APPENDIX J

TRAFFIC IMPACT ANALYSIS

Traffic Impact Analysis Report

Stadium Replacement EIR

Prepared for
City of San Diego

AECOM Project No. 60431885
August 2015

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Orange, CA 92868

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TABLE OF CONTENTS

SECTION PAGE

EXECUTIVE SUMMARY I

1.0 INTRODUCTION 1-1
- 1.1 Study Purpose 1-1
- 1.2 Scope of Study and Project Study Area 1-1
- 1.3 Traffic Analysis Scenarios Evaluated 1-7
- 1.4 Report Organization 1-8

2.0 METHODOLOGY 2-1
- 2.1 Analysis Methodology 2-1
- 2.2 Thresholds of Significance 2-3

3.0 PROJECT DESCRIPTION 3-1
- 3.1 Project Characteristics 3-1
- 3.2 Project Schedule 3-12
- 3.3 Project Objectives 3-13

4.0 EXISTING CONDITIONS (2015) 4-1
- 4.1 Existing Roadway Network 4-1
- 4.2 Existing Traffic Data 4-9
- 4.3 Existing Conditions Traffic Analysis 4-9
- 4.4 Existing Mobility and Alternative Transportation 4-29
- 4.5 Existing Parking Facilities 4-37

5.0 TRAFFIC FORECASTING AND TRIP GENERATION 5-1
- 5.1 Travel Demand Model 5-1
- 5.2 Trip Generation 5-1
- 5.3 Trip Distribution 5-8
- 5.4 Cumulative Projects 5-9

6.0 NEW STADIUM CONSTRUCTION AND QUALCOMM DEMOLITION (2017 – 2020) 6-1
- 6.1 Near Term 2019 Traffic Analysis 6-1
- 6.2 Mobility Analysis 6-57
- 6.3 Transportation Demand Management 6-58

7.0 HORIZON YEAR (2035) 7-1
- 7.1 Horizon Year (2035) Conditions Traffic Analysis 7-1
- 7.2 Mobility Analysis 7-43
- 7.3 Transportation Demand Management 7-44

8.0 TRANSPORTATION DEMAND MANAGEMENT PLAN 8-1
- 8.1 Automobile Access and Parking 8-1
- 8.2 Transit Facilities 8-7
- 8.3 Pedestrian Facilities 8-7
- 8.4 Bicycle Facilities 8-7
- 8.5 Performance Goals 8-8

8.6 Transportation Demand Management Performance Metrics.....8-9

9.0 IMPACT ANALYSIS AND MITIGATION MEASURES.....9-1

9.1 Significant Impacts and Mitigation Measures.....9-1

10.0 REFERENCES.....10-1

FIGURES

Figure 1-1 Project Vicinity.....1-2
Figure 1-2 Study Intersection Locations.....1-3
Figure 2-1 Mission Valley Community Development Intensity Districts.....2-9
Figure 3-1 Project Site Map.....3-2
Figure 4-1 Existing Intersection Lane Geometry and Traffic Volumes.....4-3
Figure 4-2 Existing Roadway Segment ADT Volumes.....4-6
Figure 4-3 Existing Game Day Intersection Traffic Volumes.....4-23
Figure 4-4 Existing Game Day Roadway Segment ADT Volumes.....4-26
Figure 4-5 Existing Transit Service.....4-31
Figure 4-6 Regional Transit.....4-33
Figure 4-7 Existing Bikeways.....4-35
Figure 4-8 Existing Stadium Parking Access and Configuration.....4-39
Figure 4-9 San Diego MTS Trolley System Map.....4-42
Figure 6-1 2019 No Project with No Games Intersection Traffic Volumes.....6-9
Figure 6-2 2019 No Project with No Games Roadway Segment ADT Volumes.....6-12
Figure 6-3 2019 No Project with Games Intersection Traffic Volumes.....6-23
Figure 6-4 2019 No Project with Games Roadway Segment ADT Volumes.....6-26
Figure 6-5 2019 Construction Phase with Games Intersection Traffic Volumes.....6-37
Figure 6-6 2019 Construction Phase with Games Roadway Segment ADT Volumes.....6-40
Figure 6-7 2019 Demolition Phase with Games Intersection Traffic Volumes.....6-51
Figure 6-8 2019 Demolition Phase with Games Roadway Segment ADT Volumes.....6-54
Figure 7-1 2035 No Project with No Games Intersection Traffic Volumes.....7-9
Figure 7-2 2035 No Project with No Games Roadway Segment ADT Volumes.....7-12
Figure 7-3 2035 No Project with Games Intersection Traffic Volumes.....7-23
Figure 7-4 2035 No Project with Games Roadway Segment ADT Volumes.....7-26
Figure 7-5 2035 Project Build Out with Games Intersection Traffic Volumes.....7-37
Figure 7-6 2035 Project Build Out with Games Roadway Segment ADT Volumes.....7-40
Figure 8-1 San Diego Region Park and Ride Lots.....8-6

TABLES

Table 1-1 Study Intersections.....1-5
Table 1-2 Study Roadway Segments.....1-6
Table 1-3 Study Freeway Segments.....1-7
Table 1-4 Study Freeway Ramps.....1-7
Table 2-1 Level of Service Descriptions.....2-1
Table 2-2 City of San Diego Roadway Classification, Capacity and LOS.....2-2
Table 2-3 LOS Criteria for Freeway Segment Analysis.....2-3
Table 2-4 Allowable Increase Due to Project Impacts.....2-4
Table 2-5 Mission Valley Development Intensity Districts.....2-7
Table 3-1 Comparison of Qualcomm Stadium to the Proposed Stadium Reconstruction.....3-1
Table 3-2 Stadium Uses and Estimated Size.....3-7
Table 3-3 Parking Statistics for Chargers Games.....3-7
Table 3-4 Stadium Parking Summary.....3-8
Table 3-5 MTS Green Line Trolley Ridership Information for Chargers and SDSU Football Games.....3-9

Table 3-6 Summary of Events at Qualcomm Stadium and Anticipated Events at the Reconstructed Stadium 3-11
Table 3-7 Stadium Reconstruction and Qualcomm Stadium Demolition....3-12
Table 4-1 Study Intersections 4-2
Table 4-2 Intersection Analysis – Existing Conditions with No Games 4-11
Table 4-3 Roadway Segment Analysis – Existing Conditions with No Games 4-13
Table 4-4 Freeway Segment Analysis – Existing Conditions with No Games....4-14
Table 4-5 Ramp Metering Analysis – Existing Conditions with No Games 4-15
Table 4-6 Intersection Analysis – Existing Conditions with Games....4-18
Table 4-7 Roadway Segment Analysis – Existing Conditions with Games 4-19
Table 4-8 Freeway Segment Analysis – Existing Conditions with Games 4-20
Table 4-9 Ramp Metering Analysis – Existing Conditions with Games....4-21
Table 4-10 Green Line Park and Ride Facilities 4-41
Table 4-11 Orange Line Park and Ride Facilities near Qualcomm Stadium Station....4-41
Table 5-1 Modal Splits for Existing Conditions 5-2
Table 5-2 Modal Splits for All Future Conditions....5-3
Table 5-3 Daily Vehicle Trip Generation on Game Days (Inbound and Outbound) 5-4
Table 5-4 Peak Hour Vehicle Trip Generation on Game Days....5-5
Table 5-5 Weekday Game Day Trip Arrival and Departure Patterns 5-6
Table 5-6 Weekday Game Trip Generations during Analyzed Peak Hours 5-6
Table 5-7 Weekend Game Trip Generation during Analyzed Peak Hours....5-7
Table 5-8 Construction Trip Generation (One Way) 5-7
Table 5-9 Trip Distribution Estimates by Region....5-8
Table 5-10 Trip Distribution Estimates by Access Route....5-9
Table 5-11 Cumulative Projects....5-9
Table 6-1 Intersection Analysis – 2019 No Project with No Games 6-3
Table 6-2 Roadway Segment Analysis – 2019 No Project with No Games 6-5
Table 6-3 Freeway Segment Analysis – 2019 No Project with No Games 6-6
Table 6-4 Ramp Metering Analysis – 2019 No Project with No Games 6-7
Table 6-5 Intersection Analysis: 2019 No Project with Game Days 6-17
Table 6-6 Roadway Segment Analysis – 2019 No Project with Game Days 6-19
Table 6-7 Freeway Segment Analysis – 2019 No Project with Games 6-20
Table 6-8 Ramp Metering Analysis – 2019 No Project with Games....6-21
Table 6-9 Intersection Analysis – 2019 Construction Phase with Games 6-31
Table 6-10 Roadway Segment Analysis – 2019 Construction Phase with Games 6-33
Table 6-11 Freeway Segment Analysis – 2019 Construction Phase with Games 6-34
Table 6-12 Ramp Metering Analysis – 2019 Construction Phase with Games 6-35
Table 6-13 Intersection LOS Analysis – 2019 Demolition Phase with Games 6-45
Table 6-14 Roadway Segment Analysis – 2019 Demolition Phase with Games 6-47
Table 6-15 Freeway Segment Analysis – 2019 Demolition Phase with Games....6-48
Table 6-16 Ramp Metering Analysis – 2019 Demolition Phase with Games 6-49
Table 7-1 Intersection Analysis – 2035 No Project with No Games 7-3
Table 7-2 Roadway Segment Analysis – 2035 No Project with No Games 7-5
Table 7-3 Freeway Segment Analysis – 2035 No Project with No Games 7-6
Table 7-4 Ramp Metering Analysis – 2035 No Project with No Games 7-7
Table 7-5 Intersection Analysis – 2035 No Project with Games....7-18
Table 7-6 Road Segment Analysis – 2035 No Project with Games 7-19
Table 7-7 Freeway Segment Analysis – 2035 No Project with Games 7-20
Table 7-8 Ramp Meter Analysis – 2035 No Project with Games....7-21
Table 7-9 Intersection Analysis – 2035 Project Build Out with Games 7-32
Table 7-10 Roadway Segment Analysis – 2035 Project Build Out with Games....7-33
Table 7-11 Freeway Segment Analysis – 2035 Project Build Out with Games....7-34
Table 7-12 Ramp Meter Analysis – 2035 Project Build Out with Games 7-35
Table 8-1 Stadium Parking Deficit Summary for Future Scenarios 8-2
Table 9-1 Intersection Project Impact – 2019 Construction Phase with Games (Weekday)....9-2
Table 9-2 Intersection Project Impact – 2019 Construction Phase with Games (Saturday) 9-3

Table 9-3 Intersection Project Impact – 2019 Construction Phase with Games (Sunday).....9-4
Table 9-4 Roadway Segment Project Impact – 2019 Construction Phase with Games.....9-5
Table 9-5 Freeway Segment Project Impact – 2019 Construction Phase with Games (Weekday) 9-7
Table 9-6 Ramp Metering Project Impact – 2019 Construction Phase with Games (Weekdays).....9-8
Table 9-7 Intersection Project Impact – 2019 Demolition Phase with Games (Weekday) 9-10
Table 9-8 Intersection Project Impact – 2019 Demolition Phase with Games (Saturday).....9-11
Table 9-9 Intersection Project Impact – 2019 Demolition Phase with Games (Sunday).....9-12
Table 9-10 Roadway Segment Project Impact – 2019 Demolition Phase with Games.....9-13
Table 9-11 Freeway Segment Project Impact – 2019 Demolition Phase with Games (Weekday) 9-15
Table 9-12 Ramp Metering Project Impact – 2019 Demolition Phase with Games (Weekdays) 9-16
Table 9-13 Intersection Project Impact – 2035 Project Build Out with Games (Weekday) 9-18
Table 9-14 Intersection Project Impact – 2035 Project Build Out with Games (Saturday).....9-19
Table 9-15 Intersection Project Impact – 2035 Project Build Out with Games (Sunday) 9-20
Table 9-16 Roadway Segment Project Impact – 2035 Project Build Out with Games.....9-21
Table 9-17 Freeway Segment Project Impact – 2035 Project Build Out with Games (Weekday).....9-23
Table 9-18 Ramp Metering Project Impact – 2035 Project Build Out with Games (Weekdays) 9-24
Table 9-19 Summary of Mitigation Measures 9-25

APPENDICES

Appendix A Existing Traffic Data
Appendix B Existing Intersection Analysis Worksheets
Appendix C City of San Diego Master Bicycle Plan and Pedestrian Master Plan Excerpts
Appendix D 2019 Construction and Demolition Intersection Analysis Worksheets
Appendix E 2035 No Project and Project Build Out Intersection Analysis Worksheets
Appendix F Project Impact Mitigation Intersection Analysis Worksheets

ACRONYMS

ADT	Average Daily Traffic
Aux	Auxiliary Lane
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CIF	California Interscholastic Federation
CMS	Changeable Message Signs
CUP	Conditional Use Permit
cy	cubic yard
DID	Development Intensity District
EB	Eastbound
EIR	Environmental Impact Report
HCM	Highway Capacity Manual
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
LRT	Light Rail Transit
ML	Mainline
MLS	Major League Soccer
Mph	miles per hour
MTS	Metropolitan Transit System
NB	Northbound
NCAA	National Collegiate Athletic Association
NCTD	North County Transit District
NFL	National Football League
PCE	Passenger Car Equivalent
PeMS	Caltrans Freeway Performance Management System
RTP	Regional Transportation Plan
RV	recreational vehicle
s/veh	seconds per vehicle
SANDAG	San Diego Association of Governments
SB	Senate Bill
SB	Southbound
SDSU	San Diego State University
SR	State Route
TDM	Transportation Demand Management
TMP	Traffic Management Plan
V/C	Volume to Capacity Ratio
veh/sec	vehicles per second
VMT	Vehicle Miles Traveled
WB	Westbound

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EXECUTIVE SUMMARY

Project Description

The City of San Diego is proposing to replace the existing 48-year-old, Qualcomm Stadium with a new multi-use sports, entertainment, and recreational stadium (Project). The Project also includes demolition of Qualcomm Stadium after the new stadium is constructed. The existing 166-acre Qualcomm Stadium site, located at 9449 Friars Road, is bounded by Friars Road to the north, Interstate 15 (I-15) to the east, and the San Diego River to the south, and by office and commercial buildings to the west. The Project site is the entire 166-acre Qualcomm Stadium property with the construction of a new stadium on an approximately 17 acres portion in the northeast corner of the property. The existing stadium is located on an approximately 15-acre portion in the center of the Project site surrounded by stadium parking.

It is anticipated that the new stadium would be leased to multitude end-users such as the National Football League's (NFL) San Diego Chargers ("Chargers"), for playing home games during the NFL pre-season, regular season, post-season, and other professional, collegiate and amateur sports, entertainment, cultural and commercial events, including Major League Soccer ("MLS") games, National Collegiate Athletic Association ("NCAA") football games and other major events. The new stadium and surrounding parking would also be used for events similar to what currently occurs at Qualcomm Stadium, however, with the new stadium; overall on-site activity is anticipated to increase due to an improvement in facilities.

Access to the Project site would remain the same as the current Qualcomm Stadium via vehicles (private vehicles, recreational vehicles, and chartered and shuttle buses), and the San Diego Metropolitan Transit System (MTS) Trolley and bus systems. The existing Qualcomm Stadium parking lot currently has 18,870 vehicle parking spaces. The City contracts with ACE Parking to manage parking and implement the stadium events' controlled ingress prior to events and egress after events through manual traffic control measures. San Diego Police Department also assists in manual traffic control measures on adjacent arterials. Events, such as a Super Bowl, that would require the expansion of stadium seating to the maximum capacity of 72,000, would require additional parking.

The existing stadium has excellent nearby access to three major freeways, Interstate 15 (I-15) to the east, Interstate 8 (I-8) to the south, and State Route 163 (SR-163) to the west. From these freeways, vehicles access the stadium via the Main Gate at Mission Village Drive; the Marquee Gate from Friars Road eastbound to Mission Village Drive; Gate 1 from San Diego Mission Road; or Gates 2, 3, and 4 from Friars Road eastbound to Qualcomm Way at the western boundary of the parking lot. The parking lot opens four hours prior to kickoff. Vehicles with pre-purchased parking permits can enter the parking lot five hours prior to kickoff. During capacity events, the parking lot can be expected to reach capacity and close one hour or more before events begin.

Scope of Study and Project Study Area

The Project study area was determined in consultation with the City of San Diego and is bounded by Friars Road from the north, I-8 to the south, I-15 and Mission Gorge Road to the east and SR-163 to the west. The project area does not extend beyond the current stadium vicinity and is not anticipated to require any additional property, land use or roadway changes.

The study intersections, roadway segments, freeway segments and freeway ramps were selected in cooperation with the City of San Diego.

New weekday traffic counts were collected in July 2015. In addition to weekday traffic counts, Saturday and Sunday were also collected for use in the weekend analysis requested. The study includes the analysis of weekday AM Peak hours (7:00 a.m. and 9:00 a.m.) and PM Peak hours (4:00 p.m. to 6:00 p.m.).

Trip Generation and Distribution

Trip generation for weekday games was analyzed for all scenarios based on an NFL game with 68,000 attendees to capture the most conservative game day traffic generated by the proposed Project. On a

weekday, the game currently generates approximately 35,700 trips. During the construction of the new replacement stadium and the demolition of the existing Qualcomm stadium, the proposed Project is anticipated to generate 31,400 to 31,600 trips during the construction phases and demolition phases of the proposed Project, respectively. During the horizon year of the Project, approximately 31,200 trips are anticipated to be generated. Future Construction and Demolition Year game day vehicle trip generation to and from the Project is anticipated to decrease from existing trip generation due to the proposed reduction in parking spaces available. Fewer trips are anticipated to be generated during the construction and demolition phase of the proposed Project because the Project would encourage attendees to shift transportation modes from the passenger car parking onsite to taking public transit to stadium events.

Scenarios Analyzed

The following scenarios were analyzed as a part of this study.

Existing Conditions (2015)

This scenario is used to establish the current level of traffic and mobility operating conditions within the study area. Analysis was conducted for weekday, Saturday, and Sunday peak hours for both game day and non-game day.

New Stadium Construction and Qualcomm Stadium Demolition (2017 – 2020)

Represents the traffic conditions during the construction of the new replacement stadium and the traffic conditions during the demolition of the existing Qualcomm stadium planned to occur in 2017 to 2020. Analysis was conducted for weekday, Saturday and Sunday peak hours for game day.

Horizon Year (2035)

This scenario represents the traffic conditions of the horizon year of the proposed project. Analysis was conducted for weekday, Saturday and Sunday peak hours for both game day and non-game day.

Direct and Cumulative Impacts

Intersection Impacts

Level of service analysis was conducted to evaluate the traffic operations at the study intersections under the traffic analysis scenarios described above. The analyses were conducted using the City of San Diego's traffic analysis guidelines. The analysis results show that one intersection out of the 27 study intersections would be significantly impacted during PM peak hour on weekday game days under the construction phase and the demolition phase conditions. The impacted intersection is located at Rancho Mission Road and Ward Road.

Mitigation measures were explored in **Section 9** for the impacted intersection located at Rancho Mission Road and Ward Road. The implementation of all-way stop controls is suggested to mitigate this project impact to be considered less than significant. Since the intersection is not anticipated to be significantly impacted by the Project on non-game days, improvement measures can be implemented on game days or similar sized major events only. In addition, the intersection does not meet traffic signal warrants.

Roadway Impacts

Roadway segment analysis was performed based on the average daily traffic volumes (ADT) and the existing roadway capacities based on City of San Diego's Roadway classifications to determine the level of service of the roadway facilities. The roadway segment level of service analysis did not result in any significant impacts on any of the roadway segments during any of the analysis scenarios. Therefore, no mitigation measures were provided for roadway segments.

Freeway Segment Impacts

A freeway segment level of service analysis was performed based on the peak-hour volume during AM and PM peak periods on weekdays, Saturday and Sundays compared to the theoretical capacity of the freeway segment. The freeway segment level of service analysis did not result in any significant impacts on any of the freeway segments during any of the analysis scenarios. Therefore, no mitigation measures were provided for freeway segments.

Freeway Ramp Meters

Ramp metering level of service analysis was performed for weekday morning and evening peak hours. The ramp meter level of service analysis did not result in any significant impacts on any of the ramp meters during any of the analysis scenarios. Therefore, no mitigation measures were provided for freeway segments.

Parking

Demand for parking at Qualcomm Stadium varies by the type of event and event attendance. Assuming all multi-modal transportation alternatives are fully utilized to maximum capacity, parking deficiency is anticipated to occur only on weekday game days. Significant impacts are anticipated occur during the Qualcomm Stadium demolition phase and the horizon year game days with the implementation of the River Park Master Plan. For the purpose of mitigating unmet onsite parking demand, a Transportation Demand Management Plan is proposed to identify offsite parking location opportunities and establish the foundation of an overall transportation demand management program for the future replacement stadium.

Transportation Demand Management Plan

Demand for parking at Qualcomm Stadium varies by the type of event and event attendance. For each type of event, onsite parking may either meet demand (or more) or would cause a parking deficiency. This study analyzes the potential demand for NFL games and similarly sized events for all scenarios to anticipate where a parking deficiency may occur. Overall, the available onsite parking for all scenarios meets parking demand except for during the Qualcomm Stadium demolition phase of the proposed project. During this period, approximately 1,800 parking spaces would be needed offsite. Chapter 8 includes recommendations for a Transportation Demand Management Plan discussing the anticipated parking deficiency and potential solutions including multi-modal park and ride lots, carpool incentives, and offsite and overflow parking opportunities. A more robust Transportation Demand Management Plan to supplement this analysis is suggested for further study and will mitigate the significant parking impacts caused by the Project.

Mobility

For each scenario, the mobility elements—transit, pedestrian and bicycle facilities are assessed for adequate capacity and future needs. A modal shift is anticipated in future scenarios when attendees would use the San Diego Metropolitan Transit System (MTS) Green Line resulting in reduced demand for onsite parking. The Green Line currently operates at a high capacity and frequency on NFL game days or similarly sized events at the Project site. This study assumes this high ridership would be maintained throughout the construction and demolition phases of the proposed Project and into the future horizon year. High ridership would relieve the demand for onsite parking and reduce traffic in the surrounding neighborhood.

Pedestrian facilities were also assessed in this study and were found to adequately serve attendees accessing to the Project site on foot. Future efforts to improve the pedestrian circulation and connectivity with surrounding retail, commercial and urban centers should be provided in the future to better integrate the Project into the Mission Valley Community. Similarly, bicycle access to the Project site is adequate with connectivity to surrounding Class I, II and III bicycle facilities. Efforts to provide further connectivity to existing and future bicycle facilities would be supported and encouraged. Ample onsite bicycle parking would be installed to further encourage biking to stadium events.

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1.0 INTRODUCTION

1.1 STUDY PURPOSE

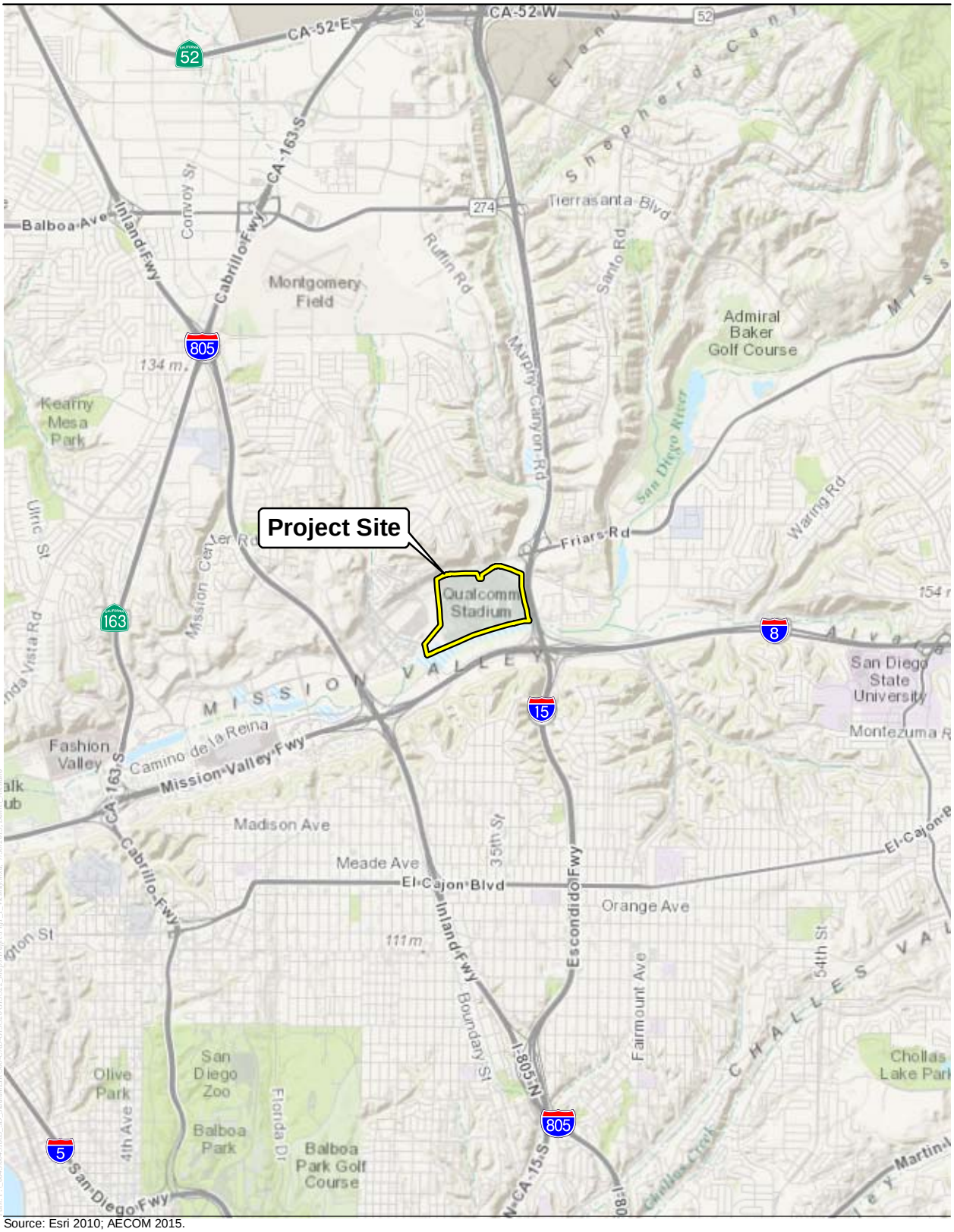
The purpose of this Traffic Impact Analysis Report is to identify and document potential traffic impacts related to the development of the proposed replacement stadium facility for the City of San Diego Qualcomm Stadium site (proposed project) located at 9449 Friars Road in the City of San Diego. This report would also recommend mitigation for identified transportation, mobility and circulation impacts associated with the construction and operation of the Proposed Project.

1.2 SCOPE OF STUDY AND PROJECT STUDY AREA

This analysis consists of a near-term and long-range analysis of the potential transportation impacts of the proposed project.

The Project study area was determined in consultation with the City of San Diego to be bounded by Friars Road from the north, I-8 to the south, I-15 and Mission Gorge Road to the east and SR-163 to the west. **Figure 1-1** shows the project location in context to the regional circulation system. **Figure 1-2** shows the study area and intersections. The project area does not extend beyond the current stadium vicinity and is not anticipated to require any additional property, land use or roadway changes.

The study intersections, roadway segments, freeway segments and freeway ramps (as listed in **Table 1-1** through **Table 1-4**, respectively) were selected in cooperation with the City of San Diego. The study areas were selected to include major roadways in the project vicinity leading to the nearby interstate and roadways that would be most likely impacted by the proposed project.

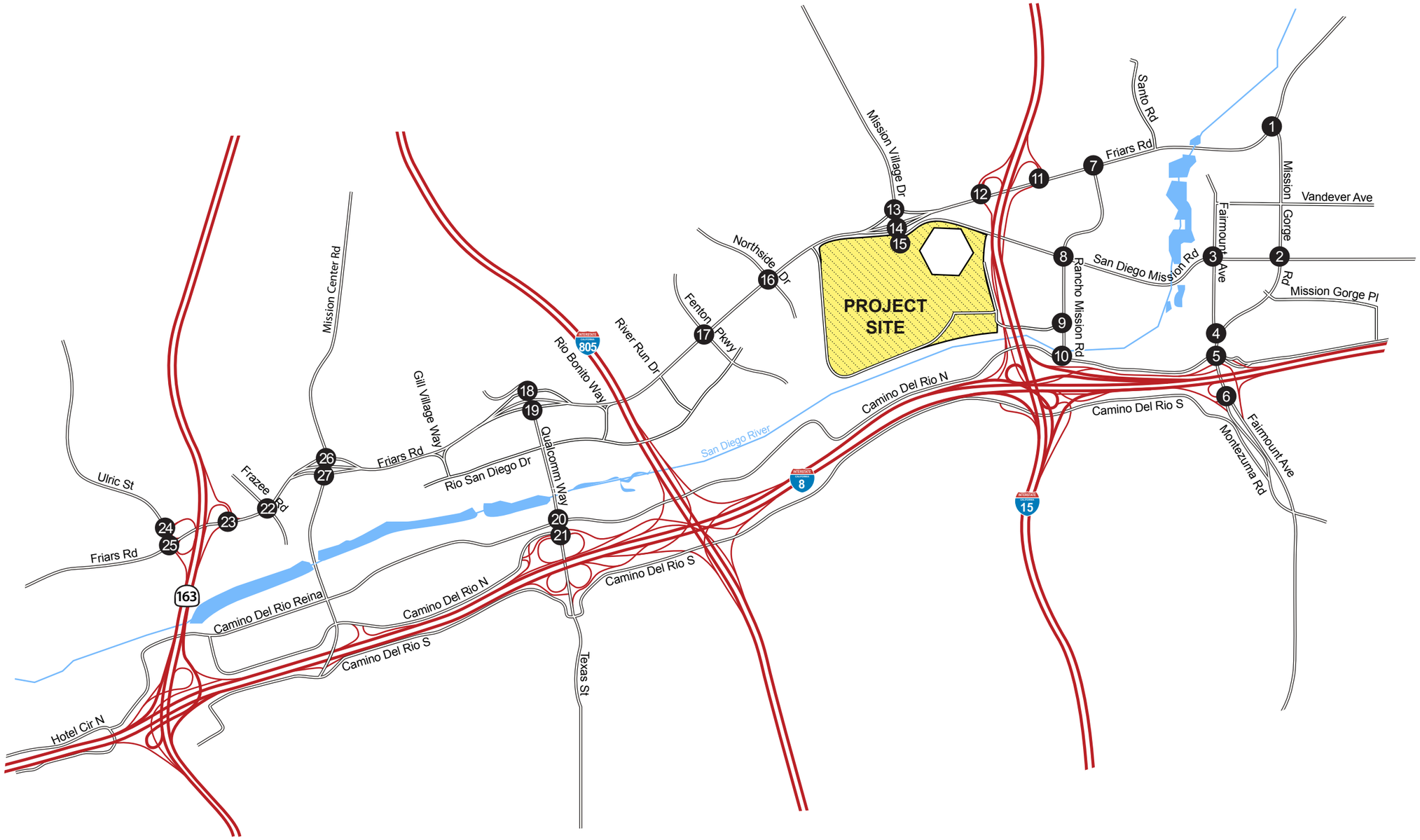


Source: Esri 2010; AECOM 2015.

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 mile

Figure 1-1
Project Vicinity



LEGEND

- # Proposed Study Intersections
- New Stadium Footprint

STUDY INTERSECTION LOCATIONS

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 1-2
PM: JR	PROJECT NO: 04102878-5939	

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Table 1-1
Study Intersections

#	North-South Arterial	East-West Arterial
1	Mission Gorge Road	Friars Road
2	Mission Gorge Road	Twain Avenue
3	Fairmount Avenue	Twain Avenue
4	Mission Gorge Road	Fairmount Avenue
5	Fairmount Avenue	Alvarado Canyon Road
6	Fairmount Avenue	I-8 Eastbound Ramps
7	Rancho Mission Road	Friars Road
8	Rancho Mission Road	San Diego Mission Road
9	Rancho Mission Road	Ward Road
10	Ward Road	Camino Del Rio North
11	I-15 Northbound Ramps	Friars Road
12	I-15 Southbound Ramps	Friars Road
13	Mission Village Drive	Friars Road WB
14	Mission Village Drive	Friars Road EB
15	Mission Village Drive	San Diego Mission Road
16	Northside Drive	Friars Road
17	Fenton Parkway	Friars Road
18	Qualcomm Way	Friars Road WB
19	Qualcomm Way	Friars Road EB
20	Qualcomm Way	Camino De La Reina
21	Qualcomm Way	I-8 WB Ramps
22	Frazee Road	Friars Road
23	SR-163 NB Ramps	Friars Road
24	Ulric Street	SR-163 SB On-ramp
25	Ulric Street	Friars Road
26	Mission Center Road	Friars Road Westbound
27	Mission Center Road	Friars Road Eastbound

Table 1-2
Study Roadway Segments

Mission Gorge Road	
1	Friars Road to Vandever Avenue
2	Vandever Avenue to Twain Avenue
3	Twain Avenue to Mission Gorge Pl
4	Mission Gorge Pl to Fairmount Avenue
Fairmount Avenue	
5	San Diego Mission Road to Mission Gorge Road
6	Mission Gorge Road to Alvarado Canyon Road
7	Alvarado Canyon Road to I-8 WB Ramps
8	I-8 WB Ramps to I-8 EB Ramps
San Diego Mission Road	
9	Fairmount Avenue to Rancho Mission Road
10	Rancho Mission Road to Mission Village Drive
Camino Del Rio N	
11	Fairmount Avenue to Ward Road
12	Ward Road to Mission City Parkway
Rancho Mission Road	
13	San Diego Mission Road to Caminito Cascara
Mission Village Drive	
14	North of Friars Road
Friars Road	
15	Mission Gorge Road to Santo Road
16	Santo Road to Rancho Mission Road
17	Rancho Mission Road to I-15 Ramps
18	I-15 Ramps to Mission Village Drive
19	Mission Village Drive to Northside Drive
20	Northside Drive to Fenton Parkway
21	Fenton Parkway to River Run Drive
22	River Run Drive to Rio Bonito Way
23	Rio Bonito Way to Qualcomm Way
24	Qualcomm Way to Gill Village Way
25	Gill Village Way to Mission Center Drive
26	Mission Center Drive to Frazee Road
27	Frazee Road to SR-163 NB Ramps
28	SR-163 NB Ramps to SR-163 SB Ramps
Qualcomm Way	
29	Friars Road to Rio San Diego Drive
30	Rio San Diego Drive to Camino Del Rio N

Table 1-3
Study Freeway Segments

Freeway	Segment
I-15	Aero Drive to Friars Road
	Friars Road to I-8
I-8	Waring Road to Fairmount Avenue
	Fairmount Avenue to I-15
	I-15 to I-805
	I-805 to Qualcomm Way
	Qualcomm Way to Mission Center Road
	Mission Center Road to SR-163
SR-163	Genesee Avenue to Friars Road
	Friars Road to I-8

Table 1-4
Study Freeway Ramps

Freeway	Ramp
I-15	I-15 NB: Friars Road On-ramp
	I-15 SB: WB Friars Road On-ramp
	I-15 SB: EB Friars Road On-ramp
I-8	I-8 EB: SB Fairmount Avenue On-ramp

1.3 TRAFFIC ANALYSIS SCENARIOS EVALUATED

The following scenarios were analyzed as a part of this study:

- **Existing Conditions (2015)** – Used to establish the current level of traffic and mobility operating conditions within the study area. Analysis conducted for weekdays, Saturdays, and Sundays.
- **New Stadium Construction and Qualcomm Stadium Demolition (2017 – 2020) –** Represents the traffic conditions for stadium construction and demolition activities from 2017 – 2020. Analysis conducted for weekdays, Saturdays, and Sundays.
- **Project Build Out (2035)** – Represents the traffic conditions of the full build out of the project both on days with no games and game days. Analysis conducted for weekdays, Saturdays, and Sundays.

Game Days

An analysis of the worst case scenario to measure the most significant impacts was performed in this study. NFL game events draw the most attendees, on average 68,000 attendees per game. Therefore, only NFL game days were analyzed. The following nomenclature is used to describe the analysis scenarios:

- With Games: Days when an NFL team is playing a home game at the Project site. Game Days can occur on both weekdays and weekends.
- With No Games: Days when no events are occurring on the Project site (NFL and non-NFL events). Days with No Games can occur on both weekdays and weekends.

1.4 REPORT ORGANIZATION

This report is organized into nine chapters. This Introduction chapter is followed by:

- **Chapter 2.0, Methodology** – This chapter describes the methodologies and standards used to analyze the traffic conditions on roadways, intersections and freeway facilities.
- **Chapter 3.0, Project Description –** This chapter describes the Project, including Project design elements and improvements developed to satisfy the purpose and need.
- **Chapter 4.0, Existing Conditions –** This chapter describes the existing traffic network within the study area, and provides analysis results for existing traffic conditions for both days with no games and game days.
- **Chapter 5.0, Traffic Forecasting and Trip Generation** - This chapter describes the travel demand model methodology and traffic analysis scenario trip generation.
- **Chapter 6.0, New Stadium Construction and Demolition (2017 – 2020)** – This chapter describes and provides the traffic analysis results for the construction conditions in 2017 – 2020 during the construction of the new replacement stadium and the demolition of the existing Qualcomm Stadium.
- **Chapter 7.0, Horizon Year (2035) -** This chapter describes and provides the analysis results for the Build Out Community Plan Conditions based on San Diego Association of Governments (SANDAG) Projections including the proposed project after construction on both days with no games and game days.
- **Chapter 8.0, Transportation Demand Management Plan –** This chapter outlines the Transportation Demand Management Plan prepared for the Project and long-term operations of the new stadium.
- **Chapter 9.0 Impact Analysis and Mitigation** – This chapter describes the impacts, level of significance and proposed mitigation measures.

2.0 METHODOLOGY

The following section describes the methodology used to determine the transportation study area operations and determine the significant impacts of the Project. The traffic analyses prepared for this study were performed in accordance with the City of San Diego Traffic Impact Study Manual (July 1998) traffic study and parking requirements (per the City General Plan Circulation Element and Municipal Code) and the City of San Diego Significance Determination Thresholds (2011). Study roadway, freeway facilities and intersection analysis methodologies, standards, and thresholds are discussed in the following sections.

2.1 ANALYSIS METHODOLOGY

2.1.1 Intersections

The analysis of the signalized and unsignalized study intersection was conducted using the Highway Capacity Manual (HCM) 2010 Edition methodology which defines LOS in terms of vehicle delay The LOS criteria used for these techniques are described in **Table 2-1**. The computerized analysis of intersection operations was performed using SYNCHRO Version 8 analysis software, which calculates the HCM 2010 methodology.

Table 2-1
Level of Service Descriptions

Level of Service	Description of Operation	Signalized Intersection Control and Delay (s/veh)	Unsignalized Intersection Average Delay (s/veh)
A	LOS A describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0-10	<10
B	LOS B describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	>10 – 20	>10 and <15
C	LOS C describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	>20 – 35	>15 and <25
D	LOS D describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.	> 35 - 55	>25 and <35
E	LOS E is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.	>55 - 80	>35 and <50
F	LOS F describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.	>80	>50

Notes:
LOS = Level of Service
s/veh = seconds per vehicle

2.1.2 Roadway Segments

Roadway segment analysis is based upon the comparison of the average daily traffic volumes (ADT) to the assumed roadway capacities. **Table 2-2** provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics for the City of San Diego. The volume-to-capacity (v/c) ratio is calculated based on the capacity of the roadway segment operating at LOS E.

Table 2-2
City of San Diego Roadway Classification, Capacity and LOS

STREET CLASSIFICATION	LANES	LEVEL OF SERVICE (LOS)				
		A	B	C	D	E
Freeway	8 lanes	60,000	84,000	120,000	140,000	150,000
Freeway	6 lanes	45,000	63,000	90,000	110,000	120,000
Freeway	4 lanes	30,000	42,000	60,000	70,000	80,000
Expressway	6 lanes	30,000	42,000	60,000	70,000	80,000
Primary Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Major Arterial	6 lanes	20,000	28,000	40,000	45,000	50,000
Major Arterial	4 lanes	15,000	21,000	30,000	35,000	40,000
Collector	4 lanes	10,000	14,000	20,000	25,000	30,000
Collector (no center lane) (continuous left-turn lane)	4 lanes 2 lanes	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2 lanes	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2 lanes	2,500	3,500	5,000	6,500	8,000
Collector (multifamily)	2 lanes	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2 lanes	—	—	2,200	—	—

Notes:
The volumes and the average daily level of service listed above are only intended as a general planning guideline.
Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic.
Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

Source: City of San Diego Traffic Impact Study Manual, July 1998

2.1.3 Freeway Segments

Analysis of freeway segments during AM and PM peak hours are based on Caltrans District 11 methodologies. Evaluation of freeway segments involves a procedure where the peak-hour volume of the mainline freeway segment is compared to the theoretical capacity of the freeway segment resulting in a v/c ratio. The capacity of the freeway segment is assumed to be 2,000 vehicles per lane per hour for mainline lanes and 1,200 vehicles per lane per hour for auxiliary lanes.

The result is compared to acceptable ranges of v/c ratio values corresponding to levels of service designations for each type of facility defined in **Table 2-3** below. The LOS levels depicted in the table approximately represent the future freeway operating condition during the peak hour in the peak travel direction.

Table 2-3
LOS Criteria for Freeway Segment Analysis

LOS	v/c Ratio	Congestion/Delay	Traffic Description
A	< 0.41	None	Free flow
B	0.41 – 0.62	None	Free to stable flow, light to moderate volumes.
C	0.63 – 0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	0.81 – 0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver
E	0.93 – 1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor
F(0)	1.01 – 1.25	Considerable (0 – 1 hour delay)	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go
F(1)	1.26 – 1.35	Severe (1 – 2 hour delay)	Very heavy congestion, very long queues.
F(2)	1.36 – 1.45	Very severe (2 – 3 hour delay)	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods
F(3)	>1.46	Extremely severe (3+ hours of delay)	Gridlock

Notes:
Based on the 1992 Caltrans guidelines.

2.1.4 Freeway Ramp Meters

Ramp metering analysis for this report utilizes the *fixed rate approach* that is based on specific time intervals at which the ramp meter releases traffic in a programmed fashion. The results produced from this method are theoretical and tend to produce unrealistic queue lengths and delays. In practice, ramp meters typically operate dynamically which allow vehicles to be discharged based on conditions on the freeway mainline. All freeway ramp meters were analyzed based on a range of ramp meter rates that were provided by Caltrans and included in **Appendix A**.

The following procedure details the steps of ramp metering analysis as outlined in the *City of San Diego Traffic Impact Study Manual, July 1998*:

1. Demand (veh/hour/lane) = number of vehicles expected to use the on-ramp during peak hour
2. Meter Rate (veh/hour/lane) = number of vehicles to be discharged during peak hour
3. Excess Demand (veh/hour/lane) = Demand – Meter Rate (or zero, whichever is greater)
4. Delay (min) = Excess Demand / Meter Rate x 60 min/hour
5. Queue (feet) = Excess Demand x 25 feet/veh

Ramp metering analysis was performed for weekday morning and evening peak hours only. No ramp meter operation is expected on weekends and was therefore excluded from the weekend analysis scenarios.

2.2 THRESHOLDS OF SIGNIFICANCE

The City of San Diego has developed thresholds to determine the impacts to intersections, roadways and

freeway segments and ramps intersections by identifying allowable increases in delay at intersections and volume to capacity ratios for roadway and freeway segments. The comparison between the existing condition analysis and the Stadium Construction and Demolition Year and Horizon Year determines where traffic impacts occur.

2.2.1 City of San Diego's Significance Determination Thresholds

A project is considered to have a significant impact if the project traffic degrades the operation of the surrounding roadways by a specific threshold. The City of San Diego utilizes the thresholds of significance below according to the City of San Diego's *Significance Determination Thresholds* dated January 2011 and also shown in Table 2-3.

The City's *Significance Determination Thresholds* categorizes transportation impacts in two types, direct and cumulative.

Direct traffic impacts are those projected to occur at the time a proposed development becomes operational, including other developments not presently operational but which are anticipated to be operational at that term (near term).

Cumulative traffic impacts are those projected to occur at the time a proposed development becomes operational, such as during subsequent phases of a project and when additional proposed developments in the area become operational (short-term cumulative) or when the affected community plan area reaches full planned build out (long-term cumulative).

It is possible that a project's near term (direct) impacts may be reduced in the long term, as future projects develop and provide additional roadway improvements (for instance, through implementation of traffic phasing plans). In such case, the project may have direct impacts by not contribute considerably to a cumulative impact.

For intersections and roadway segments affected by a project, level of service (LOS) D or better is considered acceptable under both direct and cumulative conditions.

Should the project exceed the thresholds shown in **Table 2-4**, the project is considered to have a significant direct or cumulative impact. Also, if the project causes any intersection, roadway segment or freeway segment to operate at LOS E or F under either direct or cumulative conditions, the project impact is considered to be significant. For each significant impact, a feasible mitigation measure must be identified or the impact would be considered significant and unmitigated.

Table 2-4
Allowable Increase Due to Project Impacts

Level of Service with Project*	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec)	Delay (min)
E (or ramp meter delays above 15 min)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min)	0.005	0.5	0.01	0.5	1.0	1.0

Notes: The allowable increase in delay at ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes. The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.
* All LOS measurements are based on the upon the Highway Capacity Manual procedures for peak-hour conditions. However V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using intersections is generally "D" ("C" for undeveloped locations. For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.
- If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see * note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.
Key: Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters.

Initial Study Checklist Questions

The following are taken from the City's Initial Study Checklist. They provide guidance on determining the potential significance of impacts to transportation, circulation systems, and parking:

Would the proposal result in:

1. Traffic generation in excess of specific community plan allocation?
2. An increase in projected traffic which is substantial (see table on following page) in relation to the existing traffic load and capacity of the street system?
3. Addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp as shown in the table on the next page?
4. An increased demand for off-site parking?
5. Effects on existing parking?
6. Substantial impact upon existing or planned transportation systems?
7. Substantial alterations to present circulation movements including effects on existing public access to beaches, parks, or other open space areas?
8. Increase in traffic hazards for motor vehicles, bicyclists or pedestrians due to a proposed, non-standard design feature (e.g., poor sight distance or driveway onto an access-restricted roadway)?
9. A conflict with adopted policies, plans or programs supporting alternative transportation models (e.g., bus turnouts, bicycle racks)?

Significance Thresholds

The following are the thresholds determined by the City of San Diego to determine significant impacts related to transportation, circulation and parking.

- If any intersection, roadway segment, or freeway segment affected by a project would operate at LOS E or F under either direct or cumulative conditions, the impact would be significant if the project exceeds the thresholds shown in Table 2-4.
- At any ramp meter location with delays above 15 minutes, the impact would be significant if the project exceeds the thresholds shown in Table 2-4.
- If a project would add a substantial amount of traffic to a congested freeway segment, interchange, or ramp, the impact may be significant.
- Addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp as shown in the table below?
- If a project would increase traffic hazards to motor vehicles, bicyclists or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway), the impact would be significant. Note: analysts should refer readers to a discussion of this issue in the Health and Safety section of the environmental document.
- If a project would result in the construction of a roadway which is inconsistent with the General Plan and/or a community plan, the impact would be significant if the proposed roadway would not properly align with other existing or planned roadways.
- If a project would result in a substantial restriction in access to publicly or privately owned land, the impact would be significant.

2.2.2 Parking Thresholds

The City of San Diego also has significance thresholds for parking. Parking requirements vary throughout the city by land use and location and dictated by the City of San Diego Municipal Code and City Council policies.

Significance thresholds specified by the City's Significance Thresholds Determination are as follows:

Non-compliance with the City's parking ordinance does not necessarily constitute a significant environmental impact. However, it can lead to a decrease in the availability of existing public parking in the vicinity of the project. Generally, if a project is deficient by more than ten percent of the required amount of parking and at least one of the following criteria applies, then a significant impact may result:

- The project's parking shortfall or displacement of existing parking would substantially affect the availability of parking in an adjacent residential area, including the availability of public parking.
- The parking deficiency would severely impede the accessibility of a public facility, such as a park or beach.

It must be noted that the City of San Diego does not have specific parking requirements for the stadium and historically parking has never been an issue within the Project site.

2.2.3 San Diego Municipal Code Mission Valley Planned District

San Diego Municipal Code Chapter 15, Article 14: Mission Valley Planned District, Division 3: Zoning and Subdivision includes additional thresholds for development intensity. The proposed project lies within Development Intensity Overlay District L within the Mission Valley Planned District. This overlay district limits development intensity to the levels allowed under the adopted Mission Valley Community Plan as show in **Table 2-5**. The following development intensity thresholds are applicable to the Project:

- §1514.0301(d)(1)(B) Area 2: 140 ADT per gross acre for projects in the area lying north of the centerline of Interstate 8 and east of the center line of State Route 163, except for any project lying within the steep hillsides as stated in Section 1514.0301(d)(1)(A).
- §514.0301(2)(A) Threshold 2 allocations are delineated by 13 Development Intensity District as set forth in Table 1514-03A (below) and shown on Development Intensity District Map (**Figure 2-1**). Any new project or addition to the existing project would cause the entire site to generate traffic in excess of that provided by Threshold 1 but not exceeding the limits by Threshold 2 shall be processed as a discretionary Mission Valley Development Permit.
- §1514.0301(2)(B) LRT Bonus – the "Hearing Officer" may permit increased development over the DID allocation along the light rail transit corridor where the project site design reflects the proximity to an LRT station through placement of pedestrian paths, pedestrian signage, building orientation or other means, and any portion of the proposed structure(s) that would receive the density bonus is located within 1,500 feet of an LRT station.
- §1514.0301(3)(B) Exceptions to the allocations established by Threshold 2 may be approved, conditionally approved or denied by a Hearing Officer in accordance with Process Three. The Hearing Officer's decision may be appealed to the Planning Commission in accordance with Land Development Code Section 112.0506. The Hearing Officer may approve an exception on a limited basis, without processing a community plan amendment when all the all of the following findings can be made:
    - i. The increase in traffic generated by the proposed development will not lower, by any increment, the level of service of affected streets and freeways, from what was anticipated in the community plan; and
    - ii. Accommodation of the traffic generated by the proposed development will not alter the circulation network identified in the adopted Mission Valley Community Plan; and
    - iii. An approved light rail transit or other regional or intra-valley public transit system station is identified within 1500 feet of any portion of the proposed structure that would receive the density bonus; and
    - iv. All other public facilities can accommodate the increased intensity in land use; and
    - v. The increased intensity in land use does not affect access to, view of, or preservation of community plan identified open space areas.

Table 2-5
Mission Valley Development Intensity Districts

	Trips Per Gross Acre	
District	**Threshold 1**	**Threshold 2**
A	150[1]	338[1]
B	150	263
C	150[1]	417[1]
D	200[1]	380[1]
E	140[1]	353[1]
F	140[1]	140[1]
G	140	344
H	140	323
I	140	571
J	200[1]	671[1]
K	200[1]	424[1]
L	140	267
M	140	157

Source: San Diego Municipal Code §1514.0301
1. Excluding acreage within steep hillsides.

The Mission Valley Community Plan Transportation Municipal Code establishes Development Intensity Districts to regulate the traffic capacity within the circulation system of the Mission Valley Community. The Project's anticipated maximum traffic generation for Project phases is 31,600 ADT (**See Table 5-3**). The gross Project acreage is 166 acres and the trips per acre are calculated to be 190 ADT/acre (31,600 ADT / 166 gross acres). The Municipal Code allows a traffic threshold of 140 ADT per acre for Threshold 1 and 267 ADT per acre for Threshold 2. The Project does not meet the Threshold 1 criteria, but successfully meets the Threshold 2 criteria. Also, the project is not anticipated to lower by any increment the level of service of any of the roadway facilities within the project study area. The following discusses how the Project meets each of the five findings to qualify for Threshold 2 ADT allotments in a side by side comparison.

The Project is not anticipated to add any additional trips to the roadway network compared to existing conditions and the Project horizon year. Therefore, the Project meets Threshold 2 of the Mission Valley Planned District.

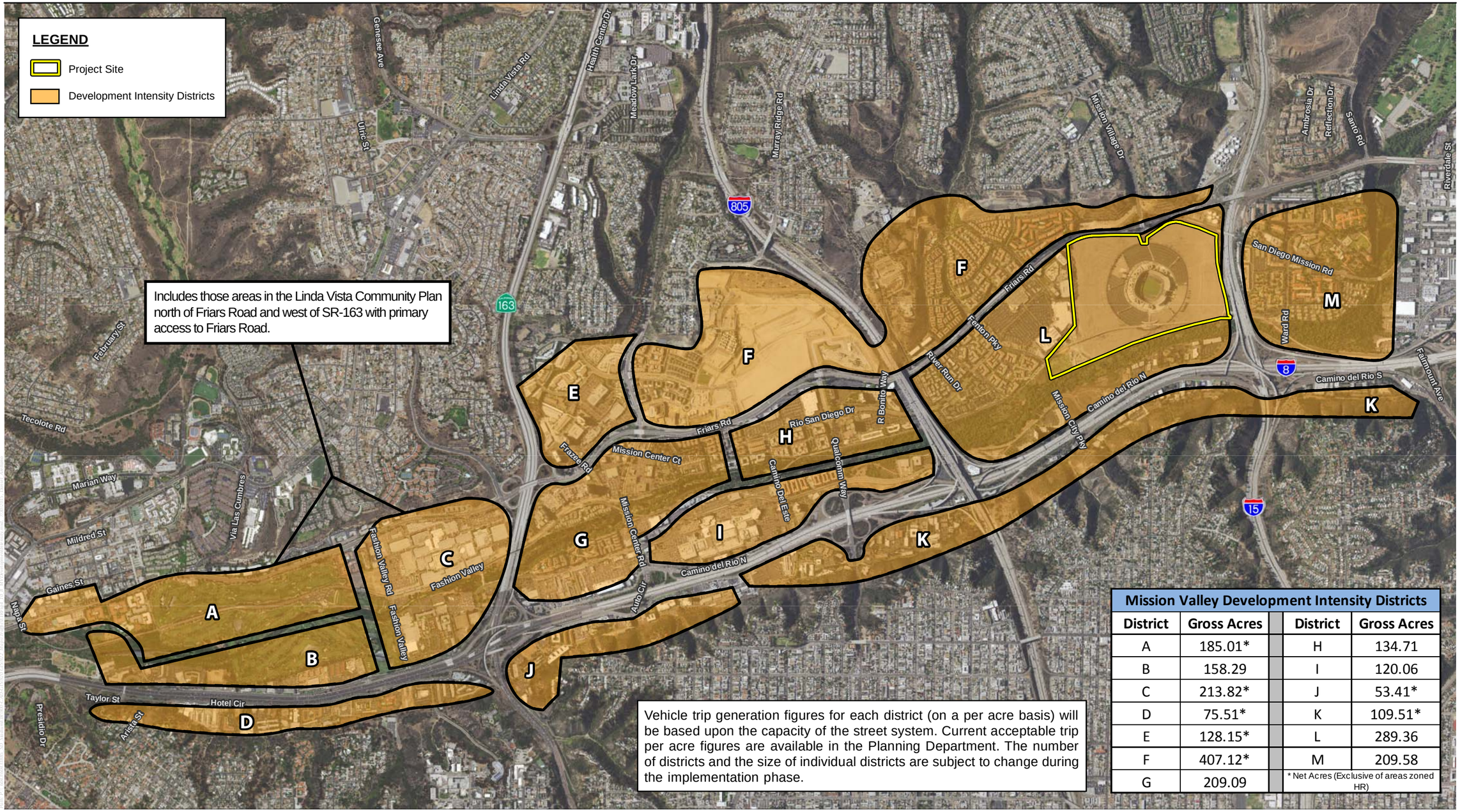
2.2.4 Mission Valley Community Plan Transportation Element

The Mission Valley Community Plan Transportation Element recognizes that the ideally, "transportation systems should be well balanced between the individual needs of the various users and the necessary support of public transit convenience that will offer a wide choice of options to the traveling public within that particular community. The transportation system must offer residents and/or employees the maximum opportunity of transportation choices to fulfill their individual needs and provide a dynamic system for the growth of the community. (City of San Diego, 1985).

Below are objectives included as part of the Community Plan Transportation Element:

- To facilitate transportation into, throughout and out of the Valley while seeking to establish and maintain a balanced transportation system
- Encourage the use of public transit modes to reduce dependency on the automobile
- Provide mitigation for traffic generation impacts through the provision and/or financing of public transportation facilities on a project-by-project basis.
- Provide adequate off-street parking for all new development in Mission Valley
- Create an intra-community bikeway system which would provide access to the various land use developments within the Valley, and connect to the regional system.

- Encourage bicycle use in the Valley
- Create the San Diego River Park Pathway that would provide for a bicycle and pedestrian access along the San Diego River and would also connect to other bicycle and pedestrian trails.



Mission Valley Development Intensity Districts			
District	Gross Acres	District	Gross Acres
A	185.01*	H	134.71
B	158.29	I	120.06
C	213.82*	J	53.41*
D	75.51*	K	109.51*
E	128.15*	L	289.36
F	407.12*	M	209.58
G	209.09	* Net Acres (Exclusive of areas zoned HR)	

Vehicle trip generation figures for each district (on a per acre basis) will be based upon the capacity of the street system. Current acceptable trip per acre figures are available in the Planning Department. The number of districts and the size of individual districts are subject to change during the implementation phase.

Source: NAIP 2014; SANDAG.

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 2-1
Mission Valley Development Intensity Districts

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3.0 PROJECT DESCRIPTION

The City of San Diego is proposing to replace the existing 48-year-old, Qualcomm Stadium with a new multi-use sports, entertainment, and recreational stadium (Project). The Project also includes demolition of Qualcomm Stadium after the new stadium is constructed. The existing 166-acre Qualcomm Stadium site, located at 9449 Friars Road, is bounded by Friars Road to the north, Interstate 15 (I-15) to the east, and the San Diego River to the south, and by office and commercial buildings to the west. The Project site is the entire 166-acre Qualcomm Stadium property with the construction of the new stadium on an approximately 17 acres in the northeast corner of the property. The existing stadium is located on an approximately 15-acre portion in the center of the Project site surrounding by stadium parking **(Figure 3-1).** The Project is not proposing any new construction or construction staging within the Influence Area of the San Diego River Park Master Plan for future implementation of the river park nor any sale of any property.

It is anticipated that the new stadium would be leased to multitude end-users such as the National Football League's (NFL) San Diego Chargers ("Chargers"), for playing home games during the NFL pre-season, regular season, post-season, and other professional, collegiate and amateur sports, entertainment, cultural and commercial events, including Major League Soccer ("MLS") games, National Collegiate Athletic Association ("NCAA") football games and other major events. The new stadium and surrounding parking would also be used for events similar to what currently occurs at Qualcomm Stadium, however, with the new stadium; overall on-site activity is anticipated to increase due to an improvement in facilities.

3.1 PROJECT CHARACTERISTICS

This section discusses the general characteristics of the reconstructed stadium including the structure, seating, lighting, internal facilities, utility improvements, access and access improvements, and stadium use. Also addressed is the construction, demolition, and operations phasing.

3.1.1 New Stadium

The new stadium would cover an area of approximately 750,000 square feet (approximately 17 acres) with an approximate floor area of 1,750,000 square feet. It is anticipated to be a steel-structured stadium that would meet all state and local seismic standards. For design flexibility, the new stadium would have a maximum height of 180 to 250 feet above the ground surface including any lighting and architectural features on top of the structure. The concept for the development is at approximately 200 feet in height. The new stadium would be four levels and include a fixed partial roof covering a portion of the seating area. **Table 3-1** shows a comparison of key features between the existing Qualcomm Stadium and the proposed new stadium.

Table 3-1
Comparison of Qualcomm Stadium to the Proposed Stadium Reconstruction

Stadium Features	Qualcomm Stadium	New Stadium [1]	Net Change
Site Size	166 acres	166 acres	-
Stadium Footprint	15 acres	17 acres	+ 2 acres
Square Footage	1,351,200	1,750,000	+ 650,000
Parking Spaces	18,870 spaces	16,500 spaces	- 5,020 spaces
Maximum Stadium Height Including Lighting	120 feet	180 - 250 feet	+ 60 to 130 feet
Seating	70,560 seats	68,000 seats	- 2,560 seats
General	61,088 seats	57,000 seats	- 4,088 seats
Suites	1,872 seats	3,000 seats	+1,128 seats
Boxes	7,600 seats	8,000 seats	+ 400 seats

Notes: sf = square feet
[1] In final design development, actual seating distribution may vary.

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Source: NAIP 2014.

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

K:\2015\San Diego Qualcomm Stadium EIR\Figures.ai

PROJECT SITE

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 3-1
PM: JR	PROJECT NO: 04102878-5939	

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3.1.2 Parking Lot

This stadium location opens the south, west, and northwest portions of the site to reorient surface parking in a more efficient manner than currently exists, including other site improvements to facilitate user modal shift away from low occupancy vehicles. It is anticipated that, due to the slightly larger footprint of the new stadium, a limited quantity of the existing stalls would be lost. The entire parking lot would be restriped and reoriented away from the stadium with concentric rings of parking to create a more efficient layout with multiple parking zones. Access to the area on the northeast side of the stadium would be limited to the general public during major events.

The parking lot would be designed to improve access in and out of the site. The on-site collector roads would be connected to preferred and general parking zones and to create safe passage ways to the stadium for the users to avoid interacting with inbound or outbound traffic flow. A separate pedestrian access would be provided for MTS Trolley users.

A number of reserved parking stalls would be provided for limousines and buses. Service and security vehicles and TV broadcasting/satellite trucks would have dedicated spaces located as not to interfere with the normal game day in and out traffic flow. Larger individual stalls would be provided to accommodate tailgaters with their shade tent structures and located to avoid visual interference with the natural flow of inbound and outbound traffic patterns.

The approach to the stadium would incorporate design features to pique user interest and anticipation while maintaining a layered security approach. Nearest the building would be the ticket gates and entries, with the most secured layer being not less than 100 feet from any stadium structure. Farther out from this point at 200 to 300 feet would be the security screening point with user queuing area beyond that. This layered perimeter approach to the stadium entrances would be in a plaza setting with landscaping accents.

The reconstructed site, after completion of the new stadium and demolition of Qualcomm Stadium, would include the reconstruction and reorientation of parking on the entire site. The parking areas would include new or renovation of existing light standards to include energy-efficient lights and fixtures. The parking lot would include new landscaping, impervious areas, and retention basins to meet water quality requirements. The existing parking would be reslurried and striped as appropriate.

3.1.3 Construction and Demolition

Construction preparation would begin along with some equipment mobilization toward the latter part of the 2016 NFL season. Once the season ends, full construction would begin. Construction would continue through the 2017 and 2018 NFL seasons. Construction activities would not occur on game days.

The Project contractor would be utilizing newer equipment to reduce air and noise impacts. Tier 4 construction equipment would be required to improve short-term construction air impacts as well as reduce greenhouse gas emissions. This equipment would also be fitted with mufflers to reduce construction noise impacts.

The initial construction stages would include designating a construction area and beginning removal of the existing parking lot northeast of Qualcomm Stadium. The new stadium field elevation would be similar to that of Qualcomm Stadium's field. To avoid drainage and terrain issues, approximately 490,000 cubic yards of fill material would be imported to elevate the new stadium site so that field level would be approximately 65 to 70 feet above sea level. A retaining wall from 12 to 20 feet tall (depending on final design development) would be required along the northeast Project site boundary to hold the imported fill.

Utility conduit and duct banks would be installed prior to the soil import. Once the fill has been installed and compacted, installation of the new stadium would begin, which would include deep foundations. This phase would last approximately 5 months. Construction of the new stadium structure would then begin including the seating areas, roof, fixtures, and exterior.

The main stadium structure would be supported on deep foundations, which would likely be required to meet structural requirements for settlement and lateral deflection of the foundations due to the subsurface conditions at the site and specifically the presence of potentially liquefiable soil. The selection of the most appropriate deep foundation system would be made during the design phase. Both driven steel piles

(original construction in the 1960s) and drilled shafts (1997 expansion) were used to support Qualcomm Stadium, and both foundation types are feasible for support of the new structure. Drilled shafts can support large vertical and lateral loads. Driven piles, steel piles, precast concrete piles, and cast-in-steel shell piles could also support large axial and lateral loads, although lateral load resistance is diminished. Other pile types, such as auger cast piles and displacement auger cast piles, would also be considered during the final design phase. Dewatering of excavations for foundations is anticipated with the potential for managing the discharge due to potential contaminants.

Depending on the magnitude of potential settlement and the sensitivity of the structure, lightly loaded improvements would be supported on shallow foundations; stiffening elements would be incorporated into the design as required to limit the effects of settlement to levels acceptable to the Project structural engineer and in conformance with the California Building Code and San Diego Municipal Code regulations. Design level geotechnical studies would be performed to confirm subsurface conditions and support the design and construction of the Project.

Ground improvement would be used independently to support lightly loaded elements of the Project or would be used in combination with deep foundations to support more heavily loaded elements of the Project. Various methods of ground improvement would be utilized to mitigate liquefaction potential such as stone columns.

Construction/demolition haul routes would be established, and a construction/demolition traffic management plan would be implemented. The haul routes would be from I-15 to Friars Road and into the main stadium entrance. Approximately 24,500 truck trips would be required to import the soil from available project sites within the San Diego area. Construction/demolition hours of operation would be from 7:00 a.m. to 7:00 p.m. on weekdays and some weekends. Construction/demolition traffic would avoid peak hours in the morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.).

3.1.4 Seating

The new stadium would have a permanent seating capacity of up to 68,000 seats in four tiers of seating and would be designed to expand to approximately 72,000 seats for special events. The regular seating configuration would include general seating for 57,000, and premium seating for 11,000 composed of 8,000 box, club and very important person (VIP) seats, as well as 3,000 suite seats in approximately 180 suites of varying sizes. There would be 340 of the seats designated for handicapped and companion seating.

3.1.5 Stadium Facilities

A breakdown of the proposed stadium facilities is shown in **Table 3-2**. Event attendee facilities would be the largest overall stadium use and would include seating, suites, club areas, public restrooms, guest services, and a Hall of Fame Museum. Internal stadium circulation would include concourses, ramps, elevators, and escalators. An area at grade would include a plaza space adjacent to the main stadium entrance(s) that would allow pre-game entertainment and sponsor activity zones.

Stadium operations would include employee areas; office/conference room; shops; engineering; janitorial; grounds keeping; security; event operations; dock and staging operations; storage; and mechanical, electrical, and plumbing facilities. Food services and merchandise facilities would include concession offices, concession stands, concession commissary and storage, kitchens and pantries, restrooms, premium club, and other dining facilities. Team locker facilities would include locker facilities for the home team, visiting team, medical and training facilities, auxiliary locker rooms, officials and crew facilities, cheerleaders' locker rooms, and performer dressing accommodations. Media facilities would include press box, booths, writing areas, TV areas, interview rooms within the stadium, and TV truck crew staging areas outside the new stadium. Administrative facilities include NFL and stadium offices along with ticketing, security, and support services.

Table 3-2
Stadium Uses and Estimated Size

Stadium Uses	Square Footage
Event Attendee Facilities	715,000
Circulation (concourses, ramps, elevators, escalators)	540,000
Stadium Operations	160,000
Food Services and Merchandise Facilities	120,000
Teams Locker Facilities	80,000
Media Facilities	35,0000
Administrative and meeting Facilities	100,000
Total	1,750,000

Of the uses shown in **Table 3-2,** there would be conference center space of 206,000 gross square feet, which could host non-game day meetings. This area would be contained within the 1,750,000 square feet and the breakdown of this space is anticipated to be as follows:

- 112,000-square-foot lounge area for club seats
- 6,000-square-foot lounge area for loge box
- 50 to 80,000-square-foot meeting space
- 8,000-square-foot restaurant

3.1.6 Stadium Parking, Access Improvements and Access

Stadium parking, access improvements, and access would be enhanced with the Project. There would be changes in parking during construction and demolition, and post-construction operations and access or other traffic improvements would be as follows.

Parking

After construction of the new stadium demolition of Qualcomm Stadium, the former stadium area would be reconstructed and the parking on the entire Project site (except the parking area within the San Diego River Influence Area) would be reoriented and restriped for optimum efficiency. The current Stadium parking layout is inefficient. The parking areas would include new or renovated lighting to include energy-efficient lights and fixtures. The parking lot would include new landscaping, impervious areas, and retention basins to meet water quality requirements. The existing paving would be removed, a drainage system would be installed, and the area would be contour graded to match the new stadium elevation. No stadium improvements, construction, or laydown areas are proposed within the Influence Area of the San Diego River Park Master Plan.

The number of automobiles typically found at a NFL regular season game is shown in **Table 3-3**. Events, such as a Super Bowl, that would require the expansion of stadium seating to the maximum capacity of 72,000, would require additional parking.

Table 3-4 shows the number of spaces that would be provided on-site through construction, demolition, and new stadium operation.

Table 3-3
Parking Statistics for Chargers Games

	2014	Approximate Percentages	Average Per Eight Regular Season Home Games
Cars	100,425	95	12,553
Buses	5,286	5	661
Vehicles	**105,711**	**100**	**13,124**

Table 3-4
Stadium Parking Summary

Stadium Parking	Currently	During New Stadium Construction	During Qualcomm Stadium Demolition	Reconstructed Stadium Operation
Total Spaces	18,870	14,530	13,500	16,500[1]

[1] Future implementation of the River Park Master Plan would result in the loss of additional parking bringing the total to 13,870 spaces.
Source: AECOM

For NFL events, season ticket holders would be assigned a specific parking lot for the duration of the season. Parking passes and specific directions to assigned lots would be distributed with tickets to allow vehicles to arrive at their assigned parking lots as quickly and efficiently as possible and minimize traffic congestion in the stadium area. Employees arriving in private automobiles would be restricted to specific parking lots.

A parking management plan for off-site parking/shuttles, both during construction and ongoing operations, would be prepared. Charter and shuttle buses would be parked in a specified location of the stadium parking lot. These buses would remain at this location for the duration of the events. All the charter and shuttle buses would enter and exit their designated parking area via Qualcomm Way and Rancho Mission Road. Between 100 and 150 buses, shuttles, and limousines would be accommodated at the new stadium. Priority parking would be provided for low emission vehicles, carpools, vanpools, buses, bikes, and motorcycles and would be Americans with Disabilities Act (ADA) accessible.

Parking usage at non-NFL events varies from slightly over 1,000 vehicles for parking lot events and high school football games to nearly 13,000 vehicles for monster truck and Supercross events (Table 3-4). For smaller events, ingress and egress are typically confined to the main entrance, but for larger events all gates are opened. MTS Trolley and buses are also available.

Prioritized Parking

Prioritized parking for more sustainable modes of transportation would be provided closer to the stadium entry for low emission vehicles, carpools, vanpools, buses, ADA accessible vehicles, motorcycles, and bicycles.

Access Improvements

Access improvements would be installed at the entrances to the site and the intersection of Friars Road and Mission Village Drive extending into the main stadium entrance (known as Coryell Way). These improvements would include:

- Improved radii at turning movements
- Curb and gutter
- Paving and striping

Stadium Access

Vehicular Access

Access to the new stadium would remain the same as the current Qualcomm Stadium via vehicles (private vehicles, recreational vehicles, and chartered and shuttle buses), and the MTS Trolley and bus systems.

The Project site is located near four major freeways. I-15 is adjacent to the Project site to the east, I-8 is approximately 0.25 mile to the south, I-805 is less than 1 mile to the west, and SR 163 is located approximately 2.4 miles farther west of the Project site. From these freeways, eastbound and westbound vehicles would continue to access the new stadium through the Main Gate at Mission Village Drive via Friars Road, or traveling eastbound through the Marquee Gate from Friars Road. An additional westbound gated access exists via San Diego Mission Road at the northeast corner of the Project site. Two eastbound driveway access points also exist via Friars Road at the northwest corner of the Project

site but are not proposed as routine access points.

Bus access would continue to be provided at the southeast corner of the Project site via a gate at Rancho Mission Road.

Transit Opportunities

San Diego Metropolitan Transit System (MTS) Trolley

The MTS Trolley Green Line provides service to the existing trolley station in the Qualcomm Stadium parking lot. The Green Line extends from 12th Street and Imperial Avenue in downtown San Diego through Old Town through Mission Valley, then passes the existing Qualcomm Stadium and ends in the City of Santee. The Green Line connects to the Blue Line and Orange Line at 12th Street and Imperial Avenue. The Blue Line extends south to San Ysidro and the Orange Line extends east to the City of El Cajon. Trolley ridership on the Green Line for current stadium events is shown on **Table 3-5**.

Table 3-5
MTS Green Line Trolley Ridership Information for Chargers and SDSU Football Games

Event	Typical Game Days	Typical Ridership
Chargers Games	Sunday	22-28% of overall attendance, 2014 maximum was 17,838 riders vs New England Patriots (Dec 7, 2014)
SDSU Football Games	Saturdays	12-15% of overall attendance, 2014 maximum was 6,337 riders for the Sky Show (Nov 8, 2014)
Source: San Diego MTS 2015		

On game days, increased frequency and longer trains help get fans to and from the stadium. Headways during pre-game operations are generally 5 minutes in the westbound direction and 7.5 minutes in the east bound direction. Extra service begins running approximately 3 hours before kickoff. Patrons can use any of the Green Line Park & Ride locations, or transfer to the Green Line from the Orange Line at Grossmont Center; or from the Blue Line at 12th & Imperial. An extension to the Blue Line has been approved, which would extend service from the Old Town station to new stations as far north as University of California, San Diego and the University Town Center mall. This line, expected to be opened by 2020, would serve fans in the north-central area of San Diego. MTS would continue to provide trolley service to the reconstructed stadium and the approved implementation program and schedule would be assessed prior to each season to ensure adequate transit support for the season is provided.

Bus

MTS Bus Route 14 travels near the Project site. The closest bus stop is located at Rancho Mission Road and San Diego Mission Road approximately a 0.5-mile walk from Gate 1. Bus Route 14 connects to Grantville Trolley Station, SDSU Transit Center, and 70th Street Trolley Station and other MTS bus routes.

Charter and Shuttle Buses

Private charter bus companies provide direct round-trip service from San Diego County, Orange County, and Riverside County locations. Express charter bus services also offer roundtrip bus transportation to all Chargers pre-season and regular season home games, including Monday and Thursday night games. Private shuttles would continue to offer service to the new stadium. A typical charter bus has approximately 55 seats and round trip fares range from $20 to $35.

It is expected that express charter bus services would continue to offer roundtrip bus transportation to all NFL pre-season and regular season home games, including Monday and Thursday night games. It is also anticipated that private shuttles would continue to offer service to the new stadium. Some of the pickup and drop off locations anticipated to continue to exist include:

- Governor Drive and I-805 Park & Ride
- Clairemont Mesa Boulevard and Complex Drive
- Mira Mesa Boulevard and I-15 Park & Ride
- Sports Authority, Chula Vista
- Vons, La Mesa
- Carmel Valley Park & Ride, Del Mar
- Sheraton San Diego Hotel and Marina
- Oceanside
- Carlsbad
- Encinitas
- Escondido
- Temecula

Bikes and Pedestrian Access

The existing bike lane along the eastern boundary of the Project site would be reconstructed in place once the new stadium and parking lot in that area are completed. The Project site would accommodate bike and pedestrian circulation on-site including ADA accessible paths in compliance with the San Diego Municipal Code. Secure bike parking would be provided. Approximately 200 bicycle parking would be provided in the main plaza around the stadium.

3.1.7 Qualcomm Stadium Demolition

Once the new stadium is constructed and ready for use, demolition would then begin on the existing Qualcomm Stadium. Demolition is expected to last approximately 12 to 14 months. An NFL team would continue to play in the new stadium during Qualcomm Stadium demolition. Demolition activities would be scheduled to not interfere with events in the new stadium. Demolition of Qualcomm Stadium would be initiated by implosion using explosives in one coordinated event.

After the implosion, the materials would be sorted for reuse, recycling, and lastly landfill disposal. Seventy-five percent of construction and demolition debris would be required to be diverted from landfills. The demolition debris would be removed from the site; it is expected that approximately 920,000 cubic yards of material would need to be hauled from the site to Miramar Landfill for clean soil, Otay Landfill for soil exceeding gasoline and diesel contamination, or Soil Safe in Adelanto for contaminated soil. Approximately 48,100 truck trips would be required to haul the debris away.

3.1.8 Stadium Operations and Use

The new stadium box office would be located on the ground level of the stadium. The box office is expected to be open year-round from 9:00 a.m. to 5:00 p.m. Monday through Saturday and for 3 hours prior to kick-off on Sunday home game days during football season.

The new stadium would be designed specifically for use by an NFL team. The new stadium, however, is expected to be used for other non-NFL events that are similar to the type of events that have occurred at Qualcomm Stadium. **Table 3-6** includes a list of events that have occurred at Qualcomm Stadium over the past 5 years. These types of events would also be anticipated to occur at the new stadium.

Table 3-6
Summary of Events at Qualcomm Stadium and Anticipated Events at the Reconstructed Stadium

Event	Qualcomm Event Days[1]	Qualcomm Event Attendance[1]	Qualcomm Event Parking[1]	Projected New Stadium Event Days	Projected Attendance	Projected On-site Parking Usage
STADIUM EVENTS						
NFL FOOTBALL						
NFL Pre- & Regular Season	10 home games	62,000	14,589	10 home games	68,000	14,000
NFL Post-Season	0	–	–	2 games	72,000	12,000
Super Bowl	0	–	–	1 game per 5 yrs	72,000	10,000[2]
COLLEGIATE FOOTBALL						
San Diego State University	6 games	30,000	5,474	6 games	30,000	10,000
Poinsettia Bowl	1 game	30,000	6,837	1 game	40,000	10,000
Holiday Bowl	1 game	50,000	9,894	1 game	60,000	10,000
Mountain West Championship	–	–	–	1 game	37,000	12,000
OTHER EVENTS						
High School Football	3 games	4,000	1,100	3 games	18,000	5,250
Soccer Games	2	20,000–50,000	2,650	5	60,000	12,000
Concerts	0[3]	–	–	2	60,000	12,500
Monster Trucks	1	50,000	12,474	1	60,000	12,500
Supercross	1	50,000	12,782	1	65,000	14,000
MISCELLANEOUS EVENTS[4]						
Large Events	4	15,001-20,000	–	10	15,001-20,000	–
Medium Events	4	5,001-15,000	–	52	5,001-15,000	–
Small Events	30	501–5,000	–	55	501–5,000	–
Minor Events	170	Less than 500	–	195	Less than 500	–

Source: Data by City of San Diego and compiled by AECOM in 2015
1. Recent attendance average.
2. Large portions of parking area inaccessible for parking due to event tents, media zones, and increased bus/shuttle parking.
3. The recent One Direction concert was the first in the past 12 years and does not present statistical significance for characterizing the base line. This concert had 13,456 cars enter the site with a disproportionately high level of drop-offs/pick-ups due to the crowd pre-teen/teen demographic.
4. For medium or large miscellaneous events with projected attendance exceeding 5,000, arrival and departure of event attendees will be limited to off-peak hours only.

NFL Football Events

The NFL season generally occurs between August and January and consists of 24 total game days, with each team participating in a minimum of 20 games (with 10 of those games played on the team's home field). Training camp typically opens off-site in late July.

NFL football events would occur on weekends with occasional Monday and/or Thursday evening games. Weekend games would occur on either Saturday (typically only during pre-season and post-season) or Sunday (all season) with start times of around 1:00 p.m. or 5:30 p.m. Weekday games typically have a start time of 5:30 p.m. A Super Bowl event would only occur on Sunday with pre-game activities typically starting 6 to 8 hours prior to kick-off and kick-off typically occurring at 3:00 p.m.

In addition to the pre-season and regular season NFL games, there is also the possibility that up to two

post-season play-off games could occur in the new stadium. The new stadium would also have the potential to host a Super Bowl game. The Super Bowl would likely only occur approximately once every 5 to 10 years.

Many attendees participate in tailgating activities prior to the start of each game. Many ticket holders arrive more than 2 hours prior to the start of each game. It is assumed that the times of arrival for attendees would continue to remain consistent with the operation of the new stadium. Tailgating activities would be restricted to attendees parking in designated areas of the parking lots.

Collegiate Football Events

The San Diego State University (SDSU) Aztecs have used Qualcomm Stadium as their home stadium for football since 1967. To meet National Collegiate Athletic Association (NCAA) Division I-A requirements, SDSU is required to use a football stadium with a minimum of 30,000 seats. SDSU plays six home games per season, which runs from August through November. Games are played on Saturdays; SDSU averaged approximately 32,300 attendees per game in 2014 (SDSU 2015). These events are anticipated to continue to occur in the new stadium.

The Holiday Bowl and the Poinsettia Bowl also use Qualcomm Stadium annually. Each bowl game occurs once per year in mid- to late-December. The attendance at the 2014 Holiday Bowl was approximately 55,789 (San Diego Union Tribune 2014a), and the attendance at the Poinsettia Bowl was approximately 23,500 (San Diego Union Tribune 2014b). These events are anticipated to continue to occur in the new stadium.

Other Events

The remaining events are characterized as smaller stadium-type events and non-stadium events. Smaller stadium events include the California Interscholastic Federation (CIF) championship high school football games. Three championship games were played at Qualcomm Stadium in 2013. Other stadium uses include soccer games, concerts, Monster Trucks, and Supercross.

Non-stadium events would include functions within the on-site conference facilities and parking lot events such as car sales, recreational vehicle sales, law enforcement training, legal racing, fun runs, and cultural festivals.

Miscellaneous Events

The Project Site would be a flexible meeting space that could accommodate events of various sizes. The events would typically be held any time from daytime through evening hours. As shown in **Table 3-6**, projected attendance for the miscellaneous events will not exceed the existing usage for similar event types and no additional vehicle trips over existing conditions on a daily basis are anticipated. The Project would increase the number of occurrences of medium and large events over current conditions on an annual basis. For medium or large events with projected attendance exceeding 5,000, arrival and departure of event attendees will be limited to off-peak hours only (i.e. event start and end times shall be set to avoid AM and PM peak hours).

3.2 PROJECT SCHEDULE

The proposed sequence of construction, operation, and demolition is shown in **Table 3-7.** The new stadium would be constructed while the NFL and Aztecs continue to play in Qualcomm Stadium. The timeline for construction would begin in late 2016 with construction equipment mobilization and preparation, and would end with the demolition, cleanup, and parking lot reconstruction in the fall of 2020. The new stadium would be ready for the NFL and collegiate 2019 football seasons.

Table 3-7
Stadium Reconstruction and Qualcomm Stadium Demolition

Activity	Approximate Duration	Approximate Start Date	Approximate Finish Date
Construction Mobilization	40 days	Mon 12/5/16	Sat 1/14/17
New Stadium Construction	960 days	Mon 1/16/17	Tue 9/3/19
Qualcomm Demolition and Parking Lot Reconstruction	400 days	Tue 9/3/19	Wed 10/7/20
NFL 2017 Season	166 days	Tue 8/1/17	Sun 1/14/18
NFL 2018 Season	165 days	Wed 8/1/18	Sun 1/13/19
NFL 2019 Season	164 days	Thu 8/1/19	Sun 1/12/20
NFL 2020 Season	169 days	Sat 8/1/20	Sun 1/17/21

3.3 PROJECT OBJECTIVES

The primary Project objectives are to:

- Develop a sustainable LEED Gold sports, entertainment, and recreational stadium that is capable of hosting NFL and NCAA football games, as well as special events, including the NFL Super Bowl in accordance with NFL stadium standards.
- Replace the existing Qualcomm Stadium with a new stadium to minimize the City's existing long-term maintenance and operational obligations.
- Develop a new stadium on a site currently under contiguous City ownership that is near multiple freeways, adjacent to existing public transit and transit stations, existing utilities, and enhanced remote parking facilities to encourage mobility and modal shift, reducing overall vehicle trips.
- Construct a fully operational stadium prior to the opening of the 2019 NFL football season.

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4.0 EXISTING CONDITIONS (2015)

This chapter describes the existing study area roadway circulation system, key study intersections and roadways segments, existing daily roadway and peak hour intersection traffic volume information, and LOS analysis results for existing conditions.

4.1 EXISTING ROADWAY NETWORK

Several regionally and locally significant roadways traverse the study area. The key roadways that form the study intersections within the Project study area are discussed below.

Alvarado Canyon Road – Alvarado Canyon Road, located east of the Project site, is an east-west, two-lane undivided local roadway with a posted speed limit of 30 mph. Alvarado Avenue provides direct access to the Project site via a full-access driveway on the east side of the Project.

Camino De La Reina – Camino De La Reina is an east-west, four-lane divided roadway raised median. The posted speed limit is 35 mph. Camino de la Reina turns into Camino Del Rio North at Qualcomm Way.

Camino Del Rio North – Camino Del Rio North is an east-west four-lane divided roadway with a raised median located south of the project site. At I-805, Camino Del Rio North turns into four lane undivided roadway with a painted left turn middle lane. The posted speed limit on Camino Del Rio North is 45 mph. A Class II Bike Lane is located along the south side of Camino Del Rio North from Qualcomm Way to Mission City Parkway.

Fairmount Avenue – Fairmount Avenue is a north-south, two lane undivided roadway with a painted median located east of the project site. The posted speed limit on Fairmount Avenue is 30 mph.

Frazee Road – Frazee Road is a north-south two lane divided roadway with a raised median located east of the project site. Frazee Road runs from Murphy Canyon Road and terminates at Hazard Center Drive, into the Hazard Center commercial center. The posted speed limit is 25 mph.

Friars Road – In the Project study area, Friars Road is a six-lane divided roadway with a posted speed limit of 50 mph. Class II Bicycle lanes are located on both sides of Friars Road. Friars Road provides direct access to the project site at Gate 2 and Mission Village Drive.

Interstate 15 – I-15 within the Project study area is a north-south eight lane highway facility with four general purpose lanes in each direction. I-15 provides northbound and southbound on/off ramps at Friars Road which provides access to the project site.

Interstate 8 – I-8 is an east-west ten lane highway facility with five general purpose lanes in each direction. I-8 is located south of the project site adjacent to the San Diego River. No direct on/off ramp is provided to the project site.

Mission Gorge Road – Mission Gorge Road is a six-lane divided roadway with a raised median and a posted speed limit of 45 mph. Mission Gorge Road begins at Zion Road and Friars Road and extends through to the City of Santee.

Mission Village Drive – Mission Village Drive is a north-south two lane divided roadway with a raised median and a posted speed limit of 45 mph. Mission Village Drive terminates at the Project site and provides direct access into Qualcomm Stadium. The intersection of Mission Gorge Road and Friars Road is the main access into the Project site parking area. A Class II bicycle lane is located on the west side of Mission Gorge Road.

Northside Drive – Northside Drive is a north-south, two-lane divided roadway with on-street parking located on the west side of the road at Old Quarry Road. Posted speed limit is 25 mph and terminates into the Fenton Marketplace Shopping Center.

Qualcomm Way – Qualcomm Way is a north-south six-lane undivided roadway with a painted median. In some parts, the roadway is divided with a raised median. The posted speed limit is 40 mph. A Class II bicycle lane is located on the west side of Qualcomm Way.

Rancho Mission Road – Rancho Mission Road is a north-south, two-lane undivided roadway with a

painted median with a posted speed limit of 35 mph. Rancho Mission Road extends from Camino Del Rio North to Friars Road.

San Diego Mission Road – San Diego Mission Road is an east-west two-lane undivided roadway. On-street parking is permitted intermittently along the corridor. The posted speed limit is 40 mph. San Diego Mission Road provides direct access to the project site at Gate 1.

SR-163 – SR-163 is a north-south eight-lane highway facility with four general purpose lanes in each direction. No direct on/off ramp is provided to the project site.

Ward Road – Ward Road is a north-south, two-lane undivided roadway with on-street parking permitted on both sides of the road. The posted speed limit is 30 mph. Ward Road extends from Camino Del Rio North to Friars Road.

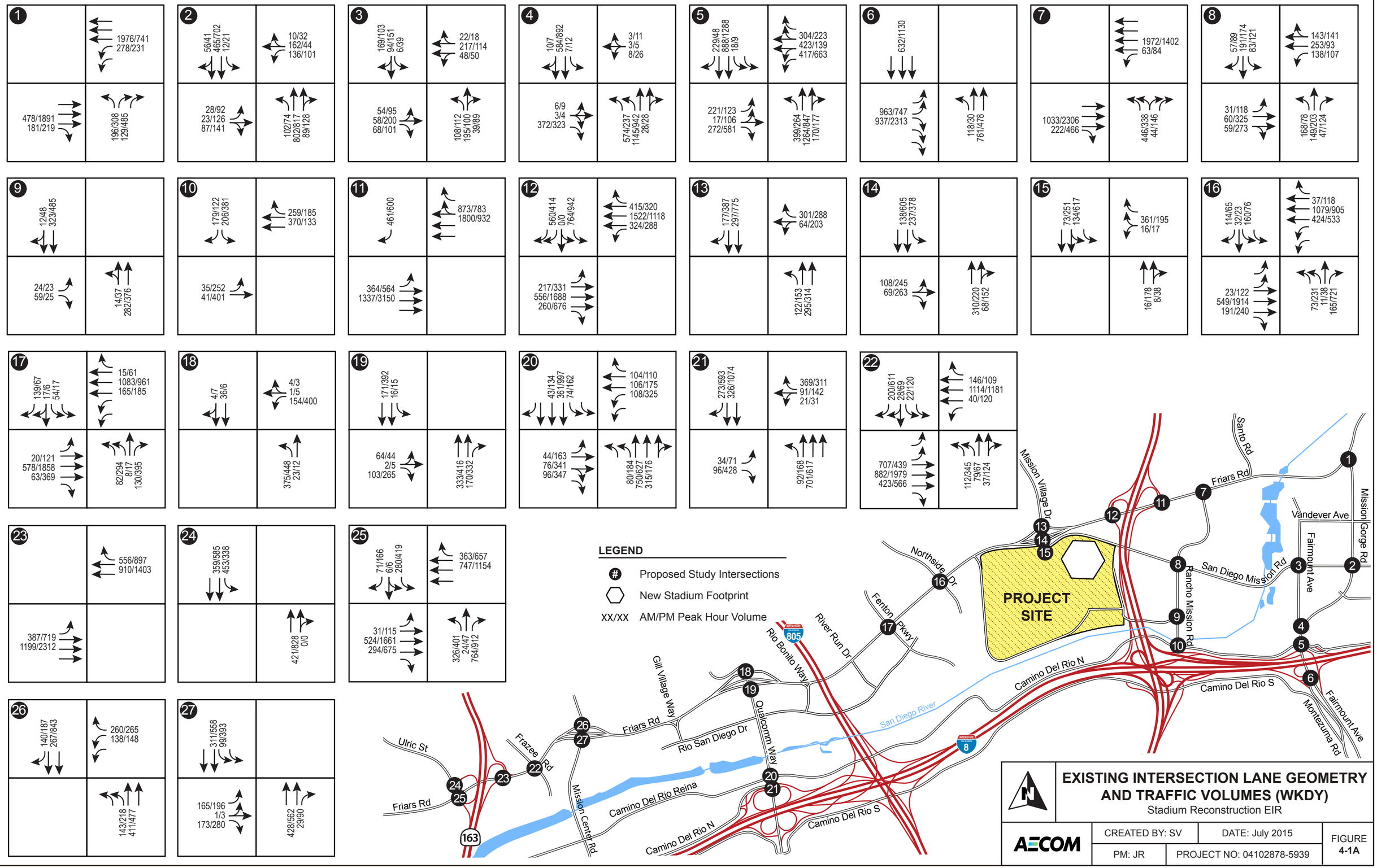
4.1.1 Study Intersections

The 27 key study area intersections shown in **Table 4-1** have been identified based on routes to and from the Project site. The existing lane geometry and turning movement volumes are shown in **Figure 4-1** and the existing roadway segment ADT volumes are shown in **Figure 4-2**.

Table 4-1
Study Intersections

	North-South Arterial	East-West Arterial	Jurisdiction	Traffic Control
1	Mission Gorge Rd	Friars Rd	City of San Diego	Signalized
2	Mission Gorge Rd	Twain Ave	City of San Diego	Signalized
3	Fairmount Ave	Twain Ave	City of San Diego	Signalized
4	Mission Gorge Rd	Fairmount Ave	City of San Diego	Signalized
5	Fairmount Ave	Alvarado Canyon Rd	City of San Diego	Signalized
6	Fairmount Ave	I-8 EB Ramps	Caltrans	Signalized
7	Rancho Mission Rd	Friars Rd	City of San Diego	Signalized
8	Rancho Mission Rd	San Diego Mission Rd	City of San Diego	Signalized
9	Rancho Mission Rd	Ward Rd	City of San Diego	Unsignalized
10	Ward Rd	Camino Del Rio N	City of San Diego	Signalized
11	I-15 NB Ramps	Friars Rd	Caltrans	Signalized
12	I-15 SB Ramps	Friars Rd	Caltrans	Signalized
13	Mission Village Dr	Friars Rd WB	City of San Diego	Signalized
14	Mission Village Dr	Friars Rd EB	City of San Diego	Signalized*
15	Mission Village Dr	San Diego Mission Rd	City of San Diego	
16	Northside Dr	Friars Rd	City of San Diego	Signalized
17	Fenton Pkwy	Friars Rd	City of San Diego	Signalized
18	Qualcomm Way	Friars Rd WB	City of San Diego	Signalized
19	Qualcomm Way	Friars Rd EB	City of San Diego	Signalized
20	Qualcomm Way	Camino De La Reina	City of San Diego	Signalized
21	Qualcomm Way	I-8 WB Ramps	Caltrans	Signalized
22	Frazee Rd	Friars Rd	City of San Diego	Signalized
23	SR-163 NB Ramps	Friars Rd	Caltrans	Signalized
24	Ulric St	SR-163 SB On-ramp	City of San Diego	Unsignalized*
25	Ulric St	Friars Rd	City of San Diego	Signalized
26	Mission Center Rd	Friars Rd WB	City of San Diego	Signalized
27	Mission Center Rd	Friars Rd EB	City of San Diego	Signalized

* Intersection analyzed using HCM 2000 due to limitations in HCM 2010 analysis



EXISTING INTERSECTION LANE GEOMETRY AND TRAFFIC VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-1A
PM: JR	PROJECT NO: 04102878-5939	

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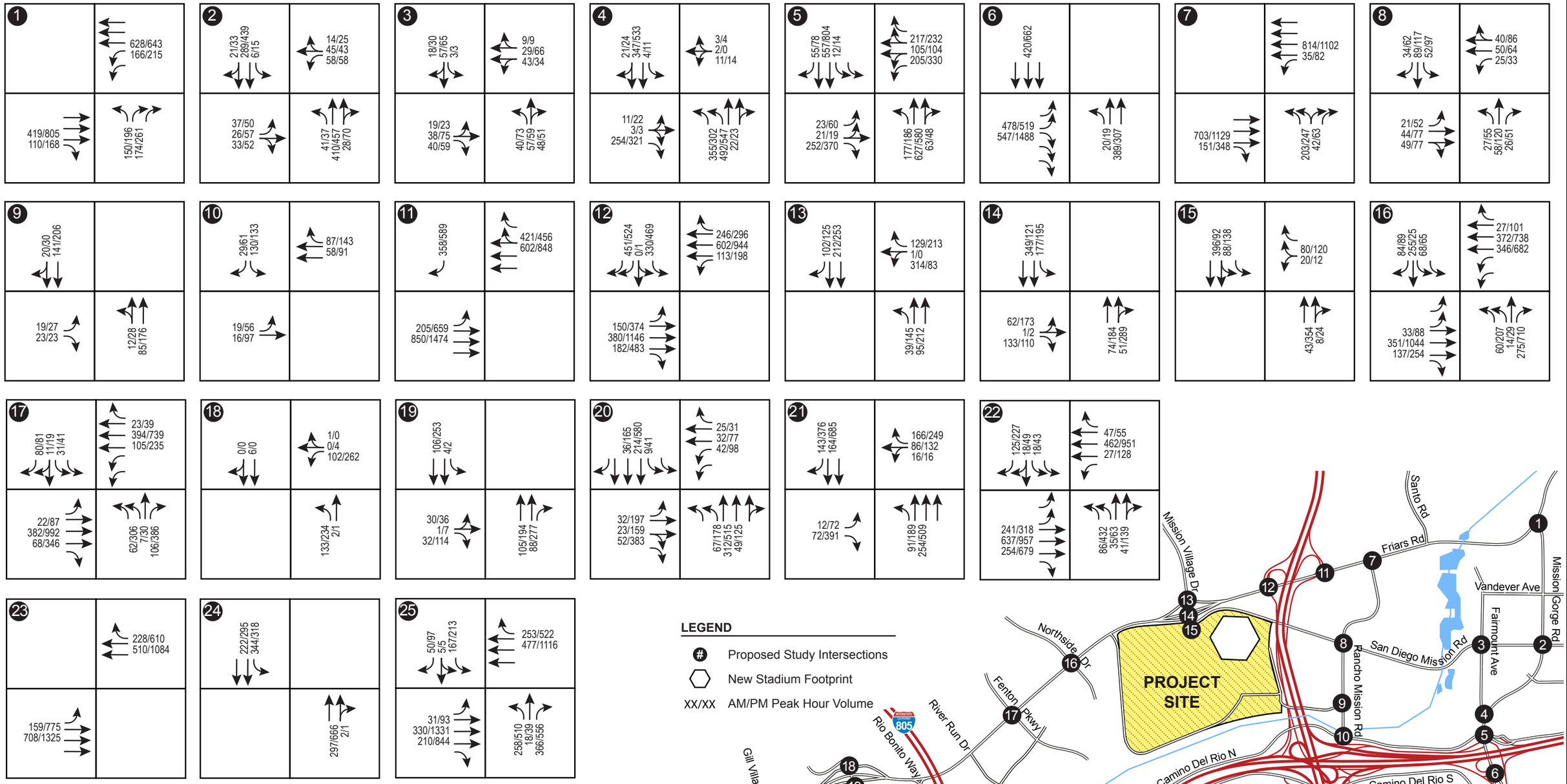

EXISTING INTERSECTION LANE GEOMETRY AND TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

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	PM: JR	PROJECT NO: 04102878-5939	

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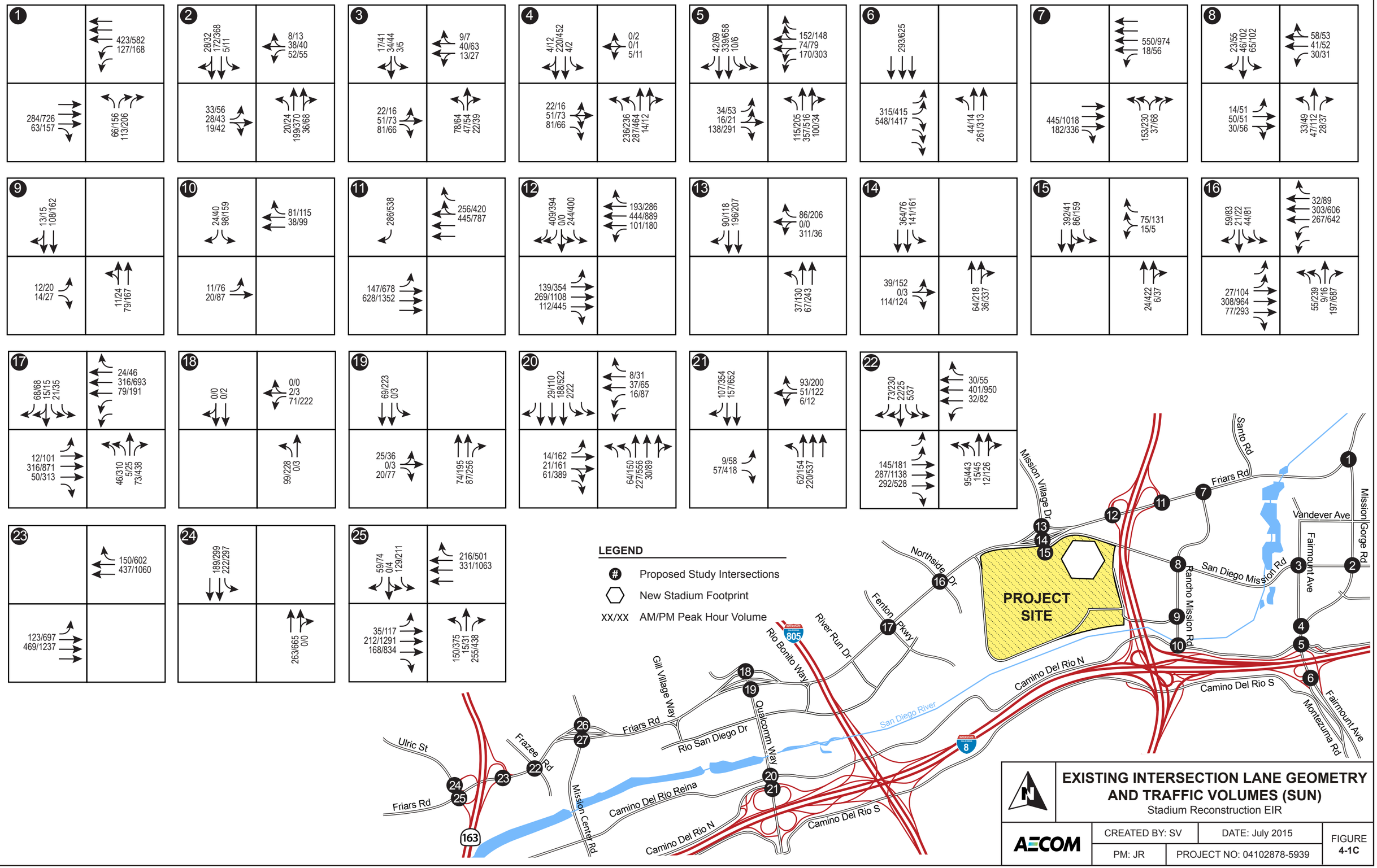

EXISTING INTERSECTION LANE GEOMETRY AND TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

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	PM: JR	PROJECT NO: 04102878-5939	

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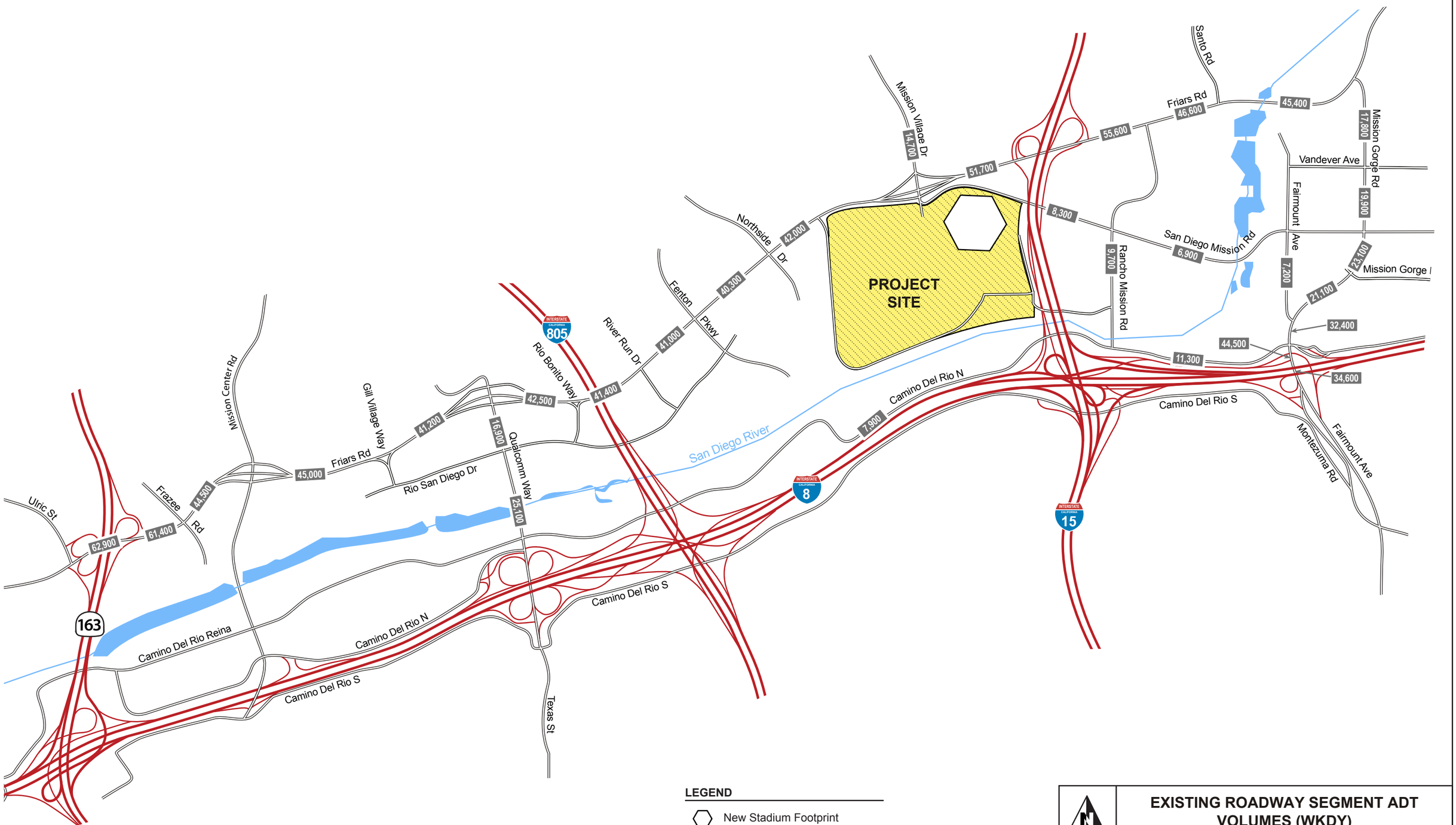

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

EXISTING ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-2A
PM: JR	PROJECT NO: 04102878-5939	

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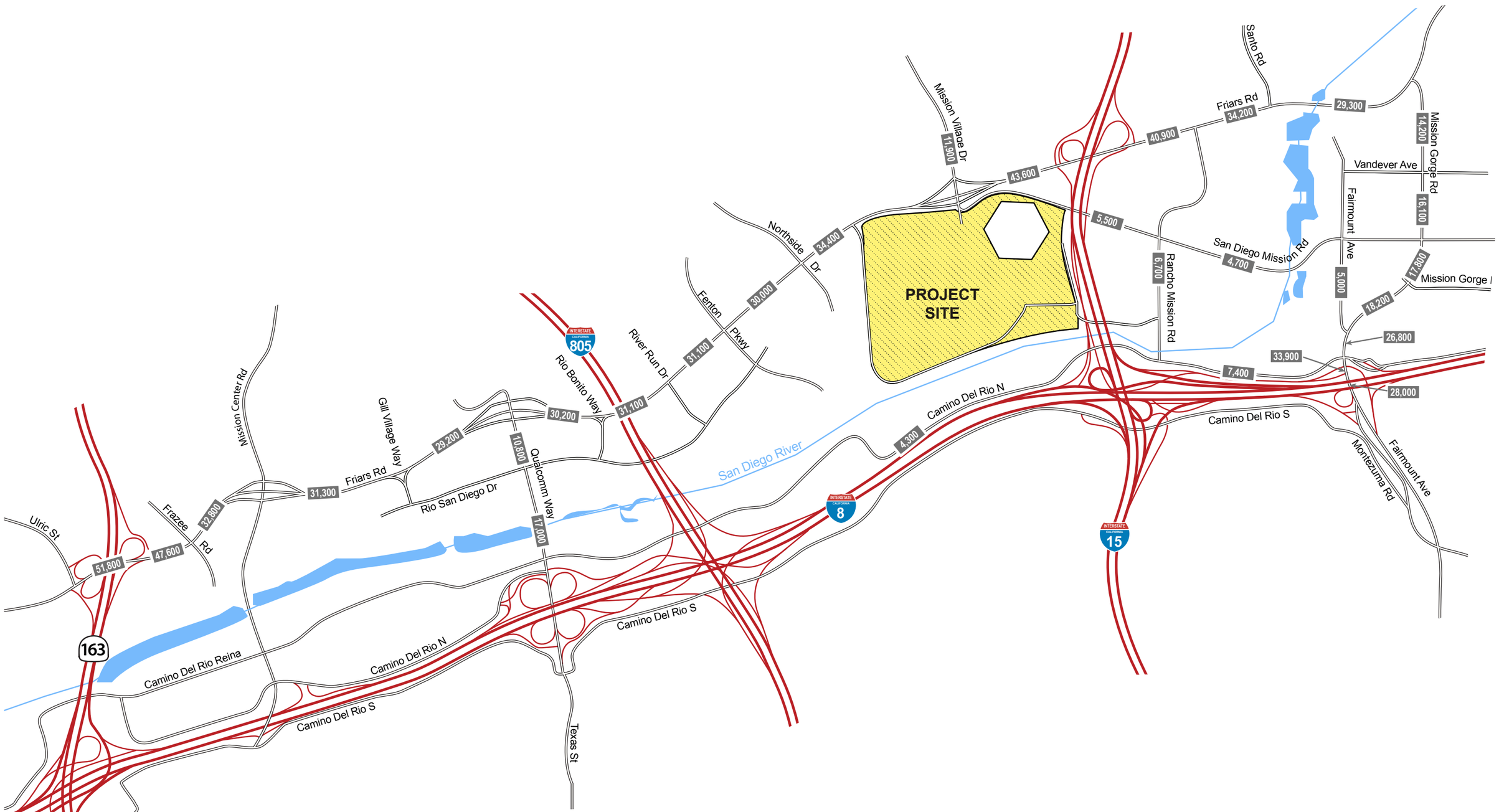

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

EXISTING ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-2B
PM: JR	PROJECT NO: 04102878-5939	

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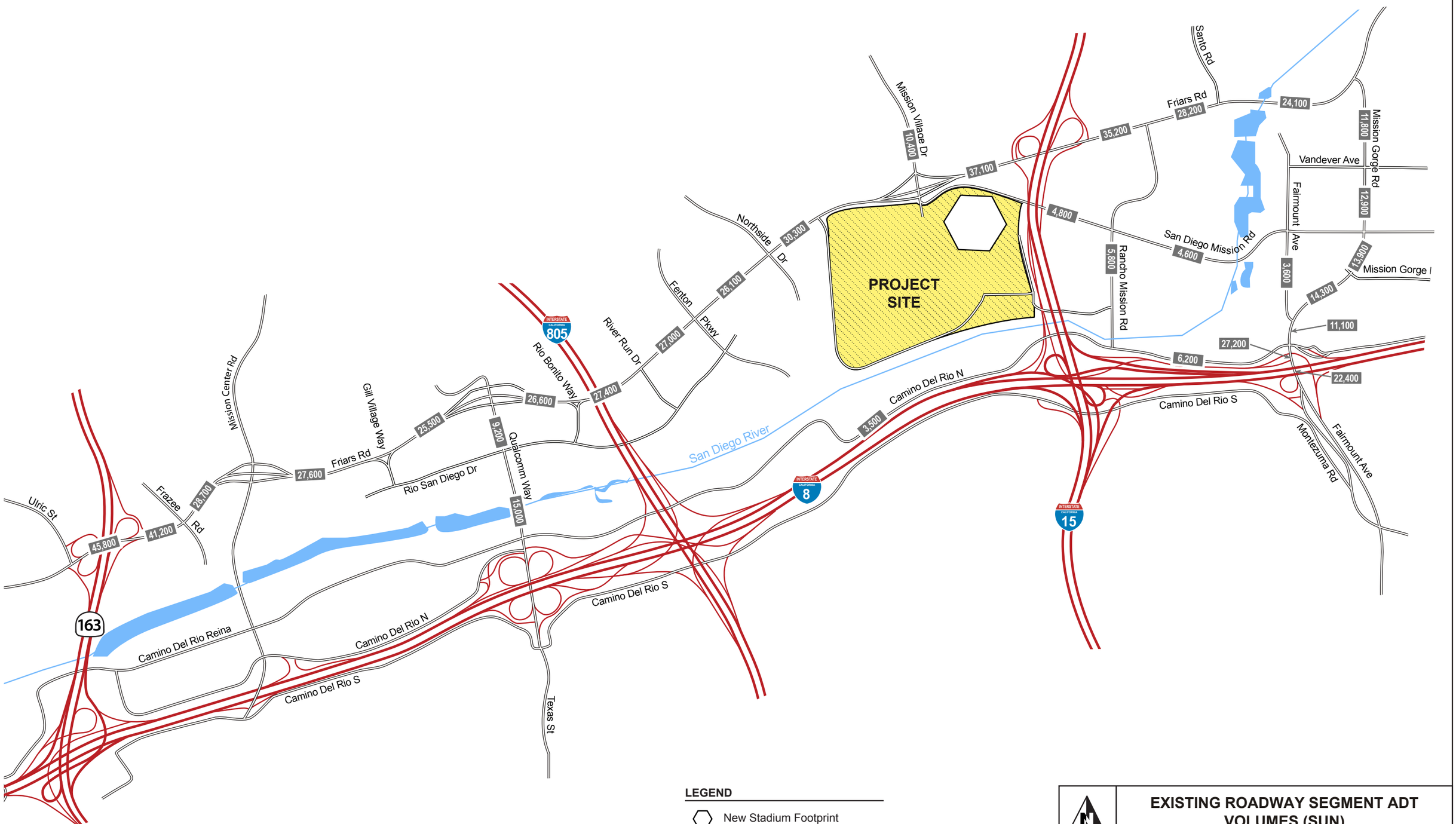

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

EXISTING ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM	CREATED BY: SV	DATE: July 2015	FIGURE 4-2C
	PM: JR	PROJECT NO: 04102878-5939	

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4.2 EXISTING TRAFFIC DATA

Existing traffic data was collected to establish the baseline condition to which the future conditions are built upon and compared. Vehicle counts were collected for the study intersections and roadway segments. In addition, freeway segment volumes were extracted from the Caltrans' Performance Management System (PeMS). Traffic counts are recorded on a typical weekday and aggregated into study peak hours (AM and PM) or Average Daily Traffic (ADT). In addition to weekday traffic counts, Saturday and Sunday counts were also collected for use in the weekend analysis requested by the City.

Peak hour turning movement volumes for study intersections and roadway segment ADT volumes were collected between July 1st 2015 and July 12th, 2015. AM peak hour is between 7:00 a.m. and 9:00 a.m. while PM peak hour is between 4:00 p.m. to 6:00 p.m. for both weekday and weekend scenarios.

Freeway and ramp traffic counts were collected from the PeMS database for the months of April and May of 2015. To verify the validity of the subset of data collected, a systematic comparative analysis of the available arterial traffic data from other projects in the vicinity of the Project was performed as part of the data collection process.

The daily roadway segment volumes and the AM/PM peak hour intersection turning movements are provided in **Appendix A**.

4.3 EXISTING CONDITIONS TRAFFIC ANALYSIS

Existing conditions analysis includes evaluations of the study area intersections, roadway segments, freeway segments and ramp meters following the methodologies outlined in **Section 2.1**.

4.3.1 Existing Conditions with No Games

Intersections

Table 4-2 summarizes the AM/PM peak hour intersection level of service (LOS) for existing conditions when no games are played. All intersections currently operate at LOS D or better during both AM and PM peak hours except the following:

- Fairmount Avenue / Alvarado Canyon Road - Operating at LOS F during weekday PM peak, LOS E during Saturday PM peak
- Frazee Road / Friars Road – Operating at LOS E during Saturday AM and PM peak

The detailed calculation worksheets for intersection existing conditions are provided in **Appendix B**.

Roadway Segments

Table 4-3 summarizes the roadway segment LOS for existing conditions when no games are played. All roadway segments currently operate at LOS D or better except for the following:

- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps (LOS E on weekdays)
- Friars Road from Frazee Road to SR-163 northbound ramps (LOS F on weekdays)
- Friars Road from SR 1-63 NB Ramps to SR-163 SB Ramps (LOS F on weekdays)

Freeway Segment

Table 4-4 summarizes the peak freeway segment operations for existing conditions when no games are played. All freeway segments currently operate at LOS D or better during AM and PM peak hours except the following:

- SB I-15 from Aero Drive to Friars Road (LOS E during weekday PM Peak)
- SB I-15 from Friars Road to I-8 (LOS E during weekday PM Peak)
- WB I-8 from I-15 to I-805 (LOS F during Weekday AM Peak)

- WB I-8 from Qualcomm Way to Mission Center Road (LOS F during weekday AM Peak)
- WB I-8 from Mission Center Road to SR-163 (LOS E during weekday AM Peak)

Ramp Meters

Table 4-5 summarizes the existing freeway ramp operations for existing peak hour conditions when no games are played. All study area ramp meters are calculated to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 NB: Friars Road On-ramp (PM peak)

Table 4-2
Intersection Analysis – Existing Conditions with No Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	8.1	A	15.5	B	9.5	A	8.9	A	8.7	A	7.7	A
2	Mission Gorge Rd	Twain Ave	19.4	B	23.6	C	13.9	B	13.4	B	13.0	B	12.6	B
3	Fairmount Ave	Twain Ave	13.9	B	14.5	B	12.6	B	12.3	B	13.0	B	12.3	B
4	Mission Gorge Rd	Fairmount Ave	22.7	C	23.4	C	23.7	C	54.5	D	22.6	C	20.6	C
5	Fairmount Ave	Alvarado Canyon Rd	47.0	D	82.7	**F**	29.8	C	60.1	**E**	42.5	D	20	B
6	Fairmount Ave	I-8 EB Ramps	12.2	B	41.5	D	17.6	B	14.8	B	18.7	B	16.1	B
7	Rancho Mission Rd	Friars Rd	17.6	B	15	B	14.1	B	13.9	B	12.5	B	15.6	B
8	Rancho Mission Rd	San Diego Mission Rd	32.6	C	27.5	C	18.1	B	17.8	B	19.1	B	17.6	B
9	Rancho Mission Rd	Ward Rd	10.7	B	14.4	B	11.0	B	10.6	B	10.4	B	9.7	A
10	Ward Rd	Camino Del Rio N	12.2	B	16.7	B	11.9	B	13.5	B	12.8	B	12.3	B
11	I-15 NB Ramps	Friars Rd	4.7	A	3.5	A	9.7	A	8.4	A	10.4	B	10.6	B
12	I-15 SB Ramps	Friars Rd	30.6	C	44.3	D	24.9	C	23.6	C	20.9	C	24.1	C
13	Mission Village Dr	Friars Rd WB	7.5	A	14	B	14.4	B	9.7	A	7.2	A	12.6	B
14	Mission Village Dr	Friars Rd EB	40.7	D	41.4	D	24.9	C	35.2	D	31.7	C	26.9	C
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.6	C	54.2	D	38.7	D	25.9	C	40.5	D	27.1	C
17	Fenton Pkwy	Friars Rd	17.8	B	29.8	C	26.2	C	21.9	C	32.2	C	25.8	C
18	Qualcomm Way	Friars Rd WB	16.1	B	20.8	C	17.7	B	15.3	B	16.6	B	19.1	B
19	Qualcomm Way	Friars Rd EB	16.6	B	21.7	C	6.5	A	5.7	A	9.7	A	5.8	A
20	Qualcomm Way	Camino De La Reina	15.2	B	25.2	C	19.5	B	18.9	B	18.3	B	16	B
21	Qualcomm Way	I-8 WB Ramps	18.3	B	35.7	D	38.8	D	18	B	22.7	C	19.4	B
22	Frazee Rd	Friars Rd	26.5	C	38.5	D	73.8	**E**	63.5	**E**	49.1	D	35.7	D
23	SR-163 NB Ramps	Friars Rd	11.0	B	15.2	B	21.8	C	11.8	B	19.4	B	12.9	B
24	Ulric St	SR-163 SB On-ramp	10.7	B	2.5	A	14.2	B	11.6	B	12.1	B	11.1	B
25	Ulric St	Friars Rd	22.0	C	33.5	C	30.6	C	23.3	C	25.2	C	44.9	D
26	Mission Center Rd	Friars Rd WB	9.1	A	11.3	B	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	8.5	A	12.6	B	--	--	--	--	--	--	--	--

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Table 4-3
Roadway Segment Analysis – Existing Conditions with No Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	17,788	0.59	C	14,153	0.47	C	11,798	0.39	B
2	Vandever Ave to Twain Ave	4	Collector	30,000	19,899	0.66	C	16,137	0.54	C	12,862	0.43	B
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	23,066	0.77	D	17,828	0.59	C	13,931	0.46	B
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	21,106	0.70	D	18,176	0.61	C	14,346	0.48	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	7,160	0.48	C	4,969	0.33	A	3,592	0.24	A
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	32,430	0.81	D	26,832	0.67	C	21,518	0.54	C
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	44,502	0.99	**E**	33,936	0.75	C	27,211	0.60	C
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	34,559	0.77	C	28,006	0.62	C	22,438	0.50	B
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	6,916	0.46	B	4,743	0.32	A	4,633	0.31	A
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	8,299	0.28	A	5,532	0.18	A	4,831	0.16	A
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	11,278	0.38	B	7,386	0.25	A	6,239	0.21	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	7,873	0.52	C	4,296	0.29	A	3,491	0.23	A
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	9,652	0.64	C	6,718	0.45	B	5,804	0.39	B
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	14,694	0.37	A	11,898	0.30	A	10,438	0.26	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	45,413	0.76	C	29,341	0.49	B	24,112	0.40	A
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	46,611	0.67	C	34,192	0.49	B	28,187	0.40	A
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	55,637	0.79	C	40,928	0.58	C	35,236	0.50	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	51,687	0.65	C	43,619	0.55	C	37,081	0.46	B
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	42,009	0.53	C	34,376	0.43	B	30,296	0.38	B
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	40,316	0.67	C	30,006	0.50	B	26,066	0.43	B
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	41,049	0.68	C	31,114	0.52	B	27,041	0.45	B
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	41,397	0.52	B	31,148	0.39	B	27,352	0.34	A
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	42,459	0.45	B	30,249	0.32	A	26,626	0.29	A
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	41,219	0.39	B	29,226	0.27	A	25,519	0.24	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	45,049	0.42	B	31,347	0.29	A	27,647	0.26	A
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	44,529	0.48	B	32,831	0.35	A	28,678	0.31	A
27	Frazee Rd to SR-163 NB Ramps	6	Primary Arterial	60,000	61,397	1.02	**F**	47,591	0.79	C	41,195	0.69	C
28	SR-163 NB Ramps to SR-163 SB Ramps	6	Primary Arterial	60,000	62,889	1.05	**F**	51,830	0.86	D	45,811	0.76	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	16,929	0.34	A	10,848	0.22	A	9,157	0.18	A
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	25,061	0.50	B	16,967	0.34	A	14,953	0.30	A

*Source: http://tfic.sandag.org/
1. 4L with no center lane or 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 4-4
Freeway Segment Analysis – Existing Conditions with No Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,798	0.87	D	6,386	0.71	C	3,480	0.39	A	3,670	0.41	A	2,088	0.23	A	2,089	0.23	A
Friars Rd to I-8	4	1	4	2	7,313	0.81	C	6,156	0.65	C	4,338	0.48	B	3,751	0.39	A	2,791	0.30	A	2,193	0.22	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,195	0.57	B	10,155	0.89	D	3,682	0.34	A	4,867	0.42	A	2,336	0.21	A	3,261	0.28	A
Fairmount Ave to I-15	4	0	4	0	3,830	0.50	B	6,413	0.83	D	2,235	0.29	A	2,692	0.34	A	1,641	0.21	A	2,185	0.28	A
I-15 to I-805	4	2	4	2	5,181	0.52	B	10,449	1.04	**F(0)**	3,104	0.31	A	5,399	0.53	B	2,165	0.22	A	3,683	0.36	A
I-805 to Qualcomm Way	4	0	4	0	3,700	0.48	B	7,248	0.92	D	1,966	0.25	A	3,603	0.46	B	1,450	0.19	A	2,556	0.32	A
Qualcomm Way to Mission Center Rd	5	0	4	1	4,830	0.50	B	9,152	1.05	**F(0)**	2,597	0.26	A	4,987	0.55	B	1,912	0.19	A	3,544	0.39	A
Mission Center Rd to SR-163	4	0	3	1	2,898	0.37	A	6,997	0.99	**E**	1,570	0.20	A	3,988	0.56	B	1,179	0.15	A	2,948	0.41	A
SR-163																						
Genesee Ave to Friars Rd	5	0	4	0	8,569	0.88	D	6,145	0.77	C	2,690	0.28	A	2,876	0.36	A	1,774	0.18	A	2,049	0.26	A
Friars Rd to I-8	3	4	4	0	7,655	0.72	C	6,585	0.85	D	2,351	0.22	A	2,963	0.38	A	1,545	0.14	A	2,233	0.29	A

Location	Number of Lanes				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,409	0.60	B	8,897	0.98	**E**	4,404	0.49	B	5,801	0.63	C	3,866	0.43	B	4,345	0.48	B
Friars Rd to I-8	4	1	4	2	5,957	0.66	C	9,052	0.97	**E**	5,252	0.58	B	6,206	0.64	C	4,787	0.53	B	4,756	0.49	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	9,795	0.89	D	7,385	0.64	C	7,356	0.66	C	6,555	0.56	B	6,719	0.60	B	5,396	0.46	B
Fairmount Ave to I-15	4	0	4	0	6,890	0.86	D	4,541	0.58	B	5,128	0.65	C	3,840	0.49	B	4,800	0.60	B	3,457	0.44	B
I-15 to I-805	4	2	4	2	8,989	0.89	D	7,864	0.77	C	7,348	0.73	C	7,157	0.70	C	6,969	0.69	C	5,851	0.57	B
I-805 to Qualcomm Way	4	0	4	0	6,607	0.86	D	5,230	0.67	C	5,305	0.69	C	4,942	0.63	C	4,520	0.58	B	4,072	0.52	B
Qualcomm Way to Mission Center Rd	5	0	4	1	9,196	0.94	**E**	7,741	0.89	D	7,441	0.77	C	7,309	0.85	D	7,101	0.73	C	6,143	0.70	C
Mission Center Rd to SR-163	4	0	3	1	5,409	0.71	C	6,094	0.87	D	4,224	0.53	B	5,626	0.80	C	4,079	0.51	B	4,756	0.68	C
SR-163																						
Genesee Ave to Friars Rd	5	0	4	0	7,515	0.77	C	6,710	0.86	D	5,586	0.57	B	4,841	0.61	B	5,861	0.60	B	3,670	0.46	B
Friars Rd to I-8	3	4	4	0	6,298	0.59	B	6,178	0.81	C	4,726	0.44	B	4,408	0.57	B	4,967	0.46	B	3,193	0.41	A

Source: Caltrans PeMS count data for month of April 2015.
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 4-5
Ramp Metering Analysis – Existing Conditions with No Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
Existing AM on Non-Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,237	562	Min:	516	46	5	1,150
						Max:	600	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	632	632	Min:	660	0	0	0
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	584	584	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	784	784	Min:	493	291	**35**	7,275
						Max:	996	0	0	0
Existing PM on Non-Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,347	612	Min:	386	226	**35**	5,650
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	651	651	Min:	660	0	0	0
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	964	964	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	997	997	Min:	493	504	**61**	12,600
						Max:	996	1	0	25

4.3.2 Existing Conditions with Games

Traffic conditions on game days at the project site vary from non-game days. This analysis considers the existing traffic conditions with games affecting both the AM and PM peak hours.

Game day trips were generated using average historic parking data and trolley ridership provided by the City. Onsite parking gate counts and regional trip patterns were utilized to devise the game day trip distributions. A detailed discussion of the methodology of game day trip generation and distribution is discussed in **Section 5.0**.

Intersections

Table 4-6 summarizes the peak hour intersection LOS for existing conditions with games and **Figure 4-3** shows the intersection turning movement volumes. All intersections currently operate at LOS D or better during both AM and PM peak hours except the following:

- Fairmount Avenue / Twain Avenue – LOS F during weekday PM Peak
- Fairmount Avenue / Alvarado Canyon Road – LOS F during weekday PM Peak, LOS E
- Rancho Mission Road / Ward Road – LOS E during weekday PM Peak
- I-15 SB Ramps / Friars Road – LOS F during weekday PM Peak
- Mission Village Drive / Friars Road WB – LOS E during weekday PM Peak
- Mission Village Drive / Friars Road EB – LOS F during weekday PM Peak, LOS F during Saturday PM Peak,
- Mission Village Drive / San Diego Mission Road – LOS F during weekday PM Peak, LOS F during Saturday PM Peak,
- Northside Drive / Friars Road – LOS F during weekday PM Peak, LOS F during Saturday PM Peak
- Fenton Parkway / Friars Road – LOS F during weekday PM Peak
- Qualcomm Way / Friars Road EB - LOS F during weekday PM Peak
- Frazee Road / Friars Road - LOS F during weekday PM Peak

The detailed calculation worksheets for intersection existing conditions are provided in **Appendix B**.

Roadway Segments

Table 4-7 summarizes the roadway segment operations for existing conditions with games and **Figure 4-4** shows the daily volumes. All roadway segments currently operate at LOS D or better except the following:

- Mission Gorge Road from Twain to Mission Gorge Place (LOS E on weekdays)
- Mission Gorge Road from Mission Gorge Place to Fairmount Avenue (LOS E on weekdays)
- Fairmount Avenue from Mission Gorge Road to Alvarado Canyon Road (LOS F on weekdays, LOS E on Saturdays)
- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps (LOS F on weekdays, LOS E on Saturdays)
- Fairmount Avenue from I-8 WB ramps to I-8 EB Ramps (LOS E on weekdays)
- San Diego Mission Road from Fairmount Avenue to Rancho Mission Road (LOS F on weekdays, Saturdays and Sundays)
- Friars Road from I-15 Ramps to Mission Village Drive (LOS F on weekdays, Saturdays and Sundays)
- Friars Road from Northside Drive to Fenton Parkway (LOS F on weekdays)

- Friars Road from Fenton Parkway to River Run Drive (LOS F on weekdays)
- Friars Road from Frazee Road to SR-163 NB Ramps (LOS F on weekdays, LOS E on Saturdays)
- Friars Road from SR-163 NB Ramps to SR-163 SB Ramps (LOS F on weekdays)

Freeway Segment Traffic Volume

Table 4-8 summarizes the freeway segment peak hour LOS for existing conditions with games. All freeway segments currently operate at LOS D or better during both AM and PM peak hours except the following:

- SB I-15 from Aero Drive to Friars Road (LOS F during weekday PM peak)
- SB I-15 from Friars Road to I-8 (LOS E during weekday PM peak)
- EB I-8 from I-15 to I-805 (LOS E during weekday PM peak)
- WB I-8 from I-15 to I-805 (LOS F during weekday AM peak)
- EB I-8 from Qualcomm Way to Mission Center Road (LOS F during weekday PM peak)
- WB I-8 from Qualcomm Way to Mission Center Road (LOS F during weekday AM peak)
- WB I-8 from Mission Center Road to SR-163 (LOS E during weekday AM peak)
- WB SR-163 from Genesee Avenue to Friars Road (LOS E during weekday PM peak)

Freeway Ramp Meters Traffic Volume

Table 4-9 summarizes the existing peak hour ramp metering operations for existing conditions with games days. All study area ramp meters are calculated to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 NB: Friars Road On-ramp (PM peak)

Table 4-6
Intersection Analysis – Existing Conditions with Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	8.1	A	25.1	C	9.5	A	10.8	B	7.1	A	8.4	A
2	Mission Gorge Rd	Twain Ave	19.4	B	26.4	C	13.9	B	13.8	B	12.5	B	41.5	D
3	Fairmount Ave	Twain Ave	13.9	B	162.7	**F**	12.6	B	44	D	21.1	C	57.3	**E**
4	Mission Gorge Rd	Fairmount Ave	22.7	C	36.7	D	23.7	C	47.7	D	26.6	C	100.6	**F**
5	Fairmount Ave	Alvarado Canyon Rd	47	D	119	**F**	29.8	C	79.8	**E**	22.7	C	180.8	**F**
6	Fairmount Ave	I-8 EB Ramps	12.2	B	39.8	D	17.6	B	26.4	C	21	C	32	C
7	Rancho Mission Rd	Friars Rd	17.6	B	14.8	B	14.1	B	12.5	B	17.8	B	15.5	B
8	Rancho Mission Rd	San Diego Mission Rd	32.6	C	48.7	D	18.1	B	24.6	C	23.3	C	42.7	D
9	Rancho Mission Rd	Ward Rd	10.7	B	37.8	**E**	11	B	15.8	C	10.5	B	11.7	B
10	Ward Rd	Camino Del Rio N	12.2	B	25.8	C	11.9	B	15.5	B	13.6	B	13.8	B
11	I-15 NB Ramps	Friars Rd	4.7	A	5.7	A	9.7	A	8.6	A	19.9	B	319.6	**F**
12	I-15 SB Ramps	Friars Rd	30.6	C	170.1	**F**	24.9	C	124.9	**F**	25.9	C	96	**F**
13	Mission Village Dr	Friars Rd WB	7.5	A	69.8	**E**	14.4	B	37.9	D	18.5	B	30.3	C
14	Mission Village Dr	Friars Rd EB	40.7	D	405.5	**F**	24.9	C	381.1	**F**	49.4	D	308.6	**F**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.6	C	189.5	**F**	38.7	D	93.8	**F**	21.7	C	54.1	D
17	Fenton Pkwy	Friars Rd	17.8	B	133	**F**	26.2	C	53.1	D	21.8	C	135.3	**F**
18	Qualcomm Way	Friars Rd WB	16.1	B	36.8	D	17.7	B	34.4	C	7.9	A	36.7	D
19	Qualcomm Way	Friars Rd EB	16.6	B	135.6	**F**	6.5	A	29.2	C	7.9	A	4.4	A
20	Qualcomm Way	Camino De La Reina	15.2	B	37.5	D	19.5	B	22.9	C	7.6	A	17.4	B
21	Qualcomm Way	I-8 WB Ramps	18.3	B	20.4	C	38.8	D	25.6	C	8.9	A	171.1	**F**
22	Frazee Rd	Friars Rd	26.5	C	82	**F**	73.8	**E**	42.3	D	25.4	C	37.7	D
23	SR-163 NB Ramps	Friars Rd	11	B	12.6	B	21.8	C	20.4	C	9.6	A	65.6	**E**
24	Ulric St	SR-163 SB On-ramp	10.7	B	12.9	B	14.2	B	11.6	B	8.6	A	11.1	B
25	Ulric St	Friars Rd	22	C	34.5	C	30.6	C	36.4	D	18.8	B	36.5	D
26	Mission Center Rd	Friars Rd WB	9.1	A	11.3	B	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	8.5	A	12.6	B	'--	--	--	--	--	--	--	--

Table 4-7
Roadway Segment Analysis – Existing Conditions with Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	19,900	0.66	C	15,900	0.53	C	13,600	0.45	B
2	Vandever Ave to Twain Ave	4	Collector	30,000	22,000	0.73	D	17,900	0.60	C	14,600	0.49	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	27,400	0.91	**E**	21,400	0.71	D	17,500	0.58	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	25,400	0.85	**E**	21,700	0.72	D	17,900	0.60	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	11,400	0.76	D	8,500	0.57	C	7,100	0.47	C
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	47,400	1.19	**F**	39,300	0.98	**E**	34,000	0.85	D
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	56,600	1.26	**F**	44,000	0.98	**E**	37,300	0.83	D
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	41,700	0.93	**E**	33,900	0.75	C	28,400	0.63	C
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	19,800	1.32	**F**	15,400	1.03	**F**	15,300	1.02	**F**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	21,900	0.73	D	16,800	0.56	C	16,100	0.54	C
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	13,400	0.45	B	9,200	0.31	A	8,000	0.27	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	7,900	0.53	C	4,300	0.29	A	3,500	0.23	A
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	11,100	0.74	D	7,900	0.53	C	7,000	0.47	B
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	15,400	0.39	B	12,500	0.31	A	11,000	0.28	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	49,000	0.82	C	32,300	0.54	B	27,100	0.45	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	50,200	0.72	C	37,200	0.53	B	31,100	0.44	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	61,300	0.88	D	45,700	0.65	C	40,000	0.57	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	81,300	1.02	**F**	68,200	0.85	D	61,600	0.77	D
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	67,000	0.84	D	55,100	0.69	C	51,000	0.64	C
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	65,300	1.09	**F**	50,700	0.85	D	46,800	0.78	C
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	66,000	1.10	**F**	51,800	0.86	D	47,800	0.80	C
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	66,400	0.83	D	51,900	0.65	C	48,100	0.60	C
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	67,400	0.72	C	51,000	0.55	C	47,300	0.51	B
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	54,100	0.51	B	39,900	0.37	A	36,200	0.34	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	57,900	0.54	C	42,000	0.39	B	38,300	0.36	A
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	57,400	0.62	C	43,500	0.47	B	39,300	0.42	B
27	Frazee Rd to SR-163 NB Ramps	6	Primary Arterial	60,000	74,200	1.24	**F**	58,200	0.97	**E**	51,900	0.87	D
28	SR-163 NB Ramps to SR-163 SB Ramps	6	Primary Arterial	60,000	65,700	1.10	**F**	54,200	0.90	D	48,200	0.80	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	29,100	0.58	C	20,900	0.42	B	19,200	0.38	A
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	37,200	0.74	C	27,000	0.54	B	25,000	0.50	B

*Source: http://tfic.sandag.org/
1. 4L with no center lane or 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 4-8
Freeway Segment Analysis – Existing Conditions with Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,798	0.87	D	6,386	0.71	C	3,480	0.39	A	3,670	0.41	A	2,088	0.23	A	2,575	0.28	A
Friars Rd to I-8	4	1	4	2	7,313	0.81	C	6,156	0.65	C	4,338	0.48	B	3,751	0.39	A	3,007	0.33	A	2,193	0.22	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,195	0.57	B	10,155	0.89	D	3,682	0.34	A	4,867	0.42	A	2,336	0.21	A	3,513	0.30	A
Fairmount Ave to I-15	4	0	4	0	3,830	0.50	B	6,413	0.83	D	2,235	0.29	A	2,692	0.34	A	1,785	0.23	A	2,185	0.28	A
I-15 to I-805	4	2	4	2	5,181	0.52	B	10,449	1.04	**F(0)**	3,104	0.31	A	5,399	0.53	B	2,309	0.23	A	3,683	0.36	A
I-805 to Qualcomm Way	4	0	4	0	3,700	0.48	B	7,248	0.92	D	1,966	0.25	A	3,603	0.46	B	1,450	0.19	A	2,556	0.32	A
Qualcomm Way to Mission Center Rd	5	0	4	1	4,830	0.50	B	9,152	1.05	**F(0)**	2,597	0.26	A	4,987	0.55	B	2,200	0.22	A	3,544	0.39	A
Mission Center Rd to SR-163	4	0	3	1	2,898	0.37	A	6,997	0.99	**E**	1,570	0.20	A	3,988	0.56	B	1,467	0.18	A	2,948	0.41	A
SR-163																						
Genesee Ave to Friars Rd	5	0	4	0	8,569	0.88	D	6,145	0.77	C	2,690	0.28	A	2,876	0.36	A	1,774	0.18	A	2,355	0.30	A
Friars Rd to I-8	3	4	4	0	7,655	0.72	C	6,585	0.85	D	2,351	0.22	A	2,963	0.38	A	1,761	0.16	A	2,467	0.32	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,452	0.60	B	10,674	1.17	**F(0)**	4,445	0.49	B	7,251	0.79	C	6,245	0.68	C	4,393	0.48	B
Friars Rd to I-8	4	1	4	2	6,746	0.74	C	9,071	0.97	**E**	5,897	0.65	C	6,224	0.64	C	4,809	0.53	B	5,813	0.59	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	9,817	0.89	D	8,306	0.71	C	7,377	0.67	C	7,306	0.62	B	7,952	0.71	C	5,421	0.46	B
Fairmount Ave to I-15	4	0	4	0	7,416	0.93	D	4,554	0.58	B	5,558	0.70	C	3,852	0.49	B	4,814	0.60	B	4,161	0.53	B
I-15 to I-805	4	2	4	2	9,515	0.94	**E**	7,877	0.77	C	7,777	0.77	C	7,169	0.70	C	6,984	0.69	C	6,556	0.64	C
I-805 to Qualcomm Way	4	0	4	0	6,607	0.86	D	5,230	0.67	C	5,305	0.69	C	4,942	0.63	C	4,520	0.58	B	4,072	0.52	B
Qualcomm Way to Mission Center Rd	5	0	4	1	10,249	1.04	**F(0)**	7,766	0.89	D	8,300	0.85	D	7,333	0.85	D	7,130	0.73	C	7,553	0.85	D
Mission Center Rd to SR-163	4	0	3	1	6,462	0.84	D	6,120	0.87	D	5,083	0.64	C	5,650	0.81	C	4,108	0.52	B	6,166	0.87	D
SR-163																						
Genesee Ave to Friars Rd	5	0	4	0	7,542	0.78	C	7,829	1.00	**E**	5,611	0.57	B	5,754	0.72	C	7,359	0.75	C	3,701	0.47	B
Friars Rd to I-8	3	4	4	0	7,108	0.67	C	7,053	0.92	D	5,390	0.51	B	5,124	0.66	C	6,134	0.57	B	4,273	0.55	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 4-9
Ramp Metering Analysis – Existing Conditions with Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
Existing AM on Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,237	562	Min:	516	46	5	1,150
						Max:	600	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	632	632	Min:	660	0	0	0
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	584	584	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	784	784	Min:	493	291	**35**	7,275
						Max:	996	0	0	0
Existing PM on Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,392	633	Min:	386	247	**38**	6,175
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	651	651	Min:	660	0	0	0
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	984	984	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,017	1017	Min:	493	524	**64**	13,100
						Max:	996	21	1	525

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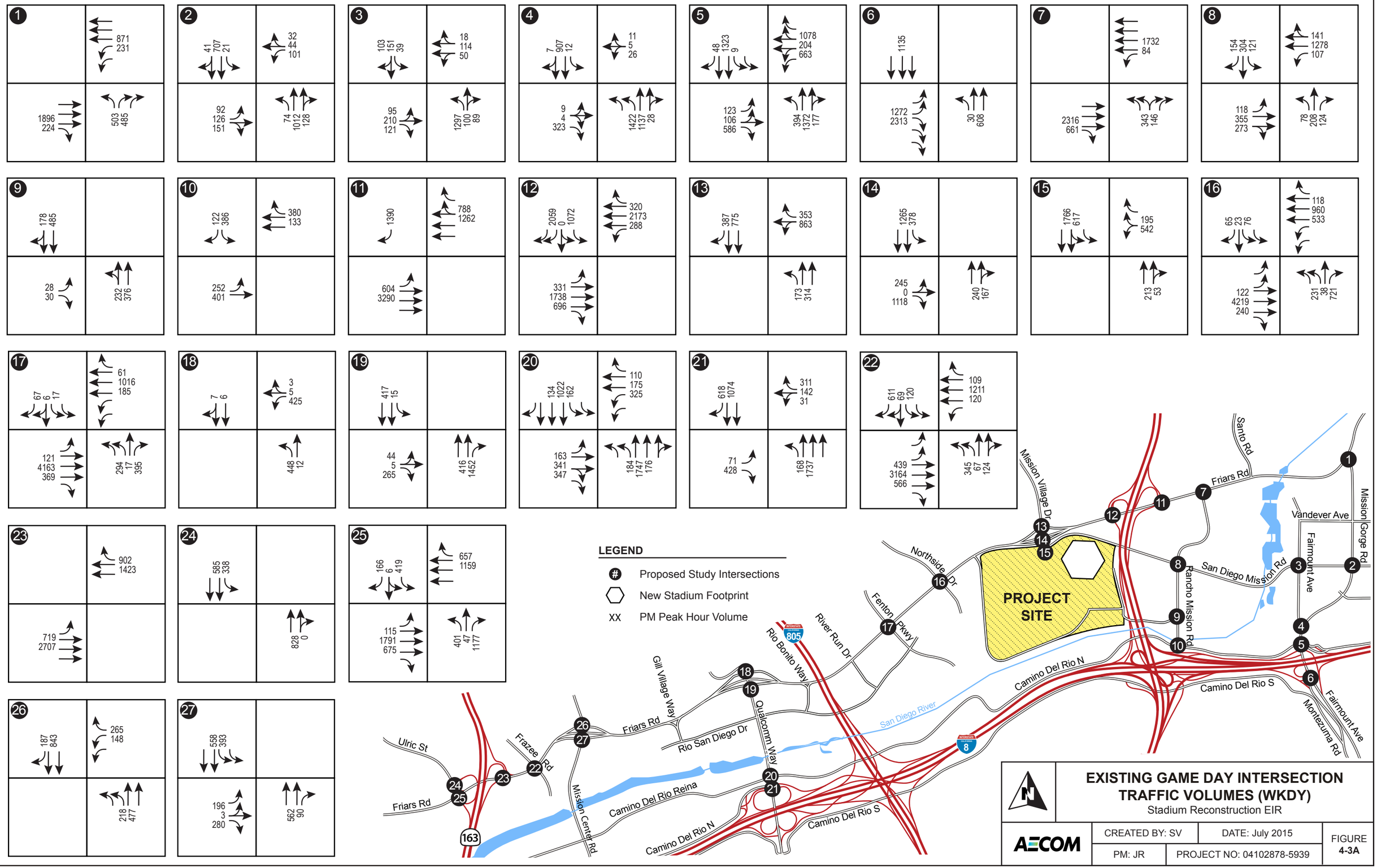

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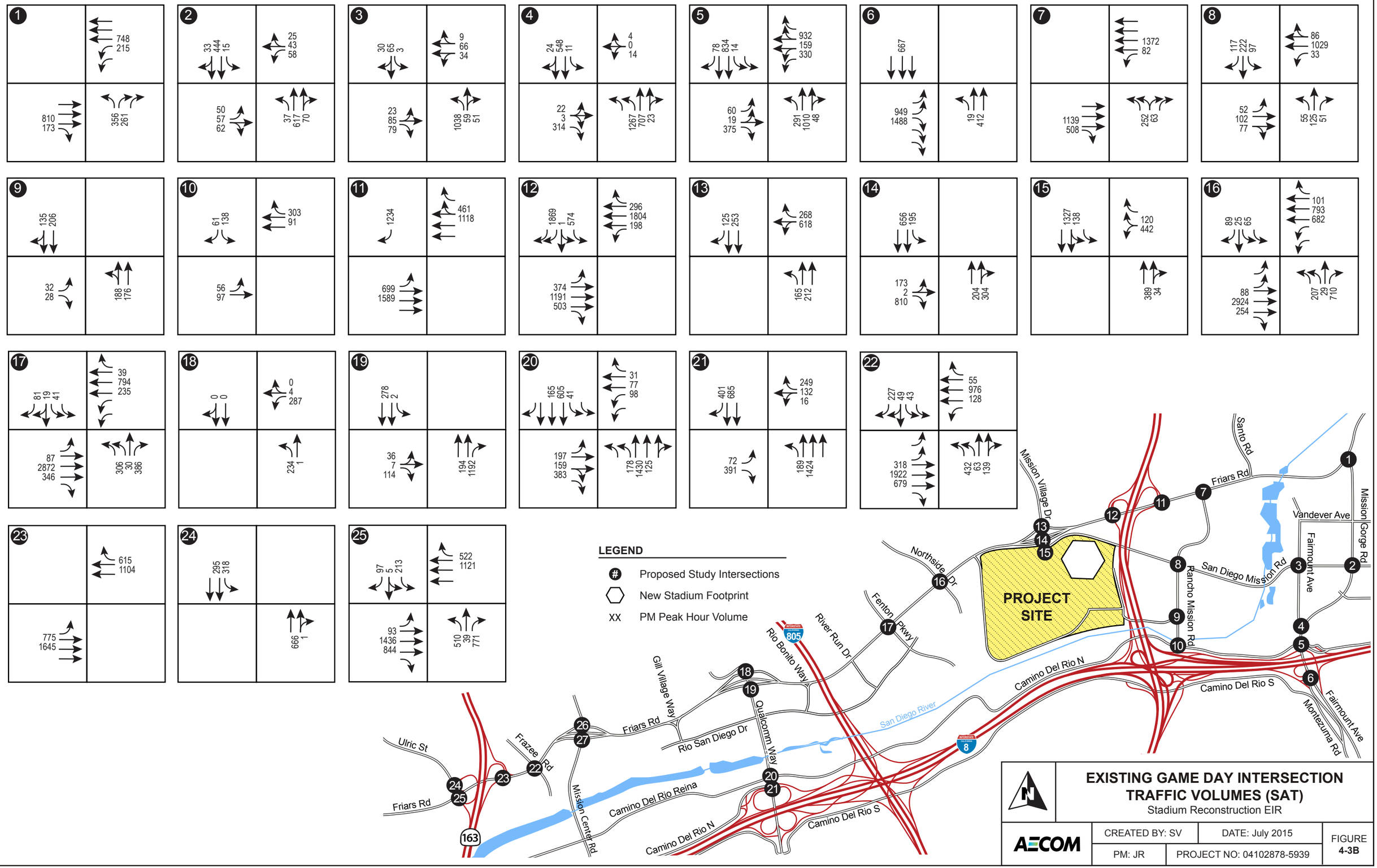

EXISTING GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-3B
PM: JR	PROJECT NO: 04102878-5939	

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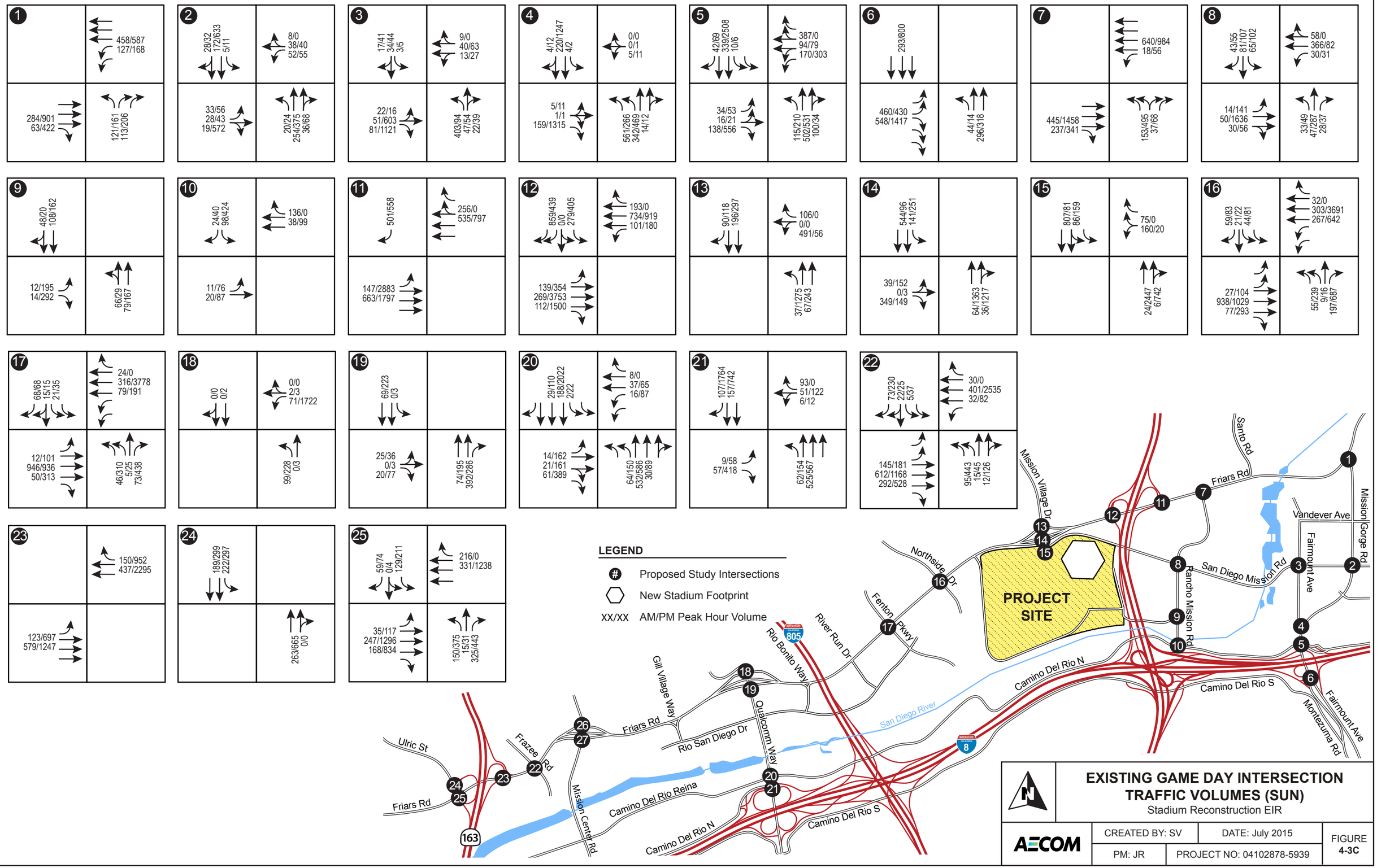

EXISTING GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM	CREATED BY: SV	DATE: July 2015	FIGURE 4-3C
	PM: JR	PROJECT NO: 04102878-5939	

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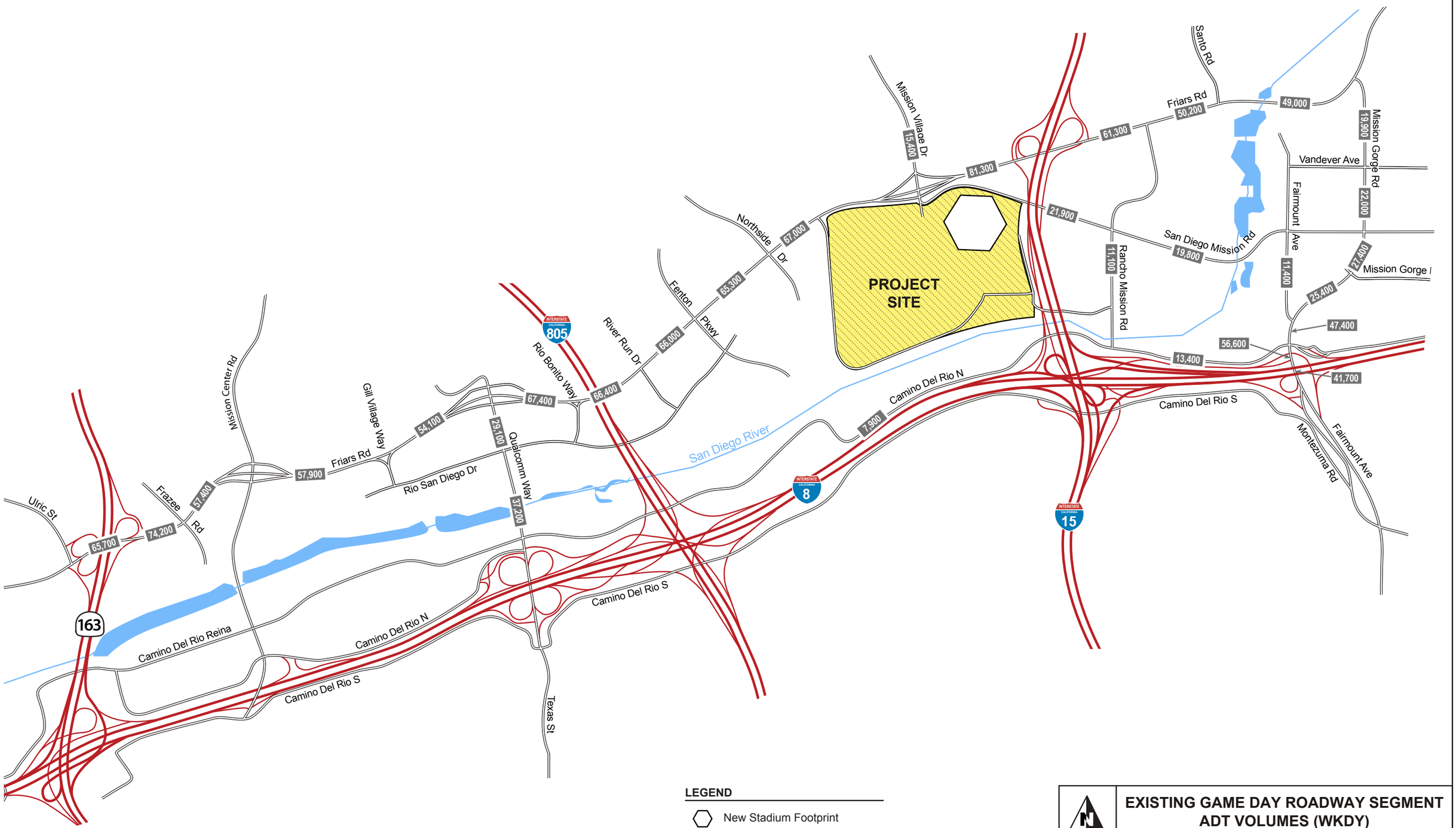

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

EXISTING GAME DAY ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-4A
PM: JR	PROJECT NO: 04102878-5939	

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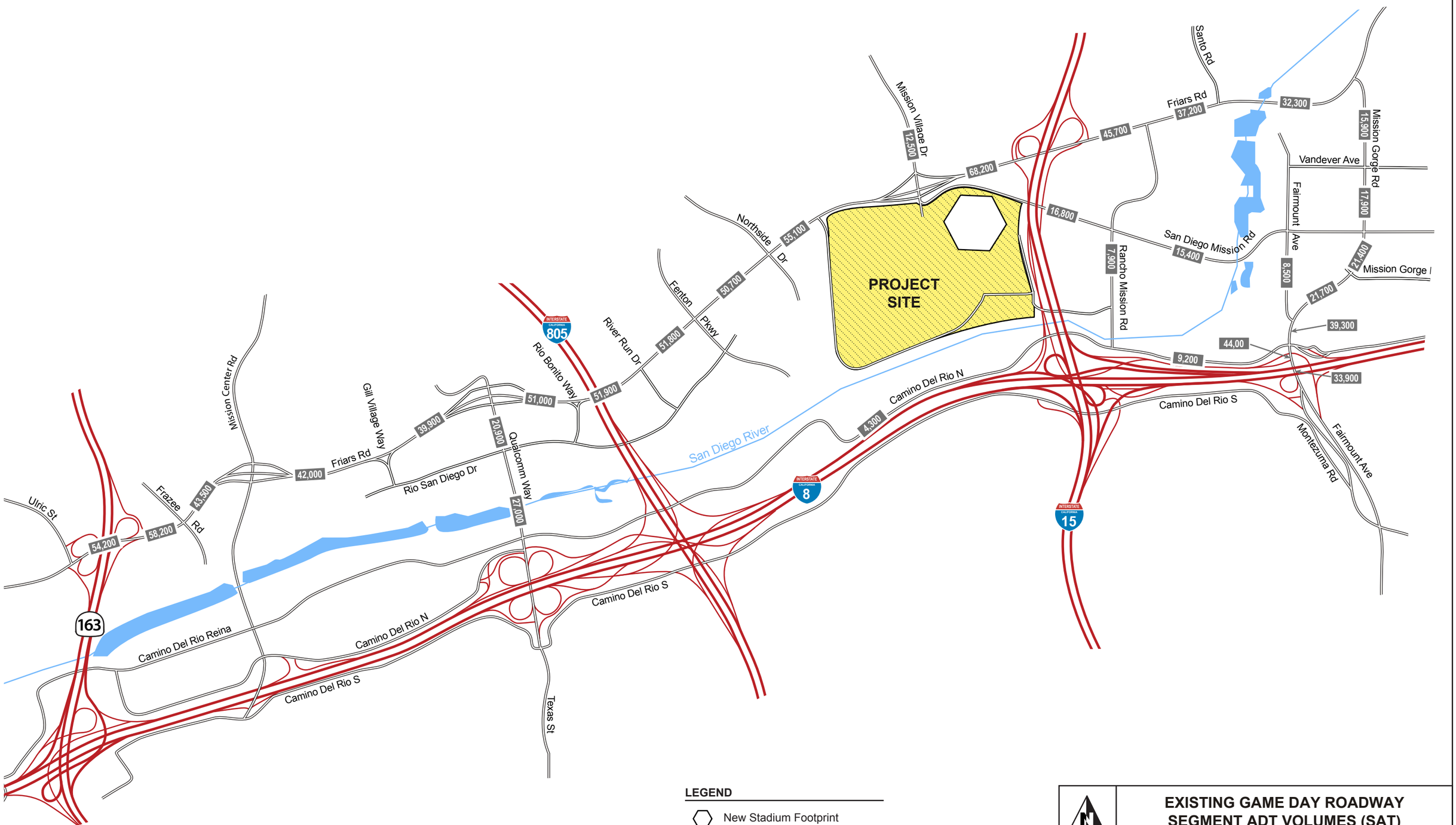

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

EXISTING GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-4B
PM: JR	PROJECT NO: 04102878-5939	

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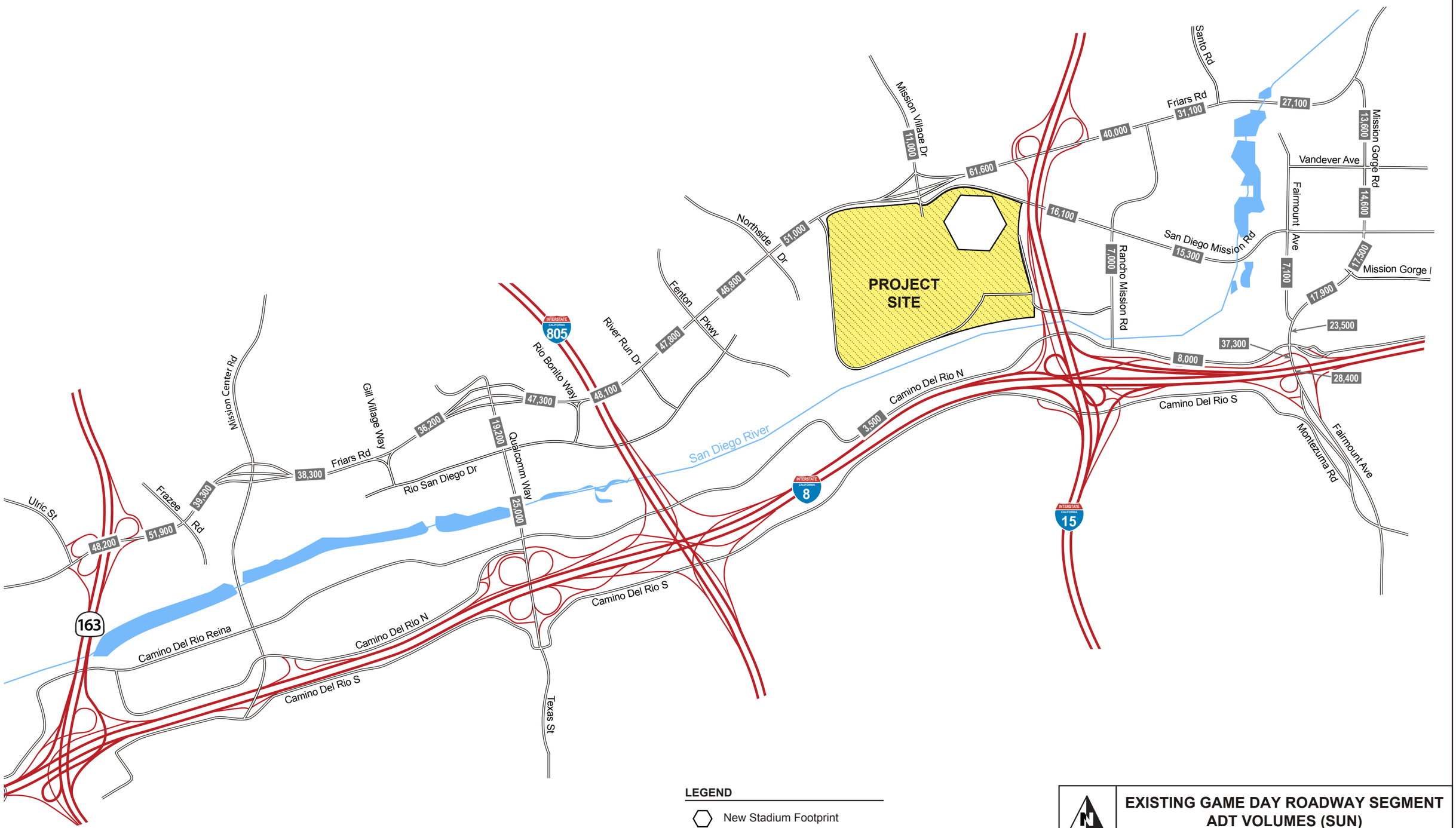

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

EXISTING GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-4C
PM: JR	PROJECT NO: 04102878-5939	

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4.4 EXISTING MOBILITY AND ALTERNATIVE TRANSPORTATION

4.4.1 Existing Transit Service

Local transit service to the project area is provided by the San Diego Metropolitan Transit System (MTS) in the form of trolley (light rail) and fixed route bus services. Regional rail transit service is provided by North County Transit District (NCTD) and Amtrak. The existing transit service is shown in **Figure 4-5**.

Trolley

The project area is served directly by one trolley transit line provided by MTS, the Green Line. Service is provided on 15-minute headways during the weekday commute and varies from 15 to 20 minutes headways on the weekend mid-day hours. On game days, pre-game operations typically have 5 minute headways from the west and 7.5 minute headways from the east. Post-game the westbound headway is 4 minutes and eastbound headway is 7.5 minutes. The Green Line provides service from Downtown San Diego to the City of Santee every day from approximately 5:00 am to midnight. The Green Line runs along I-8 and has a trolley stop at Qualcomm Stadium within the project site located at Gate 2. Each train can hold approximately 450 to 600 passengers with a throughput capacity of about 11,000 passengers per hour (20 arrivals per hour; 12 from the west, 8 from the east).

Many of the stadium patrons ride the trolley for both NFL and San Diego State Aztecs football games. Approximately 22-28% of NFL game attendees ride the trolley to the project site. In 2014, the highest ridership for a NFL game was 17,838 for the Chargers vs. New England Patriots game on December 7, 2014. Patrons attending San Diego State Aztecs game also ride the trolley to the project site. During the academic year when students are on campus, approximately 12-15% of total attendance for Aztecs games travel by trolley. Other special events such as the Sky Show fireworks display also attracts a large trolley population. The Sky Show is a post-football (Aztecs) game event that occurs once a year. The highest ridership for the Sky Show in 2014 was 6,337 riders on November 8, 2014. The highest ridership noted was during the 2003 Super Bowl game at more than 32,000 riders (MTS) (San Diego Union Tribune 2015).

On game days, increased frequency and longer trains help get attendees to and from the stadium. Headways during pre-game operations are generally 5 minutes for trains in the westbound direction and 7.5 minutes for trains in the eastbound direction. Extra service begins running approximately **3 hours** before events begin. Attendees can use any of the Green Line Park & Ride locations, or transfer to the Green Line from the Orange Line at Grossmont Center or from the Blue Line at 12th & Imperial.

Bus

MTS Bus Route 14 travels near the project site. The closest bus stop is located at Rancho Mission Road and San Diego Mission Road approximately 0.5 mile walk from Gate 1. Bus Route 14 connects to Grantville Trolley Station, SDSU Transit Center and 70th Street Trolley Station and other MTS bus routes.

Charter Bus and Shuttle Service

Private charter bus companies provide direct round-trip service from San Diego County, Orange County and Riverside County Locations. Express charter bus services also offer roundtrip bus transportation to all NFL pre-season and regular season home games, including Monday and Thursday night games. It is anticipated that private shuttles would continue to offer service to the new stadium. A typical charter bus has approximately 55 seats.

Regional Rail

Connections from regional rail services to the Green Line Trolley are provided at Old Town Station. Game day and non-game day service remains the same on all regional rail lines. **Figure 4-6** provides a regional map depicting the regional transit connections to the project site.

NCTD Coaster

The North County Transit District (NCTD) Coaster commuter train provides service to eight stations between the City of Oceanside and downtown San Diego. Service is provided on 30-minute headways during the weekday commute and one hour headways on the weekends. Access to the project site requires a transfer at the Old Town Station to the MTS Green Line trolley to Qualcomm Stadium.

Amtrak Pacific Surfliner

The Amtrak Pacific Surfliner provides service from Los Angeles to downtown San Diego. Trains are scheduled with approximately every hour on the weekdays and every 1.5 hours on the weekends. Access to the project site requires a transfer to the MTS Green Line Trolley at the Old Town Station to the Project site.

Taxi

A designated drop-off and pick-up area off-site for taxi services is provided outside the stadium. It is located on San Diego Mission Road near the Main Gate entrance. Attendees walk to the project site once they are dropped off at the drop-off area.

4.4.2 Existing Bicycle Facilities

Several bicycle lanes and bicycle paths are located in the vicinity of the project site.

Class I Bike Paths

Class I bike paths or multi-use paths are paved right-of-way for exclusive use by bicyclists, pedestrians and those using non-motorized modes of travel. They are separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way.

- Murphy Canyon Bike Path – a multi-use Class I bicycle path that continues from the Qualcomm Stadium parking lot to the residential neighborhoods in the north.
- Qualcomm Way - from Friars Road extending into the University Heights neighborhood.

Class II Bike Lanes

Class II bike lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel. Bike lanes are one-way facilities on either side of a roadway.

- Camino Del Rio North – A class II bike lane from Qualcomm Way to Fairmount Avenue on both sides of the roadway.
- Fenton Parkway – Class II bike lane from south of Friars Road to terminus located at the Fenton Parkway Trolley Station.
- Friars Road – Class II bicycle lane on both north and south sides of the roadway from SR-163 interchange connecting to Mission Gorge Road Class II bike lane.
- Mission Village Drive – A Class II facility from San Diego Mission Road to Ronda Avenue.
- San Diego Mission Road – Class II bike lane from Ward Road to Fairmount Avenue.

Class III Bike Route

Class III bike routes provide shared use with motor vehicle traffic within the same travel lane. Designated by sign but no striping, Class III bike routes provide continuity to other bike facilities or designate preferred routes through corridors with high demand.

- Mission Village Drive – Class III bicycle lane from Ronda Avenue to Ruffin Road

Onsite Bicycle Parking

Bicycle parking is also provided on the project site. Twelve bicycle lockers and one wave-style bicycle rack is provided on the lower level of the Qualcomm trolley station and one toast-style bicycle rack is provided for 40 bicycles in the southeastern corner of the parking lot on a concrete median adjacent to the motorcycle parking.

The existing bicycle facilities within the study area are shown on **Figure 4-7**. See **Appendix C** for excerpts from the San Diego Master Bicycle Plan.

Legend
Bus
Rapid service
Regular service *
Limited service •
Rail
Blue Line Trolley
Green Line Trolley
Orange Line Trolley
SPRINTER
COASTER
Other Symbols
Route number
Major bus transfer stop
Rail station
Park & Ride lot
Paid parking
Point of interest
Airport
One-way direction of travel
* Regular service: Operates at a frequency of every 60 minutes or better throughout most of the day on weekdays. Service may be less frequent or may not operate at night or on weekends or holidays.
• Limited service: Operates only selected trips or on certain days. See route timetable for more details.
Serra Mesa
Linda Vista
Kaiser Hospital
Health Center Dr
Sharp Memorial Hospital
Rady Children's Hospital
Mission San Diego de Alcalá
Qualcomm Stadium
Mission Valley Center
UCSD Medical Center
Scripps Mercy Hospital
San Diego State University
City Heights
Fashion Valley P Transit Center 6, 20, 25, 41, 88, 120, 928, Green Line
rena/ da Vista P Green Line
Washington treet 0, Green Line
Hazard Center Green Line
Rio Vista Green Line
Mission Valley Center 6, Green Line
Fenton Parkway Green Line
Qualcomm Stadium P Green Line
Mission San Diego 14, Green Line
Grantville P 13, 14, 18, Green Line
Boulevard Transit Plaza 1, 60, 170, 215, 235
Mission Gorge Rd
Princess View Dr
Waring Rd
Zion Av
Rainier Av
Friars Rd
Rancho Mission Rd
SD Mission Rd
Alvarado Canyon Rd
Camino del Rio North
Camino del Rio South
Camino de la Reina
Camino del Este
Fenton Pkwy
Rio San Diego Dr
Qualcomm Way
Frazee Rd
Murray Ridge Rd
Mission Village Dr
Gramercy Dr
Stonecrest Bl
Mission Center Rd
Linda Vista Rd
Ulric St
Comstock St
Fashion Valley Rd
Hotel Circle North
Hotel Circle South
Fort Stockton Dr
Lewis St
Arbor Dr
Front St
Washington St
Park Bl
Texas St
30th St
Adams Av
University Av
El Cajon Bl
Aldine Dr
Fairmount Av
Montezuma Rd
Collwood Bl
Monroe Av
Mission Gorge Rd
Linda Vista Rd
College Dr
Mesa College
163
120
25
928
805
44
110
280
290
20
41
235
60
14
13
18
15
8
6
88
170
11
2
215
1
83
3
10
7
955
965
EXISTING TRANSIT SERVICE
Stadium Reconstruction EIR
AECOM
CREATED BY: SV
DATE: July 2015
PM: JR
PROJECT NO: 04102878-5939
FIGURE 4-5
K:\2015\San Diego Qualcomm Stadium EIR\Figures.ai

Source: MTS

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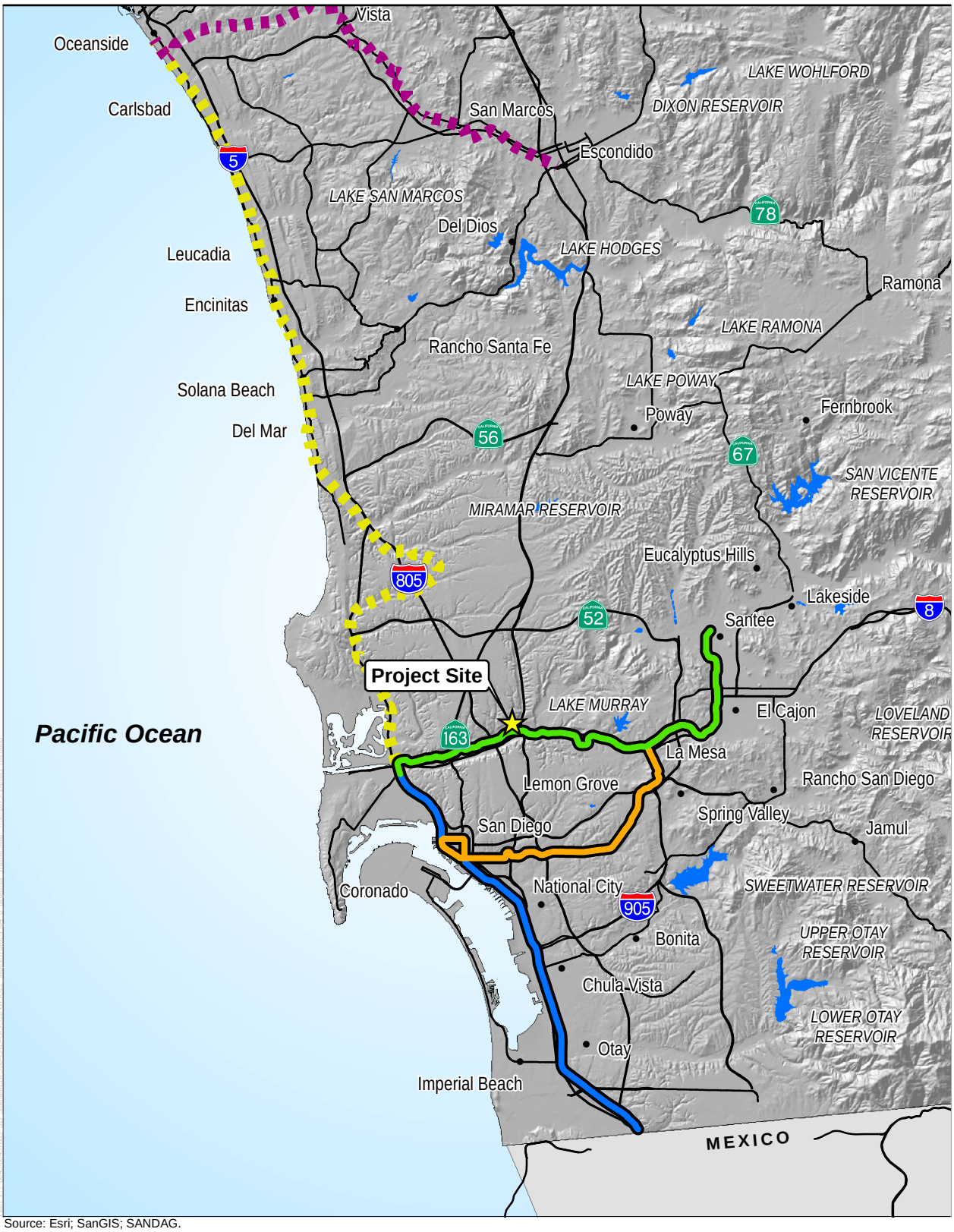

Source: Esri; SanGIS; SANDAG.

6 3 0 6 Miles

Scale: 1:380,160; 1 inch = 6 miles

Figure 4-6
Regional Transit

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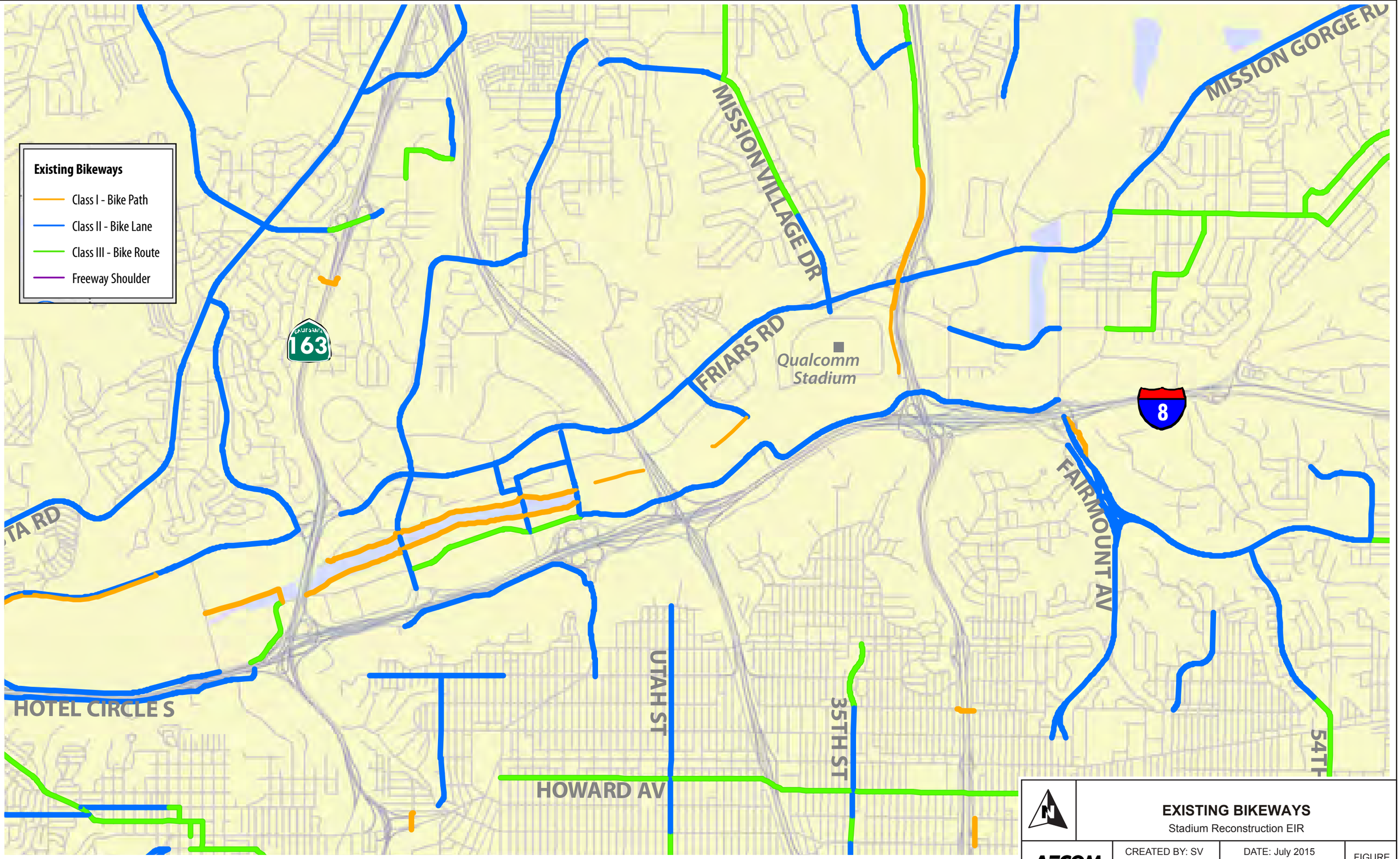

Source: City of San Diego Bicycle Master Plan, 2013

EXISTING BIKEWAYS

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 4-7
PM: JR	PROJECT NO: 04102878-5939	

K:\2015\San Diego Qualcomm Stadium EIR\Figures.ai

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4.4.3 Existing Pedestrian Facilities

The following streets provide the primary pedestrian linkages to Qualcomm stadium from the surrounding neighborhood. Pedestrians can access the project site at any of the entrance and exit gates.

- Friars Road – Friars Road provides the most pedestrian access to the stadium. Gates 1 and 4 both have pedestrian access along Friars Road. Sidewalks are located on the south side of the roadway.
- Rancho Mission Road – Rancho Mission Road is a residential street that connects directly to Gate 2/Bus Gate. There are sidewalks on both sides of the streets and crosswalks are provided to the project site.
- San Diego Mission Road – San Diego Mission Road provides pedestrian access to Gate 1 and has a continuous sidewalk on the south side of the roadway.
- Mission Village Drive – Mission Village Drive leads directly to the main gate. Although Mission Village Drive is on an incline, attendees traveling from the neighborhood north of the project site can walk down the hill and enter the Project site through the Main Gate. Pedestrian crosswalks are provided on Mission Village Drive and San Diego Mission Road.
- Murphy Canyon Bike Path – The Murphy Canyon Bike path is a multi-use recreational trail that permits both pedestrian and bicycle access.

All signalized intersections have crosswalks and signal heads with pushbutton actuators for pedestrians. See **Appendix C** for excerpts from the City of San Diego Pedestrian Master Plan.

4.5 EXISTING PARKING FACILITIES

Currently, the parking lot has approximately 18,870 parking spaces. Within the parking lot, there are areas designated for bus parking, RVs, and tailgating. A family lot (alcohol not permitted) with 120 spaces is provided north of Friars Road with access from Mission Village Drive. Figure 4.10-6 includes a map of the existing parking lot included in the Chargers Transportation Guide for the 2014 NFL Season.

Parking for attendees arriving after the start of a stadium event or later can also be accommodated on the practice field located in the southwestern corner of the parking lot. Approximately 700 cars can be accommodated utilizing a stacked parking configuration.

Employee parking is provided off-site at 2931 Camino Del Rio N, San Diego, CA 92108 and provides enough space for 1,000 vehicles. A circulating shuttle provides transportation to and from the employee parking lot and the project site.

Adjacent to the Project site are parking facilities that serve as overflow parking for the existing Qualcomm Stadium during events. Along the MTS Green Trolley Line, there are several park and ride lots that provide 4,345 free spaces and paid parking spaces in addition to the existing onsite parking lot. **Table 4-10** includes the free and paid park and ride lots along the Trolley Green Line.

Additional park and ride lots are located along both the Blue and Orange Trolley lines that can be used by attendees transferring to the Green Line Trolley to travel to the Project site. Parking availability within 10 trolley stops of Qualcomm Stadium is included in the **Table 4-11**.

Available free parking spaces within 10 station stops from Qualcomm Station on the Orange Trolley Line total 1,670 spaces. The MTS Trolley System Map is included in **Figure 4-9** displaying the available park and ride lots on each of the trolley routes.

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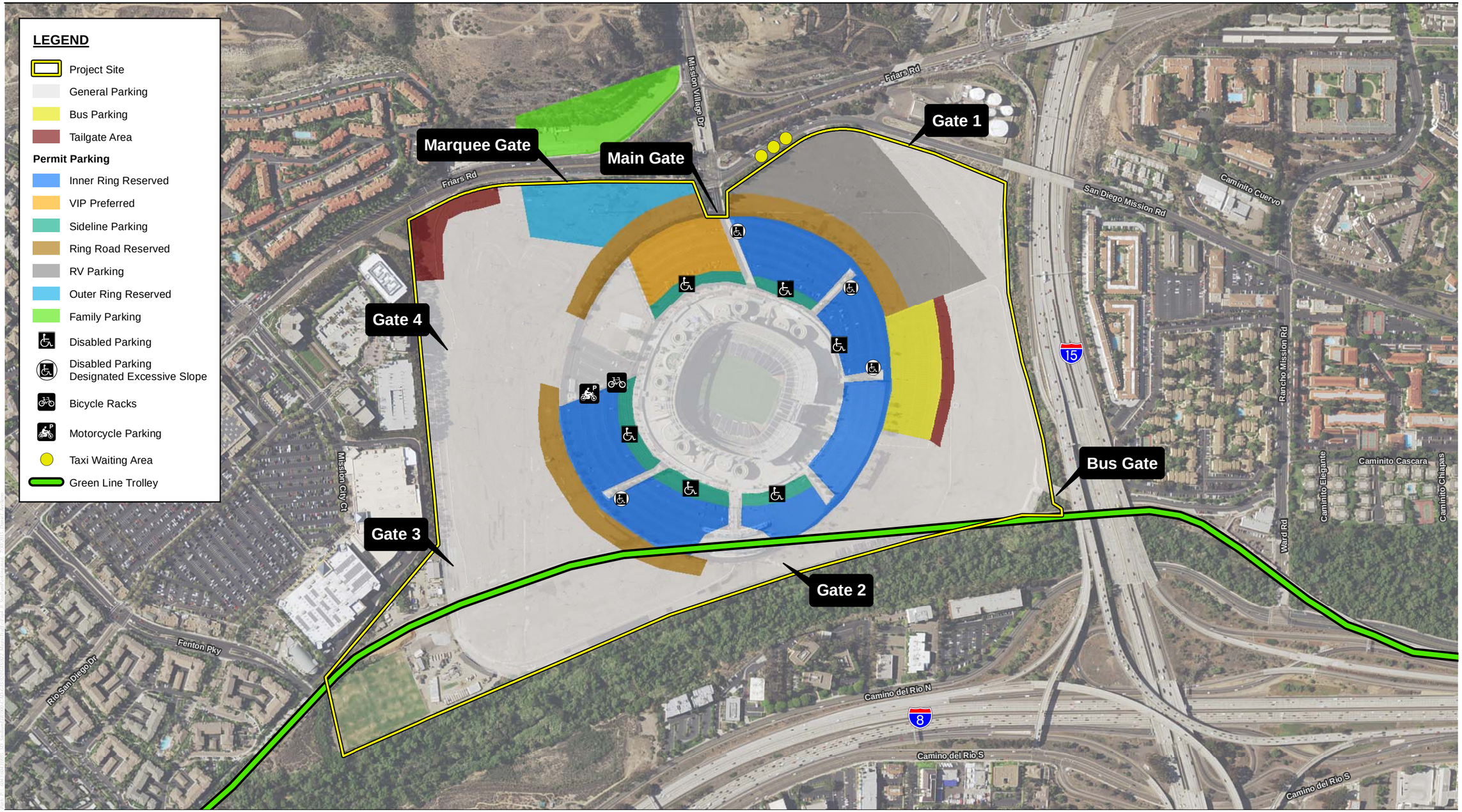

Source: NAIP 2014; SANDAG.

500 250 0 500 Feet

Scale: 1 = 6,000; 1 inch = 500 feet

Figure 4-8
Existing Stadium Parking Access and Configuration

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Table 4-10
Green Line Park and Ride Facilities

Station	Parking Spaces	Trip Time to Stadium in minutes
12th & Imperial	Paid parking; some street parking	31
Gaslamp Quarter	Paid parking	29
Convention Center	Paid parking	27
Seaport Village	Street parking	25
Santa Fe Depot	Nearby paid parking	23
County Center / Little Italy	No free parking	22
Middletown	No free parking	20
Washington St.	Paid parking	18
Old Town	412 free spaces + 350 overflow spaces (additional parking at Caltrans at 4050 Taylor St.)	14
Morena/Linda Vista	199 free spaces (do not park at the YMCA)	11
Fashion Valley	63 free spaces (specified Trolley parking areas only)	8
Hazard Center	1,500 free spaces (during special events & games only; lower level only)	6
Mission Valley Center	Street parking only	4
Rio Vista	Paid parking at Marriott Hotel	3
Fenton Parkway	Limited street parking	1
Qualcomm Stadium	+5,000, not during major events.	
Mission San Diego	Limited street parking	2
Grantville	238 (+300 in two overflow lots open during events)	4
SDSU	Several pay parking lots with some street parking	8
Alvarado Medical Center	Limited street parking	11
70th Street	118	13
Grossmont Transit Center	220	17
Amaya Drive (La Mesa)	236	19
El Cajon Transit Center	469	23
Arnele Avenue (El Cajon)	65	25
Gillespie Field	175	29
Santee	Shared parking with Santee Trolley Square shopping center	32

Source: MTS

Table 4-11
Orange Line Park and Ride Facilities near Qualcomm Stadium Station

Station	Address	Parking Spaces Available
Encanto / 62nd Street	6249 Akins Dr.	158 free spaces
Massachusetts Avenue	1787 San Altos Pl.	241 free spaces
Lemon Grove Depot	3443 Main St.	22 free spaces
Spring Street	4250 Spring St.	324 free spaces
La Mesa Blvd.	8248 La Mesa Blvd.	No free parking
Grossmont Transit Center	8601 Fletcher Pkwy.	220 free spaces (construction project in progress)
Amaya Drive	9100 Amaya Dr.	236 free spaces
El Cajon Transit Center	352 S. Marshall Ave.	469 free spaces

Figure 4-9
San Diego MTS Trolley System Map

5.0 TRAFFIC FORECASTING AND TRIP GENERATION

This section describes the traffic forecasting and trip generation procedures under the Existing Year (2015), Construction and Demolition Year (2019), and Project Build Out Year (2035) conditions.

5.1 TRAVEL DEMAND MODEL

The SANDAG Series 12 Traffic Volume Forecast was developed based on the population and employment information from the 2050 Regional Transportation Plan (RTP) completed in 2011. Models for forecast years 2015 and 2035 were adopted for the purpose of this traffic study to establish the traffic demand used for these analyses. The adjusted AM peak hour, PM peak hour and ADT volumes from the SANDAG model were used to forecast traffic volumes for the future scenarios.

Model Post-Processing

To ensure the accuracy of regional model results at the project level (i.e. at specific arterial intersections or roadway segments), it was necessary to make further adjustments based on existing data to the model results to more closely replicate travel conditions.

Future traffic volume post-processing relied on existing counts and model growths at each corresponding link extracted from the aforementioned model for forecast year 2015 and 2035. The model growths at the link level are applied to existing volumes for roadway and freeway segments, as well as for intersection approach and departure legs. All post-processed volumes are reviewed and appropriate adjustments are made to reflect local area land uses and known travel patterns.

For traffic projections in analysis year 2019 under Project Construction and Demolition conditions, annual growth rates were calculated assuming a linear traffic growth between years 2015 and 2035. For weekend traffic volume forecasting, model growths are adjusted to match existing relationships between weekday and weekend traffic volumes at the study locations.

5.2 TRIP GENERATION

The trip generation analysis used the City of San Diego Trip Generation Manual as guidance for this discussion and used existing as well as forecast data to develop trip generation figures.

In order to assess the level of service and significant impact analysis, trip generation for weekday game days were assessed to capture the most severe traffic impacts. Existing game day trip generation was calculated using parking gate counts, trolley ridership, and recent attendance data from past games. Future trip generation was estimated based on projected event frequency and attendance, the reduction of on-site parking spaces, and the implementation of the Transportation Demand Management (TDM) plan.

Average attendance to major NFL games at Qualcomm Stadium is approximately 65,000 and the most recent NFL games have been approximately 68,000. The majority of stadium attendees travel to the Project site by automobile, followed by trolley, express shuttle service, and lastly by other modes of transportation including taxi, bus, bicycling or walking.

There are currently 18,870 parking spaces available on-site. It should be noted that around 1,000 to 3,000 spaces are rendered unusable during major stadium events with the existing parking lot and site plan configuration due to event tents, tailgating activities, media zones, and increased bus/shuttle parking.

NFL games, especially weekday night games, are the worse-case scenario for traffic impacts. Therefore, the discussion will focus on NFL games as all other stadium events would not be as impacting.

Mode Split

Table 5-1 summarizes existing transportation mode split which was derived using the following assumptions:

- Transportation modal splits were derived based on historic game day parking gate counts from ACE Parking and trolley ridership from MTS.
- The vehicle occupancy rate was estimated based on existing parking data and occupancy rates used for similar stadiums and venues in California. Vehicle occupancy rate for weekday game days is assumed to be 2.7 persons per vehicle and 3.0 persons per vehicle for weekend game days. Data suggests that attendees are more likely to carpool on weekends than on weekdays. This assumption is consistent with the vehicle occupancy rates observed at similar venues in other parts of California.
- Attendees are more likely to ride the Trolley to weekend games than to weeknight games. On typical weeknights, there is a significant commuter ridership base leaving less space available for event goers.

Table 5-1
Modal Splits for Existing Conditions

Day of Week	Event Attendee						Stadium Personnel			
	Auto	Shuttle/ Charter Bus	Taxi/ Drop Off	Walk/Bike	Transit	Total	Car	Offsite Shuttle	Transit	Total
Transportation Modal Split (Person Trips)										
Weekday	63%	13%	1%	1%	22%	100%	57%	29%	14%	100%
Weekend	56%	14%	1%	1%	28%	100%	60%	29%	11%	100%
Trip Generation (Person Trips)										
Weekday	42,600	9,000	700	700	15,000	68,000	2,000	1,000	500	3,500
Weekend	38,100	9,500	700	700	19,000	68,000	2,100	1,000	400	3,500
Trip Generation (Vehicle Trips)										
Weekday	15,800	200	300	0	0	16,300	1,300	100	0	1,400
Weekend	12,700	200	200	0	0	13,100	1,400	100	0	1,500
Vehicle Occupancy Rate										
Weekday	2.7	45	2.7	--	--	--	1.5	20	--	--
Weekend	3.0	45	3.0	--	--	--	1.5	20	--	--

Automobile Trips

Automobile trips refer to passenger cars parking on-site. Attendees could either drive alone (single occupancy) or with other family or friends in a carpool (multiple occupancy). The occupancy rate of each passenger car parking onsite determines the number of attendees that travel to the games by automobile. Weekday vehicle occupancy is expected to be lower as attendees would be less likely to carpool than on weekends. A major event with an attendance of 68,000 attendees is anticipated to generate approximately of 15,800 automobile trips on weekdays and a total of 12,700 automobile trips on weekends, prior to implementation of the Transportation Demand Management (TDM) Plan. See **Section 8.0** for detailed discussion of the TDM.

Game day personnel are also anticipated to arrive to the project site via automobile trips. Approximately 1,000 spaces for employee parking are provided off-site, however there are a number of employees who would park onsite. These game day personnel are less likely to carpool as they would arrive several hours before kickoff. The average vehicle occupancy rate for game day personnel automobile vehicles is assumed to be 1.5 persons per car for both weekday and weekend game days. These personnel auto trips total approximately 1,300 auto trips on weekday games and 1,400 auto trips on weekend games.

Transit Trips

Transit trips include trolley trips and other transit connections made to the trolley. The MTS Trolley Green Line services the project site in the southern portion of the parking lot and provides the most direct transit access. Bus Route 14 services the project area, but attendees who ride the bus to the Project site must walk an additional ½ mile to the Project site and are considered as pedestrians arriving to the project site. Assuming an average game day attendance of 68,000 people, approximately 15,000 transit trips are generated on weekday games and approximately 19,000 transit trips on weekend game days.

Game day personnel also take the trolley to work from throughout the city and region. The number of game day personnel transit trips was calculated based on the onsite parking data provided by ACE parking and the limited number of employee parking spaces located offsite. It was calculated that the remainder of the game day personnel would travel to the project site using transit.

Bike and Walk Trips

Some attendees from the surrounding neighborhoods could reasonably bike or walk to the Project site, although considered to be a minimal number. Approximately 1% of the event attendee trips or 700 people are estimated to bike or walk to the project site on both weekday and weekend game days.

A very small number of employees bike or walk to the Project site on weekday and weekend game days, so much so that when rounding those figures it amounts to zero person trips. Therefore, these person trips were not represented in Table 5-1.

Taxi/Drop Off

Taxi and drop off trips refer to attendees who travel to the Project site by taxi or other ride-sharing services or by passenger cars that do not park on-site. A taxi/drop off area is located off-site along San Diego Mission Road and Mission Village Drive. The number of taxi or drop off trips to this area is expected to be minimal as this intersection is very congested before events with automobiles queuing to enter the Main Gate. Approximately 1% of the attendees are anticipated to travel to the Project site by taxi or at the drop-off area. A major event with an attendance of 68,000 attendees is anticipated to generate approximately 200-300 vehicle trips on weekdays and weekends.

Shuttle/Charter Bus trips

Shuttle and charter bus trips include private charter buses or shuttles that pick up attendees from specific locations throughout the region before the game day event, park on-site for the duration of the event and depart after the event. Approximately 100 parking spaces for these vehicles are available onsite. The number of trips currently generated by shuttle and charter bus is approximately 9,000 person trips on weekday games and 9,500 person trips on weekends.

Offsite Shuttle

Game day personnel also use an offsite shuttle to travel to and from the employee parking lot located offsite. This shuttle drops off employees onsite and does not park onsite before, during or after the game. Many of these trips occur several hours before the peak period and before the game event ends. Approximately 1,000 parking spaces are provided on the offsite employee parking lot.

Future Trip Generation

Future game day vehicle trip generation to and from the site is anticipated to decrease from existing trip generation due to the implementation of the TDM. During the events in which the parking demands are to exceed capacity, a modal shift is anticipated since attendees are expected to seek alternative modes of transportation.

In estimating mode split under Project conditions, the maximum trolley capacity was used as a constraint in limiting the number of attendees that can shift from driving and parking on-site to riding the Trolley. The modal split and trips generated for all future scenarios assume trolley ridership would reach a conservative capacity rate of 20,000 riders on weekday game days and 23,000 riders on weekend game days.

Table 5-2 represents the modal split for all future conditions including new stadium construction, Qualcomm Stadium demolition and future horizon year.

Approximately 36,600 auto trips are expected on weekday game days and 33,100 auto trips are expected on weekend game days under future Project scenarios. Overflow vehicles would be directed to off-site parking sites and shuttles would be provided between the off-site parking sites and the Project site. These shuttles would be circulating between the parking sites and the Project site and would not be parking on-site.

Table 5-2

Modal Splits for All Future Conditions

Day of Week	Event Attendee						Stadium Personnel			
	Car	Shuttle/ Charter Bus	Taxi/ Drop Off	Walk/ Bike	Trolley	Total	Car	Shuttle	Trolley	Total
Transportation Modal Split (Person Trips)										
Weekday	54%	15%	1%	1%	29%	100%	50%	36%	15%	100%
Weekend	49%	15%	1%	1%	34%	100%	53%	36%	12%	100%
Trip Generation (Person Trips)										
Weekday	36,600	10,000	700	700	20,000	68,000	1,800	1,300	400	3,500
Weekend	33,100	10,500	700	700	23,000	68,000	1,800	1,300	400	3,500
Trip Generation (Vehicle Trips)										
Weekday	13,600	200	300	0	0	14,100	1,200	100	0	1,300
Weekend	11,000	200	200	0	0	11,400	1,200	100	0	1,300
Vehicle Occupancy Rate										
Weekday	2.7	45	2.7	--	--	--	1.5	20	--	--
Weekend	3.0	45	3.0	--	--	--	1.5	20	--	--

Table 5-3 summarizes the daily vehicle trip generation under existing and Project conditions on both weekday and weekend game days. **Table 5-4** includes the AM and PM peak hour trip generations (inbound/outbound) for existing and Project conditions with games.

Table 5-3
Daily Vehicle Trip Generation on Game Days (Inbound and Outbound)

Day of Week	Auto (veh)	Shuttle / Charter Bus (veh)	Total Trips (PCE)
Existing			
Weekday	34,700	500	35,700
Weekend	28,600	500	29,600
Construction Phase			
Weekday	30,000	700	31,400
Weekend	25,000	600	26,200
Demolition Phase			
Weekday	30,000	800	31,600
Weekend	25,000	600	26,200
Project Build Out			
Weekday	30,000	600	31,200
Weekend	25,000	600	26,200

Note: Total daily trips were calculated using an assumed Passenger Car Equivalent (PCE) of 2 and rounded to the nearest 100 trips.

Arrival and Departure

Attendees and personnel travel to the project site for games at a range of times starting from more than five hours prior to kick off to as late as less than one hour prior to kickoff. It is not uncommon for the parking lot to be full approximately two hours before kickoff. Attendee arrival distribution for Qualcomm Stadium is typical of stadiums of similar size and type and the approximate times of arrival used for other similar stadiums were applied to the project site. In consultation with ACE Parking, vehicle arrival and departure patterns from a similar use site was assumed for the analysis. **Table 5-5** provides an estimate on the distribution of when attendees arrive at the project site for game days.

Table 5-4
Peak Hour Vehicle Trip Generation on Game Days

Day of Week	Peak Hour	Project Site						Off-Site Parking					
		Auto (Veh)		Bus/ Shuttle (Veh)		Total Trips (PCE)		Auto (Veh)		Bus/ Shuttle (Veh)		Total Trips (PCE)	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Existing													
Weekday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	6,322	164	131	0	6,580	160	0	0	0	0	0	0
Saturday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	5,097	147	138	0	5,370	150	0	0	0	0	0	0
Sunday	AM	1,777	0	10	0	1,800	0	0	0	0	0	0	0
	PM	181	8,431	0	189	180	8,810	0	0	0	0	0	0
New Stadium Construction													
Weekday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	5,161	164	171	27	5,500	220	450	0	27	27	500	50
Saturday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	4,450	147	151	0	4,750	150	0	0	0	0	0	0
Sunday	AM	1,544	0	13	0	1,570	0	0	0	0	0	0	0
	PM	181	7,352	0	211	180	7,770	0	0	0	0	0	0
Qualcomm Stadium Demolition													
Weekday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	4,759	164	208	64	5,170	290	1,068	0	64	64	1,200	130
Saturday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	4,450	147	151	0	4,750	150	0	0	0	0	0	0
Sunday	AM	1,544	0	13	0	1,570	0	0	0	0	0	0	0
	PM	181	7,352	0	211	180	7,770	0	0	0	0	0	0
New Stadium Build Out													
Weekday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	5,453	164	144	0	5,740	160	0	0	0	0	0	0
Saturday	AM	0	0	0	0	0	0	0	0	0	0	0	0
	PM	4,450	147	151	0	4,750	150	0	0	0	0	0	0
Sunday	AM	1,544	0	13	0	1,570	0	0	0	0	0	0	0
	PM	181	7,352	0	211	180	7,770	0	0	0	0	0	0

Note: Shuttle and buses are converted to passenger-car equivalents (PCE of 2) when calculating total trips. Total trips are rounded to the nearest 10s.

Table 5-5
Weekday Game Day Trip Arrival and Departure Patterns

Hours Prior to Kick-Off / After Game	Event Attendee		Stadium Personnel	
	Auto	Shuttle / Charter Bus	Auto	Shuttle / Charter Bus
Arrival Pattern				
>4 hours	14%	0%	90%	90%
3-4 hours	14%	2%		
2-3 hours	14%	5%		
1-2 hours	19%	28%	10%	10%
< 1 hours	39%	65%	0%	0%
Departure Pattern				
During Game	10%	10%	10%	10%
< 1 hours	65%	80%	40%	40%
1-2 hours	25%	10%	50%	50%

Source: ACE Parking July 2015,

Table 5-6 and **Table 5-7** indicate the number of inbound trips to the Project site that arrive within the peak traffic analysis periods on weekdays and weekends and therefore would cause the most impact to the transportation system. The most impacted study analysis period is 4:00 p.m. – 5:00 p.m. on weekdays and 5:00 p.m. – 6:00 p.m. on Saturdays before the start of the game and 4:30 p.m. – 5:30 p.m. on Sundays after the game.

As shown in the table, attendee arrival time periods overlap with both the weekday and weekend traffic analysis periods. The increased demands on the roadway network during these analysis periods have the most critical impacts to the study area transportation network. The trips generated from the worst peak hour for weekday, Saturday and Sunday were used for the intersection peak hour analyses.

Table 5-6
Weekday Game Trip Generations during Analyzed Peak Hours

Hours Prior to Kick-Off / After Game	Total Trips		Weekday	
	Auto	Shuttle / Charter Bus	5 PM Game Time	7 PM Game Time
Arrival Pattern				
>4 hours	2,480	10	12 - 1 PM	2 - 3 PM
3-4 hours	2,740	20	1 - 2 PM	3 - 4 PM
2-3 hours	2,610	30	2 - 3 PM	4 - 5 PM
1-2 hours	3,220	60	3 - 4 PM	**5 - 6 PM**
< 1 hours	6,320	130	**4 - 5 PM**	6 - 7 PM
Departure Pattern				
During Game	1,740	30	Before 8:30 PM	Before 10:30 PM
< 1 hours	11,000	180	8:30 - 9:30 PM	10:30 - 11:30 PM
1-2 hours	4,640	50	9:30 - 10:30 PM	11:30 PM - 12:30 AM

Table 5-7
Weekend Game Trip Generation during Analyzed Peak Hours

Hours Prior to Kick-Off / After Game	Total Weekend Trips		Saturday	Sunday
	Auto	Shuttle / Charter Bus	6 PM Game Time	1 PM Game Time
Arrival Pattern				
>4 hours	2,060	10	1 - 2 PM	**8 - 9 AM**
3-4 hours	2,340	20	2 - 3 PM	9 - 10 AM
2-3 hours	2,200	30	3 - 4 PM	10 - 11 AM
1-2 hours	2,630	60	4 - 5 PM	11 AM - 12 PM
< 1 hours	5,100	140	**5 - 6 PM**	12 - 1 PM
Departure Pattern				
During Game	1,430	30	Before 9:30 PM	Before 4:30 PM
< 1 hours	8,990	190	9:30 - 10:30 PM	**4:30 - 5:30 PM**
1-2 hours	3,890	50	10:30 - 11:30 PM	5:30 - 6:30 PM

5.2.1 Construction Trip Generation

Project construction and demolition would occur six days a week from Monday to Saturday and limited to the hours of 7:00 a.m.to 7:00 p.m. During weekday peak hour, the number of trips generated from construction is small and not expected to significantly affect peak hour traffic conditions.

The most traffic impacts are anticipated to occur during key periods during the construction and demolition schedule where both workers and truck trips would reach highest frequency per day. These time periods include:

- New Stadium Construction from January 2017 to September 2019
- Qualcomm Stadium Demolition from September 2019 to October 2020

Table 5-8 summarizes the number of worker trips and truck trips during each of the specific construction phases described above.

Table 5-8
Construction Trip Generation (One Way)

Construction Phases with Heavy Truck Trips	Duration (week)	Truck Trips (PCE / Day)	Truck Trips (PCE / Peak Hour)	On-Site Worker Trips (PCE / Day)	On-Site Worker Trips (PCE / Peak Hour)
Project Construction Phase					
New Stadium Construction: earthwork	16	242	--	80	26
Project Demolition Phase					
Qualcomm Demolition: Remove & Sort Debris	8	108	--	80	26
Demolition: Asphalt Demolition and Earthwork	34	243	--	80	26

Worker Trips

Construction workers and contractors are anticipated to drive and park onsite. On average, approximately 80 workers and 25 visitors are anticipated to travel to the project site per construction day (AECOM 2015). As the construction hours are from 7:00am to 7:00pm, workers would arrive to and depart from the project site during off-peak hours.

Worker trips during the new stadium construction and demolition of the existing Qualcomm Stadium are

small in number and are not expected to change throughout the entire construction and demolition phase of the project. An average of 80 one-way worker trips is anticipated daily (one trip per person) while only 26 of those trips would occur during each of the study AM and PM peak hours.

Truck Trips

The truck trips hauling fill and materials off-site to land fill would be the trips with the most traffic impacts. These heavy truck trips are anticipated to occur during both the new stadium construction and the Qualcomm Stadium demolition phases. A passenger-car equivalent (PCE) of 2 is assumed to convert the number of truck trips to passenger car trips.

During the new stadium construction site work phase, most of the heavy truck trips would be hauling earth to the site in preparation for construction. This activity is anticipated to occur over 16 weeks with an estimated 242 PCE trips per day and assumed to occur outside the morning and evening peak commuting hours. Also during the Qualcomm Stadium demolition phase, the most truck trips would be similar to the previous construction phase with 243 PCE per day during off-peak hours. These truck trips would have a minimal impact on the roadway network and traffic conditions during peak and non-peak hours.

5.3 TRIP DISTRIBUTION

Event Attendees

Attendees travel from all over the San Diego region to attend events at the project site. **Table 5-9** and **Table 5-10** summarize the regional travel trends used to derive the game day attendees' trip origins and the access routes for each region. Trip distribution estimates were based on a variety of factors including location of residential areas, employment and commercial centers near the project site, information from similar stadiums studies and origins and destinations data from both the *2006 San Diego Household Travel Study* and the *2006 Interregional Travel Behavior Study*. Overall, attendees most frequently use I-15 and I-8, the two interstate highways adjacent to the project area, when traveling to the Project site.

Table 5-9
Trip Distribution Estimates by Region

Region	Trip Distribution	Access Route
San Diego County		
Central	19.3%	I-15 South / SR-163 South / I-8 West / Arterial
North City	28.9%	I-15 North / I-8 West / SR-163 North/Arterial
South County (and Mexico)	10.8%	SR-163 South / I-15 South
East County	14.1%	I-8 East
North County West	12.6%	I-15 North / I-8 West
North County East	11.9%	I-15 North
Interregional		
Riverside County	1.5%	I-15 North
Imperial County	0.2%	I-8 East / I-15 North
Orange County	0.7%	I-8 West / I-15 North

Currently there are four major accesses to the Project site: the Main Gate on Mission Village Drive, Gate 1 on San Diego Mission Road, the west driveway on Friars Road (to Gates 2, 3 and 4) and the Bus Gate at the end of Rancho Mission Road. See **Figure 4-8** for a map of the gate locations. On major event days, general traffic can access the Project site through any of the gates except for the Bus Gate, which is reserved exclusively for vehicles longer than 20 feet, ADA vehicles or vehicles with permits. Trip distribution and assignment in the immediate vicinity of the Project site was determined based on past parking gate counts and observed local travel patterns. The new stadium would maintain all the existing access points on major event days during the Project construction and demolition phases.

Table 5-10
Trip Distribution Estimates by Access Route

Access Route	Trip Distribution
I-15 North	27%
I-15 South	12%
SR-163 North	4%
SR-163 South	12%
I-8 East	14%
I-8 West	24%
Local Arterial	7%
Total	**100%**

Construction Workers and Trucks

All related construction traffic would travel to and from the project site through the Main Gate via Friars Road and Mission Village Drive. All construction traffic is anticipated to access the area via I-15 and the Friars Road interchange at I-15.

5.4 CUMULATIVE PROJECTS

Table 5-11 summarizes the list cumulative projects by name, land use description and current project status.

A conservative 3% per year cumulative growth factor was recommended for the purpose of accounting for these projects' influence to the study area as well as for other unanticipated growth within the study area, in lieu of itemized cumulative added trips which were not readily available from individual developers and other project proponents. This growth rate was applied to all intersections, roadways, freeway segments and ramps when analyzing future year traffic forecasts.

Table 5-11
Cumulative Projects

Project	Description	Status
Town and Country (MV Atlas)	Proposal is to amend the Atlas Specific Plan and apply for a Master Plan Development Permit	Initiation of MV-CP amendment process has begun
Riverwalk	Proposal is to amend the Levi-Cushman Specific Plan, create a new specific plan, and apply for discretionary permits.	Applicant has not yet submitted a project.
Camino del Rio Mixed Use Project (Bob Baker site)	Proposal is to demolish existing structures and surface parking lots, and construct a mixed-use project of 305 residential units, approximately 5,000 square feet of office space, approximately 4,000 square feet of retail space, and a six- level parking structure with a total building area of approximately 563,980 square feet	Approved on October 30, 2014 by the Planning Commission (Resolution 4629-PC-2). Demolition permits were approved on March 11, 2015. Building, electrical, mechanical, plumbing, and grading permits currently under review.
Civita (formerly known as Quarry Falls)	Proposal is for 4,780 residential units, 603,000 square feet of retail/commercial, and 620,000 square feet of office. Civita is in the Quarry Falls Specific Plan.	Phase I of the project is under construction
Union Tribune Mixed Use Project	Proposal is to construct 286,000 square feet total building area including: two 7-story buildings, 200 residential units, 3,000 square feet retail, 60,000 square feet outdoor amenities space; and 212,000 square feet parking structure.	Project approved by Planning Commission, but an appeal to the City Council has been filed.
University of San	Proposal for Conditional Use Permit (CUP), amending	Currently under multi-discipline

Table 5-11
Cumulative Projects

Project	Description	Status
Diego Master Plan	CUP #92-0568 and 1996 Master Plan/Design Guidelines, would increase student enrollment to a maximum of 10,000 full time equivalent students with proposed development over a 20 year period. The 180 +/- acre site is located within the RS-1-7, RM-3-7, OR-1-1 and OP-2-1 zones within the Linda Vista Community Plan area.	review.
Hazard Center Redevelopment	Proposal to demolish existing commercial to construct new residential uses and parking on site. Five-story row homes (73 residential units) and 22-story tower (198 residential units), with additional commercial along Hazard Center Drive. Also 21-story tower (202 residential units) and commercial on northeast corner of Friars Road and Frazee Road. A 0.63- acre public park is proposed in the southwest corner of the project site.	Vesting Tentative Map, Site Development Permit, Planned Development Permit, and Land Use Plan approved by City Council on May 18, 2010. No applications for building permits have been received by the City.
Legacy International Center	Proposal is to construct a mixed-use development with religious, lodging, administrative, recreational, and commercial uses. The project is located south of I-8 at 875 Hotel Circle South and consists of two parcels, approximately 18.1 acres. Religious center and associated buildings approximately 400,588 square feet. Total of 878 parking stalls (195 surface and 683 subterranean or parking structure).	Design discussion at Mission Valley Planning Group Design Advisory Board in March 2015
Vagabond Inn	Proposal to increase number of hotel rooms on 2.77 acre site, from 131 rooms to 168 rooms.	Approved 2015
Discovery Center	Proposal to create a 17 acre nature park, community center, and discovery center. Discover Center River Trail also proposed. 9,450 square feet of indoor space, 120-seat outdoor classroom.	Currently under review
Shawnee LLC/CG 7600 Master Plan	Proposal is for a Master Plan that requires a Community Plan Amendment to alter the plan's Industrial uses to include a total of 1,023 multi-family residential units along with approximately 37,500 square feet of specialty retail which would generate 7,692 ADT. Proposal is at Mission Gorge Road at the intersection of Old Cliffs Road in the Navajo Community.	Approved by City Council in October 2012.

6.0 NEW STADIUM CONSTRUCTION AND QUALCOMM DEMOLITION (2017 – 2020)

This section describes the transportation and traffic conditions during the construction phase of the new stadium and the demolition phase of the existing Qualcomm Stadium. Construction of the new stadium is anticipated to occur January 2017 to September 2019 for approximately 960 days. The Qualcomm demolition phase is anticipated to occur from September 2019 to October 2020 for approximately 400 days. These two construction phases overlap during year 2019. Instead of analyzing traffic conditions for three years (2017 – 2019) to represent the stadium construction and demolition phase of the Project, a representative baseline analysis year of 2019 has been selected to maintain analysis consistency and capture the time period where impact may be the greatest. It is also anticipated that changes in traffic conditions from year 2017 to 2020 would be minimal.

All phases of construction would only occur on non-event and non-game days from 7:00 a.m. – 7:00 p.m. Monday through Saturday. The phases of construction are as follows:

1. New Stadium Construction Site Work and Mobilization (40 days) – Monday December 5, 2016 – Saturday January 15, 2017
2. New Stadium Construction (960 days) – Monday January 16, 2017 – Tuesday September 3, 2019
3. Qualcomm Demolition and Parking Lot Reconstruction (400 days) – Tuesday September 3, 2019 to Wednesday October 7, 2020

6.1 NEAR TERM 2019 TRAFFIC ANALYSIS

For the purpose of this traffic analysis, 2019 would be used as the near-term analysis year for the Stadium Construction and Demolition phase of the proposed project.

In addition, the following cumulative project features were included in the Year 2019 No Project and with Project analysis:

- **State Route 163 / Friars Road Interchange Project (Phase 1):** construction of temporary auxiliary lane on the west side of southbound SR-163 approaching Friars Road, modifications to the existing SR-163 / Friars Road interchange partial cloverleaf, widening of Friars Road from east of Frazee Road to the Avenida de Las Tiendas, and improvements at the intersection of Friars Road and Frazee Road. Construction for Phase 1 is scheduled to start in May 2016 and be completed in April 2018. Construction of the SR-163/Friars Road Interchange Project will overlap with a portion of the New Stadium Construction phase, but is expected to be fully implemented before the Qualcomm Demolition phase begins.

6.1.1 Year 2019 No Project with No Games

This section describes the traffic conditions for the Year 2019 No Project with no games.

Intersections

Table 6-1 summarizes the peak hour intersection conditions in analysis year 2019 excluding the Project and when no games are played. All intersections operate at LOS D or better during both AM and PM peak hours except the following:

- Fairmount Avenue / Alvarado Canyon Road – LOS E during AM Peak and LOS F during PM Peak
- Fairmount Avenue / I-8 EB Ramps – LOS E during PM Peak
- Northside Drive / Friars Road – LOS E during PM Peak
- Frazee Road / Friars Road – LOS E during PM Peak

Figure 6-1 shows the intersection turning movements under the 2019 No Project conditions and detailed

calculation worksheets for intersection operation are provided in **Appendix D**.

Roadway Segments

Table 6-2 summarizes the roadway segment conditions in analysis year 2019 excluding the Project and when no games are played, while **Figure 6-2** graphically displays the projected daily volumes. All roadway segments operate at LOS D or better except the following:

- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps (LOS F on weekdays)

Freeway Segment Analysis

Table 6-3 summarizes the peak hour freeway segment conditions in analysis year 2019 excluding the Project and when no games are played. All freeway segments operate at LOS D or better during both AM and PM peak hours except the following:

- WB I-8 from I-15 to I-805 LOS F during weekday AM peak
- WB I-8 from I-805 to Qualcomm Way LOS E during weekday AM peak
- WB I-8 from Qualcomm Way to Mission Center Road LOS F during weekday AM peak
- WB I-8 from Mission Center Road to SR-163 LOS E during weekday AM peak
- SB I-15 from Aero Drive to Friars Road LOS E during weekday PM peak
- SB I-15 from Friars Road to I-8 LOS E during weekday PM peak

Ramp Meter Analysis

Table 6-4 summarizes the existing peak hour ramp metering operating conditions in analysis year 2019 excluding the Project and when no games are played. All study area ramp meters are projected to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 NB: Friars Road On-ramp (PM peak)

Table 6-1
Intersection Analysis – 2019 No Project with No Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	8.6	A	18.5	B	7.4	A	9.6	A	6.2	A	8.3	A
2	Mission Gorge Rd	Twain Ave	22	C	27.5	C	20.9	C	14.4	B	14.4	B	13.5	B
3	Fairmount Ave	Twain Ave	13.4	B	16.5	B	12.2	B	14	B	13.9	B	14.2	B
4	Mission Gorge Rd	Fairmount Ave	24.9	C	26.5	C	20	B	26.2	C	15.1	B	23.2	C
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	116.3	**F**	22.4	C	33.3	C	18.9	B	23.8	C
6	Fairmount Ave	I-8 EB Ramps	13.8	B	57.5	**E**	10.4	B	24.7	C	10.7	B	24.7	C
7	Rancho Mission Rd	Friars Rd	12.4	B	16	B	11.8	B	16.6	B	9.5	A	16.6	B
8	Rancho Mission Rd	San Diego Mission Rd	26	C	27.5	C	16.8	B	18.3	B	18.5	B	18.3	B
9	Rancho Mission Rd	Ward Rd	11.1	B	15.3	C	9.6	A	10.7	B	9.5	A	10.7	B
10	Ward Rd	Camino Del Rio N	12.7	B	17.7	B	11.2	B	13.9	B	11.3	B	13.9	B
11	I-15 NB Ramps	Friars Rd	3.7	A	3.8	A	6.5	A	10.4	B	3.1	A	11.5	B
12	I-15 SB Ramps	Friars Rd	34.1	C	48.6	D	18.1	B	29.7	C	15.5	B	27.8	C
13	Mission Village Dr	Friars Rd WB	11.6	B	15.4	B	12.1	B	16.6	B	11.9	B	14	B
14	Mission Village Dr	Friars Rd EB	38.7	D	38.1	D	37.4	D	30.2	C	25.5	C	32.6	C
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	59.3	**E**	17.2	B	36.5	D	15.6	B	35.2	D
17	Fenton Pkwy	Friars Rd	17.6	B	38	D	17.3	B	27	C	17	B	27.3	C
18	Qualcomm Way	Friars Rd WB	20	B	34.6	C	15.1	B	26.9	C	17	B	26.7	C
19	Qualcomm Way	Friars Rd EB	12.4	B	22.3	C	12.7	B	10.6	B	14.7	B	12.1	B
20	Qualcomm Way	Camino De La Reina	27.5	C	25.9	C	11.6	B	22.9	C	15.5	B	21.5	C
21	Qualcomm Way	I-8 WB Ramps	24.4	C	37.2	D	13.1	B	22.4	C	11.2	B	54	D
22	Frazee Rd	Friars Rd	40.4	D	72.7	**E**	19.6	B	22.3	C	19.1	B	30.3	C
23	SR-163 NB Ramps	Friars Rd	13.2	B	43.8	D	10.7	B	44.8	D	11.9	B	32.7	C
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	9.5	A	13.1	B	2.9	A	12.4	B
25	Ulric St	Friars Rd	20.4	C	42.8	D	13.2	B	38	D	23.9	C	51.5	D
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	10.7	B	13.2	B	--	--	--	--	--	--	--	--

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Table 6-2
Roadway Segment Analysis – 2019 No Project with No Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	18,500	0.62	C	14,700	0.49	C	12,300	0.41	B
2	Vandever Ave to Twain Ave	4	Collector	30,000	20,400	0.68	D	16,500	0.55	C	13,200	0.44	B
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	23,800	0.79	D	18,400	0.61	C	14,400	0.48	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	21,900	0.73	D	18,900	0.63	C	14,900	0.50	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	7,400	0.49	C	5,200	0.35	B	3,700	0.25	A
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	34,800	0.87	D	28,800	0.72	C	23,100	0.58	C
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	48,700	1.08	**F**	37,100	0.82	D	29,800	0.66	C
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	37,600	0.84	D	30,400	0.68	C	24,400	0.54	B
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	7,700	0.51	C	5,300	0.35	B	5,100	0.34	B
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	8,400	0.28	A	5,600	0.19	A	4,900	0.16	A
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	12,600	0.42	B	8,200	0.27	A	6,900	0.23	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	9,900	0.66	C	5,400	0.36	B	4,400	0.29	A
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	9,900	0.66	C	6,900	0.46	B	5,900	0.39	B
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	15,200	0.38	B	12,300	0.31	A	10,800	0.27	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	47,200	0.79	C	30,500	0.51	B	25,100	0.42	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	48,000	0.69	C	35,200	0.50	B	29,000	0.41	A
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	56,700	0.81	C	41,700	0.60	C	35,900	0.51	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	53,100	0.66	C	44,800	0.56	C	38,100	0.48	B
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	44,100	0.55	C	36,100	0.45	B	31,800	0.40	B
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	42,400	0.71	C	31,600	0.53	B	27,400	0.46	B
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	43,000	0.72	C	32,600	0.54	B	28,400	0.47	B
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	44,000	0.55	C	33,100	0.41	B	29,100	0.36	A
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	46,200	0.50	B	32,900	0.35	A	28,900	0.31	A
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	44,600	0.42	B	31,600	0.30	A	27,600	0.26	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	48,800	0.46	B	33,900	0.32	A	29,900	0.28	A
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	49,200	0.53	C	36,300	0.39	B	31,700	0.34	A
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	65,400	0.65	C	50,700	0.51	B	43,800	0.44	B
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	65,400	0.82	C	53,900	0.67	C	47,700	0.60	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	20,800	0.42	B	13,300	0.27	A	11,200	0.22	A
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	26,200	0.52	B	17,800	0.36	A	15,700	0.31	A

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 6-3
Freeway Segment Analysis – 2019 No Project with No Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,090	0.23	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,190	0.65	C	4,340	0.48	B	3,770	0.39	A	2,790	0.30	A	2,210	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,250	0.58	B	10,220	0.89	D	3,710	0.34	A	4,900	0.42	B	2,360	0.21	A	3,280	0.28	A
Fairmount Ave to I-15	4	0	4	0	3,910	0.51	B	6,520	0.84	D	2,280	0.30	A	2,740	0.35	A	1,680	0.22	A	2,220	0.28	A
I-15 to I-805	4	2	4	2	5,300	0.54	B	10,620	1.05	**F(0)**	3,170	0.32	A	5,490	0.54	B	2,210	0.22	A	3,740	0.36	A
I-805 to Qualcomm Way	4	0	4	0	3,810	0.49	B	7,350	0.93	**E**	2,020	0.26	A	3,650	0.46	B	1,490	0.19	A	2,590	0.33	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,010	0.51	B	9,260	1.06	**F(0)**	2,690	0.27	A	5,050	0.56	B	1,980	0.20	A	3,590	0.40	A
Mission Center Rd to SR-163	4	0	3	1	3,010	0.38	A	7,030	0.99	**E**	1,630	0.21	A	4,010	0.57	B	1,230	0.15	A	2,960	0.42	A
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,670	0.89	D	6,170	0.67	C	2,720	0.28	A	2,890	0.32	A	1,790	0.18	A	2,060	0.22	A
Friars Rd to I-8	3	4	4	0	7,730	0.73	C	6,620	0.85	D	2,370	0.22	A	2,980	0.38	A	1,560	0.14	A	2,240	0.29	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,410	0.60	B	8,900	0.98	**E**	4,400	0.49	B	5,800	0.63	C	3,870	0.43	B	4,340	0.48	B
Friars Rd to I-8	4	1	4	2	5,960	0.66	C	9,160	0.98	**E**	5,250	0.58	B	6,280	0.64	C	4,790	0.53	B	4,810	0.50	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	9,910	0.90	D	7,420	0.64	C	7,450	0.67	C	6,580	0.56	B	6,800	0.61	B	5,420	0.46	B
Fairmount Ave to I-15	4	0	4	0	7,000	0.88	D	4,610	0.58	B	5,210	0.66	C	3,900	0.49	B	4,880	0.61	B	3,510	0.44	B
I-15 to I-805	4	2	4	2	9,190	0.91	D	8,010	0.79	C	7,510	0.75	C	7,290	0.71	C	7,130	0.71	C	5,960	0.58	B
I-805 to Qualcomm Way	4	0	4	0	6,730	0.88	D	5,350	0.68	C	5,400	0.70	C	5,050	0.64	C	4,600	0.59	B	4,170	0.53	B
Qualcomm Way to Mission Center Rd	5	0	4	1	9,370	0.96	**E**	7,920	0.91	D	7,580	0.78	C	7,480	0.87	D	7,230	0.74	C	6,290	0.71	C
Mission Center Rd to SR-163	4	0	3	1	5,550	0.73	C	6,150	0.87	D	4,330	0.55	B	5,680	0.81	C	4,180	0.53	B	4,800	0.68	C
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	7,620	0.78	C	6,770	0.75	C	5,660	0.58	B	4,880	0.53	B	5,940	0.61	B	3,700	0.40	A
Friars Rd to I-8	3	4	4	0	6,300	0.59	B	6,260	0.82	D	4,730	0.44	B	4,470	0.57	B	4,970	0.46	B	3,240	0.42	A

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 6-4
Ramp Metering Analysis – 2019 No Project with No Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2019 No Project AM on Non-Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,290	586	Min:	516	70	8	1,750
						Max:	600	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	700	700	Min:	660	40	4	1,000
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	610	610	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	810	810	Min:	493	317	**39**	7,925
						Max:	996	0	0	0
2019 No Project PM on Non-Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,400	636	Min:	386	250	**39**	6,250
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	730	730	Min:	660	70	6	1,750
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,000	1000	Max:	996	4	0	100
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,010	1010	Min:	493	517	**63**	12,925
						Max:	996	14	1	350

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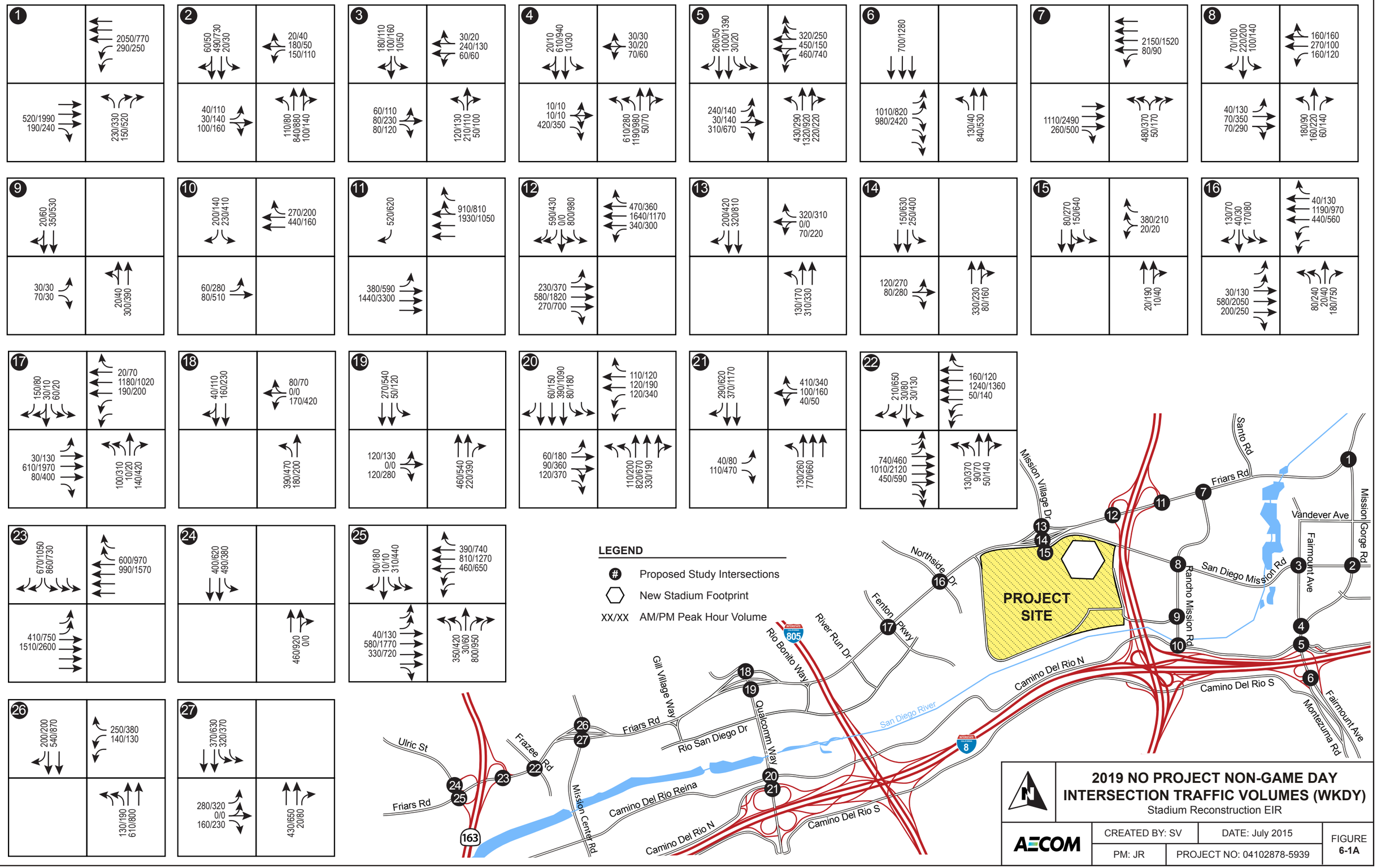

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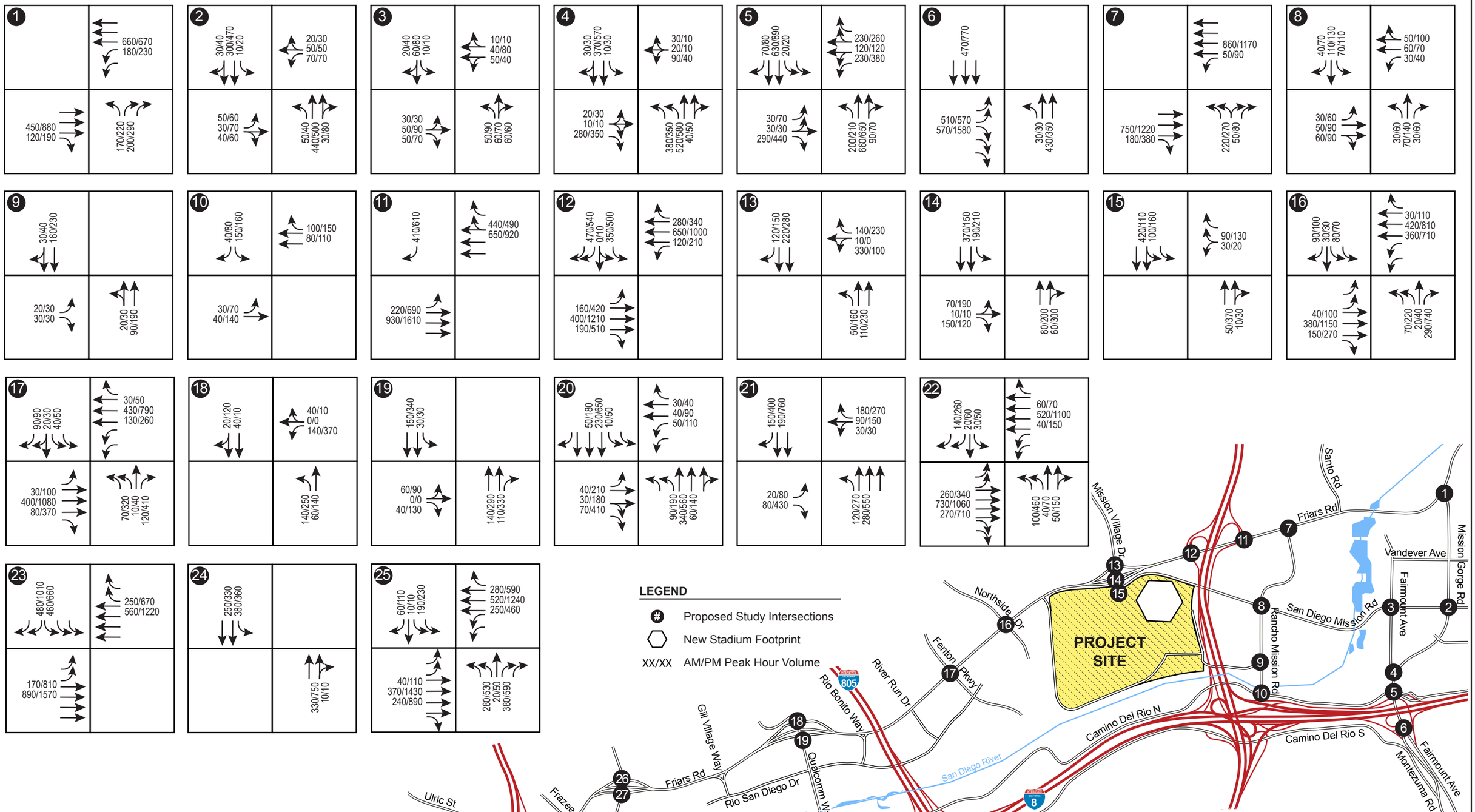

2019 NO PROJECT NON-GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-1B
PM: JR	PROJECT NO: 04102878-5939	

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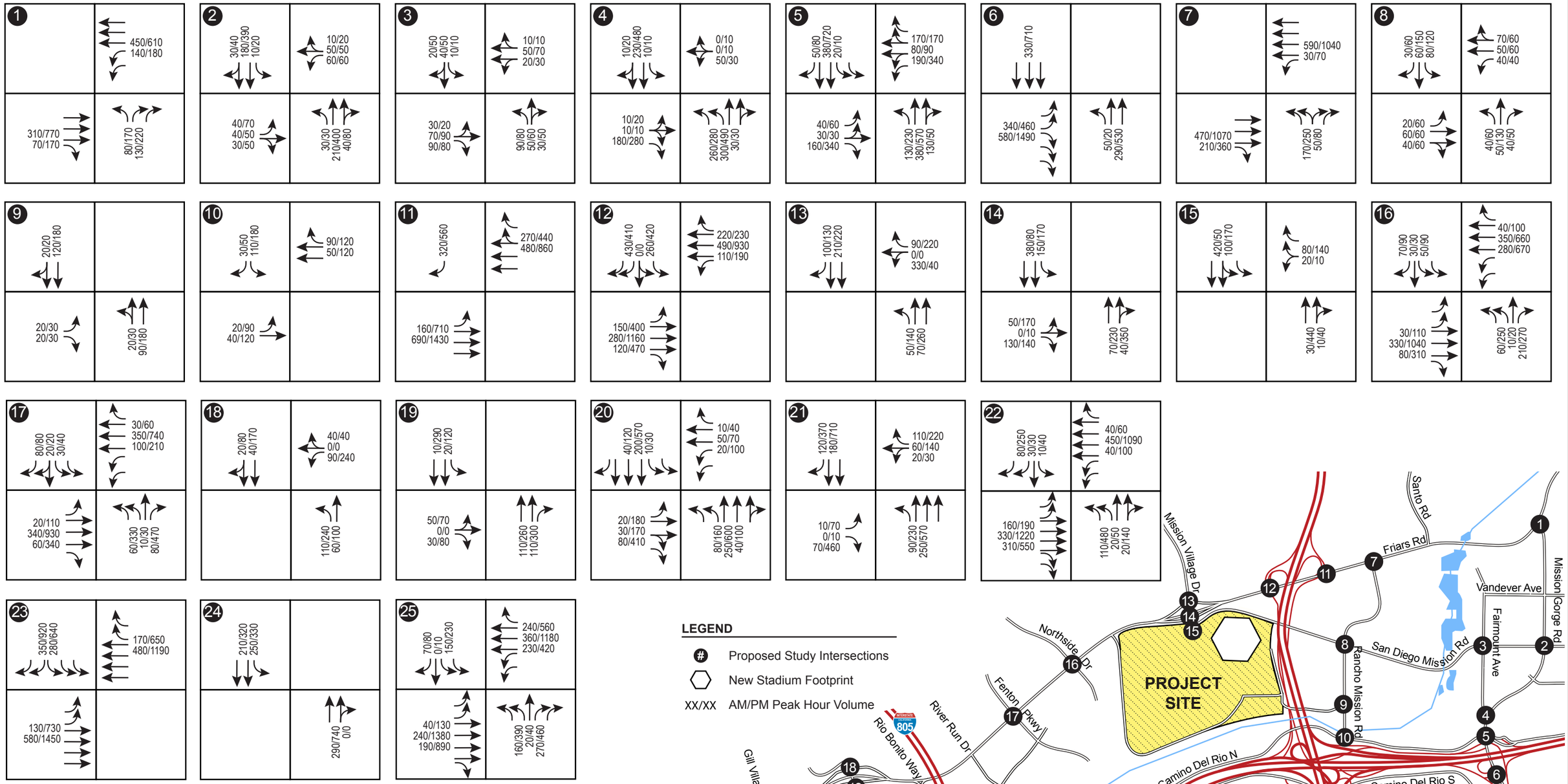

2019 NO PROJECT NON-GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-1C
PM: JR	PROJECT NO: 04102878-5939	

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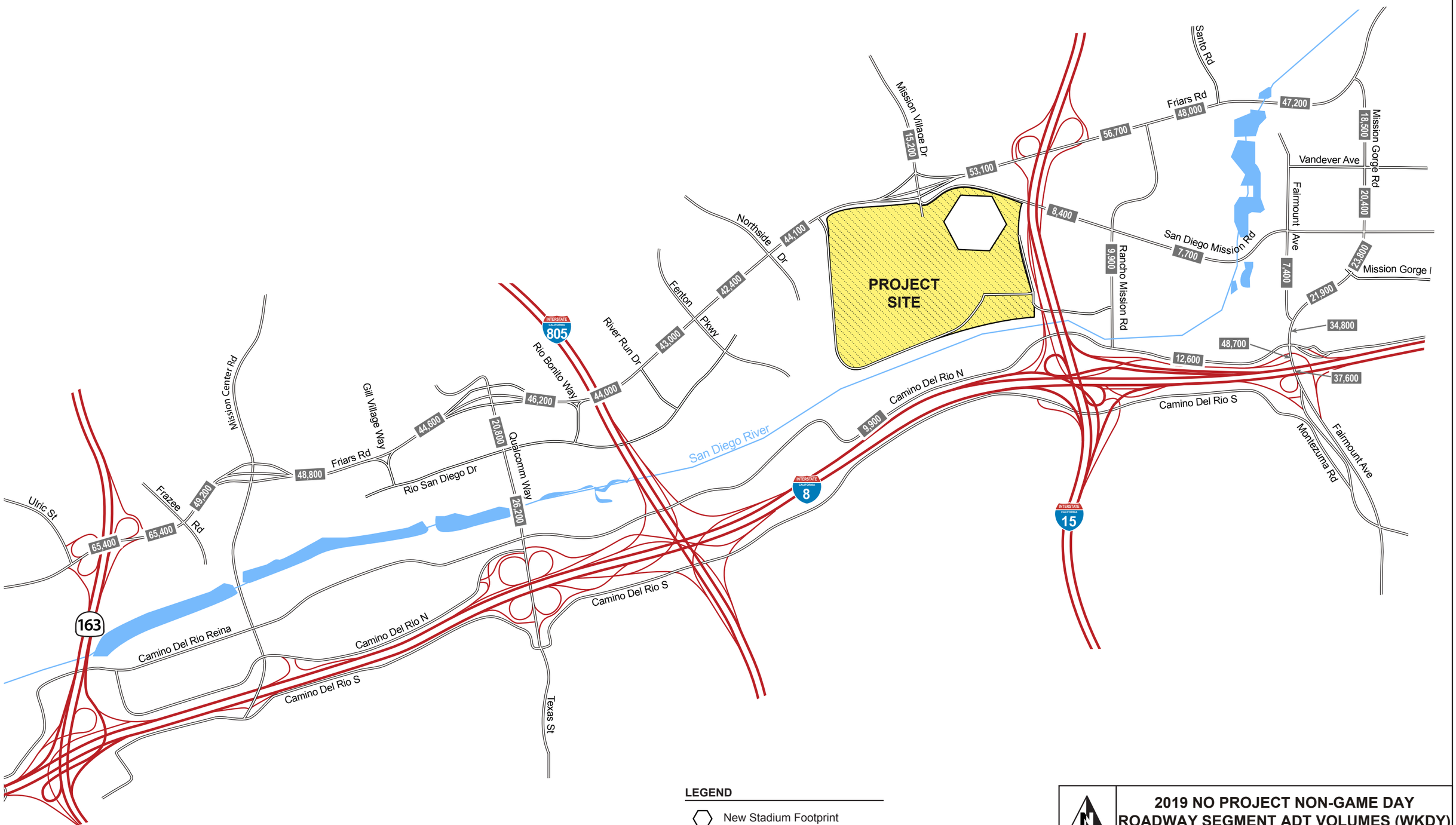

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 NO PROJECT NON-GAME DAY ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-2A
PM: JR	PROJECT NO: 04102878-5939	

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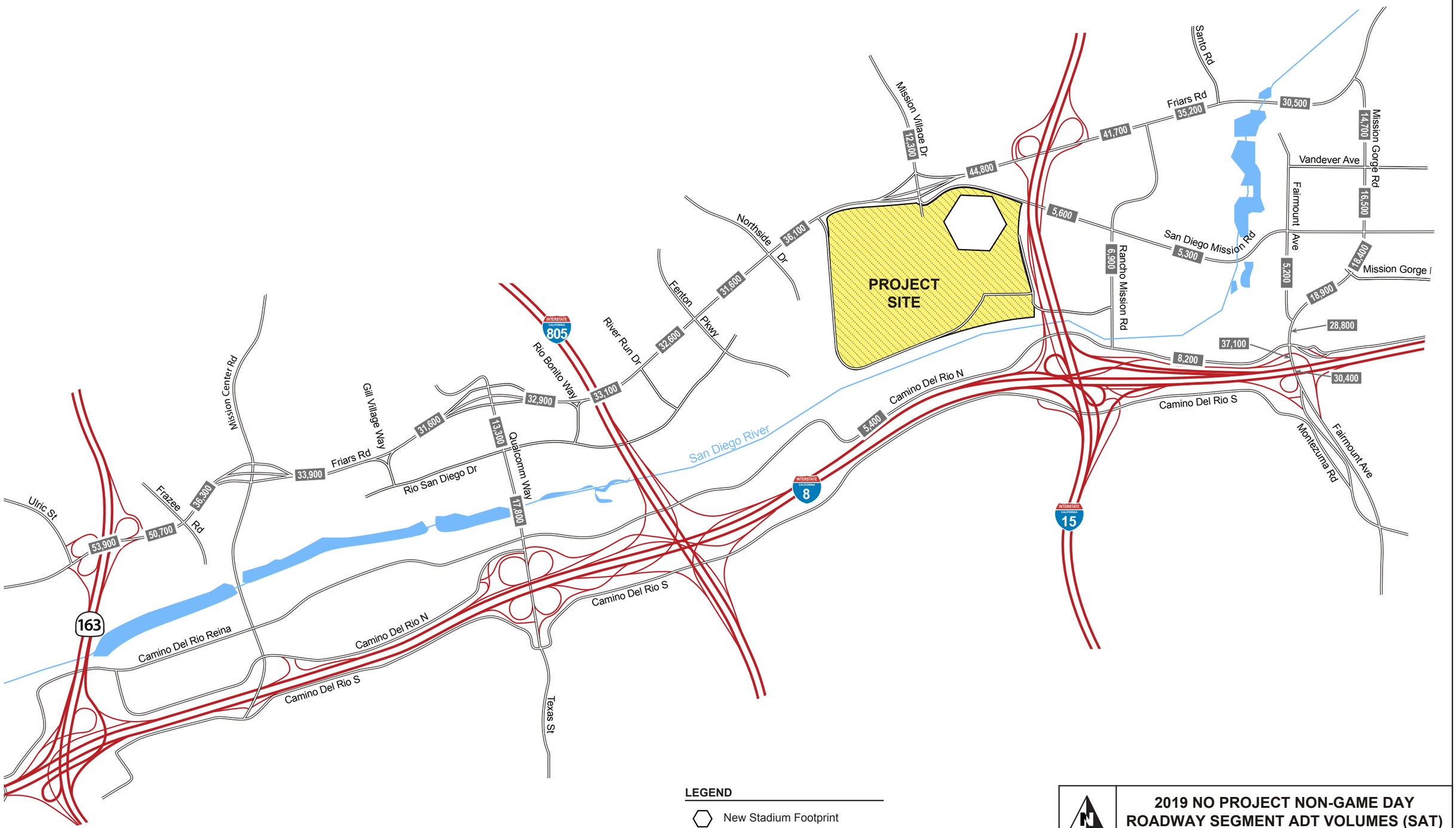

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 NO PROJECT NON-GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-2B
PM: JR	PROJECT NO: 04102878-5939	

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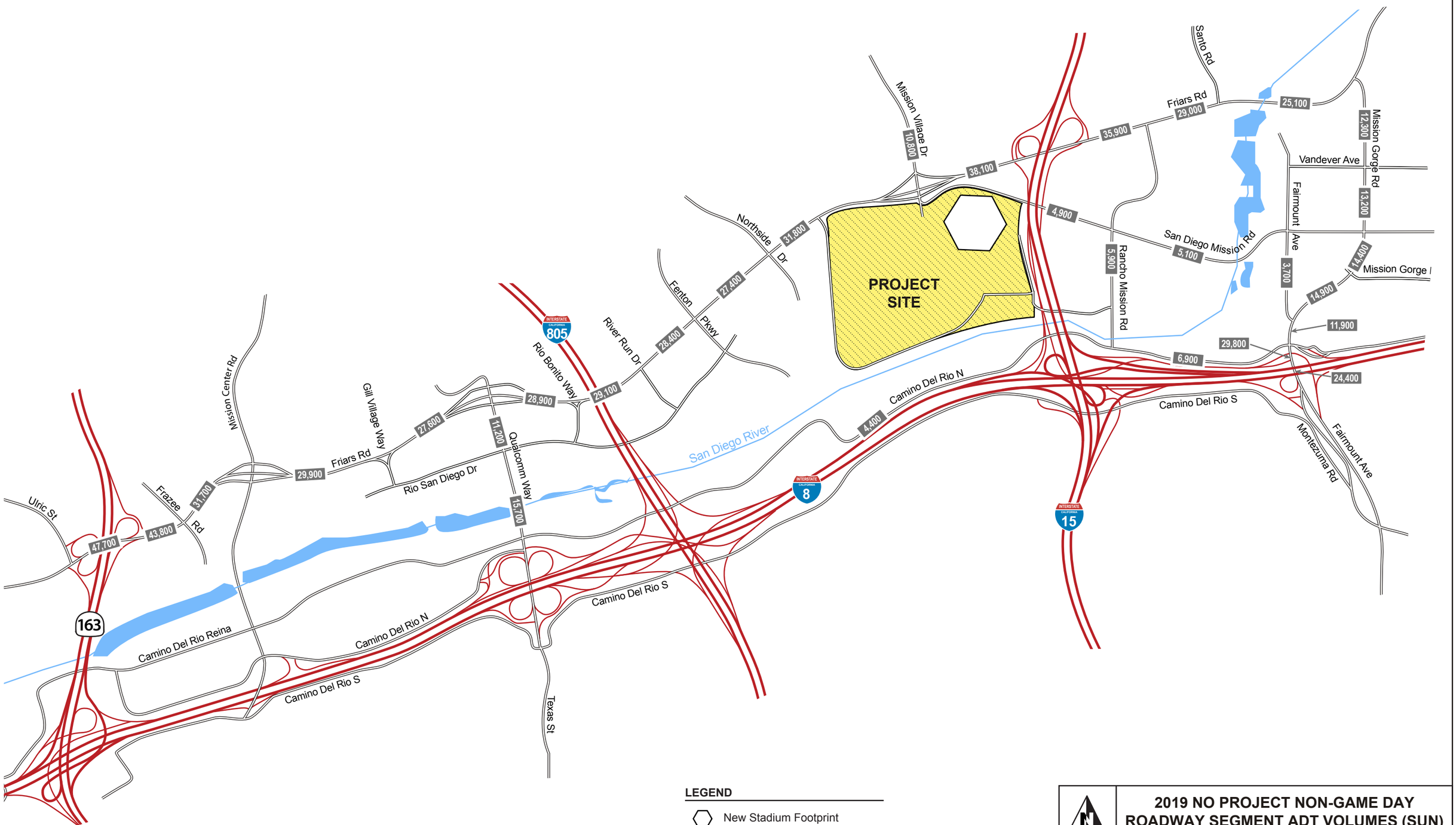

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 NO PROJECT NON-GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-2C
PM: JR	PROJECT NO: 04102878-5939	

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6.1.2 Year 2019 No Project with Games

This section provides analysis of the traffic conditions for Year 2019 excluding the Project with games.

Intersection Analysis

Table 6-5 summarizes the peak hour intersection conditions in analysis year 2019 excluding the Project when games are played; and **Figure 6-3** shows the turning movement volumes. All intersections operate at LOS D or better during both AM and PM peak hours except the following:

- Fairmount Avenue / Twain Avenue LOS F during Weekday PM Peak
- Mission Gorge Road / Fairmount Avenue LOS E during weekday PM peak
- Fairmount Avenue / Alvarado Canyon Road LOS E during weekday AM peak and LOS F during PM peak
- Fairmount Avenue / I-8 EB Ramps LOS E during weekday PM peak
- Rancho Mission Road / Ward Road LOS E during PM peak
- I-15 SB Ramps / Friars Road LOS F during weekday and Saturday PM peak
- I-15 SB Ramps / Friars Road LOS E during weekday PM peak
- Mission Village Drive / Friars Rd EB / San Diego Mission Road LOS F during weekday and Saturday PM peak
- Fenton Parkway / Friars Road LOS F during weekday PM peak and LOS E during Saturday PM peak
- Qualcomm Way / Friars Road EB LOS F during PM Peak

The detailed intersection operations calculation worksheets for the 2019 No Project with games conditions are provided in **Appendix D**.

Roadway Segment Analysis

Table 6-6 summarizes the roadway segment conditions in analysis year 2019 excluding the Project and when games are played; and **Figure 6-4** graphically displays the ADT volumes. All roadway segments operate at LOS D or better except the following:

- Mission Gorge Road from Twain Avenue to Mission Gorge Place – LOS E on weekdays
- Mission Gorge Road from Mission Gorge Place to Fairmount Avenue – LOS E on weekdays
- Fairmount Avenue from Mission Gorge Road to Alvarado Canyon Road – LOS F on weekdays, Saturdays and Sundays
- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps – LOS F on weekdays and Saturdays
- Fairmount Avenue from I-8 WB Ramps to I-8 EB Ramps – LOS E on weekdays
- San Diego Mission Road from Fairmount Avenue to Rancho Mission Road – LOS F weekdays, Saturdays and Sundays
- Friars Road from I-15 Ramps to Mission Village Drive – LOS F on weekdays
- Friars Road from Northside Drive to Fenton Parkway – LOS F on weekdays
- Friars Road from Fenton Parkway to River Run Drive – LOS F on weekdays

Freeway Segment Analysis

Table 6-7 summarizes the peak hour freeway segment conditions in year 2019 excluding the Project and when games are played. All freeway segments operate at LOS D or better during both AM and PM peak

hours except the following:

- SB I-15 from Aero Drive to Friars Road – LOS F during weekday PM peak
- SB I-15 from Friars Road to I-8 – LOS E during weekday PM peak
- WB I-8 from I-15 to I-805 – LOS F during weekday AM peak
- EB I-8 from Fairmount Avenue to I-15 – LOS E during weekday PM peak
- EB I-8 from I-15 to I-805 – LOS E during weekday PM peak
- WB I-8 from I-805 to Qualcomm Way – LOS E during weekday AM peak
- WB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday AM peak
- EB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday PM peak
- WB I-8 from Mission Center Road to SR-163 – LOS E during weekday AM peak
- SB SR-163 from Genesee Avenue to Friars Road – LOS E during weekday PM peak

Freeway Ramps

Table 6-8 summarizes the existing freeway ramp metering operating conditions in analysis year 2019 excluding the Project and when games are played. All study area ramp meters are calculated to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 NB: Friars Road On-ramp (PM peak)

Table 6-5
Intersection Analysis: 2019 No Project with Game Days

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	8.6	A	30.2	C	7.4	A	12.3	B	6.8	A	9.1	A
2	Mission Gorge Rd	Twain Ave	22	C	31	C	20.9	C	14.9	B	138	**F**	38.9	D
3	Fairmount Ave	Twain Ave	13.4	B	185.2	**F**	12.2	B	37.2	D	21.6	C	33.2	C
4	Mission Gorge Rd	Fairmount Ave	24.9	C	56.9	**E**	20	B	32.3	C	16.3	B	97.3	**F**
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	166.4	**F**	22.4	C	43	D	20.2	C	189.9	**F**
6	Fairmount Ave	I-8 EB Ramps	13.8	B	56.2	**E**	10.4	B	26.7	C	23.6	C	32	C
7	Rancho Mission Rd	Friars Rd	12.4	B	14.6	B	11.8	B	13.7	B	11.8	B	15.1	B
8	Rancho Mission Rd	San Diego Mission Rd	26	C	47.1	D	16.8	B	27	C	22.5	C	52.1	D
9	Rancho Mission Rd	Ward Rd	11.1	B	42.6	**E**	9.6	A	15.7	C	10.2	B	12.4	B
10	Ward Rd	Camino Del Rio N	12.7	B	26.9	C	11.2	B	15	B	13.8	B	14.1	B
11	I-15 NB Ramps	Friars Rd	3.7	A	5.5	A	6.5	A	13.3	B	3	A	321.8	**F**
12	I-15 SB Ramps	Friars Rd	34.1	C	195.3	**F**	18.1	B	152.4	**F**	29.5	C	110.4	**F**
13	Mission Village Dr	Friars Rd WB	11.6	B	67.3	**E**	12.1	B	38.7	D	18.2	B	29.9	C
14	Mission Village Dr	Friars Rd EB	38.7	D	336.8	**F**	37.4	D	327.2	**F**	45.7	D	382	**F**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	207.4	**F**	17.2	B	113.9	**F**	21.2	C	55.4	**E**
17	Fenton Pkwy	Friars Rd	17.6	B	157.1	**F**	17.3	B	72.9	**E**	23.4	C	119.6	**F**
18	Qualcomm Way	Friars Rd WB	20	B	36.9	D	15.1	B	33.9	C	19.5	B	43.5	D
19	Qualcomm Way	Friars Rd EB	12.4	B	122.2	**F**	12.7	B	40.2	D	8.1	A	6.3	A
20	Qualcomm Way	Camino De La Reina	27.5	C	35.1	D	11.6	B	19	B	13.1	B	47.7	D
21	Qualcomm Way	I-8 WB Ramps	24.4	C	32.5	C	13.1	B	30.4	C	12.8	B	198.4	**F**
22	Frazee Rd	Friars Rd	40.4	D	76.9	**E**	19.6	B	27.2	C	27.5	C	31.5	C
23	SR-163 NB Ramps	Friars Rd	13.2	B	36.9	D	10.7	B	32.7	C	15.9	B	62.2	**E**
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	9.5	A	13.1	B	8.6	A	12.4	B
25	Ulric St	Friars Rd	20.4	C	55.1	**E**	13.2	B	34.3	C	18.7	B	37.6	D
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars d EB	10.7	B	13.2	B	--	--	--	--	--	--	--	--

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Table 6-6
Roadway Segment Analysis – 2019 No Project with Game Days

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	20,600	0.69	D	16,500	0.55	C	14,100	0.47	C
2	Vandever Ave to Twain Ave	4	Collector	30,000	22,500	0.75	D	18,300	0.61	C	15,000	0.50	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	28,100	0.94	**E**	22,000	0.73	D	18,000	0.60	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	26,200	0.87	**E**	22,500	0.75	D	18,500	0.62	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	11,700	0.78	D	8,800	0.59	C	7,300	0.49	C
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	49,800	1.25	**F**	41,200	1.03	**F**	35,500	0.89	**E**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	60,800	1.35	**F**	47,200	1.05	**F**	39,900	0.89	D
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	44,700	0.99	**E**	36,300	0.81	D	30,300	0.67	C
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	20,600	1.37	**F**	16,000	1.07	**F**	15,800	1.05	**F**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	22,000	0.73	D	16,800	0.56	C	16,100	0.54	C
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	14,700	0.49	C	10,000	0.33	A	8,700	0.29	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	9,900	0.66	C	5,400	0.36	B	4,400	0.29	A
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	11,300	0.75	D	8,100	0.54	C	7,100	0.47	C
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	15,900	0.40	B	12,900	0.32	A	11,400	0.29	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	50,800	0.85	D	33,500	0.56	B	28,100	0.47	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	51,600	0.74	C	38,200	0.55	B	32,000	0.46	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	62,400	0.89	D	46,400	0.66	C	40,600	0.58	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	82,700	1.03	**F**	69,400	0.87	D	62,700	0.78	D
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	69,100	0.86	D	56,800	0.71	C	52,500	0.66	C
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	67,400	1.12	**F**	52,300	0.87	D	48,100	0.80	C
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	68,000	1.13	**F**	53,300	0.89	D	49,100	0.82	C
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	69,000	0.86	D	53,800	0.67	C	49,800	0.62	C
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	71,200	0.76	D	53,600	0.57	C	49,600	0.53	C
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	57,500	0.54	C	42,300	0.40	B	38,300	0.36	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	61,700	0.58	C	44,600	0.42	B	40,600	0.38	B
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	62,100	0.67	C	47,000	0.50	B	42,400	0.45	B
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	78,300	0.78	C	61,400	0.61	C	54,500	0.55	B
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	68,300	0.85	D	56,300	0.70	C	50,100	0.63	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	32,900	0.66	C	23,400	0.47	B	21,300	0.43	B
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	38,300	0.77	C	27,900	0.56	B	25,800	0.52	B

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 6-7
Freeway Segment Analysis – 2019 No Project with Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,576	0.28	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,190	0.65	C	4,340	0.48	B	3,770	0.39	A	3,006	0.33	A	2,210	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,250	0.58	B	10,220	0.89	D	3,710	0.34	A	4,900	0.42	B	2,360	0.21	A	3,532	0.30	A
Fairmount Ave to I-15	4	0	4	0	3,910	0.51	B	6,520	0.84	D	2,280	0.30	A	2,740	0.35	A	1,824	0.23	A	2,220	0.28	A
I-15 to I-805	4	2	4	2	5,300	0.54	B	10,620	1.05	**F(0)**	3,170	0.32	A	5,490	0.54	B	2,354	0.23	A	3,740	0.36	A
I-805 to Qualcomm Way	4	0	4	0	3,810	0.49	B	7,350	0.93	**E**	2,020	0.26	A	3,650	0.46	B	1,490	0.19	A	2,590	0.33	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,010	0.51	B	9,260	1.06	**F(0)**	2,690	0.27	A	5,050	0.56	B	2,268	0.23	A	3,590	0.40	A
Mission Center Rd to SR-163	4	0	3	1	3,010	0.38	A	7,030	0.99	**E**	1,630	0.21	A	4,010	0.57	B	1,518	0.19	A	2,960	0.42	A
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,670	0.89	D	6,170	0.67	C	2,720	0.28	A	2,890	0.32	A	1,790	0.18	A	2,366	0.30	A
Friars Rd to I-8	3	4	4	0	7,730	0.73	C	6,620	0.85	D	2,370	0.22	A	2,980	0.38	A	1,776	0.16	A	2,474	0.32	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,453	0.60	B	10,677	1.17	**F(0)**	4,441	0.49	B	7,250	0.79	C	6,249	0.68	C	4,389	0.48	B
Friars Rd to I-8	4	1	4	2	6,750	0.74	C	9,179	0.98	**E**	5,894	0.65	C	6,298	0.64	C	4,812	0.53	B	5,867	0.60	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	9,932	0.90	D	8,341	0.72	C	7,471	0.67	C	7,332	0.63	B	8,033	0.72	C	5,445	0.47	B
Fairmount Ave to I-15	4	0	4	0	7,526	0.94	**E**	4,623	0.59	B	5,640	0.71	C	3,912	0.50	B	4,894	0.61	B	4,215	0.53	B
I-15 to I-805	4	2	4	2	9,716	0.96	**E**	8,023	0.79	C	7,940	0.79	C	7,302	0.71	C	7,144	0.71	C	6,665	0.65	C
I-805 to Qualcomm Way	4	0	4	0	6,730	0.88	D	5,350	0.68	C	5,400	0.70	C	5,050	0.64	C	4,600	0.59	B	4,170	0.53	B
Qualcomm Way to Mission Center Rd	5	0	4	1	10,423	1.06	**F(0)**	7,946	0.91	D	8,439	0.87	D	7,504	0.87	D	7,259	0.74	C	7,700	0.87	D
Mission Center Rd to SR-163	4	0	3	1	6,603	0.86	D	6,176	0.88	D	5,189	0.65	C	5,704	0.81	D	4,209	0.53	B	6,210	0.88	D
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	7,647	0.79	C	7,889	0.88	D	5,686	0.58	B	5,793	0.63	C	7,438	0.76	C	3,731	0.41	A
Friars Rd to I-8	3	4	4	0	7,110	0.67	C	7,135	0.93	D	5,394	0.51	B	5,186	0.66	C	6,137	0.57	B	4,321	0.55	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 6-8
Ramp Metering Analysis – 2019 No Project with Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2019 No Project AM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,290	586	Min:	516	70	8	1,750
						Max:	600	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	700	700	Min:	660	40	4	1,000
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	610	610	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	810	810	Min:	493	317	**39**	7,925
						Max:	996	0	0	0
2019 No Project PM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,445	657	Min:	386	271	**42**	6,775
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	730	730	Min:	660	70	6	1,750
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,020	1020	Max:	996	24	1	600
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,030	1030	Min:	493	537	**65**	13,425
						Max:	996	34	2	850

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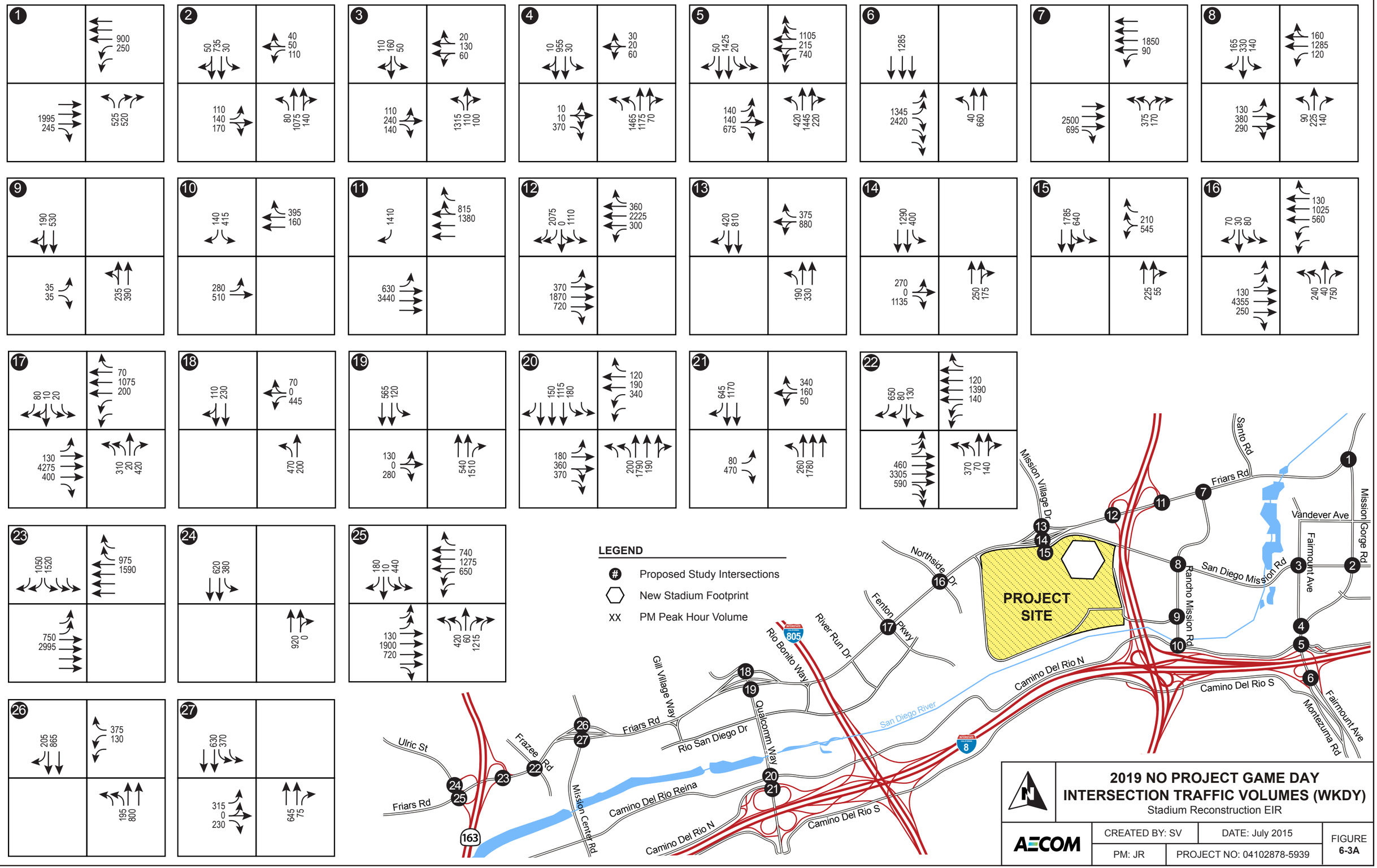
1
900
250
1995
245
525
520
2
50
735
30
40
50
110
110
140
170
80
1075
140
3
110
160
50
20
130
60
110
240
140
1315
110
100
4
10
955
30
30
20
60
10
10
370
1465
1175
70
5
50
1425
20
1105
215
740
140
140
675
420
1445
220
6
1285
1345
2420
40
660
7
1850
90
2500
695
375
170
8
165
330
140
160
1285
120
130
380
290
90
225
140
9
190
530
35
35
235
390
10
140
415
395
160
280
510
11
1410
815
1380
630
3440
12
2075
0
1110
360
2225
300
370
1870
720
13
420
810
375
880
190
330
14
1290
400
270
0
1135
250
175
15
1785
640
210
545
225
55
16
70
30
80
130
1025
560
130
4355
250
240
40
750
17
80
10
20
70
1075
200
130
4275
400
310
20
420
18
110
230
70
0
445
470
200
19
565
120
130
0
280
540
1510
20
150
1115
180
120
190
340
180
360
370
200
1790
190
21
645
1170
340
160
50
80
470
260
1780
22
650
80
130
120
1390
140
460
3305
590
370
70
140
23
1050
1520
975
1590
750
2995
24
620
380
920
0
25
180
10
440
740
1275
650
130
1900
720
420
60
1215
26
205
865
375
130
195
800
27
630
370
315
0
230
645
75
LEGEND
Proposed Study Intersections
New Stadium Footprint
XX PM Peak Hour Volume
PROJECT SITE
Mission Village Dr
Northside Dr
Fenton Pkwy
River Run Dr
Rio Bonito Way
Gill Village Way
Friars Rd
Frazee Rd
Ulric St
Mission Center Rd
Rio San Diego Dr
Qualcomm Way
Camino Del Rio Reina
Camino Del Rio N
Camino Del Rio S
San Diego River
Santo Rd
Vandever Ave
Mission Gorge Rd
Fairmount Ave
San Diego Mission Rd
Rancho Mission Rd
Montezuma Rd
163
805
8
2019 NO PROJECT GAME DAY
INTERSECTION TRAFFIC VOLUMES (WKDY)
Stadium Reconstruction EIR
AECOM
CREATED BY: SV
DATE: July 2015
PM: JR
PROJECT NO: 04102878-5939
FIGURE
6-3A
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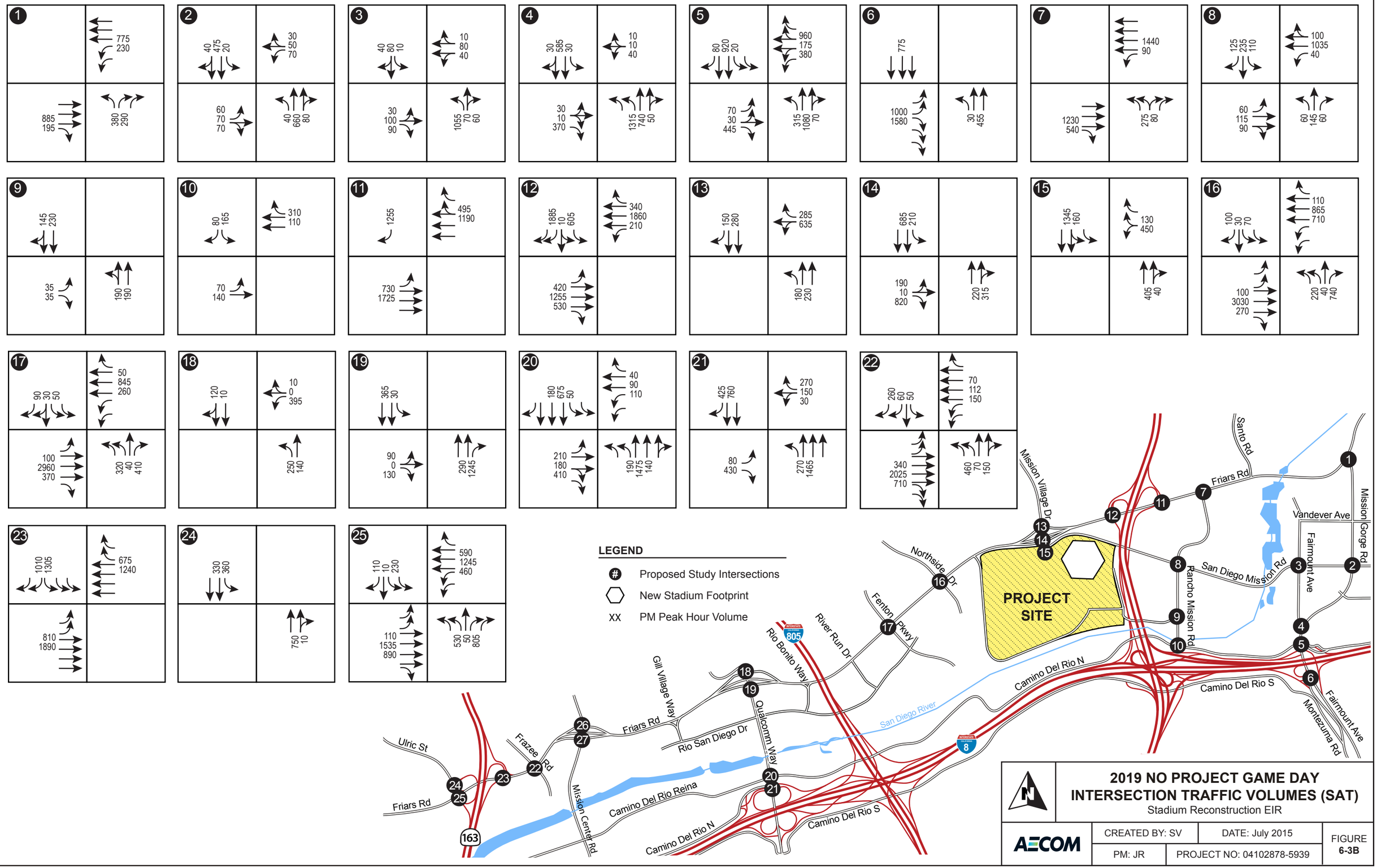

2019 NO PROJECT GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM	CREATED BY: SV	DATE: July 2015	FIGURE 6-3B
	PM: JR	PROJECT NO: 04102878-5939	

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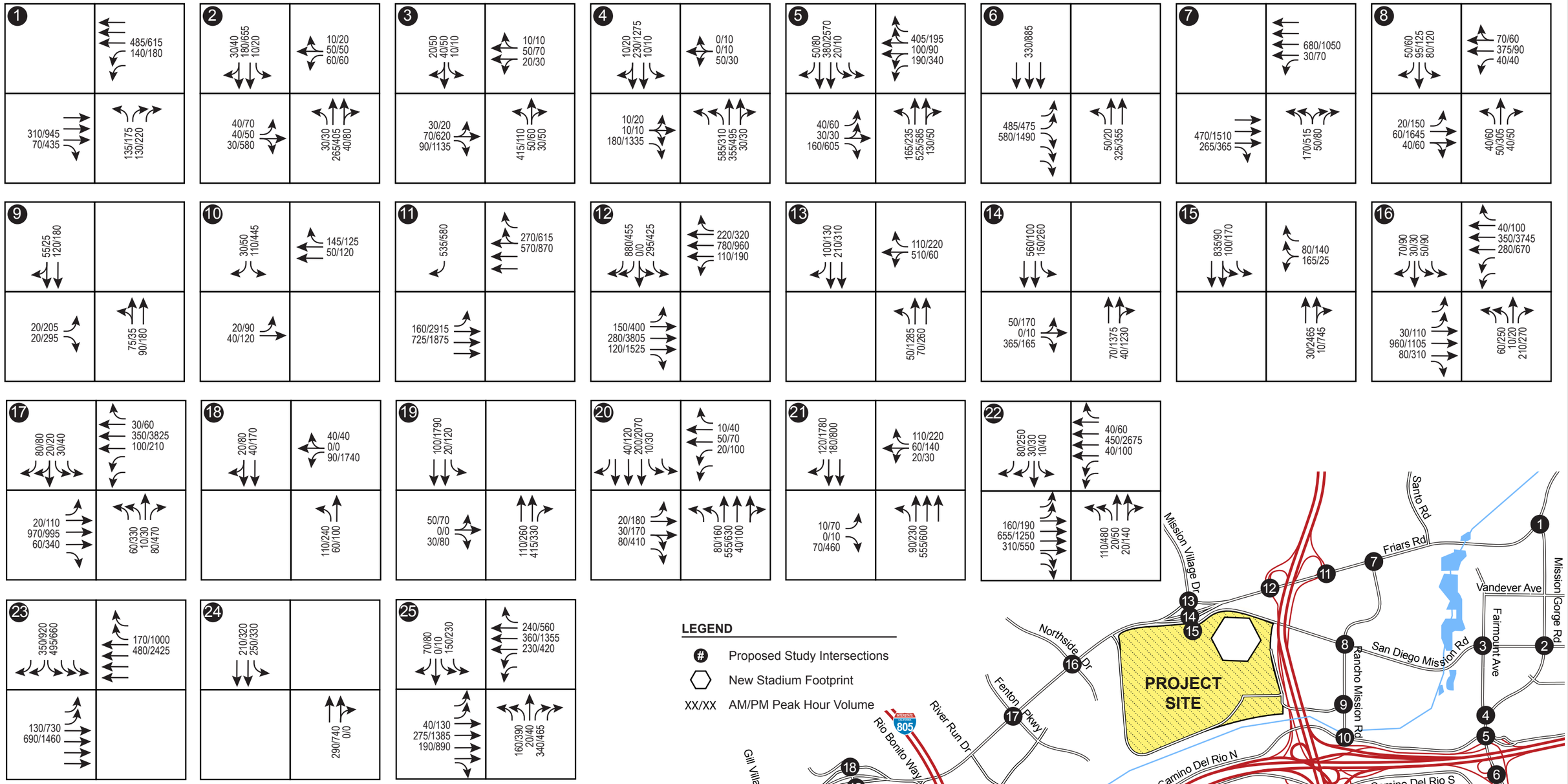

2019 NO PROJECT GAME DAY
INTERSECTION TRAFFIC VOLUMES (SUN)
Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE
PM: JR	PROJECT NO: 04102878-5939	6-3C

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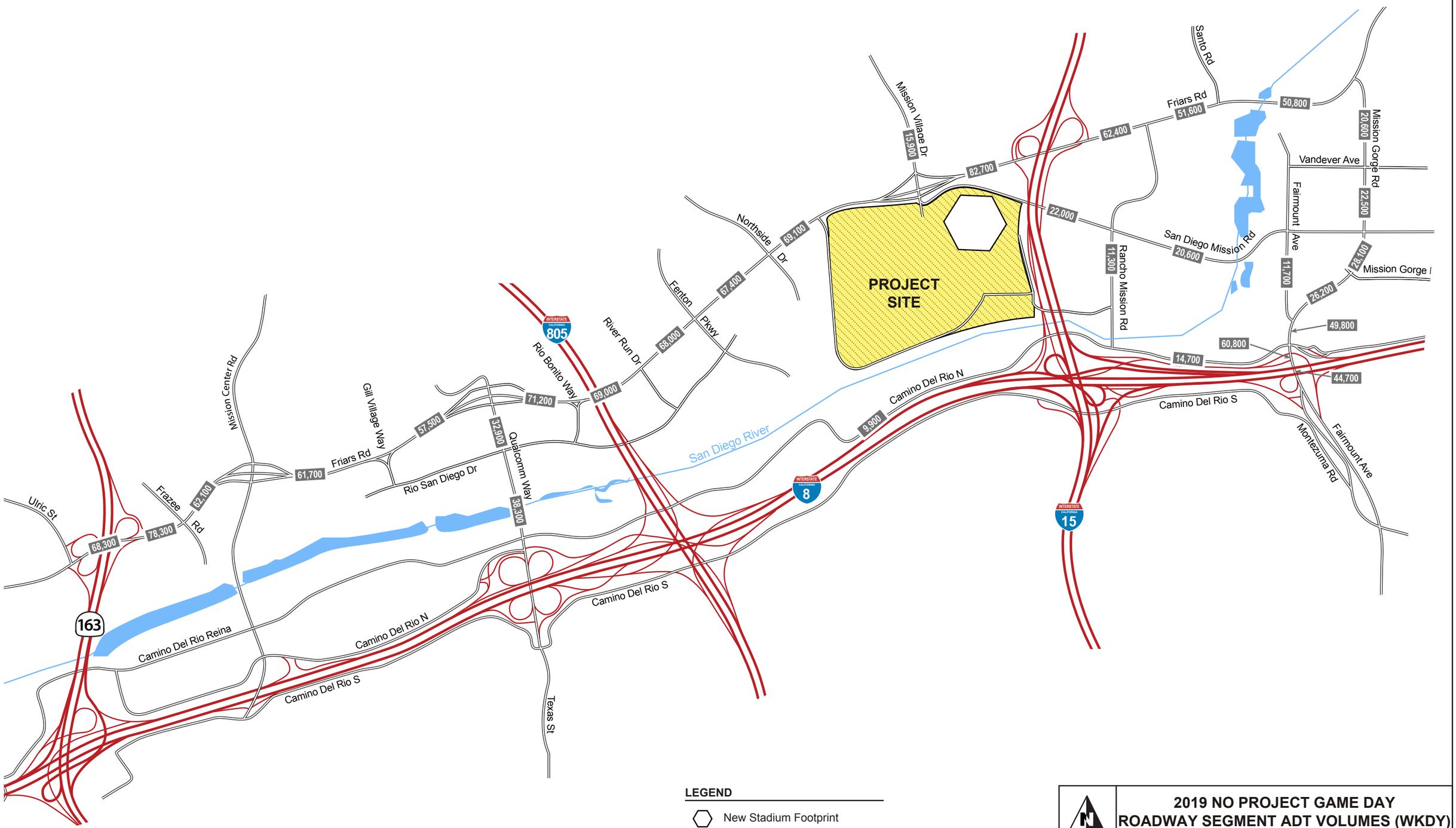

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 NO PROJECT GAME DAY
ROADWAY SEGMENT ADT VOLUMES (WKDY)
Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE
PM: JR	PROJECT NO: 04102878-5939	6-4A

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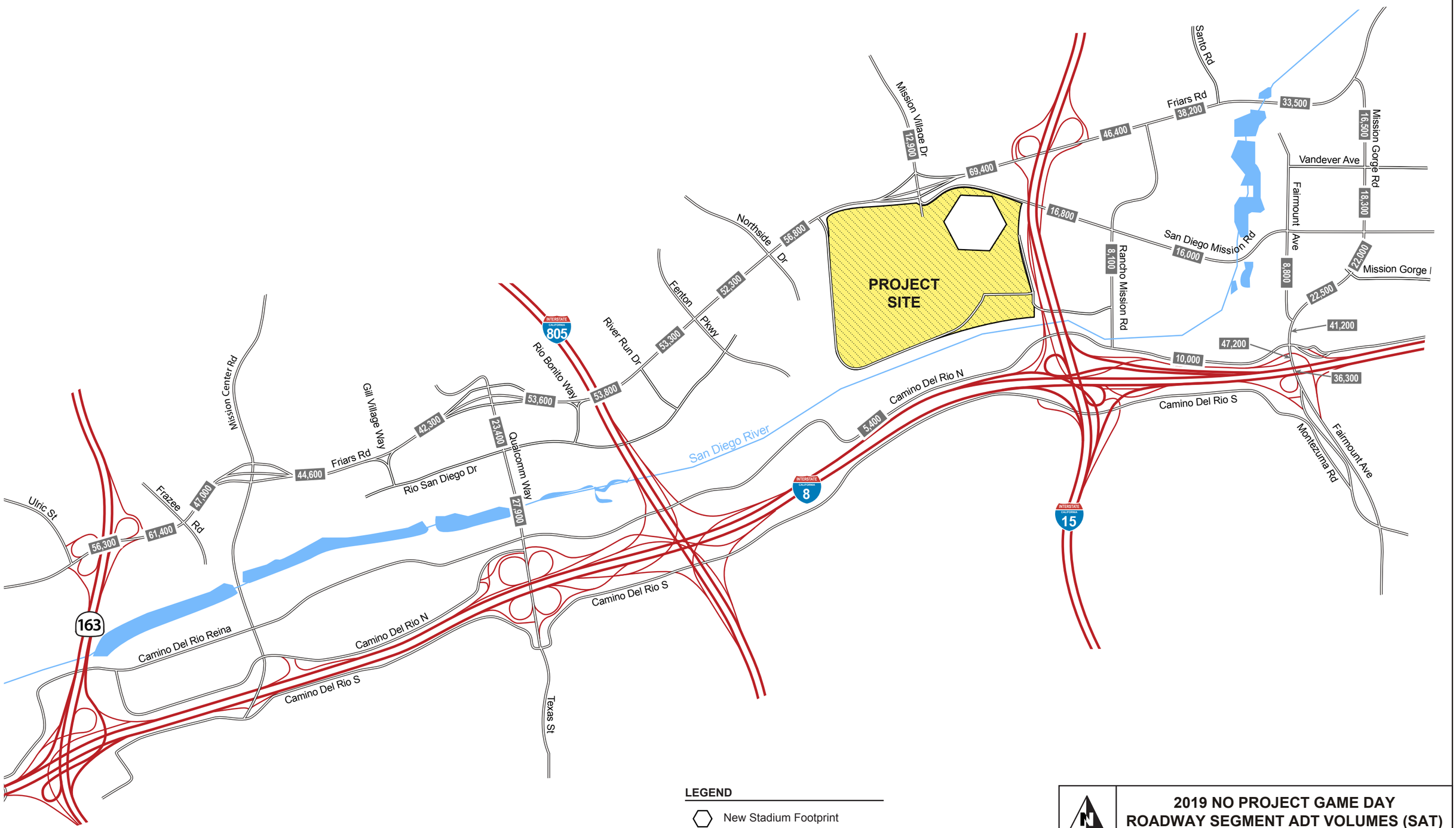

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 NO PROJECT GAME DAY
ROADWAY SEGMENT ADT VOLUMES (SAT)
Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE
PM: JR	PROJECT NO: 04102878-5939	6-4B

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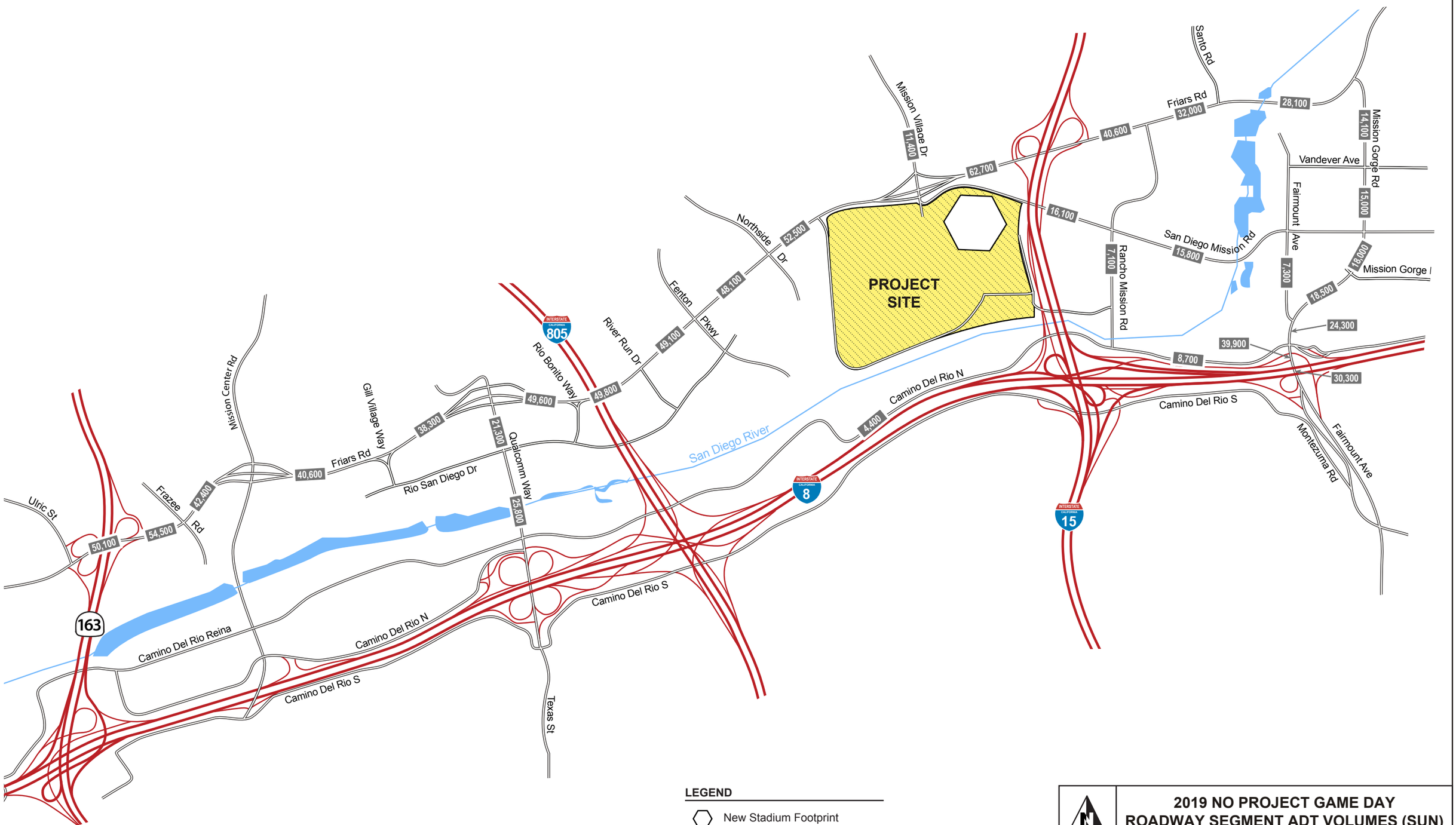

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 NO PROJECT GAME DAY
ROADWAY SEGMENT ADT VOLUMES (SUN)
Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE
PM: JR	PROJECT NO: 04102878-5939	6-4C

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6.1.3 Year 2019 Construction Phase with No Games

No Project trips are generated on days with no games during analysis year 2019. All project generated trips would be limited to construction related traffic. Construction traffic are expected to travel to and from I-15 at the Friars Road interchange to access the Project site via the Main Gate located on Mission Village Drive.

Worker trips are small in number and are not expected to change throughout the construction of the new stadium and demolition of the existing Qualcomm Stadium. Of the 80 one-way worker trips projected per day (one trip per person), and only a small portion of trips are expected to occur during the study peak hours. These worker trips would have a minimal impact on the roadway network and traffic conditions during both peak and non-peak hours.

During the new stadium construction phase, most of the heavy truck trips involve hauling earth to the site. This activity is anticipated to produce approximately 240 PCE trips per day and assumed to occur outside the morning and evening peak commuting hours. These truck trips would have a minimal impact on the roadway network and traffic conditions during both peak and non-peak hours. See **Table 5-7** in **Section 5.0** for details of construction related traffic activities.

In general, the number of trips generated from construction activity within the study peak hours is small, and the travel routes are limited to the roadway facilities immediately next to the Project site which are all currently performing at acceptable LOS D or better. Construction traffic is not expected to significantly affect conditions at the intersection, freeway segment and ramp meter levels. Similarly, daily trips generated from construction activities are not expected to adversely impact traffic conditions on the roadway segments.

6.1.4 Year 2019 Construction Phase with Games

This section provides analysis of the traffic conditions for analysis year 2019 during the construction of the new stadium when games are played.

Intersection Analysis

Table 6-9 summarizes the peak hour intersection conditions in analysis year 2019 during the new stadium construction phase and when games are played and **Figure 6-5** shows the projected intersection volumes. On game days, it is assumed construction activities are suspended for the day. All intersections operate at LOS D or better during both AM and PM peak hours except the following:

- Fairmount Avenue / Twain Avenue – LOS F during weekday PM peak
- Mission Gorge Road/ Fairmount Avenue – LOS F during Sunday PM peak
- Fairmount Avenue / Alvarado Canyon Road – LOS E during weekday AM peak, LOS F during weekday PM peak and Sunday PM peak
- Fairmount Avenue / I-8 EB Ramps – LOS E during weekday PM peak
- Rancho Mission Road / Ward Road – LOS F weekday during PM peak
- I-15 NB Ramps / Friars Road – LOS F during Sunday PM Peak
- I-15 SB Ramps / Friars Road – LOS F during weekday PM peak, Saturday PM peak and Sunday PM Peak
- Mission Village Drive / Friars Road WB – LOS E during weekday PM peak
- Mission Village Drive / Friars Road EB / San Diego Mission Rd – LOS F during weekday PM peak, Saturday PM peak and Sunday PM peak.
- Northside Drive / Friars Road – LOS F during weekday PM peak and Saturday PM peak
- Fenton Parkway / Friars Road – LOS F during weekday PM peak and Sunday PM peak, LOS E during Saturday PM peak
- Qualcomm Way / Friars Road EB – LOS F during weekday PM peak

- Qualcomm Way / I-8 WB Ramps – LOS F during Sunday PM peak
- Frazee Road / Friars Road – LOS E during weekday PM peak

The detailed calculation worksheets for intersection operations for 2019 Construction Phase on game days are provided in **Appendix D**.

Roadway Segment Analysis

Table 6-10 summarizes the roadway segment conditions in analysis year 2019 during the new stadium construction phase and when games are played, while **Figure 6-6** graphically displays the ADT volumes. On game days, it is assumed construction activities are suspended for the day. All roadway segments operate at LOS D or better except the following:

- Mission Gorge Road from Twain Avenue to Mission Gorge Place – LOS E on weekdays
- Mission Gorge Road from Mission Gorge Place to Fairmount Ave – LOS E on weekdays
- Fairmount Ave from Mission Gorge Rd to Alvarado Canyon Rd - LOS F on weekdays, Saturdays and Sundays
- Fairmount Ave from Alvarado Canyon Rd to I-8 WB Ramps – LOS F on weekdays and Saturday
- Fairmount Ave from I-8 WB Ramps to I-8 EB Ramps – LOS F on weekdays
- San Diego Mission Road from Fairmount Ave to Rancho Mission Rd – LOS F on weekdays, Saturdays and Sundays
- Friars Rd from I-15 Ramps to Mission Village Drive – LOS E on weekdays
- Friars Rd from Northside Drive to Fenton Pkwy – LOS F on weekdays
- Friars Rd from Fenton Parkway to River Run Drive – LOS F on weekdays

Freeway Segment Analysis

Table 6-11 summarizes the peak hour freeway segment conditions in analysis year 2019 new stadium construction phase and when games are played. On game days, it is assumed construction activities are suspended for the day. All freeway segments operate at LOS D or better during both AM and PM peak hours except the following:

- SB I-15 from Aero Drive to Friars Road - LOS F during weekday PM peak
- SB I-15 from Friars Road to I-8 – LOS E during weekday PM peak
- EB I-8 from Fairmount Avenue to I-15 – LOS E during weekday PM peak
- EB I-8 from I-15 to I-805 – LOS E during weekday PM peak
- WB I-8 from I-15 to I-805 – LOS F during weekday AM peak
- WB I-8 from I-805 to Qualcomm Way – LOS E during weekday AM peak
- EB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday PM peak
- WB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday AM peak
- WB I-8 from Mission Center Road to SR-163 – LOS E during weekday AM peak

Ramp Meter Analysis

Table 6-12 summarizes the ramp metering operating in analysis year 2019 during the new stadium construction phase and when games are played. On game days, it is assumed construction activities are suspended for the day. All study area ramp meters are calculated to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 NB: Friars Road On-ramp (PM peak)

Table 6-9
Intersection Analysis – 2019 Construction Phase with Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	8.6	A	27.1	C	7.4	A	12.3	B	6.6	A	8.3	A
2	Mission Gorge Rd	Twain Ave	22	C	30.1	C	20.9	C	14.9	B	13.3	B	36.6	D
3	Fairmount Ave	Twain Ave	13.4	B	133.6	**F**	12.2	B	41.2	D	17.1	B	35.1	D
4	Mission Gorge Rd	Fairmount Ave	24.9	C	44.1	D	20	B	43.4	D	19.5	B	84.5	**F**
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	116.5	**F**	22.4	C	49.3	D	20.9	C	159.3	**F**
6	Fairmount Ave	I-8 EB Ramps	13.8	B	56.6	**E**	10.4	B	26.7	C	13.7	B	18.3	B
7	Rancho Mission Rd	Friars Rd	12.4	B	14.8	B	11.8	B	18	B	12.8	B	12.5	B
8	Rancho Mission Rd	San Diego Mission Rd	26	C	42.4	D	16.8	B	27.6	C	18.8	B	41.5	D
9	Rancho Mission Rd	Ward Rd	11.1	B	61.4	**F**	9.6	A	14.9	B	10.1	B	12.1	B
10	Ward Rd	Camino Del Rio N	12.7	B	25.1	C	11.2	B	15.3	B	12.1	B	13.1	B
11	I-15 NB Ramps	Friars Rd	3.7	A	5.5	A	6.5	A	10.8	B	12.8	B	264.3	**F**
12	I-15 SB Ramps	Friars Rd	34.1	C	152.1	**F**	18.1	B	133.9	**F**	20.9	C	84.3	**F**
13	Mission Village Dr	Friars Rd WB	11.6	B	59.2	**E**	12.1	B	22.8	C	14.6	B	25.6	C
14	Mission Village Dr	Friars Rd EB	38.7	D	261	**F**	37.4	D	284.4	**F**	41	D	306.9	**F**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	174.3	**F**	17.2	B	96	**F**	22.3	C	41.1	D
17	Fenton Pkwy	Friars Rd	17.6	B	124.1	**F**	17.3	B	55.5	**E**	22.1	C	99.4	**F**
18	Qualcomm Way	Friars Rd WB	20	B	36.9	D	15.1	B	30.2	C	9.3	A	47.3	D
19	Qualcomm Way	Friars Rd EB	12.4	B	88.6	**F**	12.7	B	54	D	8.8	A	8.5	A
20	Qualcomm Way	Camino De La Reina	27.5	C	36.8	D	11.6	B	22.8	C	9.6	A	18.4	B
21	Qualcomm Way	I-8 WB Ramps	24.4	C	28.4	C	13.1	B	20.1	C	9.2	A	157.6	**F**
22	Frazee Rd	Friars Rd	40.4	D	75.8	**E**	19.6	B	25.5	C	16.5	B	23.4	C
23	SR-163 NB Ramps	Friars Rd	13.2	B	36.9	D	10.7	B	37.1	D	12	B	53.7	D
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	9.5	A	13.1	B	2.9	A	2.9	A
25	Ulric St	Friars Rd	20.4	C	54.3	D	13.2	B	31.6	C	14.4	B	36.4	D
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	10.7	B	35.2	D	--	--	--	--	--	--	--	--

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Table 6-10
Roadway Segment Analysis – 2019 Construction Phase with Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	20,300	0.68	D	16,300	0.54	C	13,900	0.46	B
2	Vandever Ave to Twain Ave	4	Collector	30,000	22,200	0.74	D	18,100	0.60	C	14,800	0.49	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	27,400	0.91	**E**	21,500	0.72	D	17,500	0.58	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	25,500	0.85	**E**	22,000	0.73	D	18,000	0.60	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	11,700	0.78	D	8,800	0.59	C	7,300	0.49	C
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	49,800	1.25	**F**	41,200	1.03	**F**	35,500	0.89	**E**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	60,800	1.35	**F**	47,200	1.05	**F**	39,900	0.89	D
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	44,700	0.99	**E**	36,300	0.81	D	30,300	0.67	C
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	20,600	1.37	**F**	16,000	1.07	**F**	15,800	1.05	**F**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	19,800	0.66	C	15,600	0.52	C	14,900	0.50	C
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	14,400	0.48	C	9,800	0.33	A	8,500	0.28	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	10,100	0.67	D	5,400	0.36	B	4,400	0.29	A
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	11,300	0.75	D	7,900	0.53	C	6,900	0.46	B
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	15,800	0.40	B	12,800	0.32	A	11,300	0.28	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	50,200	0.84	D	33,100	0.55	B	27,700	0.46	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	51,000	0.73	C	37,800	0.54	B	31,600	0.45	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	61,700	0.88	D	45,900	0.66	C	40,100	0.57	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	77,800	0.97	**E**	66,500	0.83	D	59,800	0.75	C
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	64,900	0.81	D	54,400	0.68	C	50,100	0.63	C
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	63,200	1.05	**F**	49,900	0.83	C	45,700	0.76	C
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	63,800	1.06	**F**	50,900	0.85	D	46,700	0.78	C
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	64,800	0.81	D	51,400	0.64	C	47,400	0.59	C
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	67,000	0.72	C	51,200	0.55	C	47,200	0.51	B
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	56,500	0.53	C	41,000	0.38	B	37,000	0.35	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	60,700	0.57	C	43,300	0.41	B	39,300	0.37	A
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	61,100	0.65	C	45,700	0.49	B	41,100	0.44	B
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	77,300	0.77	C	60,100	0.60	C	53,200	0.53	B
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	67,900	0.85	D	56,000	0.70	C	49,800	0.62	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	30,900	0.62	C	22,200	0.44	B	20,100	0.40	B
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	36,300	0.73	C	26,700	0.53	B	24,600	0.49	B

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 6-11
Freeway Segment Analysis – 2019 Construction Phase with Games

Location	Number of Lanes[1]				Weekday						Saturday						Sunday					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,514	0.28	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,190	0.65	C	4,340	0.48	B	3,770	0.39	A	2,978	0.32	A	2,210	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,250	0.58	B	10,220	0.89	D	3,710	0.34	A	4,900	0.42	B	2,360	0.21	A	3,500	0.30	A
Fairmount Ave to I-15	4	0	4	0	3,910	0.51	B	6,520	0.84	D	2,280	0.30	A	2,740	0.35	A	1,806	0.23	A	2,220	0.28	A
I-15 to I-805	4	2	4	2	5,300	0.54	B	10,620	1.05	**F(0)**	3,170	0.32	A	5,490	0.54	B	2,336	0.23	A	3,740	0.36	A
I-805 to Qualcomm Way	4	0	4	0	3,810	0.49	B	7,350	0.93	**E**	2,020	0.26	A	3,650	0.46	B	1,490	0.19	A	2,590	0.33	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,010	0.51	B	9,260	1.06	**F(0)**	2,690	0.27	A	5,050	0.56	B	2,231	0.23	A	3,590	0.40	A
Mission Center Rd to SR-163	4	0	3	1	3,010	0.38	A	7,030	0.99	**E**	1,630	0.21	A	4,010	0.57	B	1,481	0.19	A	2,960	0.42	A
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,670	0.89	D	6,170	0.67	C	2,720	0.28	A	2,890	0.32	A	1,790	0.18	A	2,327	0.29	A
Friars Rd to I-8	3	4	4	0	7,730	0.73	C	6,620	0.85	D	2,370	0.22	A	2,980	0.38	A	1,748	0.16	A	2,444	0.31	A

Location	Number of Lanes[1]				Weekday						Saturday						Sunday					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,478	0.61	B	10,397	1.14	**F(0)**	4,441	0.49	B	7,083	0.77	C	5,968	0.65	C	4,389	0.48	B
Friars Rd to I-8	4	1	4	2	6,614	0.73	C	9,179	0.98	**E**	5,820	0.64	C	6,298	0.64	C	4,812	0.53	B	5,742	0.58	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	9,932	0.90	D	8,183	0.70	C	7,471	0.67	C	7,245	0.62	B	7,888	0.71	C	5,445	0.47	B
Fairmount Ave to I-15	4	0	4	0	7,436	0.93	**E**	4,623	0.59	B	5,590	0.70	C	3,912	0.50	B	4,894	0.61	B	4,132	0.52	B
I-15 to I-805	4	2	4	2	9,626	0.95	**E**	8,023	0.79	C	7,890	0.78	C	7,302	0.71	C	7,144	0.71	C	6,582	0.64	C
I-805 to Qualcomm Way	4	0	4	0	6,730	0.88	D	5,350	0.68	C	5,400	0.70	C	5,050	0.64	C	4,600	0.59	B	4,170	0.53	B
Qualcomm Way to Mission Center Rd	5	0	4	1	10,242	1.04	**F(0)**	7,946	0.91	D	8,340	0.86	D	7,504	0.87	D	7,259	0.74	C	7,533	0.85	D
Mission Center Rd to SR-163	4	0	3	1	6,422	0.84	D	6,176	0.88	D	5,090	0.64	C	5,704	0.81	D	4,209	0.53	B	6,043	0.85	D
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	7,647	0.79	C	7,922	0.88	D	5,686	0.58	B	5,688	0.62	B	7,261	0.74	C	3,731	0.41	A
Friars Rd to I-8	3	4	4	0	6,975	0.65	C	6,988	0.91	D	5,320	0.50	B	5,106	0.65	C	6,002	0.56	B	4,196	0.54	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 6-12
Ramp Metering Analysis – 2019 Construction Phase with Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2019 Construction Phase AM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,290	586	Min:	516	70	8	1,750
						Max:	600	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	700	700	Min:	660	40	4	1,000
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	610	610	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	810	810	Min:	493	317	**39**	7,925
						Max:	996	0	0	0
2019 Construction Phase PM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,470	668	Min:	386	282	**44**	7,050
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	730	730	Min:	660	70	6	1,750
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,020	1020	Max:	996	24	1	600
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,030	1030	Min:	493	537	**65**	13,425
						Max:	996	34	2	850

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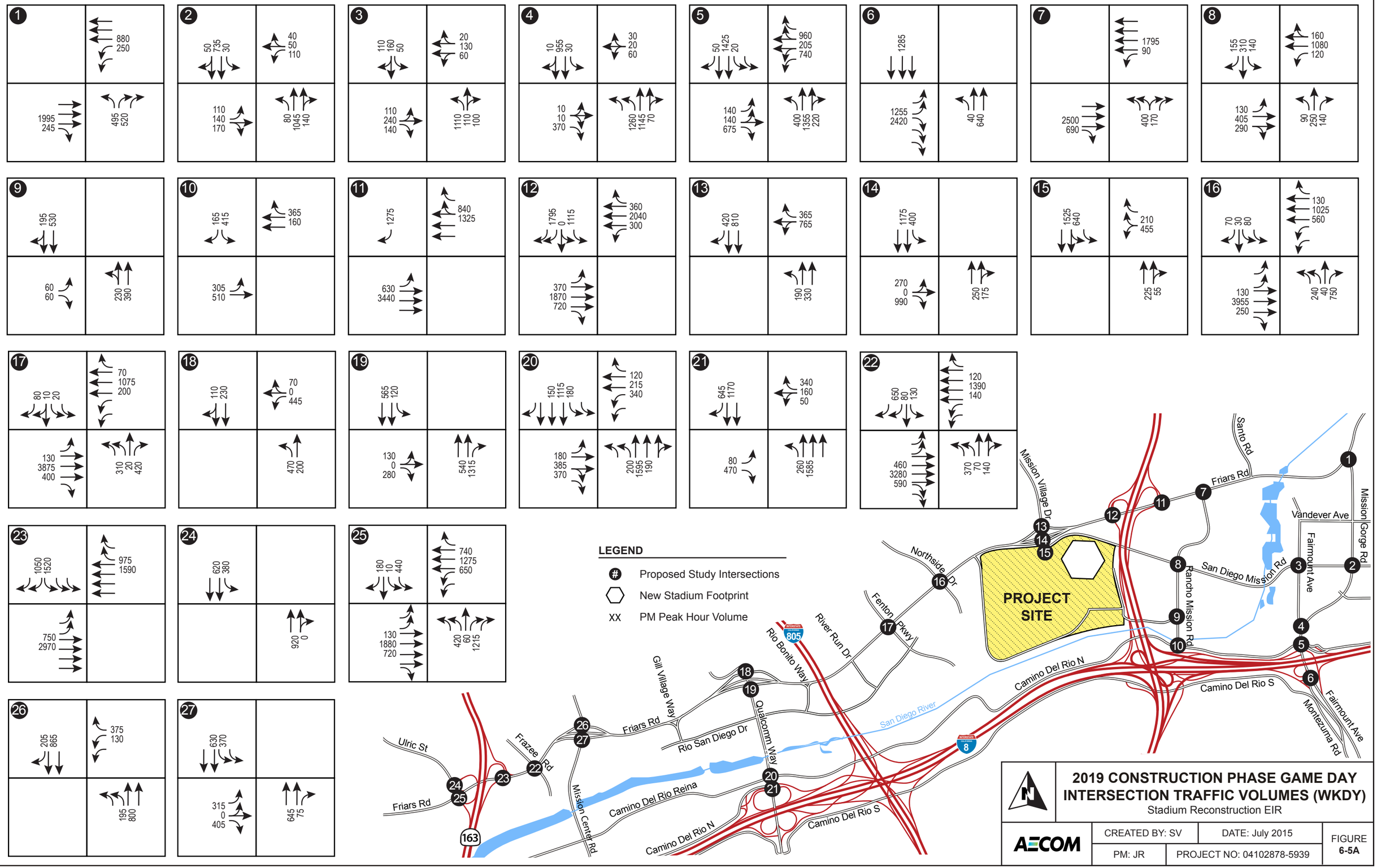

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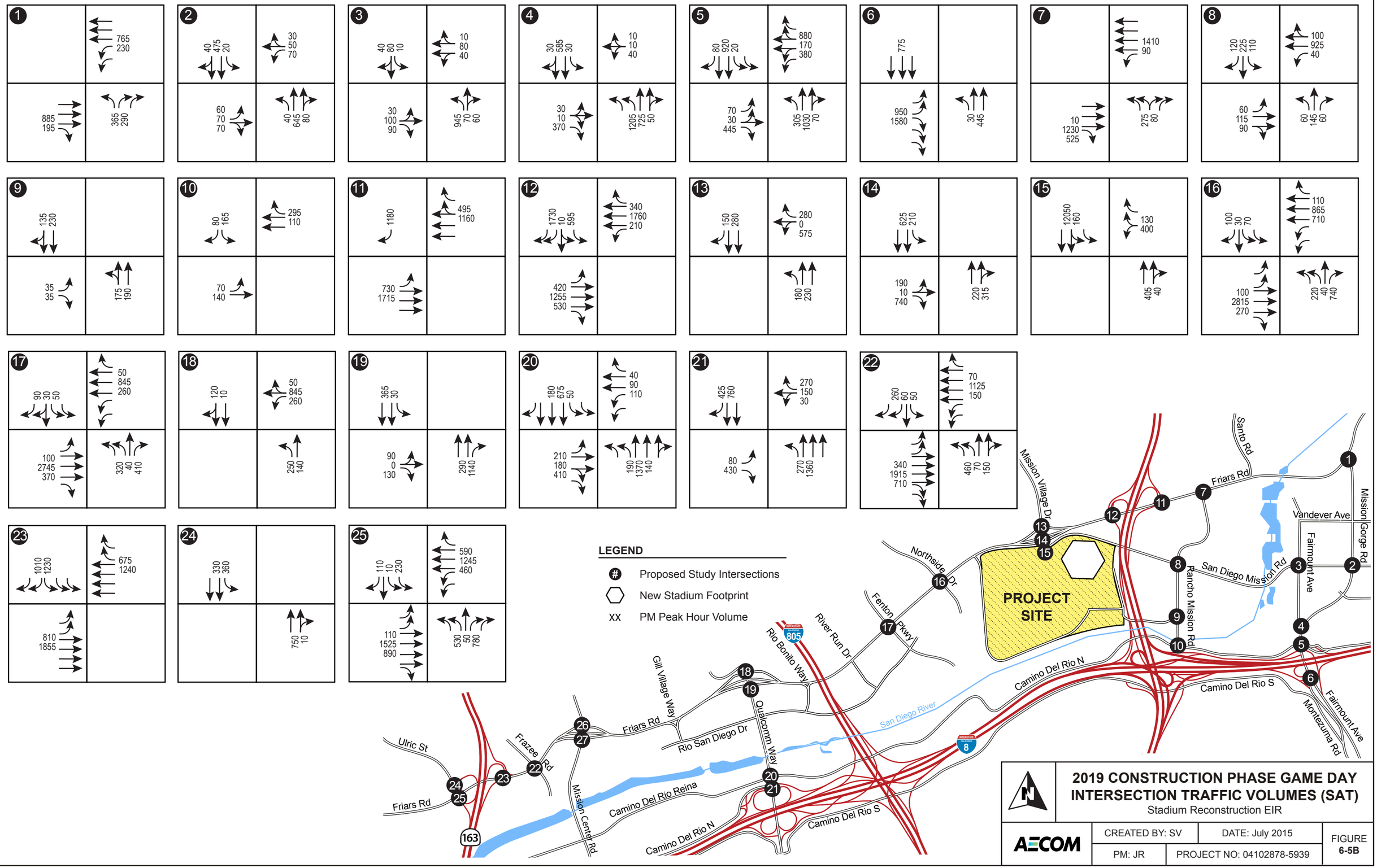

2019 CONSTRUCTION PHASE GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM	CREATED BY: SV	DATE: July 2015	FIGURE 6-5B
	PM: JR	PROJECT NO: 04102878-5939	

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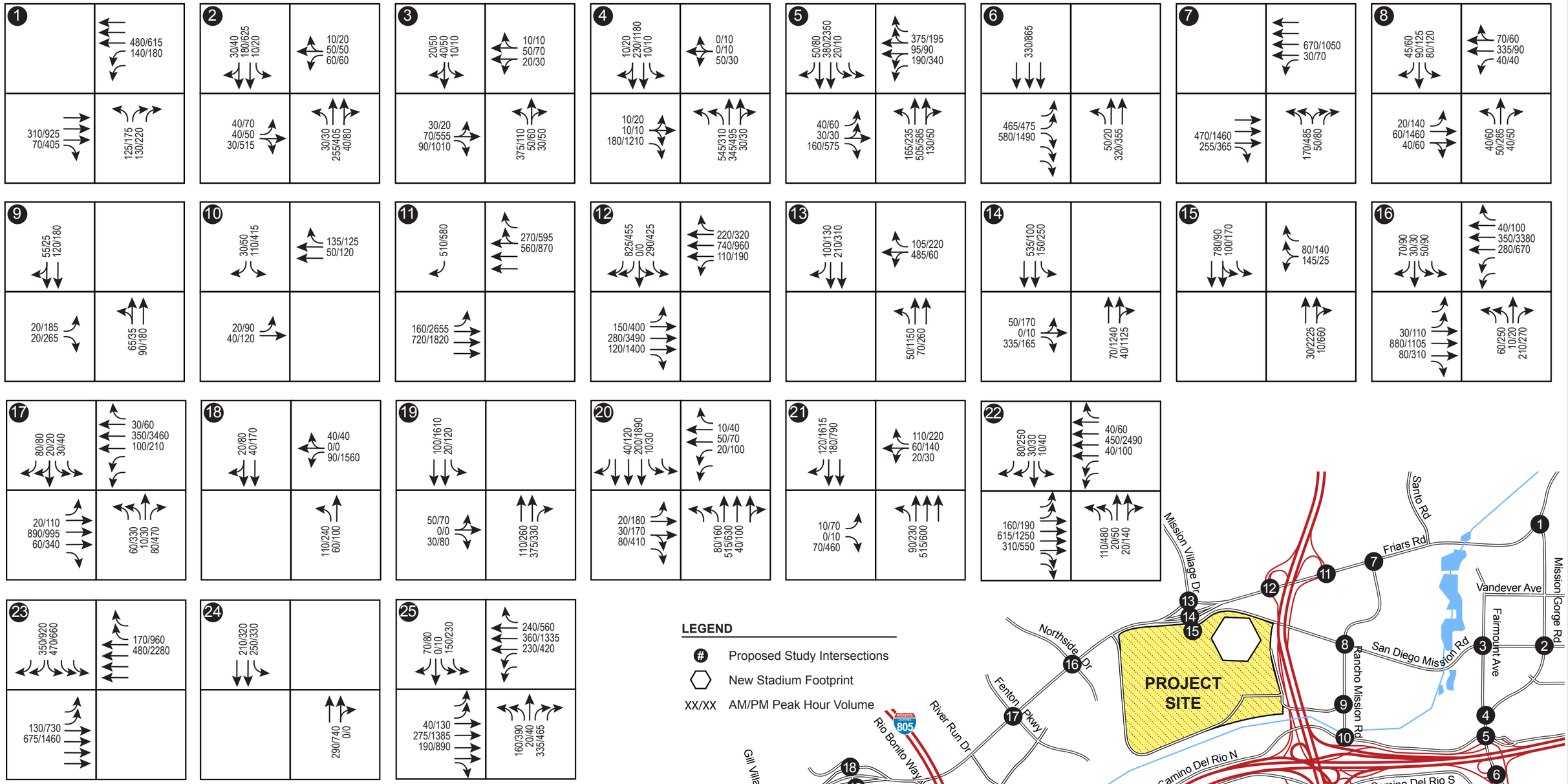

2019 CONSTRUCTION PHASE GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

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	PM: JR	PROJECT NO: 04102878-5939	

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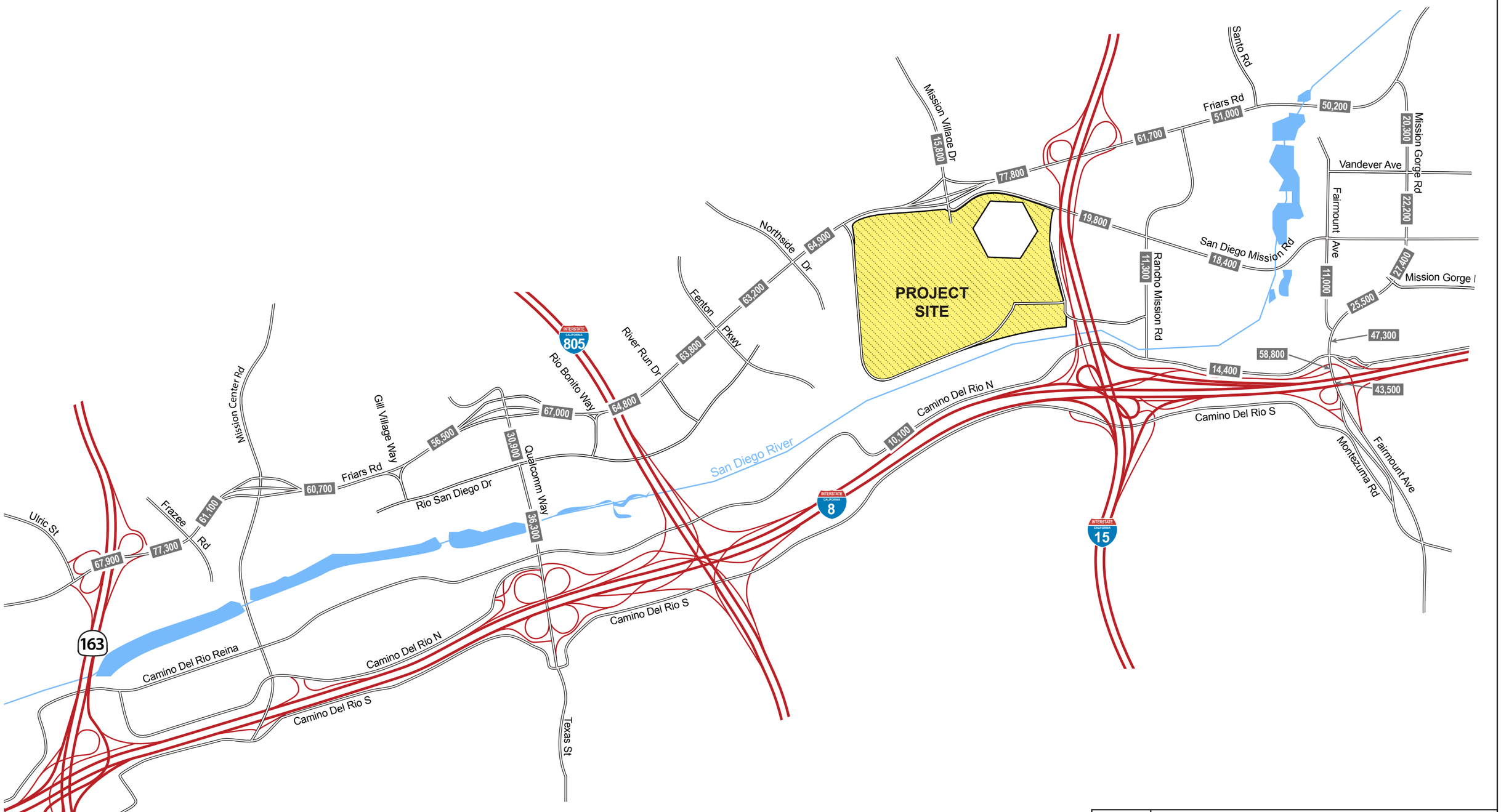

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 CONSTRUCTION PHASE GAME DAY ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-6A
PM: JR	PROJECT NO: 04102878-5939	

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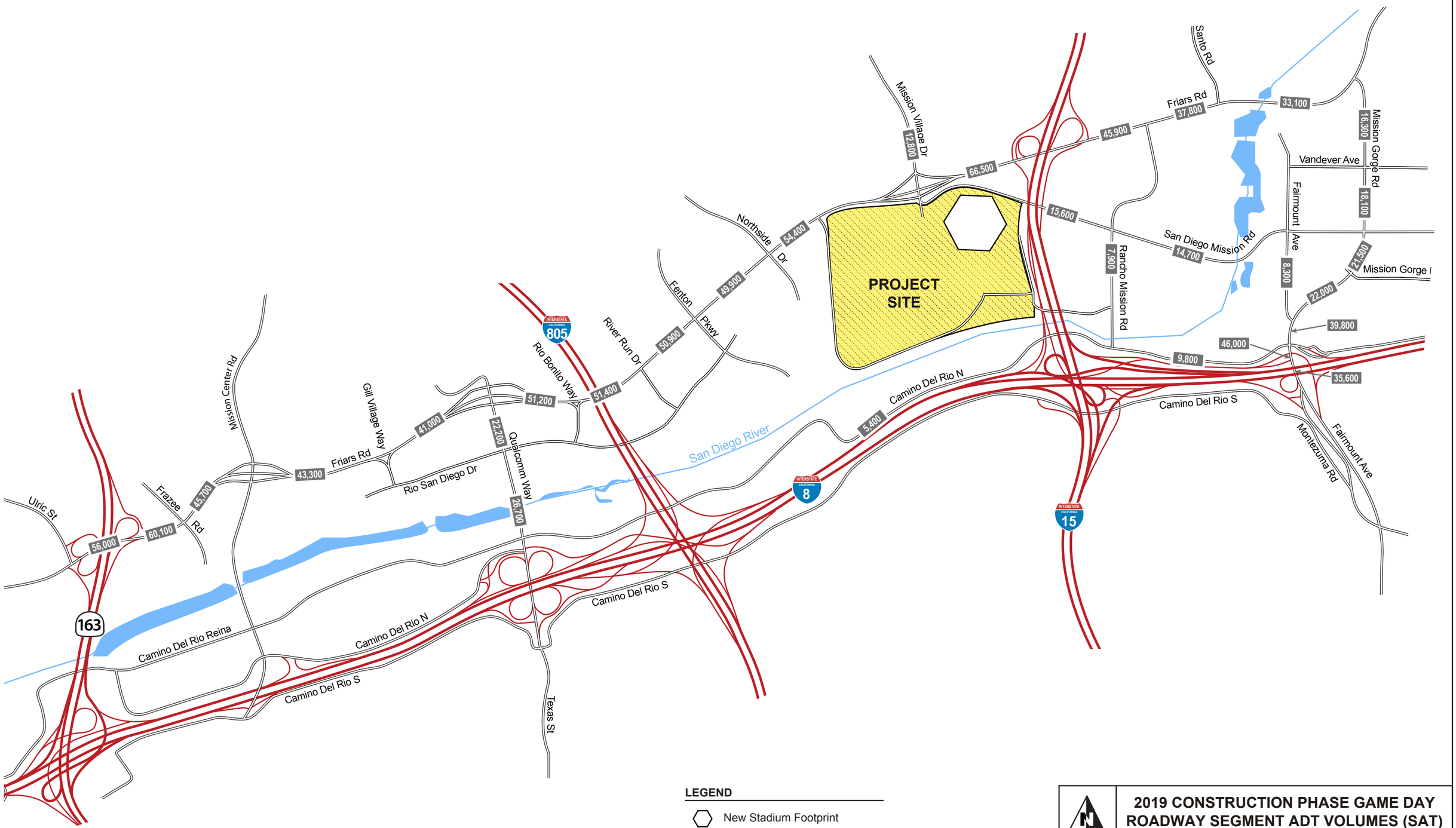

2019 CONSTRUCTION PHASE GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM	CREATED BY: SV	DATE: July 2015	FIGURE 6-6B
	PM: JR	PROJECT NO: 04102878-5939	

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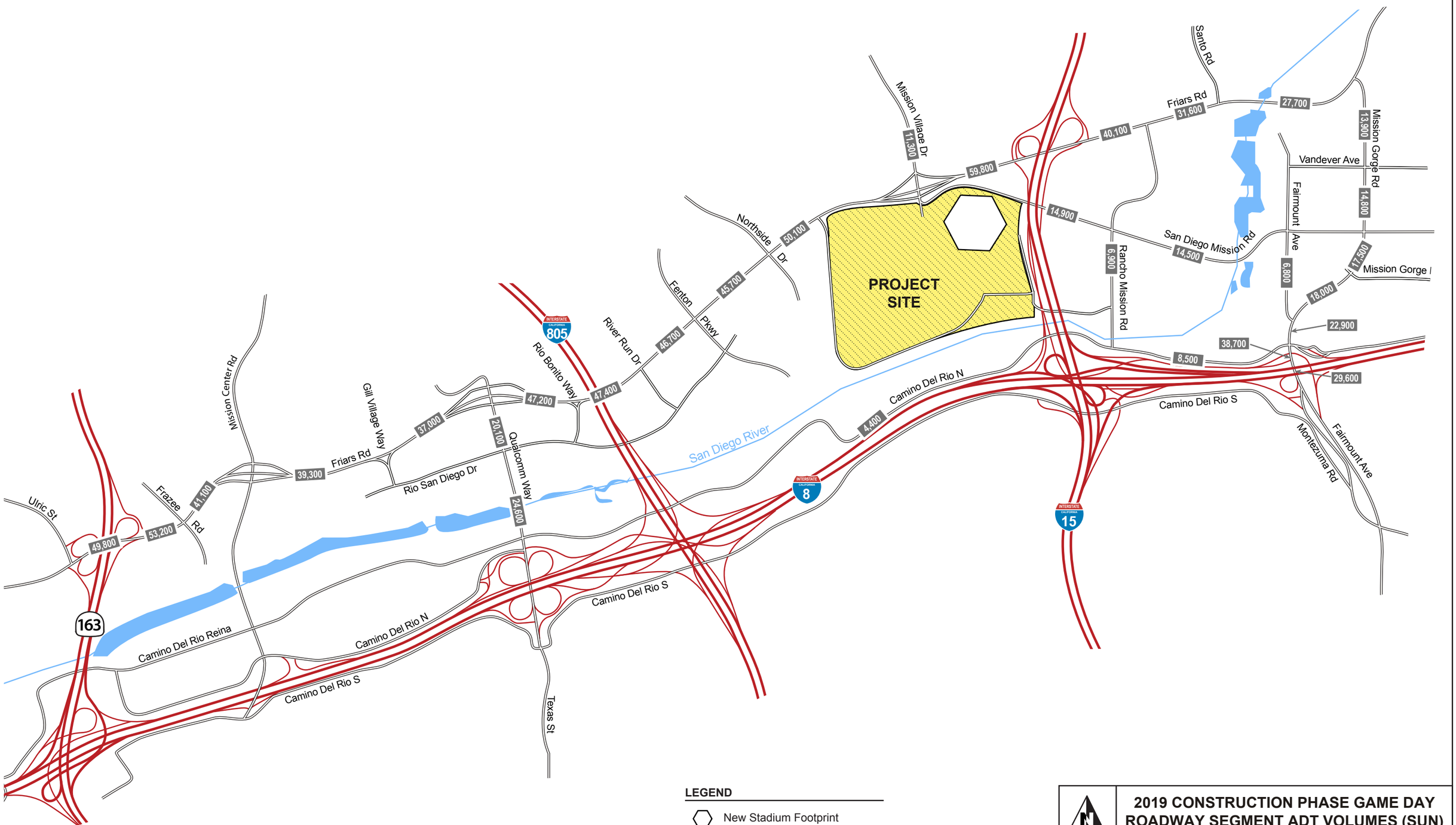

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 CONSTRUCTION PHASE GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-6C
PM: JR	PROJECT NO: 04102878-5939	

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6.1.5 Year 2019 Demolition Phase with No Games

No event attendee trips are generated on days with no games during analysis year 2019. All project generated trips would be limited to demolition related traffic. Demolition phase traffic is expected to travel to and from I-15 at the Friars Road interchange to access the Project site via the Main Gate located on Mission Village Drive.

Worker trips are small in number and are not expected to change throughout the demolition phase of the proposed project. Of the 80 one-way worker trips projected per day (one trip per person), and only a small portion of trips are expected to occur during the study peak hours. These worker trips would have a minimal impact on the roadway network and traffic conditions during both peak and non-peak hours.

During the demolition phase, most of the heavy truck trips involve hauling earth from and to the site. This activity is anticipated to produce approximately 240 PCE trips per day and assumed to occur outside the morning and evening peak commuting hours. These truck trips would have a minimal impact on the roadway network and traffic conditions during both peak and non-peak hours. See **Table 5-7** in **Section 5.0** for details of demolition related traffic activities.

In general, the number of trips generated from demolition activity within the study peak hours is small, and the travel routes are limited to the roadway facilities immediately next to the Project site which are all currently performing at acceptable LOS D or better. Demolition traffic is not expected to significantly affect conditions at the intersection, freeway segment and ramp meter levels. Similarly, daily trips generated from demolition activities are not expected to adversely impact traffic conditions on the roadway segments.

6.1.6 Year 2019 Demolition Phase with Games

This section provides analysis of the traffic conditions occurring during analysis year 2019 during the Qualcomm stadium demolition phase of the proposed Project and when games are played.

Intersection Analysis

Table 6-13 summarizes the peak hours intersection conditions in analysis year 2019 during the Qualcomm stadium demolition phase and when games are played and **Figure 6-7** shows the projected intersection volumes. On game days, it is assumed demolition activities are suspended for the day. All intersections operate at LOS D or better during both AM and PM peak hours except the following:

- Fairmount Avenue / Twain Avenue – LOS F during weekday PM peak
- Mission Gorge Road / Fairmount Avenue – LOS F during Sunday PM peak
- Fairmount Avenue / Alvarado Canyon Road – LOS E during weekday AM peak, LOS F during PM Peak and LOS F during Sunday PM peak
- Fairmount Avenue / I-8 EB Ramps – LOS E during weekday PM peak
- Rancho Mission Road / Ward Road – LOS F during weekday PM peak
- I-15 NB Ramps / Friars Road – LOS F during Sunday PM peak
- I-15 SB Ramps / Friars Road – LOS F during weekday, Saturday and Sunday PM peak
- Mission Village Drive / Friars Road EB / San Diego Mission Rd – LOS F during weekday, Saturday and Sunday PM peak
- Northside Drive / Friars Road – LOS F during weekday and Sunday PM peak and LOS E during Saturday PM peak
- Qualcomm Way / Friars Road EB – LOS E during weekday PM peak
- Qualcomm Way / I-8 WB Ramps – LOS F during Sunday PM Peak
- Frazee Road / Friars Road – LOS E during weekday PM peak

- Ulric Street / Friars Road – LOS E during weekday PM peak

The detailed calculation worksheets for intersection operations in 2019 Qualcomm Stadium Demolition Phase on game days are provided in **Appendix D**.

Roadway Segment Analysis

Table 6-14 summarizes the roadway segment conditions in analysis year 2019 during the Qualcomm stadium demolition phase and when games are played, while **Figure 6-8** graphically shows the ADT volumes. On game days, it is assumed demolition activities are suspended for the day. All roadway segments operate at LOS D or better except the following:

- Mission Gorge Road from Twain Avenue to Mission Gorge Place – LOS E on weekdays
- Mission Gorge Road from Mission Gorge Place to Fairmount Avenue – LOS E on weekdays
- Fairmount Avenue from Mission Gorge Road to Alvarado Canyon Road – LOS F on weekdays and LOS E on Saturdays
- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps – LOS F on weekdays and Saturdays
- Fairmount Avenue from I-8 WB Ramps to I-8 EB Ramps – LOS E on weekdays
- San Diego Mission Road from Fairmount Avenue to Rancho Mission Road – LOS F on weekdays, Saturdays, and Sundays
- Friars Rd from I-15 Ramps to Mission Village Drive – LOS F during weekdays and Saturdays and LOS E on Sundays
- Friars Rd from Northside Drive to Fenton Pkwy – LOS F on weekdays
- Friars Rd from Fenton Parkway to River Run Drive – LOS F on weekdays

Freeway Segment Analysis

Table 6-15 summarizes the peak hour freeway segment conditions in analysis year 2019 during the Qualcomm stadium demolition phase and when games are played. On game days, it is assumed demolition activities are suspended for the day. All freeway segments operate at LOS D or better during both AM and PM peak hours except the following:

- SB I-15 from Aero Drive to Friars Road – LOS F during weekday PM peak
- SB I-15 from Friars Road to I-8 – LOS E during weekday PM peak
- WB I-8 from I-15 to I-805 – LOS F during weekday AM peak
- EB I-8 from I-15 to I-805 – LOS E during weekday PM peak
- WB I-8 from I-805 to Qualcomm Way – LOS E during weekday AM peak
- WB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday AM peak
- EB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday PM peak
- WB I-8 from Mission Center Road to SR-163 – LOS E during weekday AM peak

Freeway Ramps

Table 6-16 summarizes the peak hour freeway ramp metering operating conditions in analysis year 2019 during the Qualcomm stadium demolition phase and when games are played. On game days, it is assumed demolition activities are suspended for the day. All study area ramp meters are calculated to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp – AM and PM peak
- I-15 NB: Friars Road On-ramp – PM peak

Table 6-13
Intersection LOS Analysis – 2019 Demolition Phase with Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	8.6	A	26.1	C	7.4	A	12.3	B	6.2	A	8.3	A
2	Mission Gorge Rd	Twain Ave	22	C	29.7	C	20.9	C	14.9	B	14.4	B	36.6	D
3	Fairmount Ave	Twain Ave	13.4	B	119.9	**F**	12.2	B	41.2	D	13.9	B	35.1	D
4	Mission Gorge Rd	Fairmount Ave	24.9	C	41.5	D	20	B	43.4	D	15.1	B	84.5	**F**
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	122.7	**F**	22.4	C	49.3	D	18.9	B	159.3	**F**
6	Fairmount Ave	I-8 EB Ramps	13.8	B	56.7	**E**	10.4	B	26.7	C	10.7	B	18.3	B
7	Rancho Mission Rd	Friars Rd	12.4	B	15	B	11.8	B	18	B	9.5	A	12.5	B
8	Rancho Mission Rd	San Diego Mission Rd	26	C	39.7	D	16.8	B	27.6	C	18.5	B	41.5	D
9	Rancho Mission Rd	Ward Rd	11.1	B	180.7	**F**	9.6	A	14.9	B	9.5	A	12.1	B
10	Ward Rd	Camino Del Rio N	12.7	B	25.2	C	11.2	B	15.3	B	11.3	B	13.1	B
11	I-15 NB Ramps	Friars Rd	3.7	A	5.5	A	6.5	A	10.8	B	3.1	A	264.3	**F**
12	I-15 SB Ramps	Friars Rd	34.1	C	140.8	**F**	18.1	B	133.9	**F**	15.5	B	84.3	**F**
13	Mission Village Dr	Friars Rd WB	11.6	B	55	D	12.1	B	22.8	C	11.9	B	25.6	C
14	Mission Village Dr	Friars Rd EB	38.7	D	235.2	**F**	37.4	D	284.4	**F**	25.5	C	306.9	**F**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	161.8	**F**	17.2	B	96	**F**	15.6	B	41.1	D
17	Fenton Pkwy	Friars Rd	17.6	B	111.1	**F**	17.3	B	55.5	**E**	17	B	99.4	**F**
18	Qualcomm Way	Friars Rd WB	20	B	36.9	D	15.1	B	30.2	C	17	B	47.3	D
19	Qualcomm Way	Friars Rd EB	12.4	B	79.3	**E**	12.7	B	54	D	14.7	B	8.5	A
20	Qualcomm Way	Camino De La Reina	27.5	C	37.3	D	11.6	B	22.8	C	15.5	B	18.4	B
21	Qualcomm Way	I-8 WB Ramps	24.4	C	28.6	C	13.1	B	20.1	C	11.2	B	157.6	**F**
22	Frazee Rd	Friars Rd	40.4	D	77.6	**E**	19.6	B	25.5	C	19.1	B	23.4	C
23	SR-163 NB Ramps	Friars Rd	13.2	B	37.5	D	10.7	B	37.1	D	11.9	B	53.7	D
24	Ulric St	SR-163 SB On-ramp	11.4	B	3.3	A	9.5	A	13.1	B	2.9	A	2.9	A
25	Ulric St	Friars Rd	20.4	C	56.8	**E**	13.2	B	31.6	C	23.9	C	36.4	D
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	10.7	B	33	C	--	--	--	--	--	--	--	--

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Table 6-14
Roadway Segment Analysis – 2019 Demolition Phase with Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	20,200	0.67	D	16,300	0.54	C	13,900	0.46	B
2	Vandever Ave to Twain Ave	4	Collector	30,000	22,100	0.74	D	18,100	0.60	C	14,800	0.49	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	27,100	0.90	**E**	21,500	0.72	D	17,500	0.58	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	25,200	0.84	**E**	22,000	0.73	D	18,000	0.60	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	10,700	0.71	D	8,300	0.55	C	6,800	0.45	B
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	46,400	1.16	**F**	39,800	1.00	**E**	34,100	0.85	D
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	58,100	1.29	**F**	46,000	1.02	**F**	38,700	0.86	D
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	43,100	0.96	**E**	35,600	0.79	D	29,600	0.66	C
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	17,600	1.17	**F**	14,700	0.98	**E**	14,500	0.97	**E**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	19,100	0.64	C	15,600	0.52	C	14,900	0.50	C
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	14,300	0.48	C	9,800	0.33	A	8,500	0.28	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	10,300	0.69	D	5,400	0.36	B	4,400	0.29	A
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	11,400	0.76	D	7,900	0.53	C	6,900	0.46	B
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	15,800	0.40	B	12,800	0.32	A	11,300	0.28	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	50,000	0.83	C	33,100	0.55	B	27,700	0.46	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	50,800	0.73	C	37,800	0.54	B	31,600	0.45	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	61,500	0.88	D	45,900	0.66	C	40,100	0.57	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	76,000	0.95	**E**	66,500	0.83	D	59,800	0.75	C
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	63,400	0.79	D	54,400	0.68	C	50,100	0.63	C
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	61,700	1.03	**F**	49,900	0.83	C	45,700	0.76	C
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	62,300	1.04	**F**	50,900	0.85	D	46,700	0.78	C
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	63,300	0.79	D	51,400	0.64	C	47,400	0.59	C
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	65,500	0.70	C	51,200	0.55	C	47,200	0.51	B
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	57,400	0.54	C	41,000	0.38	B	37,000	0.35	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	61,600	0.58	C	43,300	0.41	B	39,300	0.37	A
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	62,000	0.66	C	45,700	0.49	B	41,100	0.44	B
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	78,200	0.78	C	60,100	0.60	C	53,200	0.53	B
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	68,000	0.85	D	56,000	0.70	C	49,800	0.62	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	30,200	0.60	C	22,200	0.44	B	20,100	0.40	B
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	35,600	0.71	C	26,700	0.53	B	24,600	0.49	B

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 6-15
Freeway Segment Analysis – 2019 Demolition Phase with Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,514	0.28	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,190	0.65	C	4,340	0.48	B	3,770	0.39	A	2,978	0.32	A	2,210	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,250	0.58	B	10,220	0.89	D	3,710	0.34	A	4,900	0.42	B	2,360	0.21	A	3,500	0.30	A
Fairmount Ave to I-15	4	0	4	0	3,910	0.51	B	6,520	0.84	D	2,280	0.30	A	2,740	0.35	A	1,806	0.23	A	2,220	0.28	A
I-15 to I-805	4	2	4	2	5,300	0.54	B	10,620	1.05	**F(0)**	3,170	0.32	A	5,490	0.54	B	2,336	0.23	A	3,740	0.36	A
I-805 to Qualcomm Way	4	0	4	0	3,810	0.49	B	7,350	0.93	**E**	2,020	0.26	A	3,650	0.46	B	1,490	0.19	A	2,590	0.33	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,010	0.51	B	9,260	1.06	**F(0)**	2,690	0.27	A	5,050	0.56	B	2,231	0.23	A	3,590	0.40	A
Mission Center Rd to SR-163	4	0	3	1	3,010	0.38	A	7,030	0.99	**E**	1,630	0.21	A	4,010	0.57	B	1,481	0.19	A	2,960	0.42	A
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,670	0.89	D	6,170	0.67	C	2,720	0.28	A	2,890	0.32	A	1,790	0.18	A	2,327	0.29	A
Friars Rd to I-8	3	4	4	0	7,730	0.73	C	6,620	0.85	D	2,370	0.22	A	2,980	0.38	A	1,748	0.16	A	2,444	0.31	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[1]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,518	0.61	B	10,329	1.13	**F(0)**	4,441	0.49	B	7,083	0.77	C	5,968	0.65	C	4,389	0.48	B
Friars Rd to I-8	4	1	4	2	6,566	0.72	C	9,179	0.98	**E**	5,820	0.64	C	6,298	0.64	C	4,812	0.53	B	5,742	0.58	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	9,932	0.90	D	8,127	0.70	C	7,471	0.67	C	7,245	0.62	B	7,888	0.71	C	5,445	0.47	B
Fairmount Ave to I-15	4	0	4	0	7,404	0.93	D	4,623	0.59	B	5,590	0.70	C	3,912	0.50	B	4,894	0.61	B	4,132	0.52	B
I-15 to I-805	4	2	4	2	9,594	0.95	**E**	8,023	0.79	C	7,890	0.78	C	7,302	0.71	C	7,144	0.71	C	6,582	0.64	C
I-805 to Qualcomm Way	4	0	4	0	6,730	0.88	D	5,350	0.68	C	5,400	0.70	C	5,050	0.64	C	4,600	0.59	B	4,170	0.53	B
Qualcomm Way to Mission Center Rd	5	0	4	1	10,178	1.04	**F(0)**	7,946	0.91	D	8,340	0.86	D	7,504	0.87	D	7,259	0.74	C	7,533	0.85	D
Mission Center Rd to SR-163	4	0	3	1	6,358	0.83	D	6,176	0.88	D	5,090	0.64	C	5,704	0.81	D	4,209	0.53	B	6,043	0.85	D
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	7,647	0.79	C	8,164	0.91	D	5,686	0.58	B	5,688	0.62	B	7,261	0.74	C	3,731	0.41	A
Friars Rd to I-8	3	4	4	0	6,927	0.65	C	6,936	0.90	D	5,320	0.50	B	5,106	0.65	C	6,002	0.56	B	4,196	0.54	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 6-16
Ramp Metering Analysis – 2019 Demolition Phase with Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2019 Demolition Phase AM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,290	586	Min:	516	70	8	1,750
						Max:	600	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	700	700	Min:	660	40	4	1,000
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	610	610	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	810	810	Min:	493	317	**39**	7,925
						Max:	996	0	0	0
2019 Demolition Phase PM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,510	686	Min:	386	300	**47**	7,500
						Max:	672	14	1	350
I-15 SB: WB Friars Rd On-ramp	1	0	700	730	730	Min:	660	70	6	1,750
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,020	1020	Max:	996	24	1	600
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,050	1050	Min:	493	557	**68**	13,925
						Max:	996	54	3	1,350

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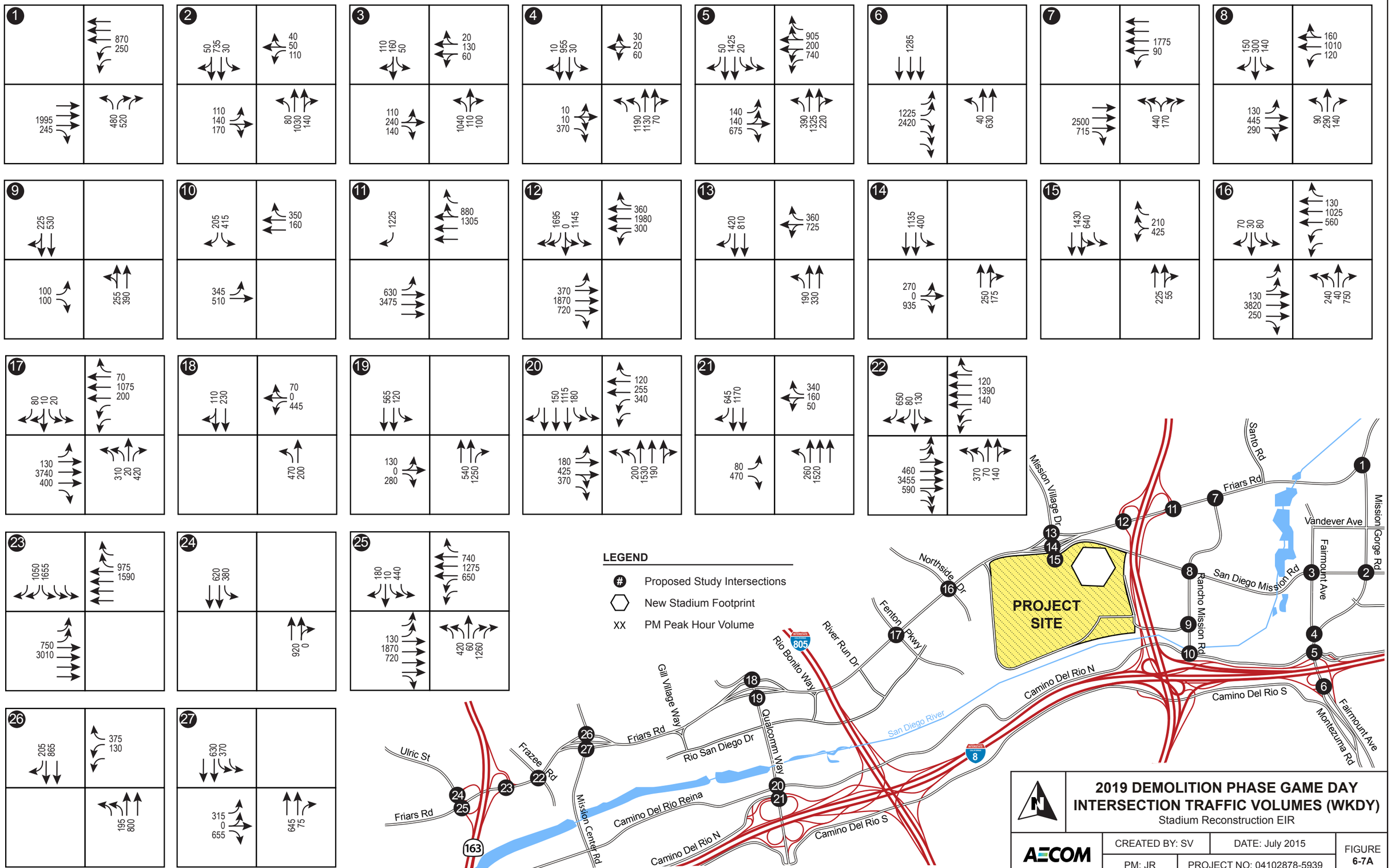

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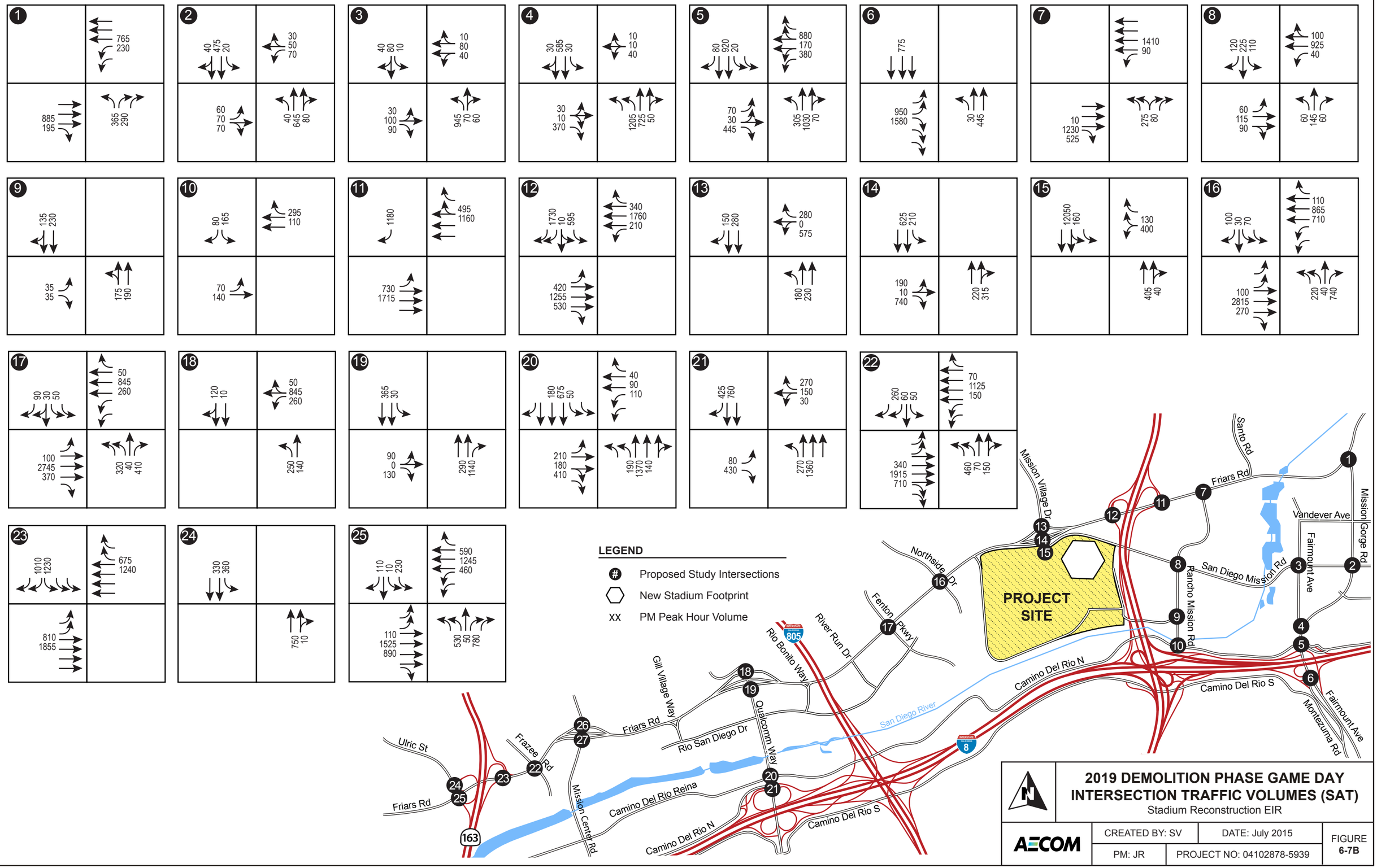

2019 DEMOLITION PHASE GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-7B
PM: JR	PROJECT NO: 04102878-5939	

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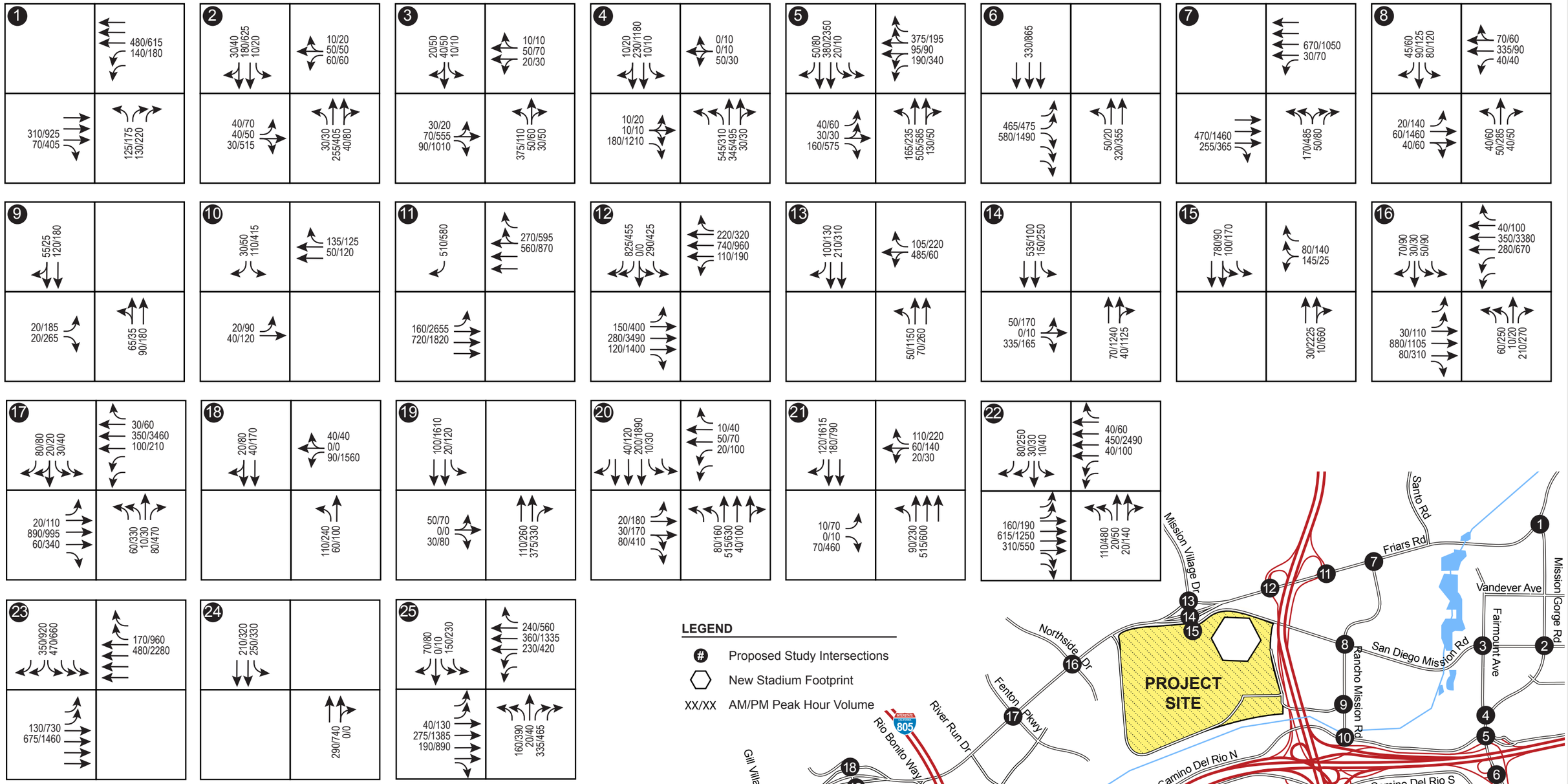

2019 DEMOLITION PHASE GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-7C
PM: JR	PROJECT NO: 04102878-5939	

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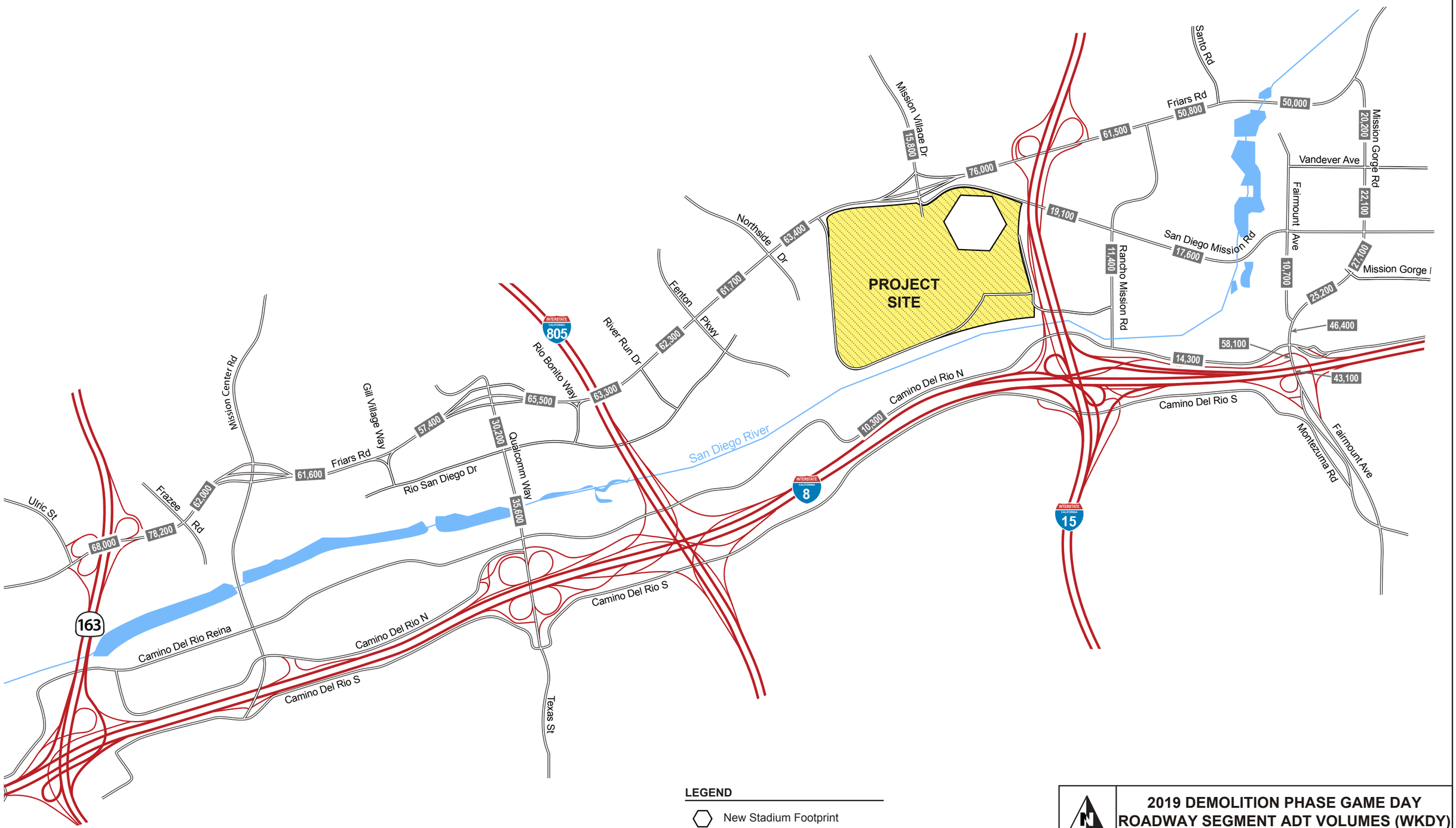

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2019 DEMOLITION PHASE GAME DAY ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-8A
PM: JR	PROJECT NO: 04102878-5939	

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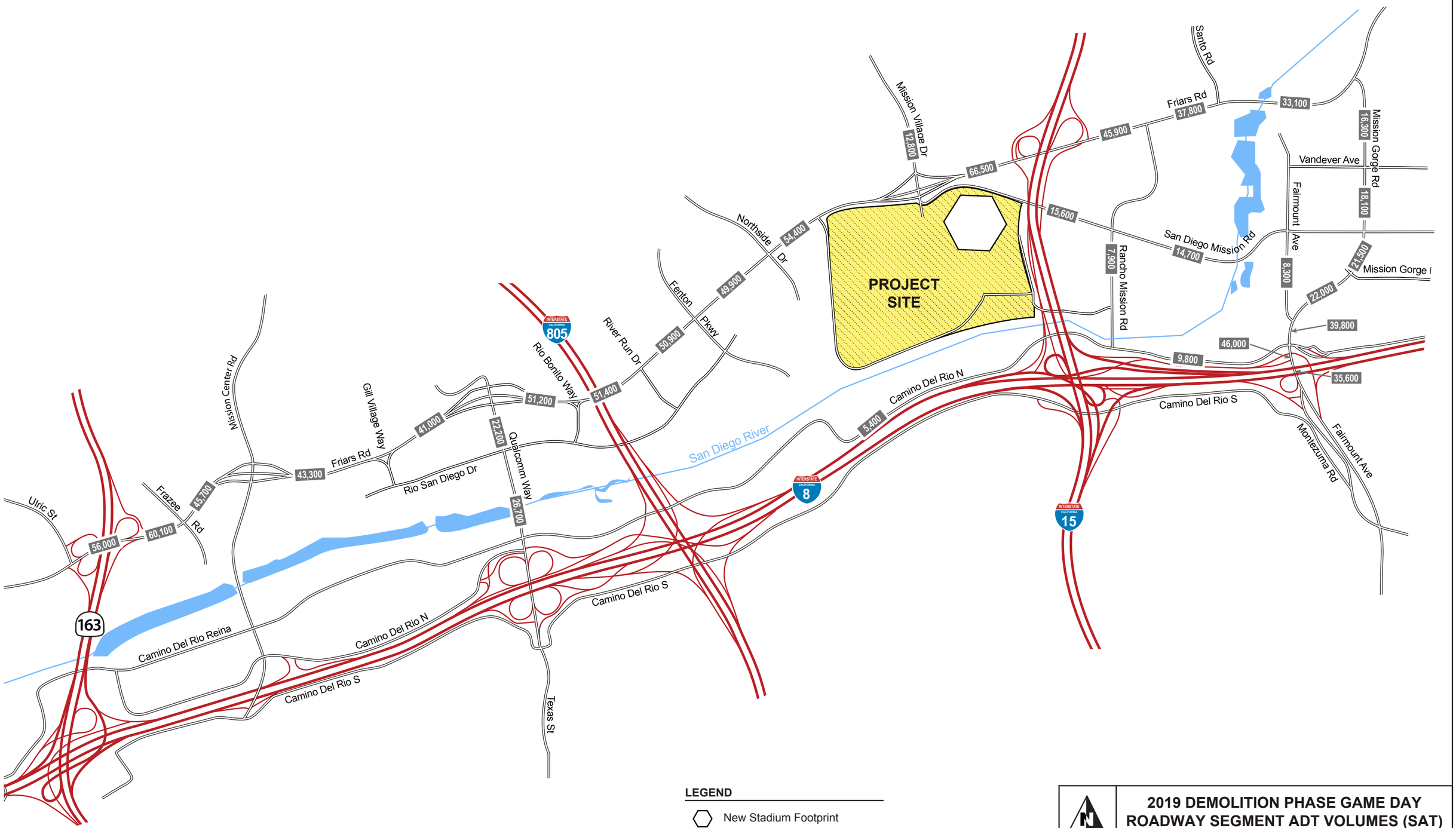

2019 DEMOLITION PHASE GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-8B
PM: JR	PROJECT NO: 04102878-5939	

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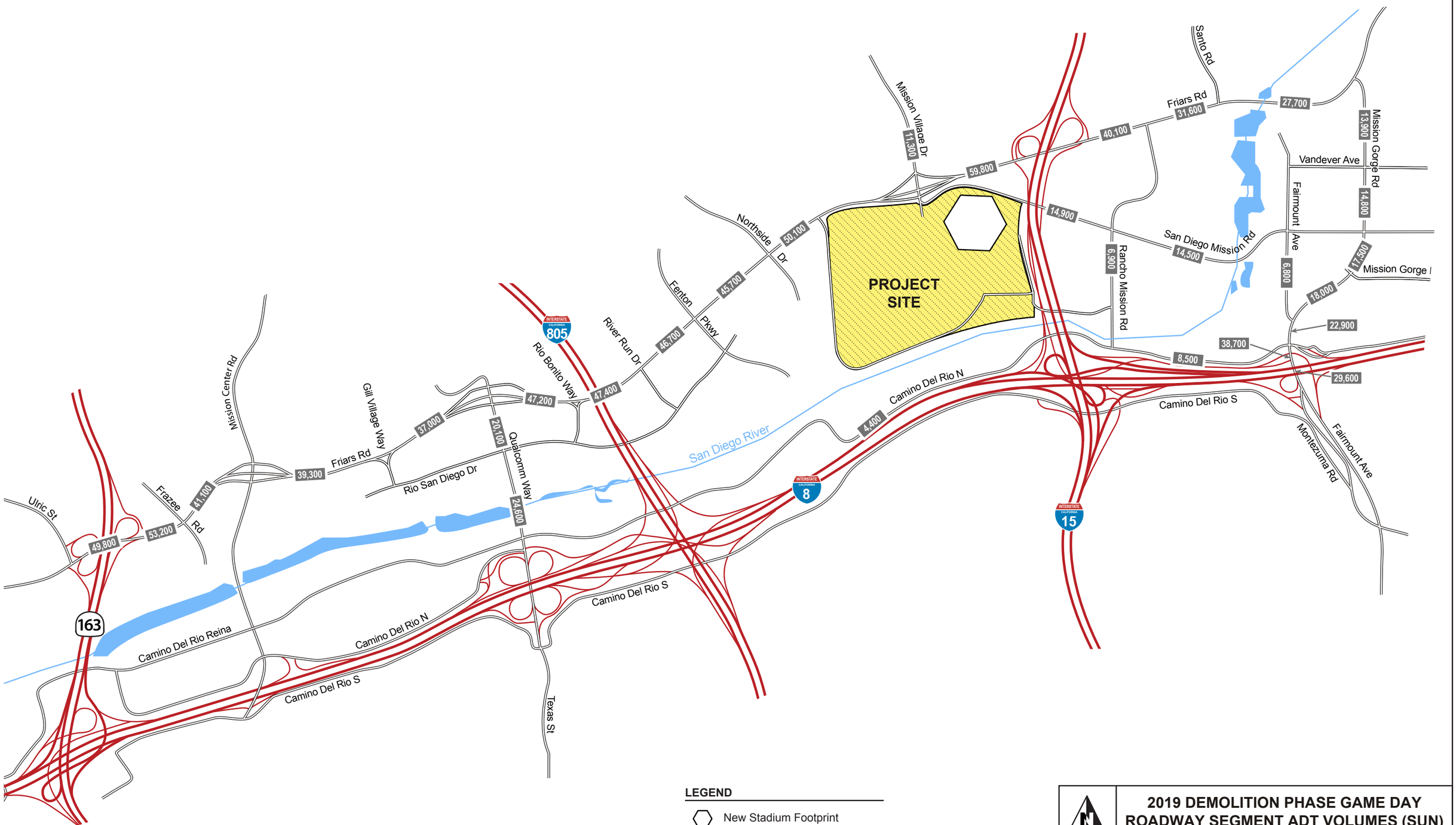

2019 DEMOLITION PHASE GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 6-8C
PM: JR	PROJECT NO: 04102878-5939	

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6.2 MOBILITY ANALYSIS

During the stadium construction and Qualcomm demolition phase of the proposed project, a reduction in available onsite parking is anticipated. There would be approximately 14,530 parking spaces available during the stadium construction phase and 13,500 parking spaces during the Qualcomm Stadium demolition phase.

This scenario presents a decrease in parking, which requires stadium attendees to rely on other modes of transportation and ride-sharing. A modal shift is needed to accommodate the deficit of approximately 5,000 parking spaces compared to the existing parking lot. The parking solutions proposed in **Section 9.0** assume a maximum capacity of trolley ridership of 20,000 riders on weekday games and 23,000 riders on weekends. This requires a dramatic change in event attendee travel behavior and would require a large-scale public awareness and information campaign regarding alternative transportation options. The following discussion presents potential alternative modes of transportation to help mitigate the parking impacts and to allow for a more efficient parking management system on game days.

6.2.1 Transit Access

Trolley

The trolley line has the potential to accommodate the additional demand seeing that the trolley on game day events, the trolley does not run at maximum capacity. Cars can currently hold between 450 – 600 passengers with a capacity of 11,000 passengers per hour with 20 arrivals per hour. Trolley ridership averages approximately 22% to 28% or 14,280 to 17,680 riders for game days. High trolley ridership for game days have reached as high 20,000 riders. In 2003, Qualcomm Stadium hosted the Super Bowl. Game day trolley ridership experienced its highest ridership at 23,000 riders on Super Bowl Sunday. A higher than average transit is essential to alleviate the parking demand and reduce the parking deficit for game days on both weekdays and weekends. During construction and demolition of the proposed project it is assumed existing trolley operations and capacity would remain the same in future conditions.

However, operations on the Green Line could be improved to provide more capacity on trains and deliver even more passengers per hour than current conditions. Shorter headways and longer trains could allow the Green Line to provide more capacity and an easier entry and exit. Travel by trolley and transit would be an essential component to reducing parking demand. Additional crowd control measures at the trolley station could also alleviate the long passenger queues before and after the games embarking and disembarking the trolley cars.

Bus

Currently, MTS Route 14 is the only bus route that has a bus stop within walking distance (0.5 mile) from the project site. Additional bus service to the project site would decrease the burden on trolley service and provide attendees more travel options. An express bus service operated by MTS could provide a limited stop bus route to and from the stadium and popular transit centers or dense urban or commercial centers on game days or for large stadium events. Adding another bus route to service the project site could help alleviate parking demand and relieve lessen trolley demand especially during the demolition phase of the proposed project.

6.2.2 Pedestrian Access

Pedestrian access during construction year during a game would remain the same as existing conditions. Pedestrian Access would continue to be provided at all open gates. Encouraging stadium attendees to use off-site parking or walk to games could assist in shifting the modal split to reduce the need for on-site parking. Wider crosswalks and crossing guards at key intersections could further encourage pedestrian travel on game days.

6.2.3 Bicycle Access

Bicycle access would remain the same as existing conditions Additional prioritized bicycle parking near the stadium entrance would be installed during construction to encourage bicycling to the stadium and reduce parking demand. By providing temporary bicycle parking or providing an on-site bicycle valet

could further encourage attendees to choose to bike to the stadium. Group bicycle rides to the stadium on event days could be coordinated by MTS or the City would further encourage attendees to choose bicycling.

6.3 TRANSPORTATION DEMAND MANAGEMENT

A transportation demand management plan would be developed for the stadium construction phase of the project to alleviate traffic congestion, establish measures to encourage attendees to use public transportation for stadium events and provide a parking plan to provide easy access to the stadium for attendees and employees during construction. The Transportation Demand Management (TDM) plan would include a public outreach campaign to educate attendees of the transportation alternatives and incentive carpooling/vanpooling, public transit, and park and ride buses and shuttles to reduce the parking demand during construction conditions. Offsite parking options would also be identified.

7.0 HORIZON YEAR (2035)

This section provides analysis of the Horizon Year 2035 No Project and Project Build Out conditions.

7.1 HORIZON YEAR (2035) CONDITIONS TRAFFIC ANALYSIS

The traffic volumes analyzed for this scenario include forecasted future traffic volumes and traffic generated by approved cumulative projects in addition to the fully built proposed project.

In addition, the following cumulative project features were included in the Horizon Year 2035 No Project and Project Build Out analysis:

- **State Route 163 / Friars Road Interchange Project:** construction of temporary auxiliary lane on the west side of southbound SR-163 approaching Friars Road, modifications to the existing SR-163 / Friars Road interchange partial cloverleaf, widening of Friars Road from east of Frazee Road to the Avenida de Las Tiendas, and improvements at the intersection of Friars Road and Frazee Road. Construction for Phase 1 is fully funded and scheduled to be completed in April 2018.

7.1.1 Horizon Year 2035 No Project with No Games

This section discusses the traffic conditions during Horizon Year 2035 when no games are played comparing the calculated impacts of No Project with Project. A comparison reveals whether or not the new stadium would create more impacts to the traffic conditions than continuing to use the existing Qualcomm stadium in the future.

Intersection Analysis

Table 7-1 summarizes the peak intersection conditions and **Figure 7-1** shows the traffic volumes in the Horizon Year 2035 No Project and when no games are played. All intersections operate at LOS D or better except for the following:

- Mission Gorge Road / Fairmount Avenue – LOS F during weekday AM peak
- Fairmount Avenue / Alvarado Canyon Road – LOS F during weekday PM peak
- Fairmount Avenue / I-8 EB Ramps – LOS F during weekday PM peak
- I-15 SB Ramps / Friars Road – LOS E during weekday PM peak
- Northside Drive / Friars Road – LOS E during weekday PM peak
- Qualcomm Way / Friars Road WB – LOS F during weekday PM peak
- Qualcomm Way / Friars Road EB – LOS E during weekday PM peak
- Qualcomm Way / I-8 WB Ramps – LOS E during weekday PM peak
- SR-163 NB Ramps / Friars Road – LOS E during weekday PM peak

The detailed calculation worksheets for intersection operations under 2035 No Project conditions are provided in **Appendix E**.

Roadway Segment Analysis

Table 7-2 summarizes the roadway segment conditions and **Figure 7-2** graphically displays the daily volumes in Horizon Year 2035 No Project conditions and when no games are played. All roadway segments operate at LOS D or better except for the following:

- Mission Gorge Road from Twain Avenue to Mission Gorge Place – LOS E on weekdays
- Mission Gorge Road from Mission Gorge Place to Fairmount Avenue – LOS E on weekdays
- Fairmount Avenue from Mission Gorge Road to Alvarado Canyon Road – LOS F on weekdays and LOS E on Saturdays

- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps – LOS F on weekdays and Saturdays
- Fairmount Avenue from I-8 WB Ramps to I-8 EB Ramps – LOS F on weekdays and LOS E on Saturdays
- Camino Del Rio North from Ward Road to Mission City Parkway – LOS F on weekdays
- Friars Road from SR-163 NB Ramps to SR-163 SB Ramps – LOS E on weekdays

Freeway Segment Analysis

Table 7-3 summarizes the peak freeway segment conditions o in the Horizon Year 2035 No Project and when no games are played. All freeway segments operate at LOS D or better except for the following:

- WB I-8 from I-15 to I-805 – LOS F during weekday AM peak
- WB I-8 from I-805 to Qualcomm Way – LOS E during weekday AM peak
- WB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday AM peak and LOS E during weekday PM peak
- WB I-8 from Mission Center Road to SR-163 – LOS F during weekday AM peak
- SB I-15 from Aero Drive to Friars Road – LOS E during weekday PM peak
- SB I-15 from Friars Road to I-8 – LOS F during weekday PM peak
- EB I-8 from Waring Road to Fairmount Avenue – LOS E during weekday PM peak
- EB I-8 from Fairmount Avenue to I-15 – LOS E during weekday PM peak NB/EB I-8 from
- EB I-8 from I-15 to I-805 – LOS E during weekday PM peak
- EB I-8 from I-805 to Qualcomm Way – LOS E during weekday PM peak
- EB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday PM peak
- NB SR-163 from Genesee Avenue to Friars Road – LOS E during weekday AM peak

Ramp Meter Analysis

Table 7-4 summarizes the existing ramp metering operations in the Horizon Year 2035 No Project and when no games are played. All study area ramp meters are calculated to operate at an acceptable LOS (delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp – AM and PM peak
- I-15 SB: WB Friars Road On-ramp – AM and PM peak
- I-15 NB: Friars Road On-ramp – PM peak

Table 7-1
Intersection Analysis – 2035 No Project with No Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	10.6	B	21.7	C	8.2	A	10.3	B	6.6	A	8.9	A
2	Mission Gorge Rd	Twain Ave	23.7	C	33.1	C	15.5	B	16.3	B	16	B	17.4	B
3	Fairmount Ave	Twain Ave	16.5	B	20.3	C	12.6	B	15.6	B	13.7	B	15.8	B
4	Mission Gorge Rd	Fairmount Ave	90.5	**F**	44.3	D	50.5	D	31.5	C	33.4	C	25.9	C
5	Fairmount Ave	Alvarado Canyon Rd	12.2	B	209.4	**F**	29.6	C	70.5	**E**	25	C	39.5	D
6	Fairmount Ave	I-8 EB Ramps	15.9	B	92.7	**F**	10.3	B	28.9	C	13.7	B	19.1	B
7	Rancho Mission Rd	Friars Rd	13	B	21.5	C	19	B	16.2	B	14.7	B	14.1	B
8	Rancho Mission Rd	San Diego Mission Rd	27.7	C	37.1	D	18.8	B	19.4	B	19.9	B	19.1	B
9	Rancho Mission Rd	Ward Rd	11.9	B	18	C	10	A	11.4	B	9.8	A	10.7	B
10	Ward Rd	Camino Del Rio N	14.3	B	27.9	C	11.3	B	14.6	B	11.2	B	15.3	B
11	I-15 NB Ramps	Friars Rd	5.5	A	8.4	A	12.8	B	9.9	A	12.6	B	10.4	B
12	I-15 SB Ramps	Friars Rd	35.4	D	66.3	**E**	16.7	B	32.3	C	22	C	27.7	C
13	Mission Village Dr	Friars Rd WB	13.4	B	21.7	C	15.2	B	15.4	B	12	B	12.7	B
14	Mission Village Dr	Friars Rd EB	46.6	D	45.4	D	45.4	D	32.1	C	25.9	C	45.7	D
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	28.5	C	66.5	**E**	19.2	B	36.6	D	17.2	B	34.5	C
17	Fenton Pkwy	Friars Rd	17.8	B	45	D	17.1	B	29.7	C	17.1	B	29.5	C
18	Qualcomm Way	Friars Rd WB	45.6	D	93.9	**F**	23.2	C	116.2	**F**	18.9	B	20.8	C
19	Qualcomm Way	Friars Rd EB	17.5	B	67.5	**E**	12.6	B	24	C	14.4	B	52.9	D
20	Qualcomm Way	Camino De La Reina	23.9	C	39.7	D	25.6	C	23.2	C	16.3	B	19.5	B
21	Qualcomm Way	I-8 WB Ramps	40.6	D	71.6	**E**	23.7	C	53.2	D	13	B	38.6	D
22	Frazee Rd	Friars Rd	29	C	53.4	D	22.9	C	33.9	C	20.7	C	22.9	C
23	SR-163 NB Ramps	Friars Rd	15.1	B	61.6	**E**	18.6	B	57.1	**E**	11	B	38.1	D
24	Ulric St	SR-163 SB On-ramp	5.1	A	20.4	C	10.5	B	5.4	A	9	A	4.4	A
25	Ulric St	Friars Rd	22.5	C	52.3	D	13.9	B	51.4	D	22.9	C	61.7	**E**
26	Mission Center Rd	Friars Rd WB	10.6	B	23.2	C	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	11.9	B	18.9	B	--	--	--	--	--	--	--	--

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Table 7-2
Roadway Segment Analysis – 2035 No Project with No Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	21,400	0.71	D	17,100	0.57	C	14,200	0.47	C
2	Vandever Ave to Twain Ave	4	Collector	30,000	22,400	0.75	D	18,200	0.61	C	14,500	0.48	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	26,600	0.89	**E**	20,600	0.69	D	16,100	0.54	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	25,300	0.84	**E**	21,800	0.73	D	17,200	0.57	C
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	8,600	0.57	C	6,000	0.40	B	4,300	0.29	A
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	44,300	1.11	**F**	36,700	0.92	**E**	29,400	0.74	C
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	65,300	1.45	**F**	49,800	1.11	**F**	39,900	0.89	D
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	49,600	1.10	**F**	40,200	0.89	**E**	32,200	0.72	C
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	10,800	0.72	D	7,400	0.49	C	7,200	0.48	C
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	8,800	0.29	A	5,900	0.20	A	5,100	0.17	A
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	17,700	0.59	C	11,600	0.39	B	9,800	0.33	A
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	17,800	1.19	**F**	9,700	0.65	C	7,900	0.53	C
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	10,700	0.71	D	7,400	0.49	C	6,400	0.43	B
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	17,000	0.43	B	13,800	0.35	A	12,100	0.30	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	54,300	0.91	D	35,100	0.59	C	28,900	0.48	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	53,600	0.77	C	39,300	0.56	B	32,400	0.46	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	60,800	0.87	D	44,700	0.64	C	38,500	0.55	B
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	58,700	0.73	C	49,500	0.62	C	42,100	0.53	C
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	52,500	0.66	C	42,900	0.54	C	37,800	0.47	B
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	50,800	0.85	D	37,800	0.63	C	32,800	0.55	B
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	51,000	0.85	D	38,700	0.65	C	33,600	0.56	B
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	54,300	0.68	C	40,900	0.51	B	35,900	0.45	B
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	61,000	0.65	C	43,400	0.47	B	38,200	0.41	B
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	58,100	0.54	C	41,200	0.39	B	36,000	0.34	A
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	63,700	0.60	C	44,300	0.42	B	39,100	0.37	A
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	68,000	0.73	C	50,100	0.54	C	43,800	0.47	B
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	81,200	0.81	C	62,900	0.63	C	54,500	0.55	B
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	75,600	0.95	**E**	62,300	0.78	C	55,100	0.69	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	36,200	0.72	C	23,200	0.46	B	19,600	0.39	A
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	30,900	0.62	C	21,000	0.42	B	18,500	0.37	A

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 7-3
Freeway Segment Analysis – 2035 No Project with No Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,090	0.23	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,330	0.66	C	4,340	0.48	B	3,860	0.40	A	2,790	0.30	A	2,260	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,450	0.59	B	10,490	0.92	D	3,830	0.35	A	5,030	0.43	B	2,430	0.22	A	3,370	0.29	A
Fairmount Ave to I-15	4	0	4	0	4,230	0.55	B	6,930	0.89	D	2,470	0.32	A	2,910	0.37	A	1,810	0.23	A	2,360	0.30	A
I-15 to I-805	4	2	4	2	5,780	0.58	B	11,290	1.12	**F(0)**	3,460	0.35	A	5,830	0.57	B	2,410	0.24	A	3,980	0.39	A
I-805 to Qualcomm Way	4	0	4	0	4,230	0.55	B	7,740	0.98	**E**	2,250	0.29	A	3,850	0.49	B	1,660	0.21	A	2,730	0.35	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,730	0.59	B	9,710	1.11	**F(0)**	3,080	0.31	A	5,290	0.59	B	2,270	0.23	A	3,760	0.41	A
Mission Center Rd to SR-163	4	0	3	1	3,480	0.44	B	7,180	1.01	**F(0)**	1,880	0.24	A	4,090	0.58	B	1,410	0.18	A	3,030	0.43	B
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	9,050	0.93	**E**	6,280	0.68	C	2,840	0.29	A	2,940	0.32	A	1,870	0.19	A	2,090	0.23	A
Friars Rd to I-8	3	4	4	0	8,010	0.75	C	6,750	0.87	D	2,460	0.23	A	3,030	0.39	A	1,620	0.15	A	2,290	0.30	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,410	0.60	B	8,900	0.98	**E**	4,400	0.49	B	5,800	0.63	C	3,870	0.43	B	4,340	0.48	B
Friars Rd to I-8	4	1	4	2	5,960	0.66	C	9,580	1.03	**F(0)**	5,250	0.58	B	6,570	0.67	C	4,790	0.53	B	5,030	0.52	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	10,390	0.94	**E**	7,550	0.65	C	7,800	0.70	C	6,700	0.57	B	7,130	0.64	C	5,520	0.47	B
Fairmount Ave to I-15	4	0	4	0	7,460	0.93	**E**	4,910	0.62	B	5,550	0.70	C	4,150	0.53	B	5,190	0.65	C	3,740	0.47	B
I-15 to I-805	4	2	4	2	10,000	0.99	**E**	8,590	0.84	D	8,180	0.81	D	7,820	0.76	C	7,760	0.77	C	6,390	0.62	B
I-805 to Qualcomm Way	4	0	4	0	7,220	0.94	**E**	5,830	0.74	C	5,790	0.75	C	5,510	0.70	C	4,940	0.64	C	4,540	0.58	B
Qualcomm Way to Mission Center Rd	5	0	4	1	10,060	1.03	**F(0)**	8,640	0.99	**E**	8,140	0.84	D	8,160	0.94	**E**	7,770	0.80	C	6,860	0.78	C
Mission Center Rd to SR-163	4	0	3	1	6,100	0.80	C	6,390	0.91	D	4,770	0.60	B	5,900	0.84	D	4,600	0.58	B	4,990	0.71	C
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,030	0.83	D	7,010	0.78	C	5,970	0.61	B	5,060	0.55	B	6,270	0.64	C	3,830	0.42	A
Friars Rd to I-8	3	4	4	0	6,300	0.59	B	6,600	0.86	D	4,730	0.44	B	4,710	0.60	B	4,970	0.46	B	3,410	0.44	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 7-4
Ramp Metering Analysis – 2035 No Project with No Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2035 No Project AM on Non-Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,330	605	Min:	516	89	10	2,225
						Max:	600	5	0	125
I-15 SB: WB Friars Rd On-ramp	1	0	700	880	880	Min:	660	220	**20**	5,500
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	630	630	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	890	890	Min:	493	397	**48**	9,925
						Max:	996	0	0	0
2035 No Project PM on Non-Game Days										
I-15 NB: Friars Rd On-ramp	2	1	780	1,430	650	Min:	386	264	**41**	6,600
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	950	950	Min:	660	290	**26**	7,250
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,030	1030	Max:	996	34	2	850
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,070	1070	Min:	493	577	**70**	14,425
						Max:	996	74	4	1,850

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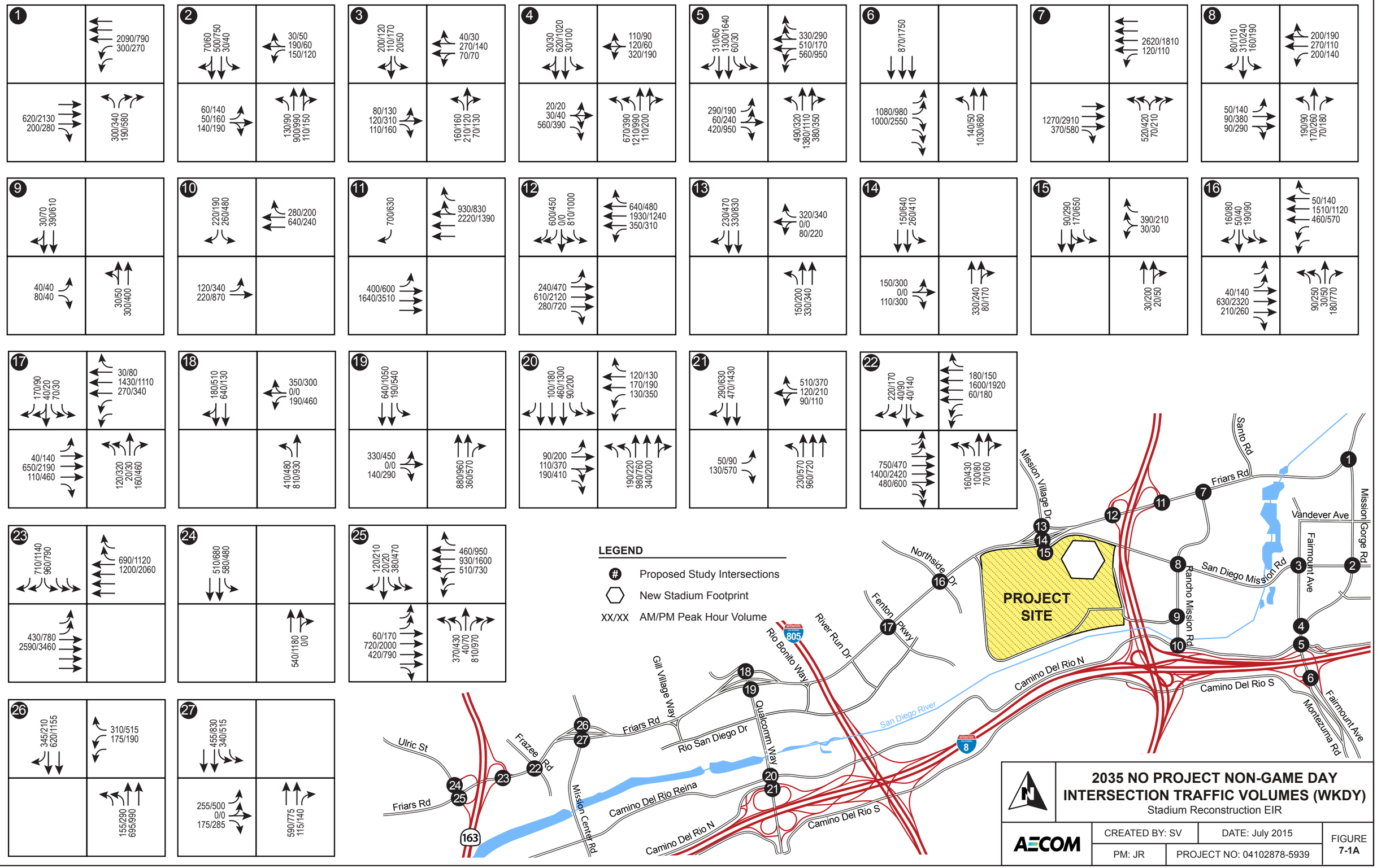

2035 NO PROJECT NON-GAME DAY INTERSECTION TRAFFIC VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-1A
PM: JR	PROJECT NO: 04102878-5939	

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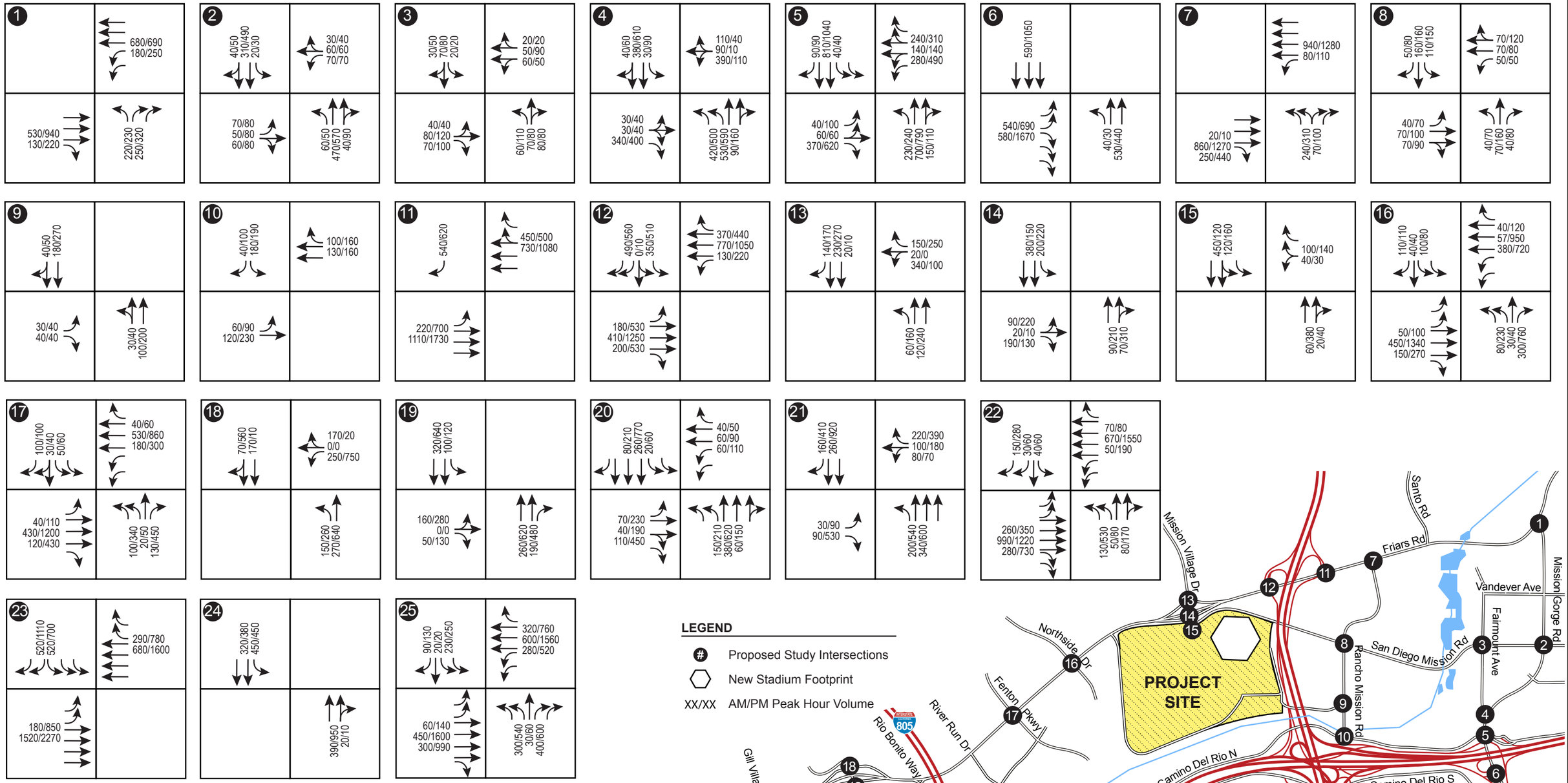

2035 NO PROJECT NON-GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM	CREATED BY: SV	DATE: July 2015	FIGURE 7-1B
	PM: JR	PROJECT NO: 04102878-5939	

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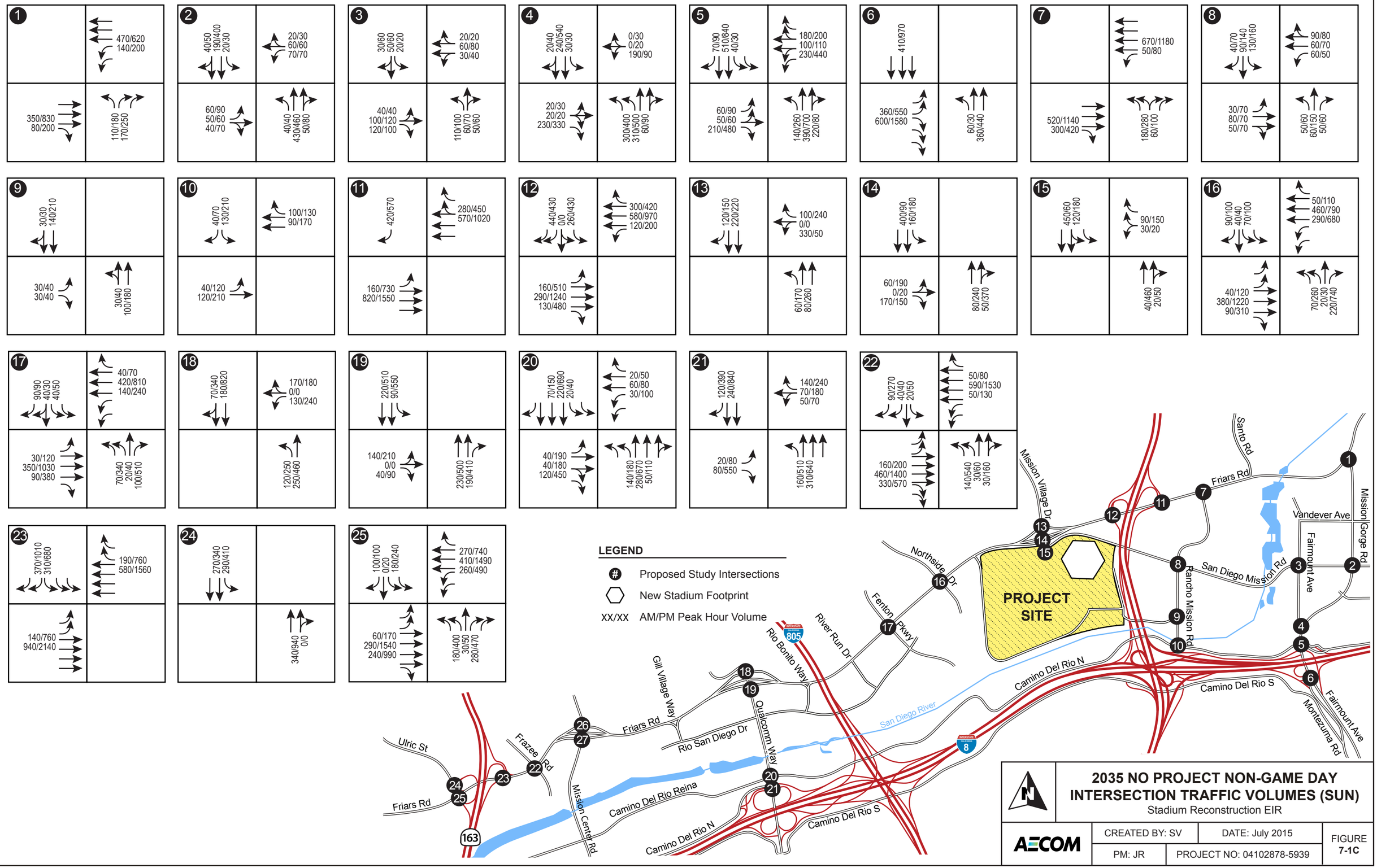

2035 NO PROJECT NON-GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

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	PM: JR	PROJECT NO: 04102878-5939	

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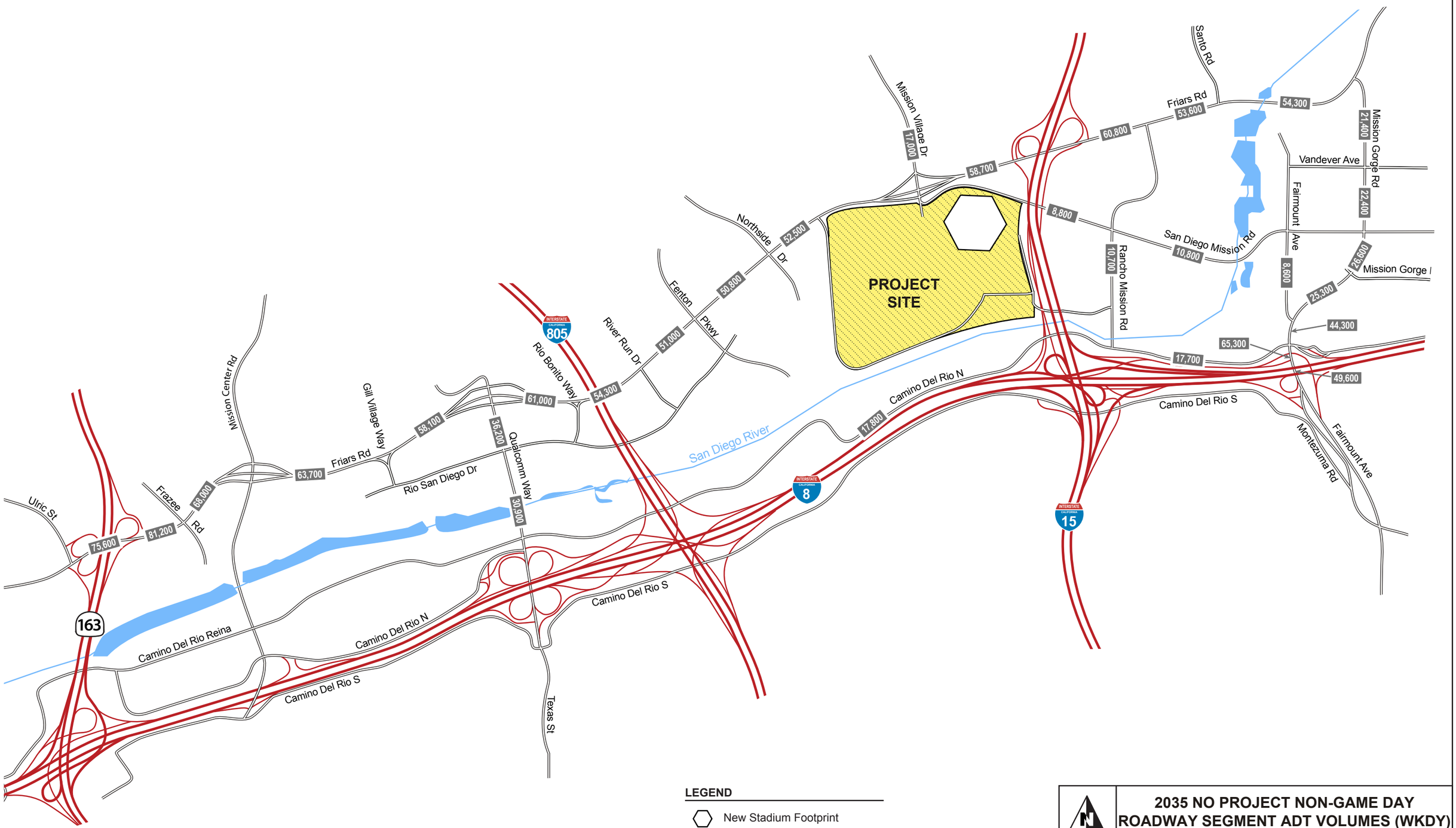

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 NO PROJECT NON-GAME DAY ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-2A
PM: JR	PROJECT NO: 04102878-5939	

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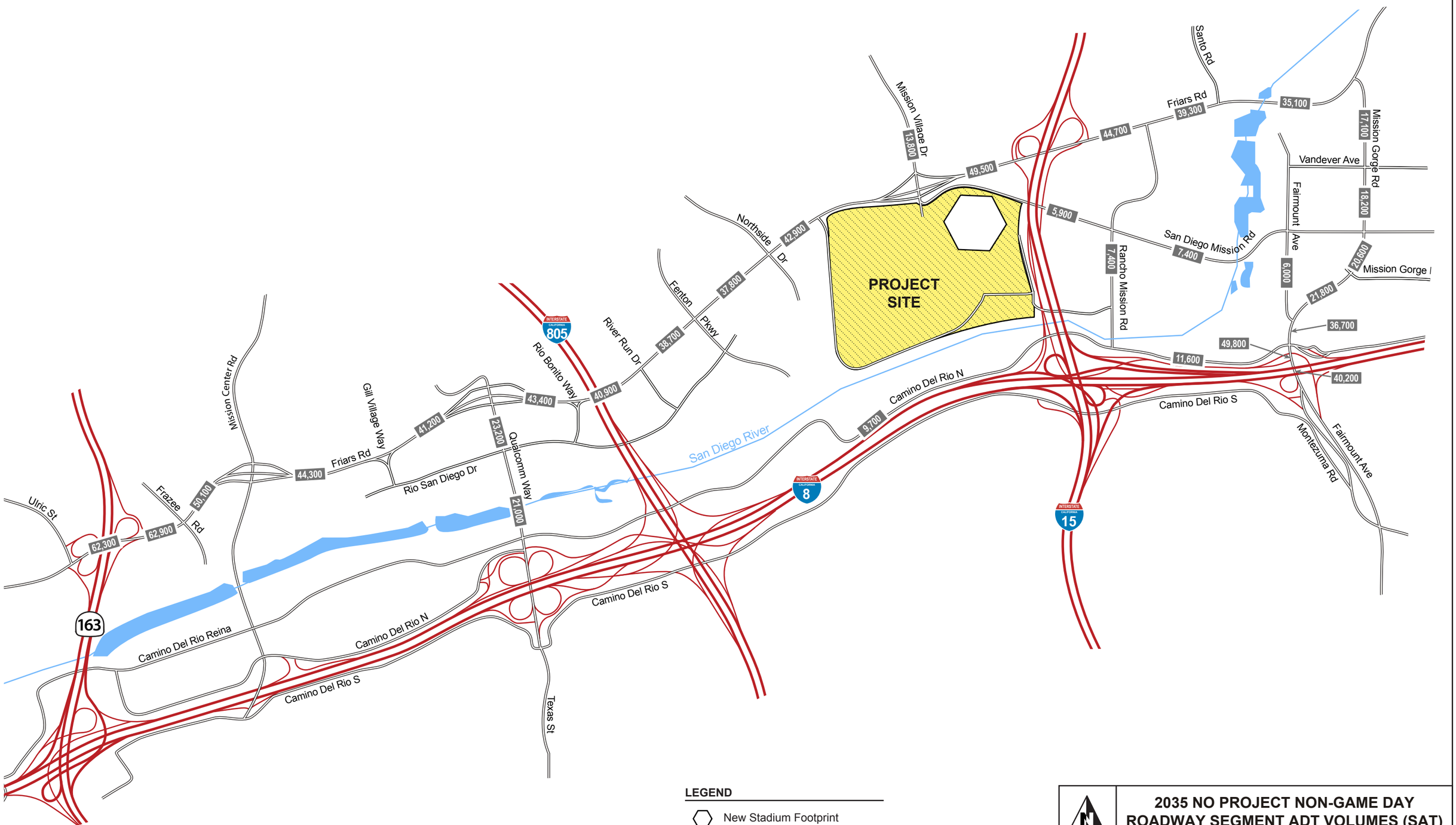

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 NO PROJECT NON-GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-2B
PM: JR	PROJECT NO: 04102878-5939	

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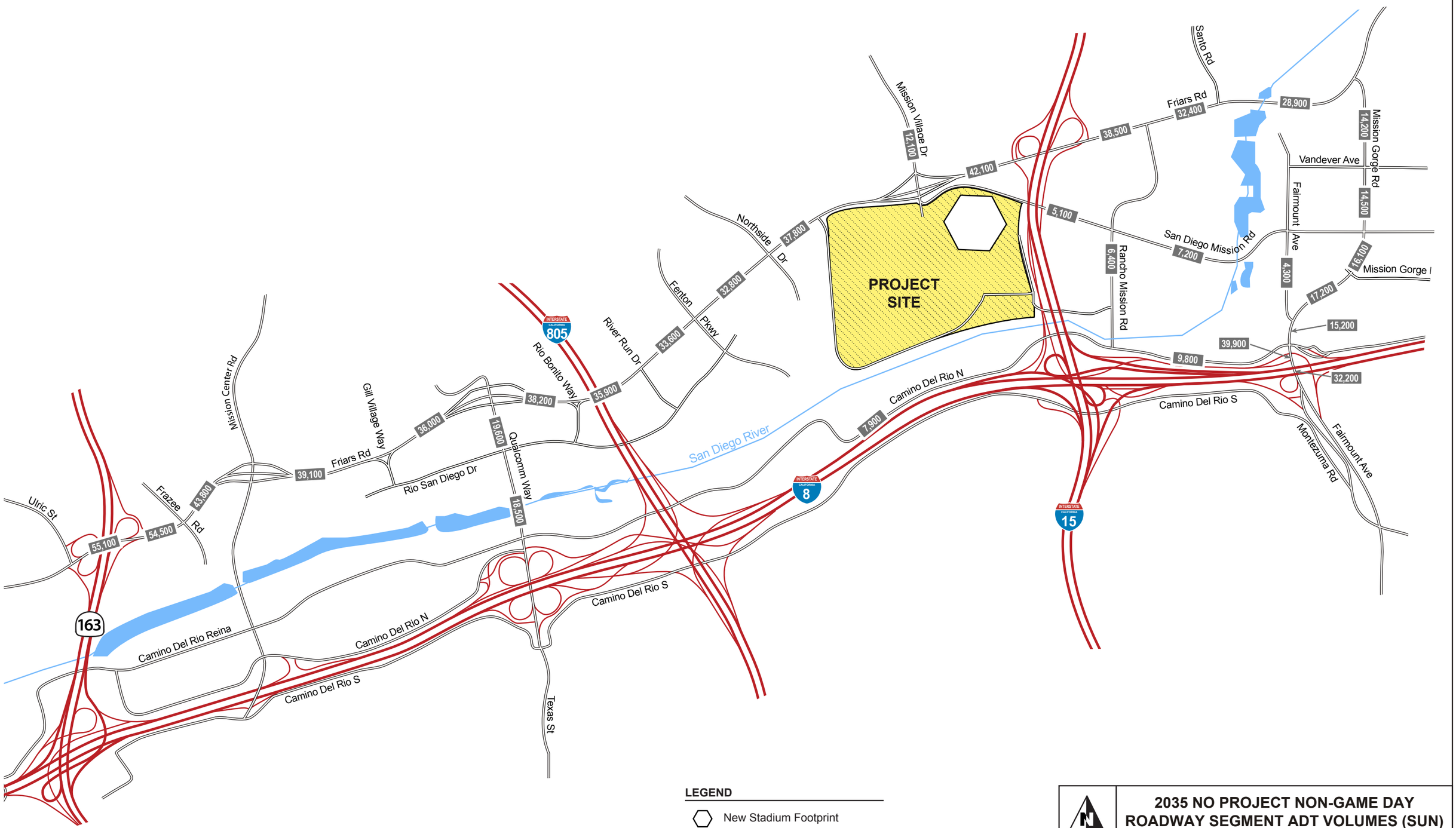

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 NO PROJECT NON-GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-2C
PM: JR	PROJECT NO: 04102878-5939	

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7.1.4 Horizon Year 2035 No Project with Games

This section discusses the traffic conditions for the study area intersections, roadway segments, freeway segments and freeway ramps for the Horizon Year 2035 No Project scenario when games are played.

Intersection Analysis

Table 7-5 summarizes the peak intersection conditions and **Figure 7-3** shows the traffic volumes in Horizon Year 2035 No Project conditions and when games are played. All intersections operate at LOS D or better except for the following:

- Fairmount Avenue / Twain Avenue – LOS F during weekday and Saturday PM peak
- Mission Gorge Road / Fairmount Avenue – LOS F during weekday AM peak and weekday, Saturday and Sunday PM peak
- Fairmount Avenue / Alvarado Canyon Road – LOS F during weekday, Saturday and Sunday PM peak
- Fairmount Avenue / I-8 EB Ramps – LOS F during weekday and Saturday PM peak
- Rancho Mission Road / Ward Road – LOS F during weekday and Saturday PM peak
- I-15 SB Ramps / Friars Road – LOS E during weekday, Saturday and Sunday PM peak
- Mission Village Drive / Friars Road WB – LOS F during weekday, Saturday and Sunday PM peak
- Mission Village Drive / Friars Road EB / San Diego Mission Rd – LOS F during weekday, Saturday and Sunday PM peak
- Northside Drive / Friars Road – LOS F during weekday, Saturday and Sunday PM peak
- Qualcomm Way / Friars Road WB – LOS F during weekday, Saturday and Sunday PM peak
- Qualcomm Way / Friars Road EB – LOS E during weekday, Saturday and Sunday PM peak
- Qualcomm Way / I-8 WB Ramps – LOS E during weekday and Saturday PM peak and LOS F during Sunday PM peak
- Frazee Road / Friars Road – LOS E during weekday and Saturday PM peak
- SR-163 NB Ramps / Friars Road – LOS F during Sunday PM peak
- Ulric Street / Friars Road – LOS E during weekday, Saturday and Sunday PM peak

The detailed calculation worksheets for the intersection operations under the analysis year 2035 conditions are provided in **Appendix E**.

Roadway Segment Analysis

Table 7-6 summarizes the roadway segment conditions and **Figure 7-4** graphically displays the daily volumes in Horizon Year 2035 No Project conditions and when games are played. All roadway segments operate at LOS D or better except for the following:

- Mission Gorge Road from Twain Avenue to Mission Gorge Place – LOS F on weekdays
- Mission Gorge Road from Mission Gorge Place to Fairmount Avenue – LOS E on weekdays and LOS F on Saturdays
- Fairmount Avenue from Mission Gorge Road to Alvarado Canyon Road – LOS F on weekdays, Saturdays and Sundays
- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps – LOS F on weekdays, Saturdays and Sundays
- Fairmount Avenue from I-8 WB Ramps to I-8 EB Ramps – LOS F on weekdays and LOS E on Saturdays

- San Diego Mission Road from Fairmount Avenue to Rancho Mission Road – LOS F on weekdays, Saturdays and Sundays
- Camino Del Rio North from Ward Road to Mission City Parkway – LOS F on weekdays
- Friars Road from Mission Gorge Road to Santo Road – LOS E on weekdays
- Friars Road from Mission Road to I-15 Ramps – LOS E on weekdays
- Friars Road from I-15 Ramps to Mission Village Drive – LOS F on weekdays and LOS E on Saturdays
- Friars Road from Mission Village Drive to Northside Drive – LOS E on weekdays
- Friars Road from Northside Drive to Fenton Parkway – LOS F on weekdays and LOS E on Saturdays
- Friars Road from Fenton Parkway to River Run Drive – LOS F on weekdays and LOS E on Saturdays
- Friars Road from River Run Drive to Rio Bonito Way – LOS E on weekdays
- Friars Road from Rio Bonito Way to Qualcomm Way – LOS E on weekdays
- Friars Road from Frazee Road to SR-163 NB Ramps – LOS E on weekdays
- Friars Road from SR-163 NB Ramps to SR-163 SB Ramps – LOS E on weekdays
- Qualcomm Way from Friars Road to Rio San Diego Drive – LOS E on weekdays

Freeway Segment Analysis

Table 7-7 summarizes the peak hour freeway segment conditions in Horizon Year 2035 No Project conditions and when games are played. All freeway segments operate at LOS D or better except for the following:

- WB I-8 from I-15 to I-805 – LOS F during weekday AM peak
- WB I-8 from I-805 to Qualcomm Way – LOS E during weekday AM peak
- WB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday AM peak, LOS E during weekday, Saturday and Sunday peak.
- WB I-8 from Mission Center Road to SR-163 – LOS F during weekday AM peak
- NB SR-163 from Genesee Avenue to Friars Road – LOS E during weekday AM peak
- SB I-15 from Aero Drive to Friars Road – LOS F during weekday PM peak
- SB I-15 from Friars Road to I-8 – LOS F during weekday PM peak
- EB I-8 from Waring Road to Fairmount Avenue – LOS E during weekday PM peak
- EB I-8 from Fairmount Avenue to I-15 – LOS E during weekday PM peak
- EB I-8 from I-15 to I-805 – LOS F during weekday PM peak
- EB I-8 from I-805 to Qualcomm way – LOS E during weekday PM peak
- EB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday PM peak
- EB I-8 from Mission Center Road to SR-163 – LOS E during weekday PM peak
- SB SR-163 from Genesee Avenue to Friars Road – LOS E during weekday PM peak

Ramp Meter Analysis

Table 7-8 summarizes the existing ramp metering operations in Horizon Year 2035 No Project conditions and when games are played. All study area ramp meters are calculated to operate at an acceptable LOS

(delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 SB: WB Friars Road On-ramp (AM and PM peak)
- I-15 NB: Friars Road On-ramp (PM peak)

Table 7-5
Intersection Analysis – 2035 No Project with Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	10.6	B	36.9	D	8.2	A	36.7	D	7.4	A	9.8	A
2	Mission Gorge Rd	Twain Ave	23.7	C	38.5	D	15.5	B	38.5	D	17.4	B	53.4	D
3	Fairmount Ave	Twain Ave	16.5	B	228.2	**F**	12.6	B	228.2	**F**	26.2	C	39	D
4	Mission Gorge Rd	Fairmount Ave	90.5	**F**	134	**F**	50.5	D	134	**F**	39.1	D	157.4	**F**
5	Fairmount Ave	Alvarado Canyon Rd	12.2	B	237.1	**F**	29.6	C	237.1	**F**	25.1	C	244.4	**F**
6	Fairmount Ave	I-8 EB Ramps	15.9	B	89.8	**F**	10.3	B	89.8	**F**	26.9	C	33.2	C
7	Rancho Mission Rd	Friars Rd	13.0	B	22.8	C	19.0	B	22.8	C	15.7	B	15.7	B
8	Rancho Mission Rd	San Diego Mission Rd	27.7	C	53.5	D	18.8	B	53.5	D	25.1	C	56.1	**E**
9	Rancho Mission Rd	Ward Rd	11.9	B	75.5	**F**	10.0	A	75.5	**F**	10.7	B	13.4	B
10	Ward Rd	Camino Del Rio N	14.3	B	38.6	D	11.3	B	38.6	D	14.6	B	16.7	B
11	I-15 NB Ramps	Friars Rd	5.5	A	5.4	A	12.8	B	5.4	A	3.0	A	324.7	**F**
12	I-15 SB Ramps	Friars Rd	35.4	D	216.3	**F**	16.7	B	216.3	**F**	30.9	C	121.6	**F**
13	Mission Village Dr	Friars Rd WB	13.4	B	80.1	**F**	15.2	B	80.1	**F**	18.5	B	37	D
14	Mission Village Dr	Friars Rd EB	46.6	D	352.7	**F**	45.4	D	352.7	**F**	49.0	D	438.6	**F**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	28.5	C	234	**F**	19.2	B	234	**F**	24.2	C	83.9	**F**
17	Fenton Pkwy	Friars Rd	17.8	B	183.9	**F**	17.1	B	183.9	**F**	24.6	C	147.7	**F**
18	Qualcomm Way	Friars Rd WB	45.6	D	96.4	**F**	23.2	C	96.4	**F**	18.8	B	114.7	**F**
19	Qualcomm Way	Friars Rd EB	17.5	B	245.7	**F**	12.6	B	245.7	**F**	8.7	A	27.4	C
20	Qualcomm Way	Camino De La Reina	23.9	C	38.6	D	25.6	C	38.6	D	14.1	B	43.5	D
21	Qualcomm Way	I-8 WB Ramps	40.6	D	63.3	**E**	23.7	C	63.3	**E**	15.1	B	257.8	**F**
22	Frazee Rd	Friars Rd	29.0	C	79.6	**E**	22.9	C	79.6	**E**	26.2	C	43.4	D
23	SR-163 NB Ramps	Friars Rd	15.1	B	53.6	D	18.6	B	53.5	D	16.6	B	85	**F**
24	Ulric St	SR-163 SB On-ramp	5.1	A	19.1	C	10.5	B	19.1	C	9.0	A	18.3	C
25	Ulric St	Friars Rd	22.5	C	61.5	**E**	13.9	B	61.5	**E**	21.9	C	59.6	**E**
26	Mission Center Rd	Friars Rd WB	10.6	B	23.2	C	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	11.9	B	18.9	B	--	--	--	--	--	--	--	--

Table 7-6
Road Segment Analysis – 2035 No Project with Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	23,500	0.78	D	18,900	0.63	C	16,000	0.53	C
2	Vandever Ave to Twain Ave	4	Collector	30,000	24,500	0.82	D	20,000	0.67	C	16,300	0.54	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	30,900	1.03	**F**	24,200	0.81	D	19,700	0.66	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	29,600	0.99	**E**	25,400	0.85	**E**	20,800	0.69	D
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	12,900	0.86	D	9,600	0.64	C	7,900	0.53	C
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	59,300	1.48	**F**	49,100	1.23	**F**	41,800	1.05	**F**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	77,400	1.72	**F**	59,900	1.33	**F**	50,000	1.11	**F**
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	56,700	1.26	**F**	46,100	1.02	**F**	38,100	0.85	D
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	23,700	1.58	**F**	18,100	1.21	**F**	17,900	1.19	**F**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	22,400	0.75	D	17,100	0.57	C	16,300	0.54	C
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	19,800	0.66	C	13,400	0.45	B	11,600	0.39	B
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	17,800	1.19	**F**	9,700	0.65	C	7,900	0.53	C
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	12,100	0.81	D	8,600	0.57	C	7,600	0.51	C
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	17,700	0.44	B	14,400	0.36	A	12,700	0.32	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	57,900	0.97	**E**	38,100	0.64	C	31,900	0.53	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	57,200	0.82	C	42,300	0.60	C	35,400	0.51	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	66,500	0.95	**E**	49,400	0.71	C	43,200	0.62	C
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	88,300	1.10	**F**	74,100	0.93	**E**	66,700	0.83	D
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	77,500	0.97	**E**	63,600	0.80	D	58,500	0.73	C
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	75,800	1.26	**F**	58,500	0.98	**E**	53,500	0.89	D
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	76,000	1.27	**F**	59,400	0.99	**E**	54,300	0.91	D
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	79,300	0.99	**E**	61,600	0.77	D	56,600	0.71	C
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	86,000	0.92	**E**	64,100	0.69	C	58,900	0.63	C
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	71,000	0.67	C	51,900	0.49	B	46,700	0.44	B
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	76,600	0.72	C	55,000	0.52	B	49,800	0.47	B
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	80,900	0.87	D	60,800	0.65	C	54,500	0.58	C
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	94,100	0.94	**E**	73,600	0.74	C	65,200	0.65	C
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	78,500	0.98	**E**	64,700	0.81	C	57,500	0.72	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	48,300	0.97	**E**	33,300	0.67	C	29,700	0.59	C
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	43,000	0.86	D	31,100	0.62	C	28,600	0.57	C

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 7-7
Freeway Segment Analysis – 2035 No Project with Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,576	0.28	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,330	0.66	C	4,340	0.48	B	3,860	0.40	A	3,006	0.33	A	2,260	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,450	0.59	B	10,490	0.92	D	3,830	0.35	A	5,030	0.43	B	2,430	0.22	A	3,622	0.31	A
Fairmount Ave to I-15	4	0	4	0	4,230	0.55	B	6,930	0.89	D	2,470	0.32	A	2,910	0.37	A	1,954	0.25	A	2,360	0.30	A
I-15 to I-805	4	2	4	2	5,780	0.58	B	11,290	1.12	**F(0)**	3,460	0.35	A	5,830	0.57	B	2,554	0.25	A	3,980	0.39	A
I-805 to Qualcomm Way	4	0	4	0	4,230	0.55	B	7,740	0.98	**E**	2,250	0.29	A	3,850	0.49	B	1,660	0.21	A	2,730	0.35	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,730	0.59	B	9,710	1.11	**F(0)**	3,080	0.31	A	5,290	0.59	B	2,558	0.26	A	3,760	0.41	A
Mission Center Rd to SR-163	4	0	3	1	3,480	0.44	B	7,180	1.01	**F(0)**	1,880	0.24	A	4,090	0.58	B	1,698	0.21	A	3,030	0.43	B
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	9,050	0.93	**E**	6,280	0.68	C	2,840	0.29	A	2,940	0.32	A	1,870	0.19	A	2,396	0.30	A
Friars Rd to I-8	3	4	4	0	8,010	0.75	C	6,750	0.87	D	2,460	0.23	A	3,030	0.39	A	1,836	0.17	A	2,524	0.32	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,453	0.60	B	10,677	1.17	**F(0)**	4,441	0.49	B	7,250	0.79	C	6,249	0.68	C	4,389	0.48	B
Friars Rd to I-8	4	1	4	2	6,750	0.74	C	9,599	1.03	**F(0)**	5,894	0.65	C	6,588	0.67	C	4,812	0.53	B	6,087	0.62	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	10,412	0.95	**E**	8,471	0.73	C	7,821	0.71	C	7,452	0.64	C	8,363	0.75	C	5,545	0.47	B
Fairmount Ave to I-15	4	0	4	0	7,986	1.00	**E**	4,923	0.62	B	5,980	0.75	C	4,162	0.53	B	5,204	0.65	C	4,445	0.56	B
I-15 to I-805	4	2	4	2	10,526	1.04	**F(0)**	8,603	0.84	D	8,610	0.86	D	7,832	0.77	C	7,774	0.77	C	7,095	0.69	C
I-805 to Qualcomm Way	4	0	4	0	7,220	0.94	**E**	5,830	0.74	C	5,790	0.75	C	5,510	0.70	C	4,940	0.64	C	4,540	0.58	B
Qualcomm Way to Mission Center Rd	5	0	4	1	11,113	1.13	**F(0)**	8,666	0.99	**E**	8,999	0.92	D	8,184	0.95	**E**	7,799	0.80	C	8,270	0.93	**E**
Mission Center Rd to SR-163	4	0	3	1	7,153	0.93	**E**	6,416	0.91	D	5,629	0.71	C	5,924	0.84	D	4,629	0.58	B	6,400	0.90	D
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,057	0.83	D	8,129	0.90	D	5,996	0.61	B	5,973	0.65	C	7,768	0.79	C	3,861	0.42	B
Friars Rd to I-8	3	4	4	0	7,110	0.67	C	7,475	0.97	**E**	5,394	0.51	B	5,426	0.69	C	6,137	0.57	B	4,491	0.57	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 7-8
Ramp Meter Analysis – 2035 No Project with Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2035 No Project AM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,330	605	Min:	516	89	10	2,225
						Max:	600	5	0	125
I-15 SB: WB Friars Rd On-ramp	1	0	700	880	880	Min:	660	220	**20**	5,500
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	630	630	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	890	890	Min:	493	397	**48**	9,925
						Max:	996	0	0	0
2035 No Project PM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,475	670	Min:	386	284	**44**	7,100
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	950	950	Min:	660	290	**26**	7,250
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,050	1050	Max:	996	54	3	1,350
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,090	1090	Min:	493	597	**73**	14,925
						Max:	996	94	6	2,350

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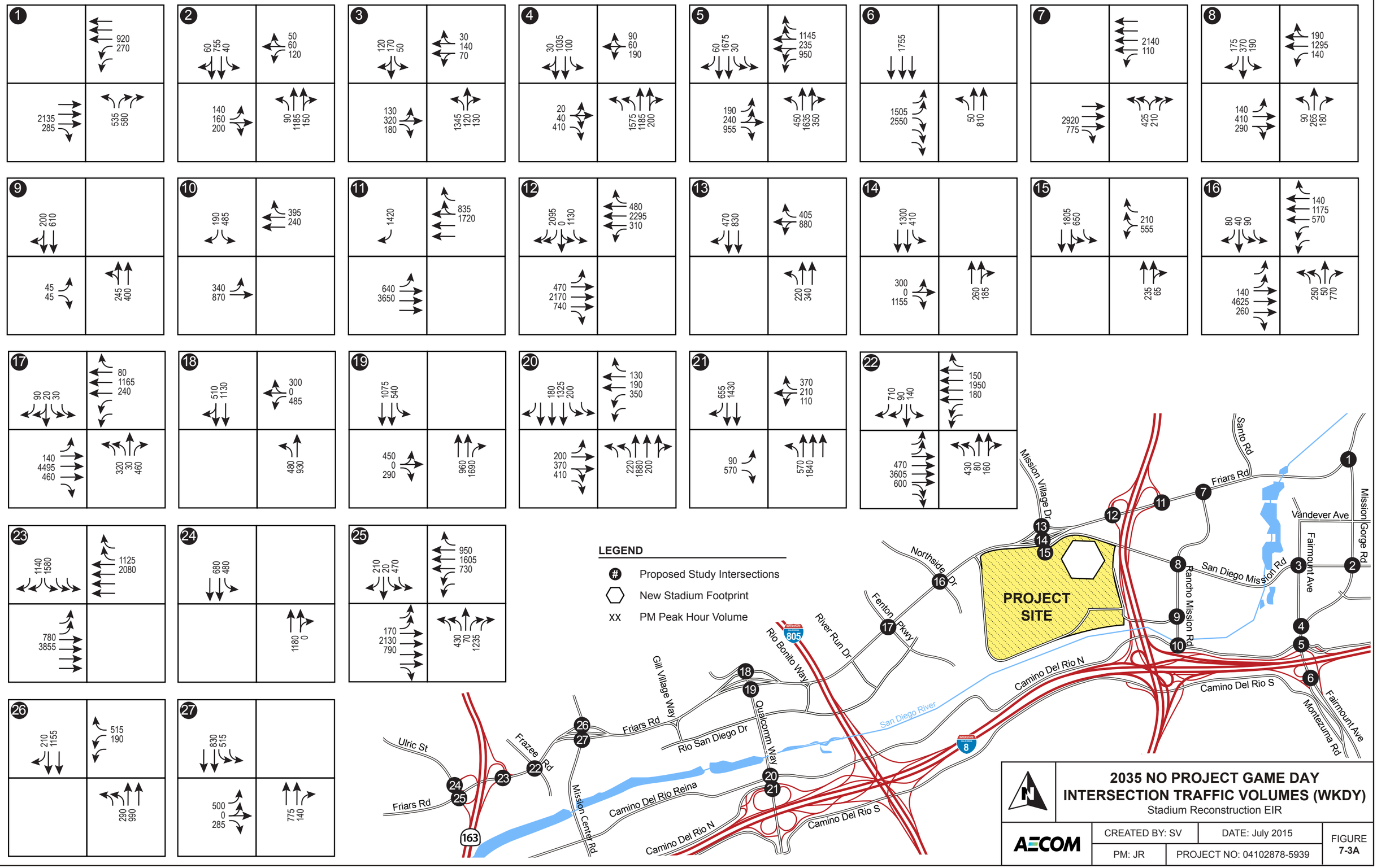

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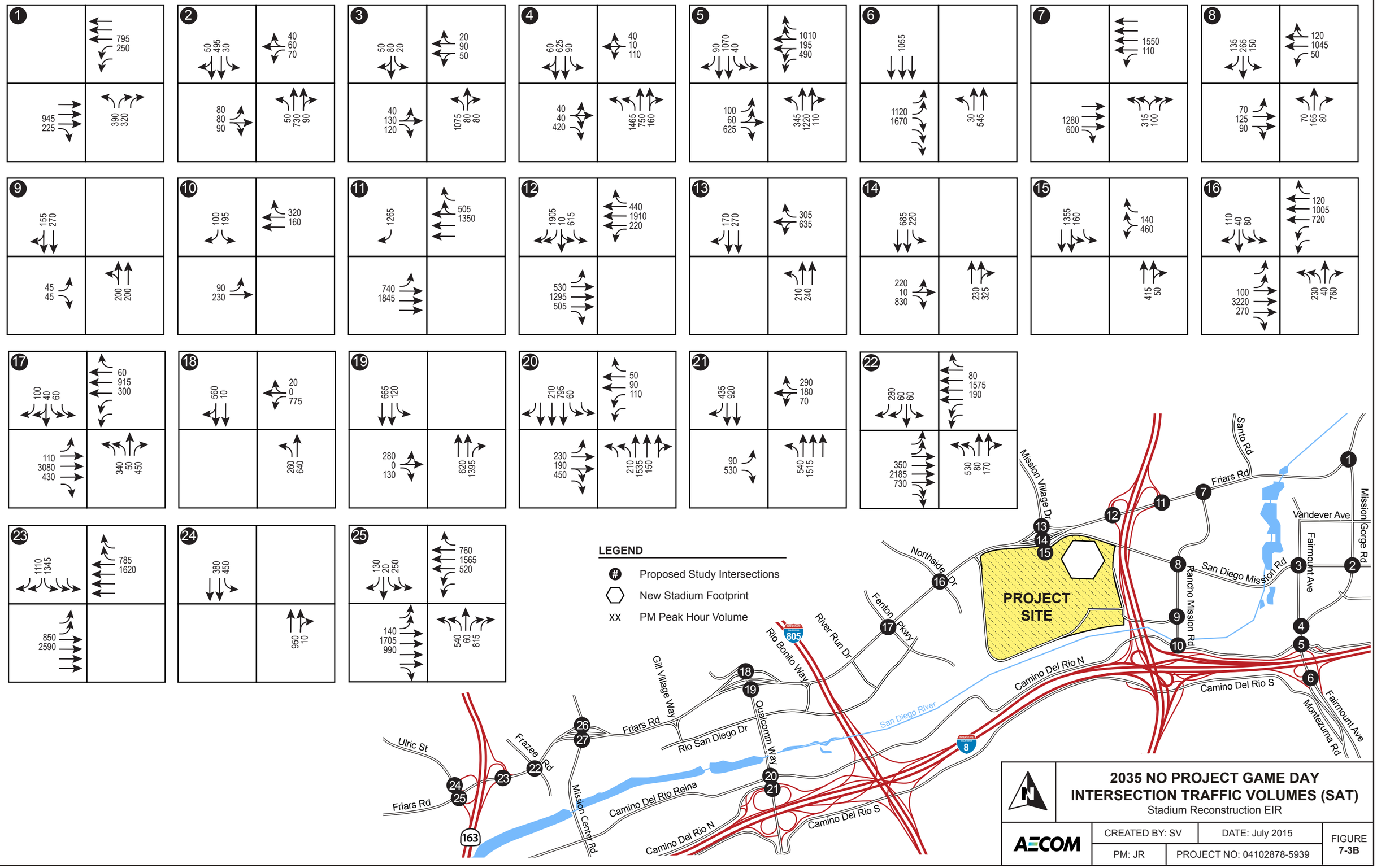

2035 NO PROJECT GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-3B
PM: JR	PROJECT NO: 04102878-5939	

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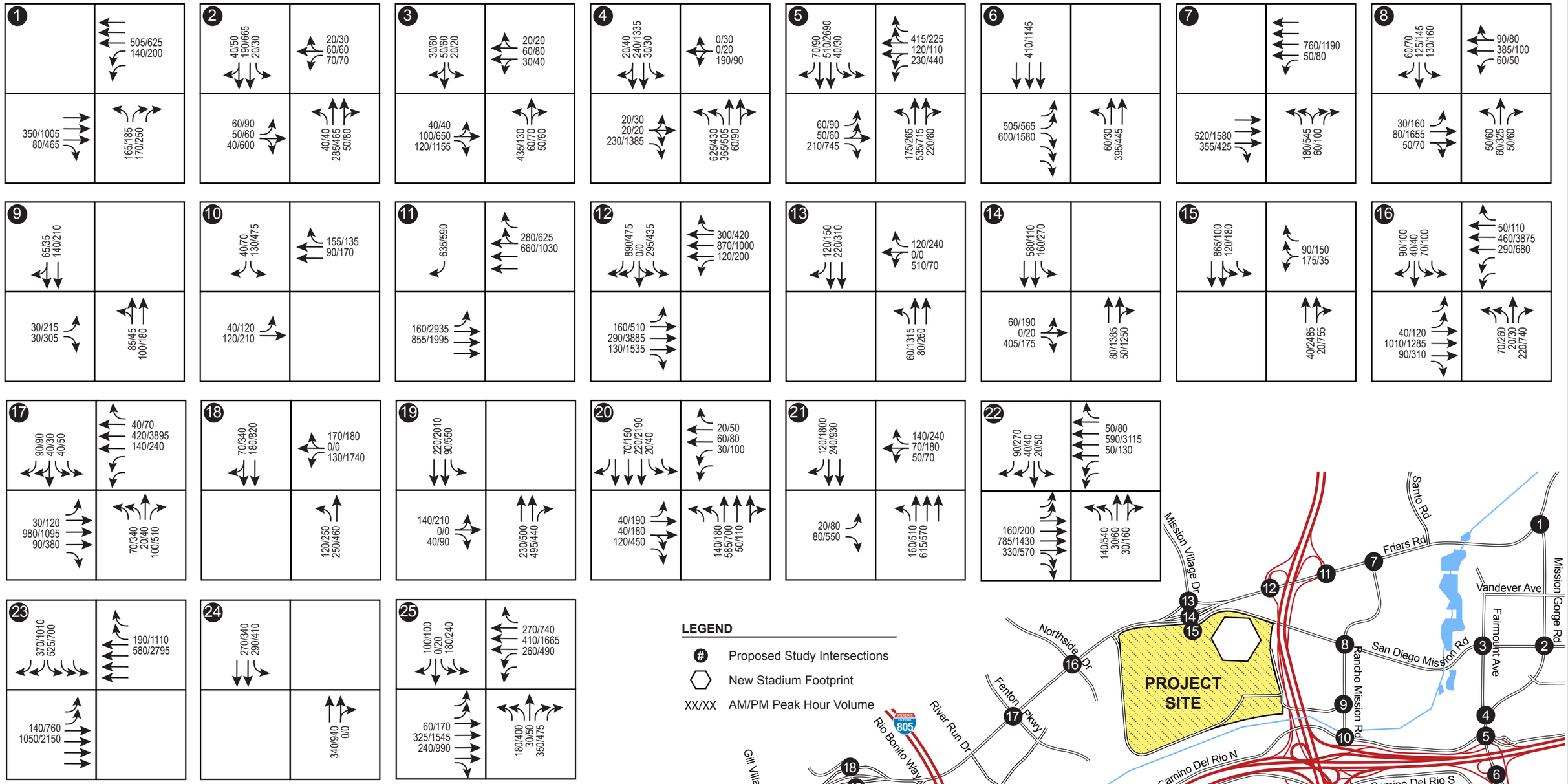

2035 NO PROJECT GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

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	PM: JR	PROJECT NO: 04102878-5939	

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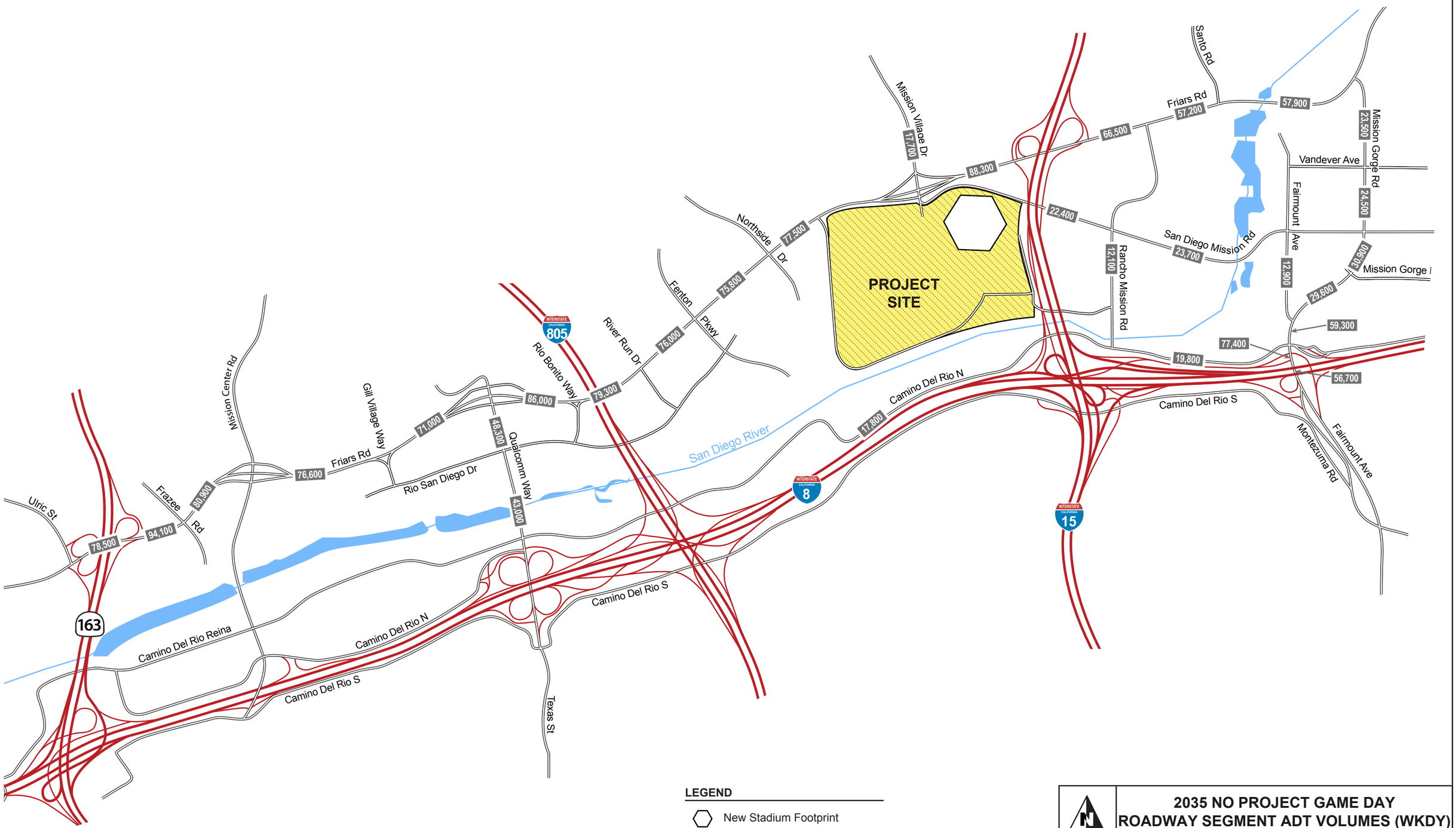

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 NO PROJECT GAME DAY
ROADWAY SEGMENT ADT VOLUMES (WKDY)
Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-4A
PM: JR	PROJECT NO: 04102878-5939	

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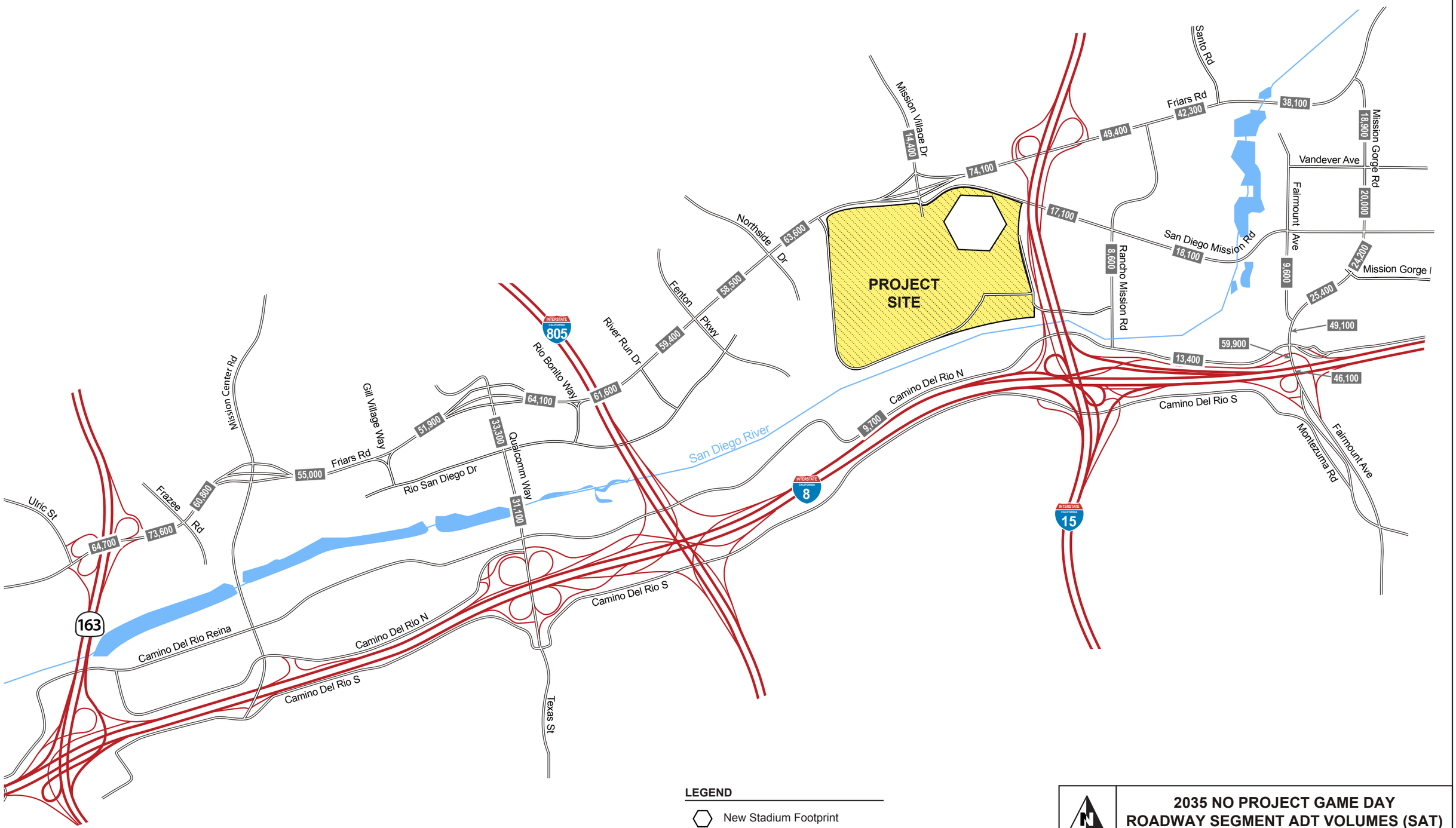

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 NO PROJECT GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-4B
PM: JR	PROJECT NO: 04102878-5939	

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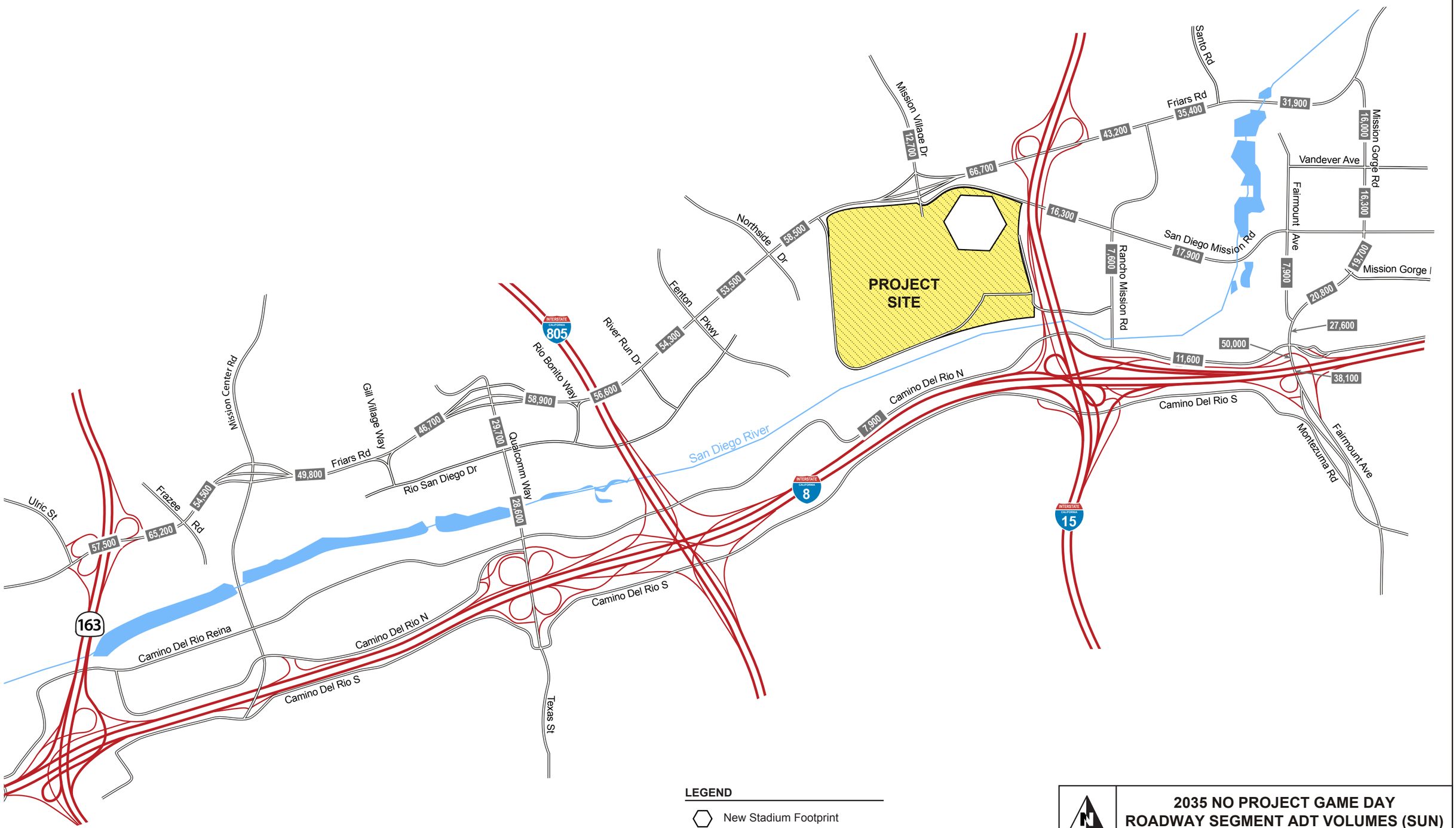

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 NO PROJECT GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-4C
PM: JR	PROJECT NO: 04102878-5939	

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7.1.5 Horizon Year 2035 Project Build Out with No Games

See **Section 7.1.1** for analysis for the Horizon Year 2035 Project Build Out with no game days for all facilities. Traffic conditions are identical between the 2035 No Project and Project Build out scenarios on non-game days since the proposed Project is a replacement facility and the trips generated from the site would remain constant on non-game days before and after the project implementation.

7.1.6 Horizon Year 2035 Project Build Out with Games

This section discusses the traffic conditions for the study area intersections, roadway segments, freeway segments and freeway ramps for Horizon Year 2035 Project Build conditions on days when games are played.

Intersection Analysis

Table 7-9 summarizes the peak intersection conditions and **Figure 7-5** shows the traffic volumes in Horizon Year 2035 Project Build Out with games. All intersections operate at LOS D or better except for the following:

- Fairmount Avenue / Twain Avenue – LOS F during weekday and Saturday peak
- Mission Gorge Road / Fairmount Avenue – LOS F during weekday AM peak and weekday and Saturday and Sunday PM peak
- Fairmount Avenue / Alvarado Canyon Road – LOS F during weekday, Saturdays and Sundays PM peak
- Fairmount Avenue / I-8 EB Ramps – LOS F during weekday and Saturday PM peak
- Rancho Mission Road / Ward Road – LOS F during weekday and Saturday PM peak
- I-15 SB Ramps / Friars Road – LOS F during weekday, Saturday and Sunday PM peak
- Mission Village Drive / Friars Road WB – LOS E during weekday and Saturday PM peak
- Mission Village Drive / Friars Road EB / San Diego Mission Rd – LOS F during weekday, Saturday and Sunday PM peak
- Northside Drive / Friars Road – LOS F during weekday and Saturday PM peak and LOS E during Sunday PM peak
- Fenton Parkway / Friars Road – LOS F during weekday, Saturday and Sunday PM peak
- Qualcomm Way / Friars Road WB – LOS F during weekday, Saturday and Sunday PM peak
- Qualcomm Way / Friars Road EB – LOS F during weekday and Saturday PM peak
- Qualcomm Way / I-8 WB Ramps – LOS E during weekday and Saturday PM peak and LOS F on Sunday PM peak
- Frazee Road / Friars Road – LOS E during weekday and Saturday PM peak
- Ulric Street / Friars Road – LOS E during weekday and Saturday PM peak

The detailed intersection operations calculation worksheets under the Horizon Year 2035 Project Build Out conditions are provided in **Appendix E**.

Roadway Segment Analysis

Table 7-10 summarizes the daily roadway segment conditions and **Figure 7-6** shows graphically the daily volumes in Horizon Year 2035 Project Build Out on game days. All roadway segments operate at LOS D or better except for the following:

- Mission Gorge Road from Twain Avenue to Mission Gorge Place – LOS F on weekdays
- Mission Gorge Road from Mission Gorge Place to Fairmount Avenue – LOS E on weekdays

- Fairmount Avenue from Mission Gorge Road to Alvarado Canyon Road – LOS F on weekdays, Saturdays, and Sundays
- Fairmount Avenue from Alvarado Canyon Road to I-8 WB Ramps – LOS F on weekdays, Saturdays and Sundays
- Fairmount Avenue from I-8 WB Ramps to I-8 EB Ramps – LOS F during weekdays and Saturdays
- San Diego Mission Road from Fairmount Avenue to Rancho Mission Road – LOS F weekdays, Saturdays and Sundays
- Camino Del Rio North from Ward Road to Mission City Parkway – LOS F on weekdays
- Friars Road from Mission Gorge Road to Santo Road – LOS E on weekdays
- Friars Road from Rancho Mission Road to I-15 Ramps – LOS E on weekdays
- Friars Road from I-15 Ramps to Mission Village Drive – LOS F on weekdays and LOS E on Saturdays
- Friars Road from Mission Village Drive to Northside Drive – LOS F on weekdays
- Friars Road from Northside Drive to Fenton Parkway – LOS F on weekdays, LOS E on Saturdays
- Friars Road from Fenton Parkway to River Run Drive – LOS F on weekdays and LOS E on Saturdays
- Friars Road from River Run Drive to Rio Bonito Way – LOS E on weekdays
- Friars Road from Rio Bonito Way to Qualcomm Way – LOS E on weekdays
- Friars Road from Frazee Road to SR-163 NB Ramps – LOS E on weekdays
- Friars Road from SR-163 NB Ramps to SR-163 SB Ramps – LOS E on weekdays

Freeway Segment Analysis

Table 7-11 summarizes the peak hour freeway segment conditions in Horizon Year 2035 Project Build Out on game days. All freeway segments operate at LOS D or better except for the following:

- SB I-15 from Aero Drive to Friars Road – LOS F during weekday PM peak
- SB I-15 from Friars Road to I-8 – LOS F during weekday PM peak
- WB I-8 from I-15 to I-805 – LOS F during weekday AM peak
- WB I-8 from I-805 to Qualcomm Way – LOS E during weekday AM peak
- WB I-8 from Qualcomm Way to Mission Center Road – LOS F during weekday AM peak, LOS E during weekday PM peak
- WB I-8 from Mission Center Road to SR-163 – LOS F during weekday AM peak
- EB I-8 from Waring Road to Fairmount Ave – LOS E during weekday PM peak
- EB I-8 from Fairmount Avenue to I-15 – LOS E during weekday PM peak
- EB I-8 from I-15 to I-805 – LOS F during weekday PM peak
- EB I-8 from I-805 to Qualcomm Way – LOS E during weekday PM peak
- SB SR-163 from Friars Road to -8 – LOS E during weekday PM peak

Ramp Meter Analysis

Table 7-12 summarizes the existing freeway ramp metering operations in Horizon Year 2035 Project Build Out on game days. All study area ramp meters are calculated to operate at an acceptable LOS

(delay of 15 minutes or less) except the following:

- I-8 EB: SB Fairmount Avenue On-ramp (AM and PM peak)
- I-15 SB: WB Friars Road On-ramp (AM and PM peak)
- I-15 NB Friars Road On-ramp (PM peak)

As discussed above, the baseline used for NFL gameday analysis was 68,000 based on attendance at the most recent 2014 games. An analysis was also performed of 65,000 and 60,000 to provide a more conservative approach and the impact analysis would not substantially differ due to the reduction of on-site parking spaces and the implementation of the TDM plan, Weekday NFL games are not a regular occurrence and none occurred in 2014 and on average there are 0 to 2 weekday games in San Diego per year. Of the 10 most recent weekday games attendance ranged from just below 60,000 to over 68,000.

Table 7-9
Intersection Analysis – 2035 Project Build Out with Games

ID	North-South Arterial	East-West Arterial	Weekday				Saturday				Sunday			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Mission Gorge Rd	Friars Rd	10.6	B	33.1	C	8.2	A	33.1	C	7.3	A	9.8	A
2	Mission Gorge Rd	Twain Ave	23.7	C	36.8	D	15.5	B	36.8	D	17.5	B	50.5	D
3	Fairmount Ave	Twain Ave	16.5	B	191	**F**	12.6	B	191	**F**	26.3	C	29.6	C
4	Mission Gorge Rd	Fairmount Ave	90.5	**F**	121.2	**F**	50.5	D	117.8	**F**	23.7	C	130.1	**F**
5	Fairmount Ave	Alvarado Canyon Rd	12.2	B	206.3	**F**	29.6	C	234.1	**F**	19.9	B	212	**F**
6	Fairmount Ave	I-8 EB Ramps	15.9	B	88	**F**	10.3	B	88	**F**	23.6	C	33.1	C
7	Rancho Mission Rd	Friars Rd	13	B	21.3	C	19	B	21.3	C	15.1	B	15	B
8	Rancho Mission Rd	San Diego Mission Rd	27.7	C	49.5	D	18.8	B	49.5	D	25	C	44.6	D
9	Rancho Mission Rd	Ward Rd	11.9	B	56.4	**F**	10	A	56.4	**F**	10.5	B	13	B
10	Ward Rd	Camino Del Rio N	14.3	B	35	C	11.3	B	35	C	14.8	B	16.7	B
11	I-15 NB Ramps	Friars Rd	5.5	A	10.7	B	12.8	B	10.7	B	3	A	272.3	**F**
12	I-15 SB Ramps	Friars Rd	35.4	D	184.8	**F**	16.7	B	184.8	**F**	30.5	C	92.9	**F**
13	Mission Village Dr	Friars Rd WB	13.4	B	67.8	**E**	15.2	B	67.8	**E**	18.9	B	38.3	D
14	Mission Village Dr	Friars Rd EB	46.6	D	293.5	**F**	45.4	D	293.5	**F**	46.9	D	379.5	**F**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	28.5	C	211.9	**F**	19.2	B	216.6	**F**	26.6	C	65.8	**E**
17	Fenton Pkwy	Friars Rd	17.8	B	166.8	**F**	17.1	B	166.4	**F**	25.3	C	109.3	**F**
18	Qualcomm Way	Friars Rd WB	45.6	D	97	**F**	23.2	C	95.3	**F**	17.7	B	93.2	**F**
19	Qualcomm Way	Friars Rd EB	17.5	B	216.4	**F**	12.6	B	210.6	**F**	7.9	A	30.5	C
20	Qualcomm Way	Camino De La Reina	23.9	C	47.7	D	25.6	C	47.7	D	14.6	B	31.1	C
21	Qualcomm Way	I-8 WB Ramps	40.6	D	64.5	**E**	23.7	C	64.6	**E**	14.1	B	222.1	**F**
22	Frazee Rd	Friars Rd	29	C	79.7	**E**	22.9	C	79.7	**E**	18.7	B	45.8	D
23	SR-163 NB Ramps	Friars Rd	15.1	B	49.7	D	18.6	B	49.7	D	14.5	B	70.4	**E**
24	Ulric St	SR-163 SB On-ramp	5.1	A	19.1	C	10.5	B	19.1	C	4.7	A	18.3	C
25	Ulric St	Friars Rd	22.5	C	58.9	**E**	13.9	B	58.9	**E**	21.9	C	44.1	D
26	Mission Center Rd	Friars Rd WB	10.6	B	23.2	C	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	11.9	B	18.9	B	--	--	--	--	--	--	--	--

Table 7-10
Roadway Segment Analysis – 2035 Project Build Out with Games

ID	Roadway Segment	Lanes	Classification*	Capacity	Weekday			Saturday			Sunday		
					ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
Mission Gorge Rd													
1	Friars Rd to Vandever Ave	4	Collector	30,000	23,300	0.78	D	18,700	0.62	C	15,800	0.53	C
2	Vandever Ave to Twain Ave	4	Collector	30,000	24,300	0.81	D	19,800	0.66	C	16,100	0.54	C
3	Twain Ave to Mission Gorge Pl	4	Collector	30,000	30,300	1.01	**F**	23,700	0.79	D	19,200	0.64	C
4	Mission Gorge Pl to Fairmount Ave	4	Collector	30,000	29,000	0.97	**E**	24,900	0.83	D	20,300	0.68	D
Fairmount Ave													
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	15,000	12,300	0.82	D	9,100	0.61	C	7,400	0.49	C
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	40,000	57,400	1.44	**F**	47,700	1.19	**F**	40,400	1.01	**F**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	45,000	75,900	1.69	**F**	58,700	1.30	**F**	48,800	1.08	**F**
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	45,000	55,800	1.24	**F**	45,400	1.01	**F**	37,400	0.83	D
San Diego Mission Rd													
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	15,000	22,000	1.47	**F**	16,800	1.12	**F**	16,600	1.11	**F**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	30,000	20,700	0.69	D	15,900	0.53	C	15,100	0.50	C
Camino Del Rio N													
11	Fairmount Ave to Ward Rd	4	Collector	30,000	19,600	0.65	C	13,200	0.44	B	11,400	0.38	B
12	Ward Rd to Mission City Pkwy	2	Collector[1]	15,000	17,800	1.19	**F**	9,700	0.65	C	7,900	0.53	C
Rancho Mission Rd													
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	15,000	11,900	0.79	D	8,400	0.56	C	7,400	0.49	C
Mission Village Dr													
14	North of Friars Rd	4	Major Arterial	40,000	17,600	0.44	B	14,300	0.36	A	12,600	0.32	A
Friars Rd													
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	60,000	57,400	0.96	**E**	37,700	0.63	C	31,500	0.53	B
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	70,000	56,700	0.81	C	41,900	0.60	C	35,000	0.50	B
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	70,000	65,800	0.94	**E**	48,900	0.70	C	42,700	0.61	C
18	I-15 Ramps to Mission Village Dr	6	Expressway	80,000	84,600	1.06	**F**	71,200	0.89	**E**	63,800	0.80	D
19	Mission Village Dr to Northside Dr	6	Expressway	80,000	74,300	0.93	**E**	61,200	0.77	D	56,100	0.70	C
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	60,000	72,600	1.21	**F**	56,100	0.94	**E**	51,100	0.85	D
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	60,000	72,800	1.21	**F**	57,000	0.95	**E**	51,900	0.87	D
22	River Run Dr to Rio Bonito Way	6	Expressway	80,000	76,100	0.95	**E**	59,200	0.74	C	54,200	0.68	C
23	Rio Bonito Way to Qualcomm Way	7	Expressway	93,333	82,800	0.89	**E**	61,700	0.66	C	56,500	0.61	C
24	Qualcomm Way to Gill Village Way	8	Expressway	106,667	69,300	0.65	C	50,600	0.47	B	45,400	0.43	B
25	Gill Village Way to Mission Center Dr	8	Expressway	106,667	74,900	0.70	C	53,700	0.50	B	48,500	0.45	B
26	Mission Center Dr to Frazee Rd	7	Expressway	93,333	79,200	0.85	D	59,500	0.64	C	53,200	0.57	C
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	100,000	92,400	0.92	**E**	72,300	0.72	C	63,900	0.64	C
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	80,000	78,100	0.98	**E**	64,400	0.81	C	57,200	0.72	C
Qualcomm Way													
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	50,000	46,800	0.94	**E**	32,100	0.64	C	28,500	0.57	C
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	50,000	41,500	0.83	D	29,900	0.60	C	27,400	0.55	B

*Source: http://tfic.sandag.org/
1. 4L with no center lane o 2L with continuous left-turn lane
2. No fronting property
3. Commercial-industrial fronting
4. Multifamily
5. Single-family

Table 7-11
Freeway Segment Analysis – 2035 Project Build Out with Games

Location	Number of Lanes[1]				Weekday AM						Saturday AM						Sunday AM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	7,800	0.87	D	6,390	0.71	C	3,480	0.39	A	3,670	0.41	A	2,090	0.23	A	2,514	0.28	A
Friars Rd to I-8	4	1	4	2	7,310	0.81	C	6,330	0.66	C	4,340	0.48	B	3,860	0.40	A	2,978	0.32	A	2,260	0.23	A
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	6,450	0.59	B	10,490	0.92	D	3,830	0.35	A	5,030	0.43	B	2,430	0.22	A	3,590	0.31	A
Fairmount Ave to I-15	4	0	4	0	4,230	0.55	B	6,930	0.89	D	2,470	0.32	A	2,910	0.37	A	1,936	0.25	A	2,360	0.30	A
I-15 to I-805	4	2	4	2	5,780	0.58	B	11,290	1.12	**F(0)**	3,460	0.35	A	5,830	0.57	B	2,536	0.25	A	3,980	0.39	A
I-805 to Qualcomm Way	4	0	4	0	4,230	0.55	B	7,740	0.98	**E**	2,250	0.29	A	3,850	0.49	B	1,660	0.21	A	2,730	0.35	A
Qualcomm Way to Mission Center Rd	5	0	4	1	5,730	0.59	B	9,710	1.11	**F(0)**	3,080	0.31	A	5,290	0.59	B	2,521	0.25	A	3,760	0.41	A
Mission Center Rd to SR-163	4	0	3	1	3,480	0.44	B	7,180	1.01	**F(0)**	1,880	0.24	A	4,090	0.58	B	1,661	0.21	A	3,030	0.43	B
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	9,050	0.93	**E**	6,280	0.68	C	2,840	0.29	A	2,940	0.32	A	1,870	0.19	A	2,357	0.30	A
Friars Rd to I-8	3	4	4	0	8,010	0.75	C	6,750	0.87	D	2,460	0.23	A	3,030	0.39	A	1,808	0.17	A	2,494	0.32	A

Location	Number of Lanes[1]				Weekday PM						Saturday PM						Sunday PM					
	NB/EB		SB/WB		NB/EB			SB/WB			NB/EB			SB/WB			NB/EB			SB/WB		
	ML	Aux	ML	Aux	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS	Volume	V/C[2]	LOS
I-15																						
Aero Dr to Friars Rd	4	1	4	1	5,453	0.60	B	10,450	1.15	**F(0)**	4,441	0.49	B	7,083	0.77	C	5,968	0.65	C	4,389	0.48	B
Friars Rd to I-8	4	1	4	2	6,649	0.73	C	9,599	1.03	**F(0)**	5,820	0.64	C	6,588	0.67	C	4,812	0.53	B	5,962	0.61	B
I-8																						
Waring Rd to Fairmount Ave	5	1	6	0	10,412	0.95	**E**	8,354	0.72	C	7,821	0.71	C	7,365	0.63	B	8,218	0.74	C	5,545	0.47	B
Fairmount Ave to I-15	4	0	4	0	7,919	0.99	**E**	4,923	0.62	B	5,930	0.75	C	4,162	0.53	B	5,204	0.65	C	4,362	0.55	B
I-15 to I-805	4	2	4	2	10,459	1.04	**F(0)**	8,603	0.84	D	8,560	0.85	D	7,832	0.77	C	7,774	0.77	C	7,012	0.68	C
I-805 to Qualcomm Way	4	0	4	0	7,220	0.94	**E**	5,830	0.74	C	5,790	0.75	C	5,510	0.70	C	4,940	0.64	C	4,540	0.58	B
Qualcomm Way to Mission Center Rd	5	0	4	1	10,978	1.12	**F(0)**	8,666	0.99	**E**	8,900	0.91	D	8,184	0.95	**E**	7,799	0.80	C	8,103	0.91	D
Mission Center Rd to SR-163	4	0	3	1	7,018	0.92	D	6,416	0.91	D	5,530	0.70	C	5,924	0.84	D	4,629	0.58	B	6,233	0.88	D
SR-163																						
Genesee Ave to Friars Rd	5	0	4	1	8,057	0.83	D	7,986	0.89	D	5,996	0.61	B	5,868	0.64	C	7,591	0.77	C	3,861	0.42	B
Friars Rd to I-8	3	4	4	0	7,010	0.66	C	7,365	0.96	**E**	5,320	0.50	B	5,346	0.68	C	6,002	0.56	B	4,366	0.56	B

Note:
1. ML = Mainline Lane, Aux = Auxiliary Lane
2. V/C = Volume / Capacity ratio. Capacity is calculated at 2,000 vehicles per hour per mainline lane and 1,200 vehicles per hour per auxiliary lane.

Table 7-12
Ramp Meter Analysis – 2035 Project Build Out with Games

Location	Lane		Storage	Peak Hour Demand		Meter Rate Range		Excess Demand	Delay	Queue
	GP	HOV	(ft)	(veh)	(vphpl)	(vphpl)		(vphpl)	(min)	(ft)
2035 Project Build Out AM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,330	605	Min:	516	89	10	2,225
						Max:	600	5	0	125
I-15 SB: WB Friars Rd On-ramp	1	0	700	880	880	Min:	660	220	**20**	5,500
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	630	630	Max:	996	0	0	0
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	890	890	Min:	493	397	**48**	9,925
						Max:	996	0	0	0
2035 Project Build Out PM with Games										
I-15 NB: Friars Rd On-ramp	2	1	780	1,475	670	Min:	386	284	**44**	7,100
						Max:	672	0	0	0
I-15 SB: WB Friars Rd On-ramp	1	0	700	950	950	Min:	660	290	**26**	7,250
						Max:	996	0	0	0
I-15 SB: EB Friars Rd On-ramp	1	0	900	1,050	1050	Max:	996	54	3	1,350
I-8 EB: SB Fairmount Ave On-ramp	1	0	670	1,090	1090	Min:	493	597	**73**	14,925
						Max:	996	94	6	2,350

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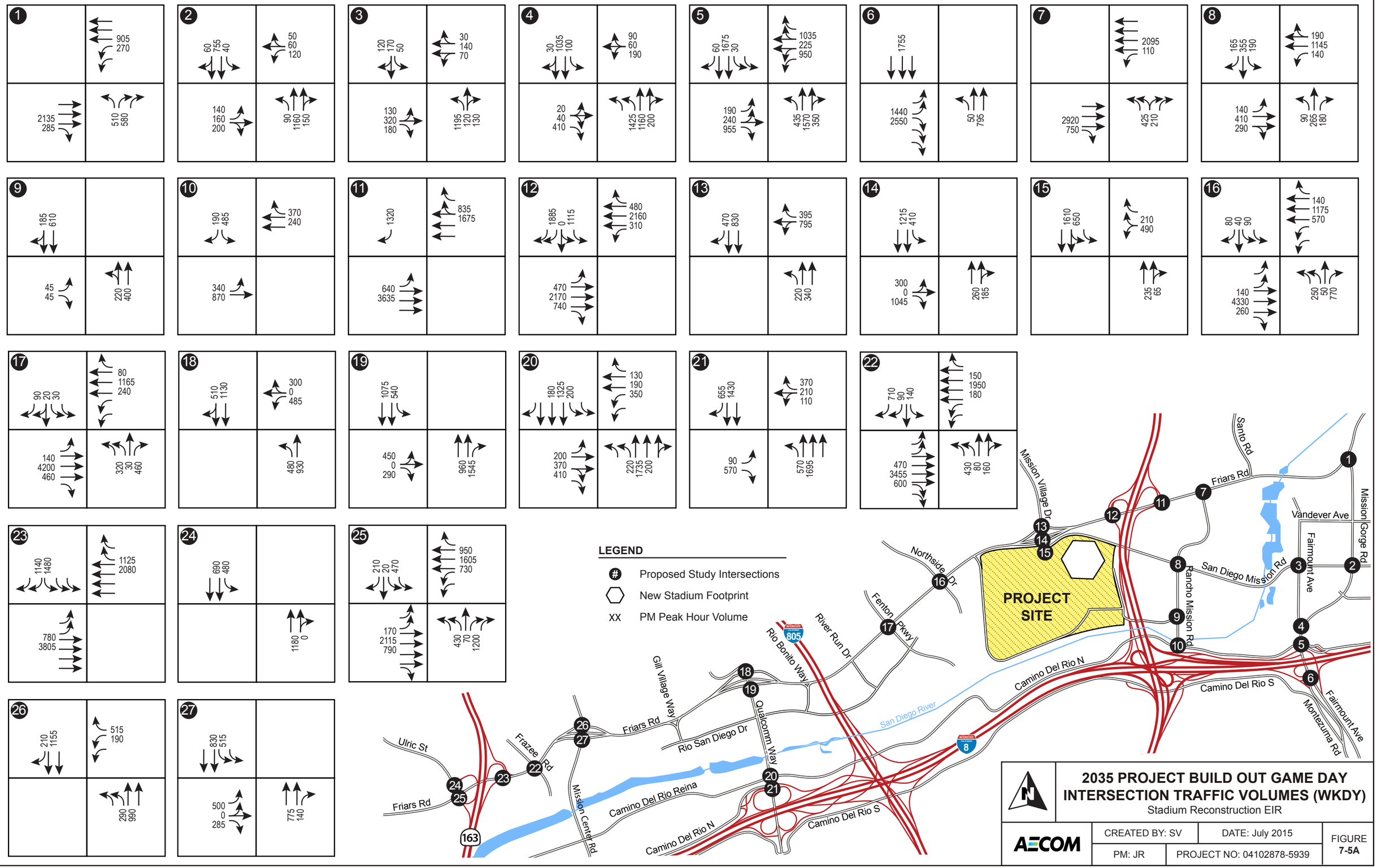

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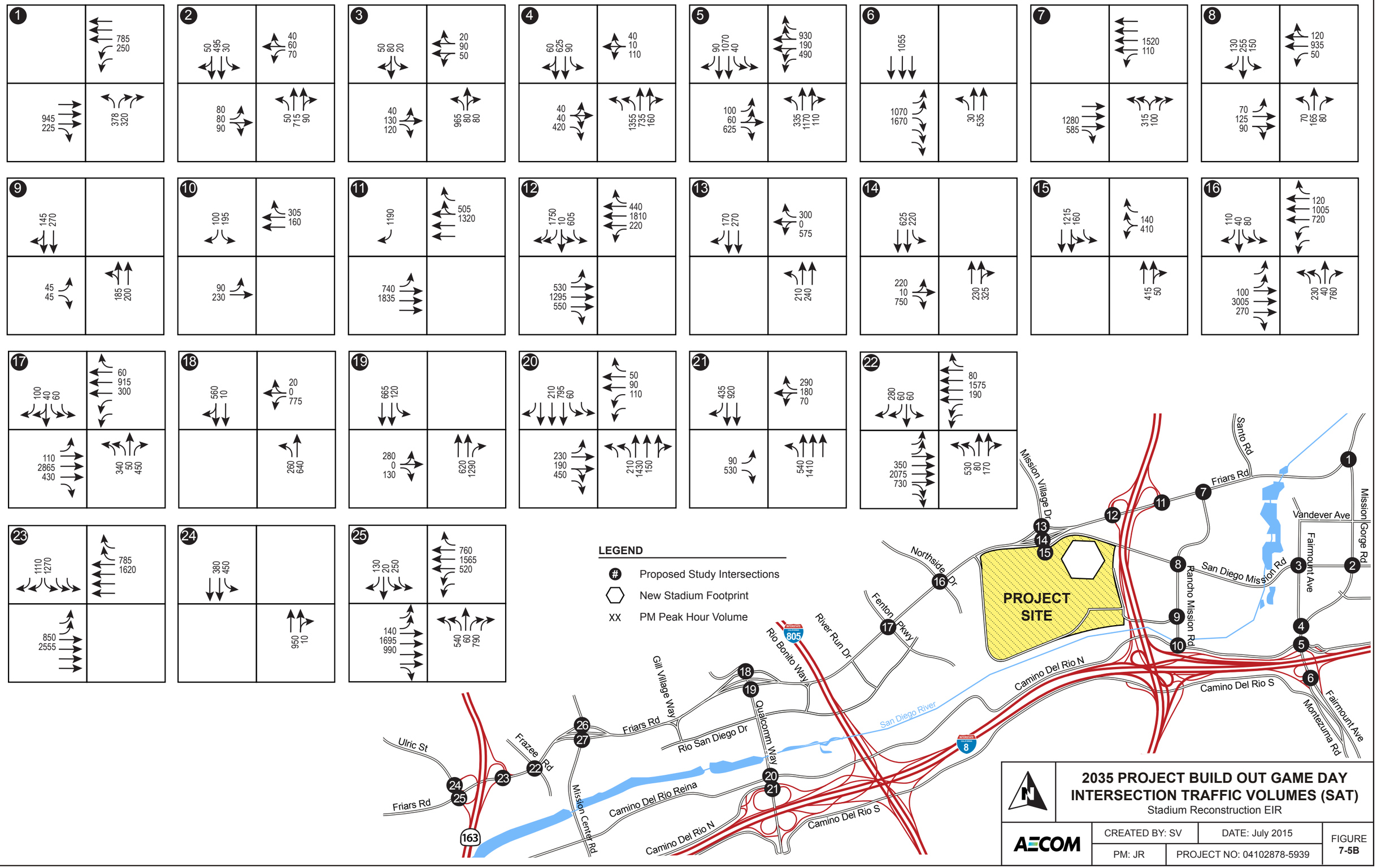

2035 PROJECT BUILD OUT GAME DAY INTERSECTION TRAFFIC VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-5B
PM: JR	PROJECT NO: 04102878-5939	

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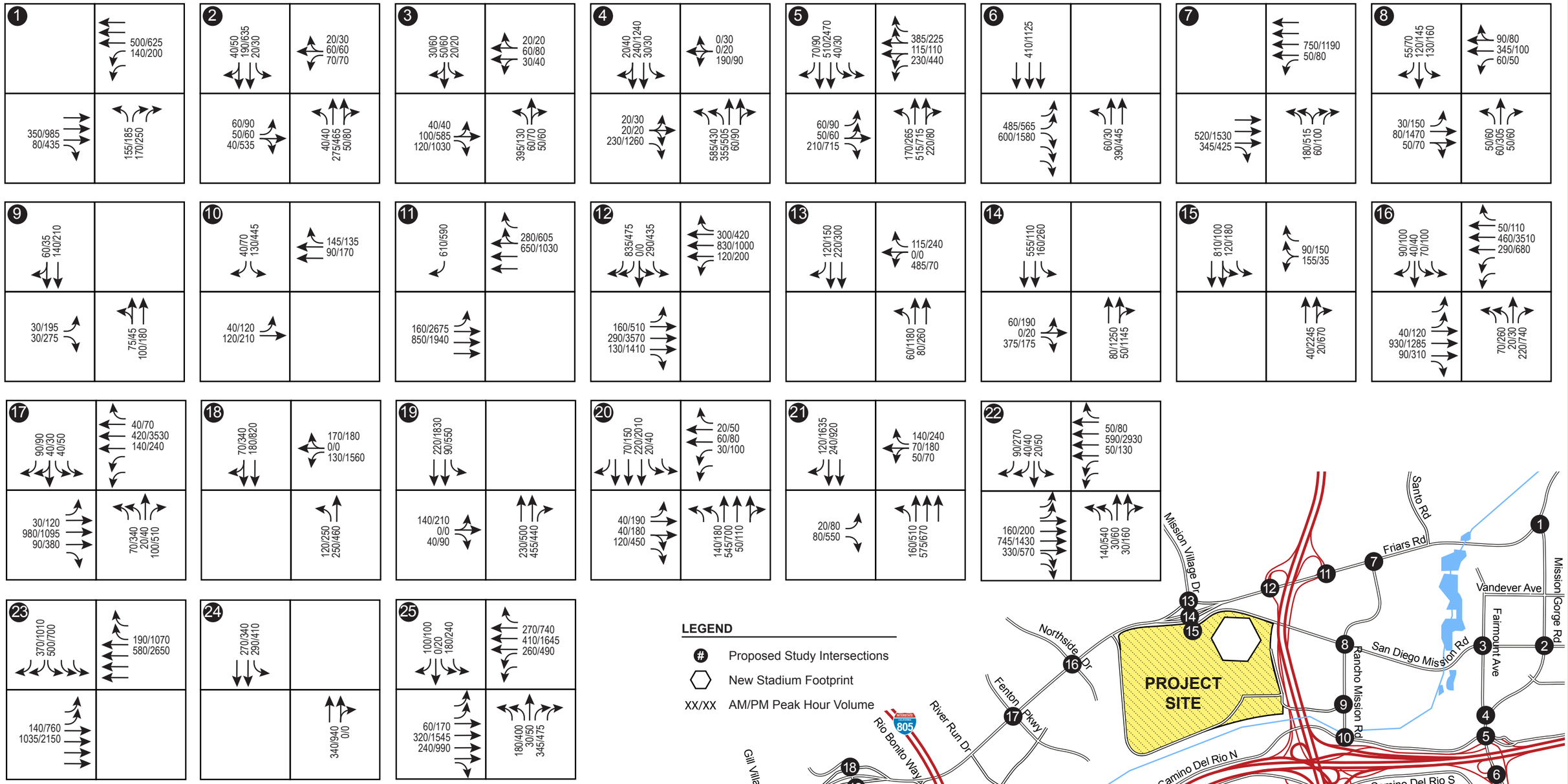

2035 PROJECT BUILD OUT GAME DAY INTERSECTION TRAFFIC VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-5C
PM: JR	PROJECT NO: 04102878-5939	

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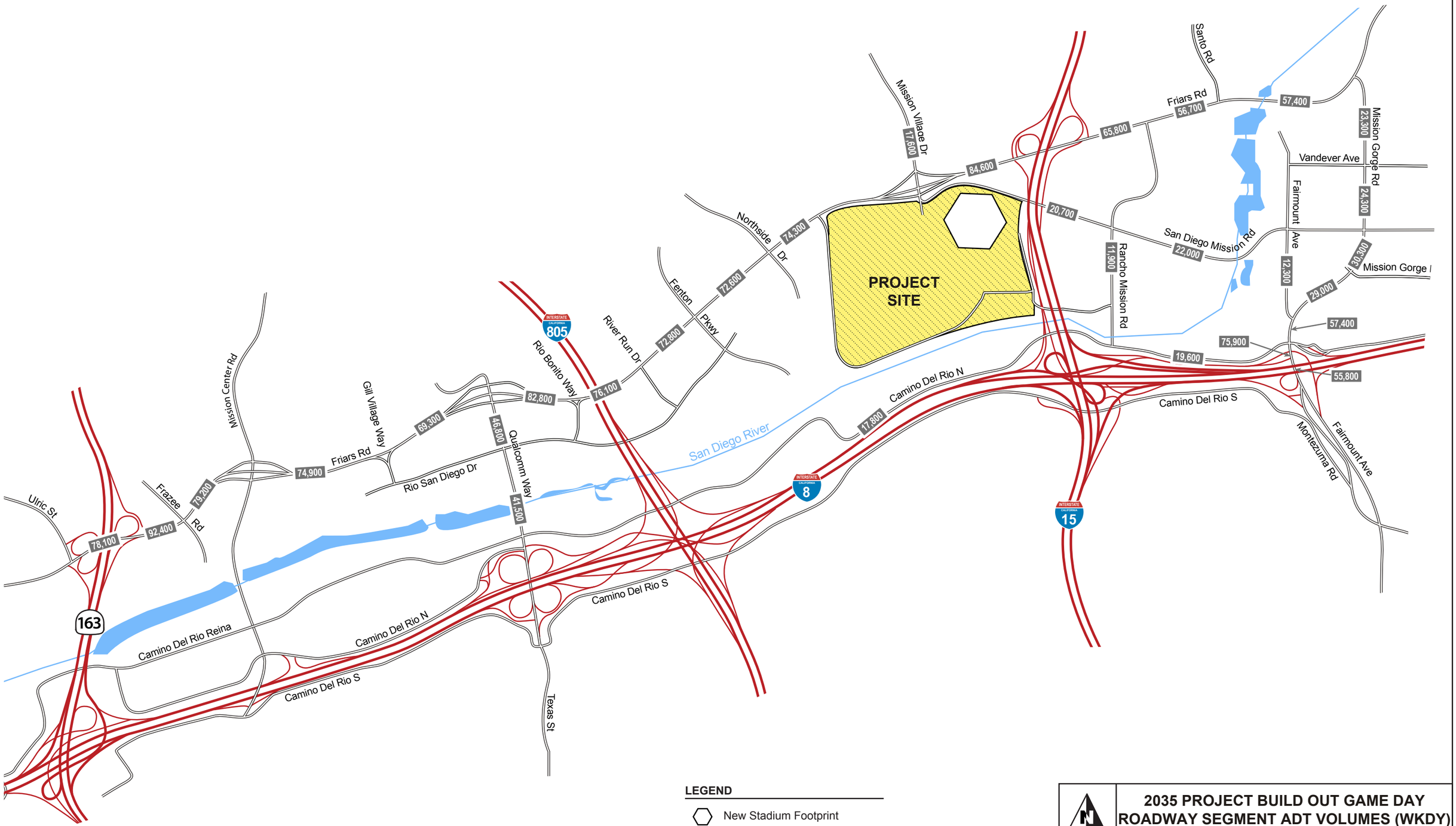

LEGEND

New Stadium Footprint

10,000 Average Daily Traffic

2035 PROJECT BUILD OUT GAME DAY ROADWAY SEGMENT ADT VOLUMES (WKDY)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-6A
PM: JR	PROJECT NO: 04102878-5939	

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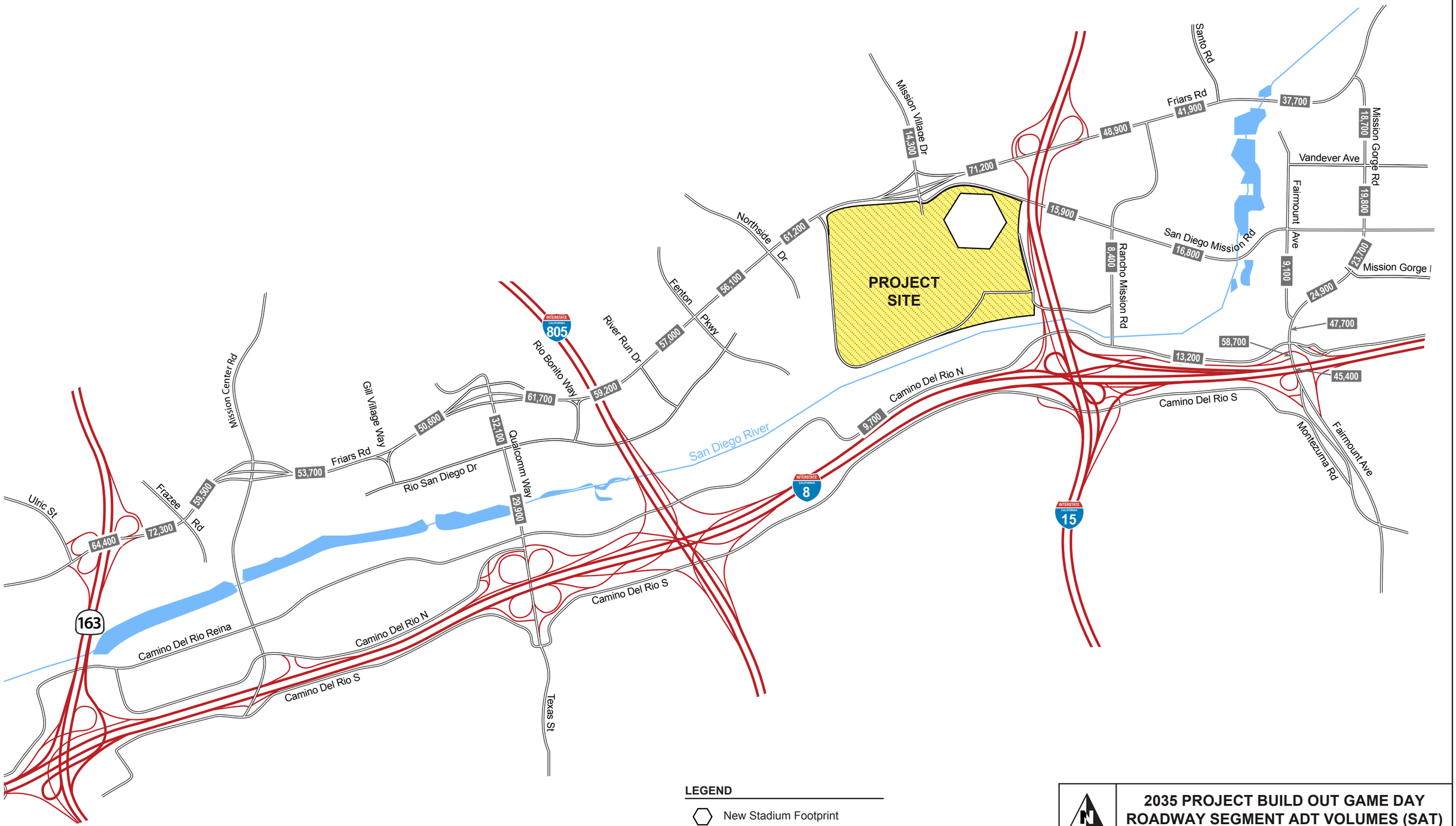

2035 PROJECT BUILD OUT GAME DAY ROADWAY SEGMENT ADT VOLUMES (SAT)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-6B
PM: JR	PROJECT NO: 04102878-5939	

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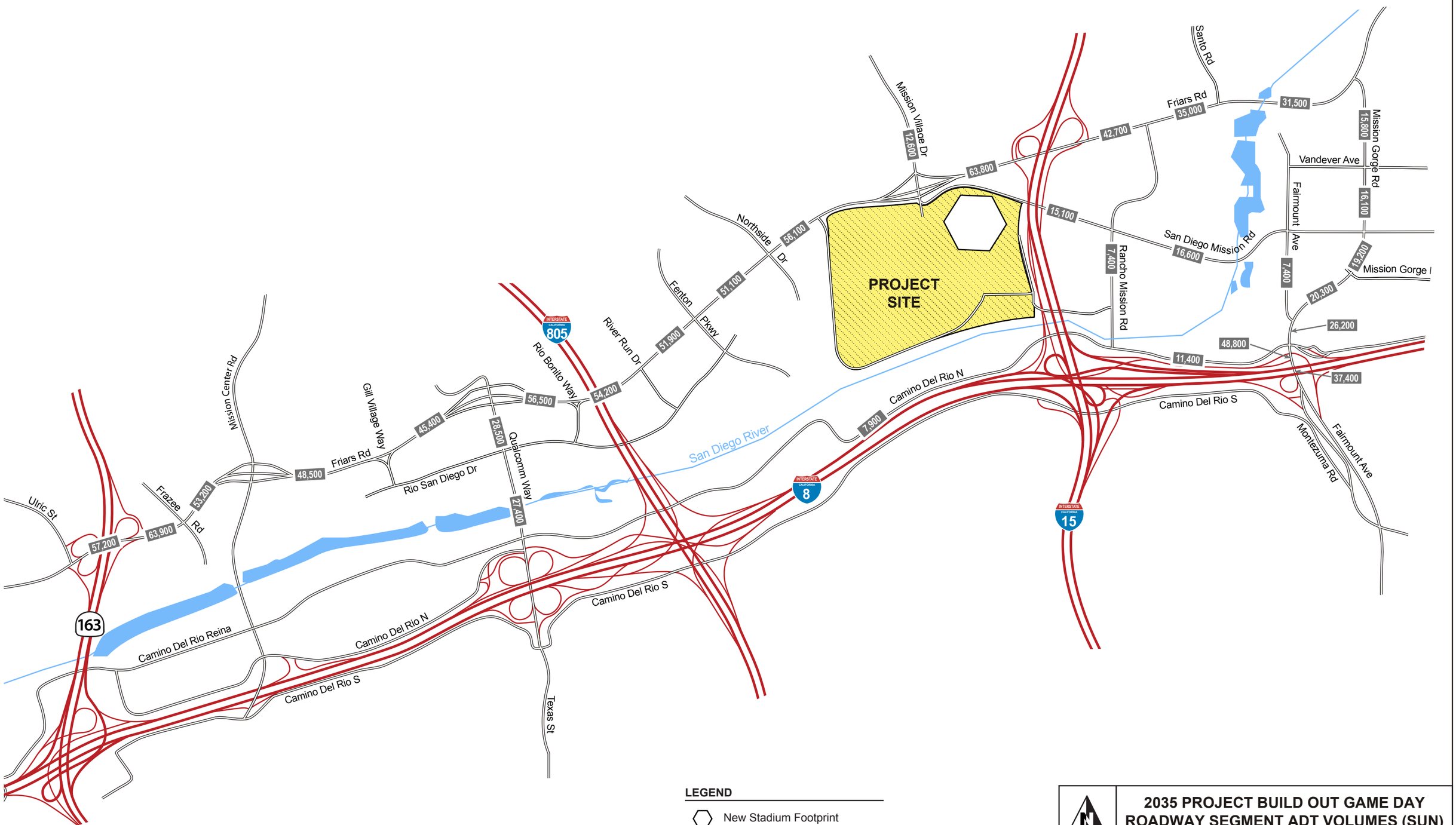

2035 PROJECT BUILD OUT GAME DAY ROADWAY SEGMENT ADT VOLUMES (SUN)

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 7-6C
PM: JR	PROJECT NO: 04102878-5939	

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7.1.7 Horizon Year 2035 Project Build Out with Miscellaneous Events

Consistent with existing Stadium operations and functions, the Project Site would be a flexible meeting space that could accommodate events of various sizes upon completion. The events would typically be held any time from daytime through evening hours. As discussed in **Section 3.1.8**, projected attendance for the miscellaneous events will not exceed the existing usage for similar event types and no additional vehicle trips over existing conditions on a daily basis are anticipated.

The Project, however, is expected to substantially increase the frequency of the medium and large events. Depending on the nature and operation of these events, any weekday event with attendance over 5,000 could potentially result in significant impact on the transportation network during the AM and PM peak hour.

Should these events become more frequent and regular, special measures such as scheduling adjustments would need to be utilized to minimize potential conflicts with other planned stadium and community activities as well as being cognizant to the traffic patterns in the Mission Valley area.

Parking demand for these events would be fully accommodated with the 16,500 available parking spaces onsite reflecting no significant parking impact. Event attendees would also be anticipated to utilize various multi-modal options to access the event center.

7.2 MOBILITY ANALYSIS

At full build out of the proposed project, the stadium and parking would require a transportation modal shift to alternative modes of transportation to adjust to the reduction of parking spaces from the existing stadium parking lot to the full build out of the proposed project. A TDM Plan should be prepared to ensure the modal shift continues into the future horizon year.

7.2.1 Transit

Although parking demand would be met, this assumes attendees would continue to maintain high ridership rates required during construction and demolition conditions. High ridership on game days is anticipated to continue and the Project would continue to support a stadium with fewer parking spaces than existing conditions.

Future ridership region wide is not anticipated to change in Horizon Year 2035 and therefore existing transit conditions and operations are anticipated to remain the same.

7.2.2 Pedestrian

Pedestrian access to the project site would remain unchanged an unaffected in the 2035 future project build out. More pedestrians could increase in the horizon year 2035 scenario with more car-sharing services requiring a larger drop off area. The project would provide an onsite drop-off area to accommodate current and future attendees traveling by car-sharing and taxi.

7.2.3 Bicycle

Future bicycle routes are planned to improve the overall connectivity of the regional bicycle network. The following projects near the Project Area are anticipated to be implemented by 2023 as part of the SANDAG Regional Bicycle Plan Early Action Program:

- Project 31A: San Diego River Trail – Qualcomm Stadium
- Project 31C: San Diego River Trail – I-805 to Fenton
- Project 31D: San Diego River Trail – Short Gap Connections

These bicycle improvement projects would improve the bicycle network connectivity and provide additional access to the project site to surrounding neighborhoods and public transit stations. The future bicycle network would provide improved connectivity to encourage bicycle transportation to the project site (See **Section 8**).

7.3 TRANSPORTATION DEMAND MANAGEMENT

A transportation demand management plan (See **Section 8**) would be developed for the new stadium to alleviate traffic congestion, identify offsite and overflow parking and continue to encourage, incentivize and maintain high public transit ridership for stadium events. This TDM plan would aid the new stadium to be more sustainable, reduce Vehicle Miles Traveled (VMT), and continue to propagate a more balanced and sustainable transportation modal split with less attendees traveling to the stadium by car. A transportation demand management coordinator position would be identified in the TDM Plan. This person would be responsible for coordinating TDM programs for both attendees and employees and would continue to create public outreach programs and incentive programs for stadium events to encourage a continued non-motorized transportation to travel to the Project site.

8.0 TRANSPORTATION DEMAND MANAGEMENT PLAN

Because this Traffic Impact Analysis Report does not have the authority to implement certain policies and operational characteristics of the project, a transportation demand management (TDM) Plan must be prepared in addition to this Traffic Impact Analysis Report for the Project. The objective of the TDM Plan would be to develop enforceable policies and operational practices that would achieve a transportation mode shift to reduce the passenger car traffic arriving at the stadium on game days and other large stadium events.

This Traffic Impact Analysis Report assumes a high trolley ridership to accommodate attendees during the reconstruction of the new stadium and the demolition of the existing Qualcomm stadium. High trolley ridership is anticipated to continue into the 2035 horizon year, assuming the attendees continue riding the trolley to games following the reconstruction of the new stadium and full build out of the Project. The maximum trolley capacity is 23,000 riders on weekend game days and 20,000 riders on weekday game days. Therefore, on an average game day with an attendance of 68,000 people, approximately 48,000 to 45,000 attendees are expected to travel by automobile or other modes of transportation. The TDM Plan would provide policy and program recommendations to help achieve maximum trolley ridership and propose other transportation solutions for attendees and employees to travel to and from the Project site, and to encourage the use of transportation modes other than personal automobile.

This TDM Plan will be prepared to address the significant impacts as a mitigation measure caused by onsite parking deficiency and supply. At a minimum, the following topics should be covered in the TDM Plan to achieve a transportation mode shift:

- Automobile Access and Parking
- Transit Ridership
- Pedestrians
- Bicyclists

This TDM Plan is a necessary mitigation measure for the near-term construction of the new stadium, demolition of the existing Qualcomm stadium facility and long term operation of the Project.

8.1 AUTOMOBILE ACCESS AND PARKING

8.1.1 Passenger Car Access

Existing access to the Project site causes traffic delays and creates a queuing pattern on nearby arterials before and after large stadium events. The following roadways are impacted by vehicles queueing to enter the parking lot.

- EB Friars Road to access Gates 3 and 4
- WB Friars Road to access Gates 3 and 4
- SB Mission Village Drive to access Main Gate
- WB San Diego Mission Road to access Gate 1
- WB Rancho Mission Road to access the Bus Gate

On game days, these roadways could benefit from manual traffic control measures and interventions including a traffic control officer to monitor flow and divert through-traffic. Changeable Message Signs (CMS), both portable and fixed, with proper messaging, could be placed along the roadways named above to direct traffic to access gates that are less congested to dissipate traffic flow to the Project site. Additional traffic control measures should be studied as a part of the TDM Plan to assess the ingress and egress into each of the gate access points to the Project site to ensure attendees can arrive and depart the Project site in an efficient manner.

8.1.2 Parking Demand

Demand for parking at Qualcomm Stadium varies by the type of event and event attendance. The following assumptions were used to determine how many parking spaces are required to meet demand during each of the construction phases for the proposed project. **Table 8-1** summarizes the anticipated parking deficit for each of the construction phases and for the long-term operation of the new stadium. The following parking behavior assumptions were made to determine parking demand:

The maximum trolley capacity is 23,000 riders on weekend game days and 20,000 riders on weekday game days. Weekday commuters are anticipated to reduce trolley capacity on the Green Line. These ridership figures were provided by MTS from past high ridership events. These MTS ridership rates were treated as trolley capacity constraints and the remaining attendees not traveling by trolley were assumed to travel mostly by automobile. A smaller percentage of non-trolley riders were assumed to travel by alternative modes including charter bus, taxi, walking or bicycling.

During construction and demolition phases, the need for off-site stadium employee parking is anticipated to increase, assuming the a portion of the onsite employee parking would be used for event attendees. ACE Parking and stadium employees who typically park onsite would likely receive a directive from facility management to park off-site or carpool with coworkers during the construction of the new stadium and the demolition of Qualcomm Stadium.

The assumed de-facto occupancy rate per vehicle would remain unchanged; 2.7 persons per vehicle on weekdays and 3.0 person per vehicle on weekends for event attendee trips and 1.5 persons per vehicle for stadium employee trips. The occupancy rates are consistent with occupancy rates that were used in studies of other stadium construction projects of similar size and location.

Attendees traveling to the project site using alternative modes of transportation (i.e., charter buses, transit, street parking, walking and biking etc.) are forecasted to increase by approximately 10 percent. Stadium attendees would be well-informed of the new stadium construction and demolition and would potentially be more willing to change their travel behaviors to the project site to avoid a full onsite parking lot.

With fewer parking spaces available, attendees would pursue other transportation options, and Charter bus services are expected to increase. Charter buses that park onsite would be equivalent to 2.5 regular vehicle parking spaces.

Table 8-1
Stadium Parking Deficit Summary for Future Scenarios

Project Phasing	Date	Available On-Site Parking Spaces	Weekday General Parking		Weekend General Parking	
			Demand	Deficiency	Demand	Deficiency
Existing	--	18,870	17,620	None	14,620	None
New Stadium Construction	12/2016 – 9/2019	14,530	15,280	750	12,850	None
Qualcomm Stadium Demolition	9/2019 – 10/2020	13,500	15,280	1,780	12,850	None
New Stadium Build Out	After 10/2020	16,500	15,280	None	12,850	None
New Stadium Build Out with River Park Master Plan	--	13,860	15,280	1,420	12,850	None

Considering the assumptions described above, parking deficiency is anticipated to occur only on weekday game days. The most impact would occur during the Qualcomm Stadium demolition phase with approximately 1,800 parking spaces that would have to be accommodated offsite. For the purpose of mitigating unmet onsite parking demand, a stadium parking plan is proposed to identify offsite parking location opportunities and establish the foundation of an overall transportation demand management plan for the new stadium.

Parking demand can also be managed by pricing parking at the Project site in such a manner that

stadium attendees are encouraged to utilize alternative modes of travel to get to the stadium. Pricing policy could be used to encourage higher vehicle occupancy for those attendees that choose to park at the Project site, it could be used to encourage use of remote parking areas and shuttles to and from the Project site, and pricing of the trolley and shuttles can be used to encourage use of those modes of travel. However, it is outside the purview of this Traffic Impact Analysis Report to make specific pricing and pricing policy recommendations that may have a positive impact on mode shift goals discussed herein.

8.1.3 Parking Impacts

The project site is governed by the City's Municipal Code and the land use designation for the project site is Mission Valley Planned District (MVPD-MV-CV). The project site does not have a parking minimum and the City parking ordinance does not specify a minimum number of parking spaces for the Project site. Therefore, the Project would not create a deficiency of parking exceeding more than 10 percent of the required amount of parking as there is no minimum requirement for the Project site. Although there is no identified parking requirement by the City, the parking demand during the Demolition phase and full Project Build Out with the implementation of the River Park Master Plan exceeds the availability of onsite parking by greater than 10 percent as shown in **Table 8-1**. Therefore, during the Demolition Phase of the Project, the Project would cause a significant parking impact to occur.

Attendees would be encouraged to take the trolley to reduce parking demand. The Project would not significantly impact the existing parking in adjacent residential areas near the Project site. A TDM Plan with a parking management plan element identifying offsite parking opportunities with adjacent retail and commercial centers will help to mitigate impacts to be less than significant and meet the parking deficiency on game days during the Demolition Phase of the Project and full build out of the Project.

8.1.4 Parking Management Plan

An essential component to TDM plan is a Parking Management Plan (PMP) to first and foremost encourage attendees to consider all transportation options and opt for alternative transportation modes to address the parking deficiencies described in **Table 8-1**. There would be a parking deficiency of approximately 750 spaces during the construction phase of the Project. The most severe parking deficiency of approximately 1,800 parking spaces would occur on weekdays during the demolition phase of the Project, as the parking lot would be significantly reduced in size due to the temporary presence of two stadiums, Qualcomm and the new stadium, plus additional demolition clear space. Considering the parking deficiencies are anticipated only on weekday game days, which occur one or two days a year, offsite parking versus added onsite parking capacity such as a parking structure would be the preferred solution. Strategies to offset demand for a reduction of approximately 1,800 parking spaces would need to be identified for attendees during the demolition phase of the Project. Upon completion of demolition of Qualcomm Stadium, it is estimated that adequate parking supply would exist if the aforementioned mode shift strategies remain in place. The recommendations listed below provide tools to meet the parking deficiency during all phases of the Project and should be addressed in the Parking Management Plan in addition to other parking solutions and programs to encourage alternative modes of travel to the Project site.

Signage, Way-finding and Dynamic Messaging

During events when the new stadium is anticipated to reach capacity, the parking lot can also be expected to reach capacity. Implementation of a parking guidance system, including dynamic messaging displaying parking availability and directing travelers to available parking is recommended. Dynamic messaging and signage could be placed in strategic locations such as on I-15 near the Friars Road exit and along Friars Road from I-805 and Mission Gorge Road. The purpose of the dynamic messaging is to alert attendees of the status of the stadium parking availability, and to direct motorists to offsite overflow parking options. If the Project site parking lot is closed, the attendees anticipating to park onsite would have the opportunity to look for other off-site parking or park at nearby trolley stations and take public transit.

Kiosks should also be installed onsite to provide attendees information, flyers and pamphlets on all of the local and regional transportation options available. Information on the Qualcomm Stadium website would also provide a transportation guide and information on available transportation options, pricing, way-

finding and other pertinent information on how to travel to stadium events.

Parking Pricing

In order to encourage attendees to take trolley to the Project site, the parking prices for onsite parking could be increased to encourage attendees to take modes of transportation to the Project site, other than the private automobile. Raising parking fees from the existing fees of $25 - $75 may help to reduce parking demand, or encourage attendees to carpool. The additional revenue could be used to improve the trolley station facilities and/or other transportation modes such as pedestrian and bicycle facility improvements.

Carpool Incentives

Increasing the vehicle occupancy for each of the cars parking onsite during construction and future conditions could potentially single-handedly solve the parking deficiency issue. On very large stadium events where attendance is anticipated to exceed the average of 68,000 persons, a tiered pricing based on persons per vehicle may be implemented to further incentivize and encourage more persons per vehicle. For example, a passenger car with three or more persons per vehicle would pay a lower parking fee versus a passenger vehicle with only one person. This pricing structure would encourage carpooling to the stadium and deter passenger vehicles with single person occupancy.

Multi-modal Park and Ride Lots

Approximately 4,345 free spaces are provided along the Green Line for the purposes of park and ride. Other paid parking and street parking (paid and free) adjacent to some of the Green Line stations are available for park and ride opportunities as well. Utilizing these park and ride lots both paid and unpaid would help reduce the demand for parking at the Project site.

Available free parking spaces within 10 station stops along the Orange Trolley Line total 1,670 spaces.

Other Offsite and Overflow Parking Opportunities

After all efforts have been made to maximize capacity of existing facilities and alternative transportation options, offsite and overflow parking opportunities would be identified to alleviate the parking demand and further relieve parking deficiency for the proposed Project during both construction conditions and for the future new stadium.

The following offsite parking location areas have potentially untapped capacity to provide the spaces needed to alleviate the parking deficiencies identified. A circulator shuttle would continuously run to and from these locations to drop off attendees before, after, and during the game. These locations could charge a fee for parking to cover the cost of providing shuttle service and also to the various landowners for providing parking spaces.

A parking utilization study is recommended to evaluate the available capacity during stadium event periods in order to identify feasible offsite parking locations.

<u>Government/Public Buildings</u>

The following possible offsite parking locations are near the project site and offer large surface parking lots or parking structures for employees and visitors. On weekend game days, outside of their normal business operating hours, the government or public buildings including schools and public service centers could provide potential opportunities for off-site parking with a circulator shuttle providing transportation to and from the Project site before, during, and after games.

- U.S. Department of Veteran’s Affairs - 8810 Rio San Diego Drive, San Diego, CA 92108
- San Diego County Employees Retirement Association
- Juarez Elementary School - 2633 Melbourne Drive, San Diego, CA 92123
- Taft Elementary School - 9191 Gramercy Drive, San Diego, CA 92123
- Cubberley Elementary School - 3201 Marathon Drive, San Diego, CA 92123

<u>Shopping Centers</u>

The following shopping centers are located in close proximity to the Project site and have parking availability for off-site and overflow parking from the stadium. Surplus parking during the game/event at these parking facilities could be reserved for stadium parking with a circulator shuttle service running to and from the parking site before, after and during a game.

- Westfield Mission Valley - 1640 Camino Del Rio N, San Diego, CA 92108
- Rio Vista Shopping Center - 8310-8740 Rio, San Diego Drive, San Diego, CA 92108
- Hazard Center - 7510 Hazard Center Drive, San Diego, CA 92108
- Fenton Marketplace - 2169-2482 Friars Road, San Diego, CA 92109
- Stonecrest Plaza - 3382 Murphy Canyon Road, San Diego, CA 92123
- Fry's Electronics - 9825 Stonecrest Boulevard, San Diego, CA 92123

Office Centers

These following office centers are located along Camino Del Rio N, adjacent to the off-site stadium employee parking lot located at Dave and Buster's. A circulator shuttle already provides service to and from the employee parking lot. With the cooperation of these private parking lot locations, who could charge for stadium parking, the employee shuttle service could be increased to also accommodate attendees along its existing circulating route.

- Encore Capital Group - 3111 Camino Del Rio N, San Diego, CA 92108
- American Cancer Society - 2655 Camino Del Rio N San Diego, CA 92108

San Diego Region Park and Ride Lots

SANDAG Park & Ride lots are free, conveniently located lots available throughout the region, and offer locations for vanpools or carpools to meet on game days. Approximately 81 lots are offered throughout the San Diego region. **Figure 8-1** shows the SANDAG Park & Ride Lots in relation to the project site.

These parking lots could provide key locations for attendees to park off-site rather than onsite, especially if traveling from greater distances to games on weekdays. The SANDAG service iCommuteSD (http://www.icommutesd.com/) provides the ability for attendees to schedule carpools with other attendees on game days. Charter bus service could also be provided from these park and ride lots as well as shuttle service to other key locations throughout Mission Valley.

Employee Parking

Currently, employee parking with approximately 1,000 parking spaces is located off-site. Additional off-site parking spaces would need to be made available to employees assuming the employee parking during the construction and demolition phase of the Project would be used to accommodate attendees parking onsite. Implementing stacked parking in the existing employee parking lot may be one solution in accommodating all, or a majority of the employees parking off-site in the existing employee lot. Employees could arrive and depart from the employee lot based on duties and approximate shift times in order to coordinate efficient shuttle pick up and drop off times to minimize the number of trips employee shuttles would make and allow employees to leave when their shift is complete in an organized manner.

Additional off-site employee parking opportunities would also need to be identified along the existing employee shuttle route along Camino Del Rio North.

san diego park & ride lots

CALTRANS LOT #		TRANSIT	BIKE LOCKERS	PARKING SPACES
1	SR 94 at Sweetwater Springs Blvd	●		45
2	SR 67 at Riverford Rd & Woodside Ave	●		30
3	Felicita Ave at Escondido Blvd	●		30
4	Carmel Mountain Rd at Freeport Rd		●	102
5	Maxson St at Barnes St	●		43
6	I-15 at Mira Mesa Blvd	●		176
7	I-5 at Carmel Valley Rd & Sorrento Valley Rd			50
8	Lemon Grove Ave at High St			43
9	I-805 at Sweetwater Rd			135
10	SR 67 at Mapleview St	●		45
11	SR 78 at Broadway	●		85
12	Lemon Grove Ave at Lincoln St			23
13	I-8 at 70th St & Alvarado Rd	●	●	72
16	Poway Rd at Sabre Springs Pkwy	●	●	103
17	I-8 at Taylor St (*Under Construction*)			25
19	I-15 at SR 76	●		163
20	I-805 at Governor Dr			84
21	SR 78 at Sunset Dr & Seaview Pl			15
22	I-8 at Murray Dr			65
24	I-805 at Mira Mesa Blvd & Vista Sorrento Pkwy			53
25	SR 54 at Washington Ave	●		65
26	Carmel Mountain Rd at Rancho Carmel Dr			125
28	SR 94 at Potrero Post Office	●		10
29	I-8 at Japatul Valley Rd			25
30	I-15 at El Norte Pkwy	●		41
31	SR 56 at Rancho Carmel Dr	●	●	70
32	I-5 at La Costa Ave			115
33	I-15 at Deer Springs Rd			28
34	I-15 at Mountain Meadow Rd			22
35	I-15 at Gopher Canyon Rd			11
37	SR 94 at Avocado Blvd			63
38	7 Oakes Rd at El Norte Pkwy			111
39	SR 78 at College Blvd (South)			50
40	SR 54 at Jamacha Blvd	●		22
41	I-8 at Los Coches Rd			106
42	I-8 at Lake Jennings Park Rd	●		18
43	I-5 at Gilman Dr			26
44	I-5 at SR 78 & Moreno St			130
45	SR 78 at College Blvd (North)			32
46	SR 76 at Sweetgrass Ln			50
47	I-5 at Birmingham Dr			56
48	Twin Peaks Rd at Budwin Ln			34
50	Telegraph Canyon Rd at Paseo Del Ray			23
51	I-15 at Rancho Peñasquitos Blvd	●		58
53	Carmel Mountain Rd at Paseo Cardiel	●		88
54	I-15 at Via Rancho Pkwy & Del Lago Blvd	●		215
56	East H St at Buena Vista Way	●		50
57	Carmel Mountain Rd at Stoney Creek Rd	●		132
58	Black Mountain Rd at Hillery Dr	●		44
59	Bancroft Dr at Grossmont Blvd			29
60	Severin Dr at Bancroft Dr			20
61	Severin Dr at Murray Dr			17
62	Encinitas Blvd at Calle Magdelena			27
63	SR 67 at Day St	●		35
64	East Valley Pkwy at Citrus Ave			20
65	I-15 at Rancho Bernardo Rd	●	●	15
69	SR 78 at Barham Dr			89
70	Mission Gorge Rd at Big Rock Dr	●		36
71	Sweetwater Springs Blvd at Austin Dr	●		10
72	North Magnolia Ave at Alexander Way	●		22
73	Mission Ave at Frontier Dr	●		50
75	SR 67 at Dye Rd			20
76	I-15 at Scripps Poway Pkwy			50
77	SR 67 at Poway Rd			102
78	I-805 at Children's Way			15

Source: Caltrans District 11, 2015

SAN DIEGO PARK AND RIDE LOTS

Stadium Reconstruction EIR

AECOM

CREATED BY: SV	DATE: July 2015	FIGURE 8-1
PM: JR	PROJECT NO: 04102878-5939	

K:\2015\San Diego Qualcomm Stadium EIR\Figures 8.5x11.ai

8.2 TRANSIT FACILITIES

As previously mentioned, high ridership on the trolley is assumed in order to continue to successfully host NFL games and similarly sized events at the Project site. The maximum capacity for trolley ridership under existing conditions is 20,000 riders on weekdays and 23,000 riders on weekends. The following concepts should be explored in the TDM Plan to utilize the transit facilities to meet this maximum capacity at every event, most efficiently use transit facilities, and encourage attendees to consider the trolley first as a mode of transportation to the Project site.

Transit Incentives

In order to encourage attendees to take public transit to the Project site on NFL game days, discounted transit passes could be offered on all game days. This program would include all public transit systems including MTS, NCTD, and Amtrak.

Ticket prices to the stadium events could also be provided at a discount for those who walked to the stadium.

Additional Transit Capacity and Operations

Although trolley capacity and operation already provides special service before and after NFL games, additional improvements to the trolley could be implemented to further increase capacity and operations. Transporting 20,000 to 23,000 riders within a few hours before and after NFL games is a challenge and causes riders to wait in long lines to embark and disembark trolley trains. Additional cars could be added to the trains running during peak hours before and after games to add to trolley capacity. Headways could also decrease slightly in both directions from the existing 5 minutes from the west and 7.5 minutes from the east. Optimal headway based on the trolley signaling system is 3.75 minutes and there is room for improvement.

Another chokepoint that occurs during the pre-game trolley operations is San Diego Transit Police checking valid transit passes at the Qualcomm Station turnstiles for riders disembarking the trolley and entering through Gate 2. This process creates long queues for attendees. San Diego Transit Police should reassess this protocol and find the most efficient way to check transit passes without creating long queues for transit riders. Widening the pathways for more trolley riders to walk to Gate 2 would allow for a more efficient and safe passageway for trolley riders. An assessment of how many riders are utilizing these walkways should be assessed in the TDM Plan.

Additional MTS bus service could be provided to the Project vicinity on game days as an express bus service to and from dense urban areas and from transportation hubs throughout the City and region. These bus routes could utilize the new drop off area onsite providing attendees another public transportation option in addition to the trolley.

8.3 PEDESTRIAN FACILITIES

Currently, pedestrians are able to access the Project site from all Gates and from all adjacent roadways. In order to encourage more pedestrians to travel to the stadium, crosswalks should be updated per latest continental cross walk standards to ensure additional pedestrian traffic can be accommodated. Traffic control officers or crossing guards could also be placed at key pedestrian crossings to ensure safe passage for attendees walking to the Project site. Ticket prices to the stadium events could also be offered at a discount for those who walked to the stadium.

A more detailed pedestrian study would be needed to identify key crosswalks and pedestrian routes near the stadium and should be included in the TDM plan.

8.4 BICYCLE FACILITIES

Existing bicycle facilities provide access to the Project site and should be emphasized to further encourage attendees to travel to the Project site during large events such as an NFL game. Additional bicycle parking should be provided onsite in addition to the existing 42 bicycle parking spaces. A bicycle valet should also be proposed during large events where capacity is anticipated to be met.

Additionally, programs or events featuring biking to the stadium should be included in the TDM Plan by encouraging bike pools or meetings to bike to the stadium prior to the game or event. Bike pools could also be marketing events to publicize and encourage attendees to travel with other bicyclists to the stadium. Ticket prices to the stadium events could also be offered at a discount for those who biked to the Project site.

Future bicycle routes are planned to improve the overall connectivity of the regional bicycle network. Projects near the Project Area are anticipated to be implemented by 2023 as part of the SANDAG Regional Bicycle Plan Early Action Program and should the implementation of these projects should be supported, encouraged and included in the TDM Plan. These bicycle improvement projects would improve the bicycle network connectivity and provide additional access to the project site to surrounding neighborhoods and public transit stations. The future bicycle network would provide improved connectivity to encourage bicycle transportation to the project site.

A more detailed bicycle study would be needed to identify bike routes near the stadium and should be included in the TDM plan.

8.5 PERFORMANCE GOALS

The following targeted TDM goals have been developed to create a synergetic approach across applicable modes of transportation and parking to address both near-term (construction/demolition phases) and long-term operational Mobility needs of the Project. These goals must be achievable, enforceable as well as financially sustainable over time.

Goal 1 – Trip Reduction

Objective 1A: Encourage carpooling

Promote carpooling with the goal of meeting a 2.7 passenger car occupancy or higher.

Objective 1B: Minimize Single Occupancy Vehicle (SOV) mode

Discourage SOV mode by incentivizing those who walk, bike, use transit and carpool.

Goal 2 – Reduce Onsite Parking Demand

Objective 2A: Onsite parking reduction

Discourage onsite parking by incentivizing use of offsite parking.

Objective 2B: Encourage offsite parking

Incentivize offsite parking via enhanced (free or discounted fare) shuttle services, free or reduced parking fees and secure parking lots.

Objective 2C: Enhance collaboration between Stadium and public and private sectors.

Identify viable parking areas and enter into cooperate parking agreements to avail of excess parking inventory and joint use of parking facilities.

Goal 3 – Increase Transit Ridership

Objective 3A: Maintaining high trolley ridership during weekday game days

Promote and encourage trolley use during weekday game days with the goal of 20,000 riders or higher.

Objective 3B: Maintaining high trolley ridership during weekend game days

Promote and encourage trolley use during weekend game days with the goal of 23,000 riders or higher.

Objective 3C: Expanded bus service

Coordinate with MTS to improve bus system use and connectivity with the MTS Green Line. Currently, the nearest bus stop for MTS Bus Route 14 is 0.5 miles away from the Project site.

Objective 3D: Expanded shuttle service

In conjunction with the Parking Objectives 2A and 2B, expanded parking shuttle services will encourage transit ridership.

Goal 4 – Increase Walking and Bicycle Use

Objective 4A: Encourage walking and bicycle mode

Objective 4B: Enhance pedestrian and bicyclist user satisfaction

Objective 4C: Enhance walking and biking safety measures

Providing safe pedestrian and bicycle facilities will is critical to encouraging the campus community to walk and bike. Examples include providing adequate lighting along walkways, sufficient sidewalk and pathway widths to accommodate pedestrian volumes, and separated bicycle pathways when possible.

8.6 TRANSPORTATION DEMAND MANAGEMENT PERFORMANCE METRICS

The following metrics provide the needed tool and data to assess the effectiveness of the TDM measures implemented to achieve the performance goals described in the previous section.

Metric 1 – Mode Split

Mode split data is the primary tool in evaluating goals associated with auto trip reduction, parking, transit ridership, pedestrian and bicycle use.

This metric is accomplished by comparing the results of before and after surveys to determine if goals were met. Data should be collected annually to determine if expectations are being met and to reinforce as necessary any TDM measure that need improvement.

Metric 2 – Traffic Counts

Manual intersection and machine collected roadway segment traffic count data not only provide traffic volume information but can be designed to extract and collect vehicle classification, time of day volume as well as vehicle occupancy.

Metric 3 – Parking Counts

Regular parking survey would be conducted to determine parking use on-site as well as at select offsite parking sites during major events.

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9.0 IMPACT ANALYSIS AND MITIGATION MEASURES

The potential impacts associated with the proposed project relative to the Mobility, Transportation and Circulations are discussed in this section. The significance of these potential impacts is gauged in relation to the City's CEQA thresholds (City of San Diego 2011) to replace and rebuild the existing stadium to the northeastern corner of the project site.

9.1 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Direct and cumulative impacts were analyzed for both the Construction and Demolition Year (2019) and Horizon Year (2035) Project conditions. Mitigations measures are recommended for any facilities that are projected to exceed the significance thresholds as set forth by the City of San Diego. These improvements were proposed to improve traffic operations to a level of "no significant" impact. See **Section 2.3** for the City's significance determination thresholds. Analysis worksheets for mitigation measures for all facilities are provided in **Appendix F**.

9.1.1 Year 2019 Construction Phase with Games

Project related traffic impacts during the construction phase with games are discussed in this Section.

Intersections

Table 9-1 through **Table 9-3** present the impact analysis for intersections during the year 2019 construction phase as compared to the Year 2019 No Project conditions. The following intersection is anticipated to experience significant impacts due to the proposed Project:

- Rancho Mission Road / Ward Road – additional 18.8 second delay on weekdays during PM peak hour.

The following mitigation is recommended to improve the intersection to operate at a level of no significance under project conditions:

- Rancho Mission Road / Ward Road – implement manual all-way stop control to the current two-way stop controlled intersection. The improved intersection would operate at an acceptable LOS C under Project conditions. Since the intersection is not anticipated to be significantly impacted by the Project on non-game days, the improvement measures must only be implemented temporarily on game days or similar sized major events.

Roadway Segments

Table 9-4 includes the significant impact analysis on roadway segments during the 2019 Construction Phase with Games. As shown in the table, none of the roadway segments are expected to experience significant impacts under Project conditions during the 2019 Construction Phase on weekday game days.

Freeway Segments

Table 9-5 includes the significant impact analysis on freeway segments during the 2019 Construction Phase on weekdays with games. As shown in the table, none of the freeway segments are expected to experience significant impacts under Project conditions. The weekend impact analysis tables are not included in this section since all freeway segments are projected to operate at acceptable LOS D or better for all future Project conditions.

Ramp Meters

Table 9-6 presents the significant impact analysis on freeway ramp meters during the 2019 Construction Phase on weekdays with games. As shown in the table, none of the ramp meters are expected to experience significant impacts under Project conditions.

Table 9-1
Intersection Project Impact – 2019 Construction Phase with Games (Weekday)

ID	North-South Arterial	East-West Arterial	2019 No Project				2019 Construction Phase				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	8.6	A	30.2	C	8.6	A	27.1	C	0.0	No	(3.1)	No
2	Mission Gorge Rd	Twain Ave	22.0	C	31	C	22	C	30.1	C	0.0	No	(0.9)	No
3	Fairmount Ave	Twain Ave	13.4	B	185.2	**F**	13.4	B	133.6	**F**	0.0	No	(51.6)	No
4	Mission Gorge Rd	Fairmount Ave	24.9	C	56.9	**E**	24.9	C	44.1	D	0.0	No	(12.8)	No
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	166.4	**F**	63.3	**E**	116.5	**F**	0.0	No	(49.9)	No
6	Fairmount Ave	I-8 EB Ramps	13.8	B	56.2	**E**	13.8	B	56.6	**E**	0.0	No	0.4	No
7	Rancho Mission Rd	Friars Rd	12.4	B	14.6	B	12.4	B	14.8	B	0.0	No	0.2	No
8	Rancho Mission Rd	San Diego Mission Rd	26.0	C	47.1	D	26	C	42.4	D	0.0	No	(4.7)	No
9	Rancho Mission Rd	Ward Rd	11.1	B	42.6	**E**	11.1	B	61.4	**F**	0.0	No	18.8	**Yes**
10	Ward Rd	Camino Del Rio N	12.7	B	26.9	C	12.7	B	25.1	C	0.0	No	(1.8)	No
11	I-15 NB Ramps	Friars Rd	3.7	A	5.5	A	3.7	A	5.5	A	0.0	No	0.0	No
12	I-15 SB Ramps	Friars Rd	34.1	C	195.3	**F**	34.1	C	152.1	**F**	0.0	No	(43.2)	No
13	Mission Village Dr	Friars Rd WB	11.6	B	67.3	**E**	11.6	B	59.2	**E**	0.0	No	(8.1)	No
14	Mission Village Dr	Friars Rd EB	38.7	D	336.8	**F**	38.7	D	261	**F**	0.0	No	(75.8)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	207.4	**F**	22.3	C	174.3	**F**	0.0	No	(33.1)	No
17	Fenton Pkwy	Friars Rd	17.6	B	157.1	**F**	17.6	B	124.1	**F**	0.0	No	(33.0)	No
18	Qualcomm Way	Friars Rd WB	20.0	B	36.9	D	20	B	36.9	D	0.0	No	0.0	No
19	Qualcomm Way	Friars Rd EB	12.4	B	122.2	**F**	12.4	B	88.6	**F**	0.0	No	(33.6)	No
20	Qualcomm Way	Camino De La Reina	27.5	C	35.1	D	27.5	C	36.8	D	0.0	No	1.7	No
21	Qualcomm Way	I-8 WB Ramps	24.4	C	32.5	C	24.4	C	28.4	C	0.0	No	(4.1)	No
22	Frazee Rd	Friars Rd	40.4	D	76.9	**E**	40.4	D	75.8	**E**	0.0	No	(1.1)	No
23	SR-163 NB Ramps	Friars Rd	13.2	B	36.9	D	13.2	B	36.9	D	0.0	No	0.0	No
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	11.4	B	16.7	C	0.0	No	0.0	No
25	Ulric St	Friars Rd	20.4	C	55.1	**E**	20.4	C	54.3	D	0.0	No	(0.8)	No
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	9.1	A	13.8	B	0.0	No	0.0	No
27	Mission Center Rd	Friars Rd EB	10.7	B	13.2	B	10.7	B	35.2	D	0.0	No	22.0	No

Table 9-2
Intersection Project Impact – 2019 Construction Phase with Games (Saturday)

ID	North-South Arterial	East-West Arterial	2019 No Project				2019 Construction Phase				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	7.4	A	12.3	B	7.4	A	12.3	B	0.0	No	0.0	No
2	Mission Gorge Rd	Twain Ave	20.9	C	14.9	B	20.9	C	14.9	B	0.0	No	0.0	No
3	Fairmount Ave	Twain Ave	12.2	B	37.2	D	12.2	B	41.2	D	0.0	No	4.0	No
4	Mission Gorge Rd	Fairmount Ave	20.0	B	32.3	C	20	B	43.4	D	0.0	No	11.1	No
5	Fairmount Ave	Alvarado Canyon Rd	22.4	C	43	D	22.4	C	49.3	D	0.0	No	6.3	No
6	Fairmount Ave	I-8 EB Ramps	10.4	B	26.7	C	10.4	B	26.7	C	0.0	No	0.0	No
7	Rancho Mission Rd	Friars Rd	11.8	B	13.7	B	11.8	B	18	B	0.0	No	4.3	No
8	Rancho Mission Rd	San Diego Mission Rd	16.8	B	27	C	16.8	B	27.6	C	0.0	No	0.6	No
9	Rancho Mission Rd	Ward Rd	9.6	A	15.7	C	9.6	A	14.9	B	0.0	No	(0.8)	No
10	Ward Rd	Camino Del Rio N	11.2	B	15	B	11.2	B	15.3	B	0.0	No	0.3	No
11	I-15 NB Ramps	Friars Rd	6.5	A	13.3	B	6.5	A	10.8	B	0.0	No	(2.5)	No
12	I-15 SB Ramps	Friars Rd	18.1	B	152.4	**F**	18.1	B	133.9	**F**	0.0	No	(18.5)	No
13	Mission Village Dr	Friars Rd WB	12.1	B	38.7	D	12.1	B	22.8	C	0.0	No	(15.9)	No
14	Mission Village Dr	Friars Rd EB	37.4	D	327.2	**F**	37.4	D	284.4	**F**	0.0	No	(42.8)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	17.2	B	113.9	**F**	17.2	B	96	**F**	0.0	No	(17.9)	No
17	Fenton Pkwy	Friars Rd	17.3	B	72.9	**E**	17.3	B	55.5	**E**	0.0	No	(17.4)	No
18	Qualcomm Way	Friars Rd WB	15.1	B	33.9	C	15.1	B	30.2	C	0.0	No	(3.7)	No
19	Qualcomm Way	Friars Rd EB	12.7	B	40.2	D	12.7	B	54	D	0.0	No	13.8	No
20	Qualcomm Way	Camino De La Reina	11.6	B	19	B	11.6	B	22.8	C	0.0	No	3.8	No
21	Qualcomm Way	I-8 WB Ramps	13.1	B	30.4	C	13.1	B	20.1	C	0.0	No	(10.3)	No
22	Frazee Rd	Friars Rd	19.6	B	27.2	C	19.6	B	25.5	C	0.0	No	(1.7)	No
23	SR-163 NB Ramps	Friars Rd	10.7	B	32.7	C	10.7	B	37.1	D	0.0	No	4.4	No
24	Ulric St	SR-163 SB On-ramp	9.5	A	13.1	B	9.5	A	13.1	B	0.0	No	0.0	No
25	Ulric St	Friars Rd	13.2	B	34.3	C	13.2	B	31.6	C	0.0	No	(2.7)	No
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 9-3
Intersection Project Impact – 2019 Construction Phase with Games (Sunday)

ID	North-South Arterial	East-West Arterial	2019 No Project				2019 Construction Phase				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	6.8	A	9.1	A	6.6	A	8.3	A	(0.2)	No	(0.8)	No
2	Mission Gorge Rd	Twain Ave	138.0	**F**	38.9	D	13.3	B	36.6	D	(124.7)	No	(2.3)	No
3	Fairmount Ave	Twain Ave	21.6	C	33.2	C	17.1	B	35.1	D	(4.5)	No	1.9	No
4	Mission Gorge Rd	Fairmount Ave	16.3	B	97.3	**F**	19.5	B	84.5	**F**	3.2	No	(12.8)	No
5	Fairmount Ave	Alvarado Canyon Rd	20.2	C	189.9	**F**	20.9	C	159.3	**F**	0.7	No	(30.6)	No
6	Fairmount Ave	I-8 EB Ramps	23.6	C	32	C	13.7	B	18.3	B	(9.9)	No	(13.7)	No
7	Rancho Mission Rd	Friars Rd	11.8	B	15.1	B	12.8	B	12.5	B	1.0	No	(2.6)	No
8	Rancho Mission Rd	San Diego Mission Rd	22.5	C	52.1	D	18.8	B	41.5	D	(3.7)	No	(10.6)	No
9	Rancho Mission Rd	Ward Rd	10.2	B	12.4	B	10.1	B	12.1	B	(0.1)	No	(0.3)	No
10	Ward Rd	Camino Del Rio N	13.8	B	14.1	B	12.1	B	13.1	B	(1.7)	No	(1.0)	No
11	I-15 NB Ramps	Friars Rd	3.0	A	321.8	**F**	12.8	B	264.3	**F**	9.8	No	(57.5)	No
12	I-15 SB Ramps	Friars Rd	29.5	C	110.4	**F**	20.9	C	84.3	**F**	(8.6)	No	(26.1)	No
13	Mission Village Dr	Friars Rd WB	18.2	B	29.9	C	14.6	B	25.6	C	(3.6)	No	(4.3)	No
14	Mission Village Dr	Friars Rd EB	45.7	D	382	**F**	41	D	306.9	**F**	(4.7)	No	(75.1)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	21.2	C	55.4	**E**	22.3	C	41.1	D	1.1	No	(14.3)	No
17	Fenton Pkwy	Friars Rd	23.4	C	119.6	**F**	22.1	C	99.4	**F**	(1.3)	No	(20.2)	No
18	Qualcomm Way	Friars Rd WB	19.5	B	43.5	D	9.3	A	47.3	D	(10.2)	No	3.8	No
19	Qualcomm Way	Friars Rd EB	8.1	A	6.3	A	8.8	A	8.5	A	0.7	No	2.2	No
20	Qualcomm Way	Camino De La Reina	13.1	B	47.7	D	9.6	A	18.4	B	(3.5)	No	(29.3)	No
21	Qualcomm Way	I-8 WB Ramps	12.8	B	198.4	**F**	9.2	A	157.6	**F**	(3.6)	No	(40.8)	No
22	Frazee Rd	Friars Rd	27.5	C	31.5	C	16.5	B	23.4	C	(11.0)	No	(8.1)	No
23	SR-163 NB Ramps	Friars Rd	15.9	B	62.2	**E**	12	B	53.7	D	(3.9)	No	(8.5)	No
24	Ulric St	SR-163 SB On-ramp	8.6	A	12.4	B	2.9	A	2.9	A	(5.7)	No	(9.5)	No
25	Ulric St	Friars Rd	18.7	B	37.6	D	14.4	B	36.4	D	(4.3)	No	(1.2)	No
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 9-4
Roadway Segment Project Impact – 2019 Construction Phase with Games

ID	Roadway Segment	Lanes	Classification*	Weekday					Saturday					Sunday					Project Impact		
				No Project		With Project		Δ V/C	No Project		With Project		Δ V/C	No Project		With Project		Δ V/C	Max Δ V/C	Day of Week	Significant?
				V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS				
Mission Gorge Rd																					
1	Friars Rd to Vandever Ave	4	Collector	0.69	D	0.68	D	-0.01	0.55	C	0.54	C	-0.01	0.47	C	0.46	B	-0.01	-0.01	Sunday	No
2	Vandever Ave to Twain Ave	4	Collector	0.75	D	0.74	D	-0.01	0.61	C	0.60	C	-0.01	0.50	C	0.49	C	-0.01	-0.01	Saturday	No
3	Twain Ave to Mission Gorge Pl	4	Collector	0.94	**E**	0.91	**E**	-0.02	0.73	D	0.72	D	-0.02	0.60	C	0.58	C	-0.02	-0.02	Saturday	No
4	Mission Gorge Pl to Fairmount Ave	4	Collector	0.87	**E**	0.85	**E**	-0.02	0.75	D	0.73	D	-0.02	0.62	C	0.60	C	-0.02	-0.02	Saturday	No
Fairmount Ave																					
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	0.78	D	0.78	D	0.00	0.59	C	0.59	C	0.00	0.49	C	0.49	C	0.00	0.00	Weekday	No
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	1.25	**F**	1.25	**F**	0.00	1.03	**F**	1.03	**F**	0.00	0.89	**E**	0.89	**E**	0.00	0.00	Weekday	No
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	1.35	**F**	1.35	**F**	0.00	1.05	**F**	1.05	**F**	0.00	0.89	D	0.89	D	0.00	0.00	Weekday	No
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	0.99	**E**	0.99	**E**	0.00	0.81	D	0.81	D	0.00	0.67	C	0.67	C	0.00	0.00	Weekday	No
San Diego Mission Rd																					
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	1.37	**F**	1.37	**F**	0.00	1.07	**F**	1.07	**F**	0.00	1.05	**F**	1.05	**F**	0.00	0.00	Weekday	No
10	Rancho Mission Rd to Mission Village Dr	4	Collector	0.73	D	0.66	C	-0.07	0.56	C	0.52	C	-0.04	0.54	C	0.50	C	-0.04	-0.04	Sunday	No
Camino Del Rio N																					
11	Fairmount Ave to Ward Rd	4	Collector	0.49	C	0.48	C	-0.01	0.33	A	0.33	A	-0.01	0.29	A	0.28	A	-0.01	-0.01	Saturday	No
12	Ward Rd to Mission City Pkwy	2	Collector[1]	0.66	C	0.67	D	0.01	0.36	B	0.36	B	0.00	0.29	A	0.29	A	0.00	0.01	Weekday	No
Rancho Mission Rd																					
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	0.75	D	0.75	D	0.00	0.54	C	0.53	C	-0.01	0.47	C	0.46	B	-0.01	0.00	Weekday	No
Mission Village Dr																					
14	North of Friars Rd	4	Major Arterial	0.40	B	0.40	B	0.00	0.32	A	0.32	A	0.00	0.29	A	0.28	A	0.00	0.00	Weekday	No
Friars Rd																					
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	0.85	D	0.84	D	-0.01	0.56	B	0.55	B	-0.01	0.47	B	0.46	B	-0.01	-0.01	Sunday	No
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	0.74	C	0.73	C	-0.01	0.55	B	0.54	B	-0.01	0.46	B	0.45	B	-0.01	-0.01	Saturday	No
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	0.89	D	0.88	D	-0.01	0.66	C	0.66	C	-0.01	0.58	B	0.57	B	-0.01	-0.01	Saturday	No
18	I-15 Ramps to Mission Village Dr	6	Expressway	1.03	**F**	0.97	**E**	-0.06	0.87	D	0.83	D	-0.04	0.78	D	0.75	C	-0.04	-0.04	Sunday	No
19	Mission Village Dr to Northside Dr	6	Expressway	0.86	D	0.81	D	-0.05	0.71	C	0.68	C	-0.03	0.66	C	0.63	C	-0.03	-0.03	Saturday	No
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	1.12	**F**	1.05	**F**	-0.07	0.87	D	0.83	C	-0.04	0.80	C	0.76	C	-0.04	-0.04	Sunday	No
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	1.13	**F**	1.06	**F**	-0.07	0.89	D	0.85	D	-0.04	0.82	C	0.78	C	-0.04	-0.04	Saturday	No
22	River Run Dr to Rio Bonito Way	6	Expressway	0.86	D	0.81	D	-0.05	0.67	C	0.64	C	-0.03	0.62	C	0.59	C	-0.03	-0.03	Saturday	No
23	Rio Bonito Way to Qualcomm Way	7	Expressway	0.76	D	0.72	C	-0.05	0.57	C	0.55	C	-0.03	0.53	C	0.51	B	-0.03	-0.03	Saturday	No
24	Qualcomm Way to Gill Village Way	8	Expressway	0.54	C	0.53	C	-0.01	0.40	B	0.38	B	-0.01	0.36	A	0.35	A	-0.01	-0.01	Weekday	No
25	Gill Village Way to Mission Center Dr	8	Expressway	0.58	C	0.57	C	-0.01	0.42	B	0.41	B	-0.01	0.38	B	0.37	A	-0.01	-0.01	Weekday	No
26	Mission Center Dr to Frazee Rd	7	Expressway	0.67	C	0.65	C	-0.01	0.50	B	0.49	B	-0.01	0.45	B	0.44	B	-0.01	-0.01	Weekday	No
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	0.78	C	0.77	C	-0.01	0.61	C	0.60	C	-0.01	0.55	B	0.53	B	-0.01	-0.01	Weekday	No
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	0.85	D	0.85	D	-0.01	0.70	C	0.70	C	0.00	0.63	C	0.62	C	0.00	0.00	Sunday	No
Qualcomm Way																					
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	0.66	C	0.62	C	-0.04	0.47	B	0.44	B	-0.02	0.43	B	0.40	B	-0.02	-0.02	Sunday	No
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	0.77	C	0.73	C	-0.04	0.56	B	0.53	B	-0.02	0.52	B	0.49	B	-0.02	-0.02	Saturday	No

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Table 9-5
Freeway Segment Project Impact – 2019 Construction Phase with Games (Weekday)

Location	2019 No Project AM				2019 Construction Phase AM				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C Δ	Significant?	V/C Δ	Significant?
I-15												
Aero Dr to Friars Rd	0.87	D	0.71	C	0.87	D	0.71	C	0.000	No	0.000	No
Friars Rd to I-8	0.81	C	0.65	C	0.81	C	0.65	C	0.000	No	0.000	No
I-8												
Waring Rd to Fairmount Ave	0.58	B	0.89	D	0.58	B	0.89	D	0.000	No	0.000	No
Fairmount Ave to I-15	0.51	B	0.84	D	0.51	B	0.84	D	0.000	No	0.000	No
I-15 to I-805	0.54	B	1.05	F(0)	0.54	B	1.05	F(0)	0.000	No	0.000	No
I-805 to Qualcomm Way	0.49	B	0.93	E	0.49	B	0.93	E	0.000	No	0.000	No
Qualcomm Way to Mission Center Rd	0.51	B	1.06	F(0)	0.51	B	1.06	F(0)	0.000	No	0.000	No
Mission Center Rd to SR-163	0.38	A	0.99	E	0.38	A	0.99	E	0.000	No	0.000	No
SR-163												
Genesee Ave to Friars Rd	0.89	D	0.67	C	0.89	D	0.67	C	0.000	No	0.000	No
Friars Rd to I-8	0.73	C	0.85	D	0.73	C	0.85	D	0.000	No	0.000	No

Location	2019 No Project PM				2019 Construction Phase PM				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C Δ	Significant?	V/C Δ	Significant?
I-15												
Aero Dr to Friars Rd	0.60	B	1.17	F(0)	0.61	B	1.14	F(0)	0.003	No	-0.030	No
Friars Rd to I-8	0.74	C	0.98	E	0.73	C	0.98	E	-0.015	No	0.000	No
I-8												
Waring Rd to Fairmount Ave	0.90	D	0.72	C	0.90	D	0.70	C	0.000	No	-0.013	No
Fairmount Ave to I-15	0.94	D	0.59	B	0.93	E	0.59	B	-0.011	No	0.000	No
I-15 to I-805	0.96	D	0.79	C	0.95	E	0.79	C	-0.009	No	0.000	No
I-805 to Qualcomm Way	0.88	D	0.68	C	0.88	D	0.68	C	0.000	No	0.000	No
Qualcomm Way to Mission Center Rd	1.06	E	0.91	D	1.04	F(0)	0.91	D	-0.018	No	0.000	No
Mission Center Rd to SR-163	0.86	C	0.88	D	0.84	D	0.88	D	-0.023	No	0.000	No
SR-163												
Genesee Ave to Friars Rd	0.79	C	0.88	D	0.79	C	0.88	D	0.000	No	0.004	No
Friars Rd to I-8	0.67	B	0.93	D	0.65	C	0.91	D	-0.013	No	-0.018	No

Table 9-6
Ramp Metering Project Impact – 2019 Construction Phase with Games (Weekdays)

Ramp Location	Meter Rate Range (vphpl)		2019 No Project				2019 Construction Phase				Project Impact	
			Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Delay Δ (min)	Significant?
AM Peak Hour with Games												
I-15 NB: Friars Rd On-ramp	Min:	516	1,290	70	8	1,750	1290	70	8	1,750	0	No
	Max:	600		0	0	0		0	0	0	0	No
I-15 SB: WB Friars Rd On-ramp	Min:	660	700	40	4	1,000	700	40	4	1,000	0	No
	Max:	996		0	0	0		0	0	0	0	No
I-15 SB: EB Friars Rd On-ramp	Max:	996	610	0	0	0	610	0	0	0	0	No
I-8 EB: SB Fairmount Ave On-ramp	Min:	493	810	317	**39**	7,925	810	317	**39**	7,925	0	No
	Max:	996		0	0	0		0	0	0	0	No
PM Peak Hour with Games												
I-15 NB: Friars Rd On-ramp	Min:	386	1,445	271	**42**	6,775	1,470	282	**44**	7,050	1.7	No
	Max:	672		0	0	0		0	0	0	0	No
I-15 SB: WB Friars Rd On-ramp	Min:	660	730	70	6	1,750	730	70	6	1,750	0	No
	Max:	996		0	0	0		0	0	0	0	No
I-15 SB: EB Friars Rd On-ramp	Max:	996	1,020	24	1	600	1,020	24	1	600	0	No
I-8 EB: SB Fairmount Ave On-ramp	Min:	493	1,030	537	**65**	13,425	1,030	537	**65**	13,425	0	No
	Max:	996		34	2	850		34	2	850	0	No

Parking

The impact analysis measuring the exceedance of available parking spaces onsite compared to the anticipated parking deficiency during the 2019 Construction Phase will not cause significant impacts under Project conditions. The available onsite parking is 14,530 spaces with a parking deficiency of 750 spaces which does not exceed the ten percent parking threshold.

9.1.2 Year 2019 Demolition Phase with Games

Project related traffic impacts during the 2019 Demolition Phase with games are discussed in this section.

Intersections

Table 9-7 through **Table 9-9** present the impact analysis for intersections during the year 2019 Demolition Phase as compared to the year 2019 No Project conditions. The following intersection is anticipated to experience significant impacts due to the proposed Project:

- Rancho Mission Road / Ward Road – additional 138 seconds of delay on weekdays during PM peak hour.

The following mitigation is recommended to improve the intersection to operate at a level of no significance under project conditions:

- Rancho Mission Road / Ward Road – implement a manual all-way stop control to the current two-way stop controlled intersection. The improved intersection would operate at an acceptable LOS C under Project demolition conditions. Since the intersection is not anticipated to be significantly impacted by the Project on non-game days, the improvement measures must only be implemented temporarily on game days or similar sized major events.

Roadway Segments

Table 9-10 include the significant impact analysis on roadway segments during the 2019 Demolition Phase on both weekday and weekend Game Days. As shown in the table, none of the roadway segments are expected to experience significant impacts under Project conditions.

Freeway Segments

Table 9-11 includes the significant impact analysis on freeway segments during the 2019 Demolition Phase on weekday game days. As shown in the table, none of the roadway segments are expected to experience significant impacts under Project conditions. The weekend impact analysis tables are not included in this section since all freeway segments are projected to operate at acceptable LOS D or better for all future Project conditions.

Ramp Meters

Table 9-12 presents the significant impact analysis on freeway ramp meters during the 2019 Construction Phase on weekday game days. As shown in the table, none of the ramp meters are expected to experience significant impacts under Project conditions.

Parking

The impact analysis measuring the exceedance of available parking spaces onsite compared to the anticipated parking deficiency during the 2019 Demolition Phase is anticipated to experience significant impacts under Project conditions. The available onsite parking is 13,500 spaces with a parking deficiency of 1,780 spaces which exceed the ten percent parking threshold. A TDM Plan will be prepared to mitigate this impact to be less than significant. See **Section 8: Transportation Demand Management Plan**.

Table 9-7
Intersection Project Impact – 2019 Demolition Phase with Games (Weekday)

ID	North-South Arterial	East-West Arterial	2019 No Project				2019 Construction Phase				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	8.6	A	30.2	C	8.6	A	26.1	C	0.0	No	(4.1)	No
2	Mission Gorge Rd	Twain Ave	22.0	C	31	C	22	C	29.7	C	0.0	No	(1.3)	No
3	Fairmount Ave	Twain Ave	13.4	B	185.2	**F**	13.4	B	119.9	**F**	0.0	No	(65.3)	No
4	Mission Gorge Rd	Fairmount Ave	24.9	C	56.9	**E**	24.9	C	41.5	D	0.0	No	(15.4)	No
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	166.4	**F**	63.3	**E**	122.7	**F**	0.0	No	(43.7)	No
6	Fairmount Ave	I-8 EB Ramps	13.8	B	56.2	**E**	13.8	B	56.7	**E**	0.0	No	0.5	No
7	Rancho Mission Rd	Friars Rd	12.4	B	14.6	B	12.4	B	15	B	0.0	No	0.4	No
8	Rancho Mission Rd	San Diego Mission Rd	26.0	C	47.1	D	26	C	39.7	D	0.0	No	(7.4)	No
9	Rancho Mission Rd	Ward Rd	11.1	B	42.6	**E**	11.1	B	180.7	**F**	0.0	No	138.1	**Yes**
10	Ward Rd	Camino Del Rio N	12.7	B	26.9	C	12.7	B	25.2	C	0.0	No	(1.7)	No
11	I-15 NB Ramps	Friars Rd	3.7	A	5.5	A	3.7	A	5.5	A	0.0	No	0.0	No
12	I-15 SB Ramps	Friars Rd	34.1	C	195.3	**F**	34.1	C	140.8	**F**	0.0	No	(54.5)	No
13	Mission Village Dr	Friars Rd WB	11.6	B	67.3	**E**	11.6	B	55	D	0.0	No	(12.3)	No
14	Mission Village Dr	Friars Rd EB	38.7	D	336.8	**F**	38.7	D	235.2	**F**	0.0	No	(101.6)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	207.4	**F**	22.3	C	161.8	**F**	0.0	No	(45.6)	No
17	Fenton Pkwy	Friars Rd	17.6	B	157.1	**F**	17.6	B	111.1	**F**	0.0	No	(46.0)	No
18	Qualcomm Way	Friars Rd WB	20.0	B	36.9	D	20	B	36.9	D	0.0	No	0.0	No
19	Qualcomm Way	Friars Rd EB	12.4	B	122.2	**F**	12.4	B	79.3	**E**	0.0	No	(42.9)	No
20	Qualcomm Way	Camino De La Reina	27.5	C	35.1	D	27.5	C	37.3	D	0.0	No	2.2	No
21	Qualcomm Way	I-8 WB Ramps	24.4	C	32.5	C	24.4	C	28.6	C	0.0	No	(3.9)	No
22	Frazee Rd	Friars Rd	40.4	D	76.9	**E**	40.4	D	77.6	**E**	0.0	No	0.7	No
23	SR-163 NB Ramps	Friars Rd	13.2	B	36.9	D	13.2	B	37.5	D	0.0	No	0.6	No
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	11.4	B	3.3	A	0.0	No	(13.4)	No
25	Ulric St	Friars Rd	20.4	C	55.1	**E**	20.4	C	56.8	**E**	0.0	No	1.7	No
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	9.1	A	13.8	B	0.0	No	0.0	No
27	Mission Center Rd	Friars Rd EB	10.7	B	13.2	B	10.7	B	33	C	0.0	No	19.8	No

Table 9-8
Intersection Project Impact – 2019 Demolition Phase with Games (Saturday)

ID	North-South Arterial	East-West Arterial	2019 No Project				2019 Construction Phase				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	7.4	A	12.3	B	7.4	A	12.3	B	0.0	No	0.0	No
2	Mission Gorge Rd	Twain Ave	20.9	C	14.9	B	20.9	C	14.9	B	0.0	No	0.0	No
3	Fairmount Ave	Twain Ave	12.2	B	37.2	D	12.2	B	41.2	D	0.0	No	4.0	No
4	Mission Gorge Rd	Fairmount Ave	20.0	B	32.3	C	20	B	43.4	D	0.0	No	11.1	No
5	Fairmount Ave	Alvarado Canyon Rd	22.4	C	43	D	22.4	C	49.3	D	0.0	No	6.3	No
6	Fairmount Ave	I-8 EB Ramps	10.4	B	26.7	C	10.4	B	26.7	C	0.0	No	0.0	No
7	Rancho Mission Rd	Friars Rd	11.8	B	13.7	B	11.8	B	18	B	0.0	No	4.3	No
8	Rancho Mission Rd	San Diego Mission Rd	16.8	B	27	C	16.8	B	27.6	C	0.0	No	0.6	No
9	Rancho Mission Rd	Ward Rd	9.6	A	15.7	C	9.6	A	14.9	B	0.0	No	(0.8)	No
10	Ward Rd	Camino Del Rio N	11.2	B	15	B	11.2	B	15.3	B	0.0	No	0.3	No
11	I-15 NB Ramps	Friars Rd	6.5	A	13.3	B	6.5	A	10.8	B	0.0	No	(2.5)	No
12	I-15 SB Ramps	Friars Rd	18.1	B	152.4	**F**	18.1	B	133.9	**F**	0.0	No	(18.5)	No
13	Mission Village Dr	Friars Rd WB	12.1	B	38.7	D	12.1	B	22.8	C	0.0	No	(15.9)	No
14	Mission Village Dr	Friars Rd EB	37.4	D	327.2	**F**	37.4	D	284.4	**F**	0.0	No	(42.8)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	17.2	B	113.9	**F**	17.2	B	96	**F**	0.0	No	(17.9)	No
17	Fenton Pkwy	Friars Rd	17.3	B	72.9	**E**	17.3	B	55.5	**E**	0.0	No	(17.4)	No
18	Qualcomm Way	Friars Rd WB	15.1	B	33.9	C	15.1	B	30.2	C	0.0	No	(3.7)	No
19	Qualcomm Way	Friars Rd EB	12.7	B	40.2	D	12.7	B	54	D	0.0	No	13.8	No
20	Qualcomm Way	Camino De La Reina	11.6	B	19	B	11.6	B	22.8	C	0.0	No	3.8	No
21	Qualcomm Way	I-8 WB Ramps	13.1	B	30.4	C	13.1	B	20.1	C	0.0	No	(10.3)	No
22	Frazee Rd	Friars Rd	19.6	B	27.2	C	19.6	B	25.5	C	0.0	No	(1.7)	No
23	SR-163 NB Ramps	Friars Rd	10.7	B	32.7	C	10.7	B	37.1	D	0.0	No	4.4	No
24	Ulric St	SR-163 SB On-ramp	9.5	A	13.1	B	9.5	A	13.1	B	0.0	No	0.0	No
25	Ulric St	Friars Rd	13.2	B	34.3	C	13.2	B	31.6	C	0.0	No	(2.7)	No
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 9-9
Intersection Project Impact – 2019 Demolition Phase with Games (Sunday)

ID	North-South Arterial	East-West Arterial	2019 No Project				2019 Construction Phase				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	6.8	A	9.1	A	6.2	A	8.3	A	(0.6)	No	(0.8)	No
2	Mission Gorge Rd	Twain Ave	138.0	**F**	38.9	D	14.4	B	36.6	D	(123.6)	No	(2.3)	No
3	Fairmount Ave	Twain Ave	21.6	C	33.2	C	13.9	B	35.1	D	(7.7)	No	1.9	No
4	Mission Gorge Rd	Fairmount Ave	16.3	B	97.3	**F**	15.1	B	84.5	**F**	(1.2)	No	(12.8)	No
5	Fairmount Ave	Alvarado Canyon Rd	20.2	C	189.9	**F**	18.9	B	159.3	**F**	(1.3)	No	(30.6)	No
6	Fairmount Ave	I-8 EB Ramps	23.6	C	32	C	10.7	B	18.3	B	(12.9)	No	(13.7)	No
7	Rancho Mission Rd	Friars Rd	11.8	B	15.1	B	9.5	A	12.5	B	(2.3)	No	(2.6)	No
8	Rancho Mission Rd	San Diego Mission Rd	22.5	C	52.1	D	18.5	B	41.5	D	(4.0)	No	(10.6)	No
9	Rancho Mission Rd	Ward Rd	10.2	B	12.4	B	9.5	A	12.1	B	(0.7)	No	(0.3)	No
10	Ward Rd	Camino Del Rio N	13.8	B	14.1	B	11.3	B	13.1	B	(2.5)	No	(1.0)	No
11	I-15 NB Ramps	Friars Rd	3.0	A	321.8	**F**	3.1	A	264.3	**F**	0.1	No	(57.5)	No
12	I-15 SB Ramps	Friars Rd	29.5	C	110.4	**F**	15.5	B	84.3	**F**	(14.0)	No	(26.1)	No
13	Mission Village Dr	Friars Rd WB	18.2	B	29.9	C	11.9	B	25.6	C	(6.3)	No	(4.3)	No
14	Mission Village Dr	Friars Rd EB	45.7	D	382	**F**	25.5	C	306.9	**F**	(20.2)	No	(75.1)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	21.2	C	55.4	**E**	15.6	B	41.1	D	(5.6)	No	(14.3)	No
17	Fenton Pkwy	Friars Rd	23.4	C	119.6	**F**	17	B	99.4	**F**	(6.4)	No	(20.2)	No
18	Qualcomm Way	Friars Rd WB	19.5	B	43.5	D	17	B	47.3	D	(2.5)	No	3.8	No
19	Qualcomm Way	Friars Rd EB	8.1	A	6.3	A	14.7	B	8.5	A	6.6	No	2.2	No
20	Qualcomm Way	Camino De La Reina	13.1	B	47.7	D	15.5	B	18.4	B	2.4	No	(29.3)	No
21	Qualcomm Way	I-8 WB Ramps	12.8	B	198.4	**F**	11.2	B	157.6	**F**	(1.6)	No	(40.8)	No
22	Frazee Rd	Friars Rd	27.5	C	31.5	C	19.1	B	23.4	C	(8.4)	No	(8.1)	No
23	SR-163 NB Ramps	Friars Rd	15.9	B	62.2	**E**	11.9	B	53.7	D	(4.0)	No	(8.5)	No
24	Ulric St	SR-163 SB On-ramp	8.6	A	12.4	B	2.9	A	2.9	A	(5.7)	No	(9.5)	No
25	Ulric St	Friars Rd	18.7	B	37.6	D	23.9	C	36.4	D	5.2	No	(1.2)	No
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 9-10
Roadway Segment Project Impact – 2019 Demolition Phase with Games

ID	Roadway Segment	Lanes	Classification*	Weekday					Saturday					Sunday					Project Impact		
				No Project		With Project		Δ V/C	No Project		With Project		Δ V/C	No Project		With Project		Δ V/C	Max Δ V/C	Day of Week	Significant?
				V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS				
Mission Gorge Rd																					
1	Friars Rd to Vandever Ave	4	Collector	0.69	D	0.67	D	-0.01	0.55	C	0.54	C	-0.01	0.47	C	0.46	B	-0.01	-0.01	Sunday	No
2	Vandever Ave to Twain Ave	4	Collector	0.75	D	0.74	D	-0.01	0.61	C	0.60	C	-0.01	0.50	C	0.49	C	-0.01	-0.01	Saturday	No
3	Twain Ave to Mission Gorge Pl	4	Collector	0.94	**E**	0.90	**E**	-0.03	0.73	D	0.72	D	-0.02	0.60	C	0.58	C	-0.02	-0.02	Saturday	No
4	Mission Gorge Pl to Fairmount Ave	4	Collector	0.87	**E**	0.84	**E**	-0.03	0.75	D	0.73	D	-0.02	0.62	C	0.60	C	-0.02	-0.02	Saturday	No
Fairmount Ave																					
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	0.78	D	0.71	D	-0.07	0.59	C	0.55	C	-0.03	0.49	C	0.45	B	-0.03	-0.03	Saturday	No
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	1.25	**F**	1.16	**F**	-0.09	1.03	**F**	1.00	**E**	-0.04	0.89	**E**	0.85	D	-0.03	-0.03	Sunday	No
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	1.35	**F**	1.29	**F**	-0.06	1.05	**F**	1.02	**F**	-0.03	0.89	D	0.86	D	-0.03	-0.03	Sunday	No
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	0.99	**E**	0.96	**E**	-0.04	0.81	D	0.79	D	-0.02	0.67	C	0.66	C	-0.02	-0.02	Saturday	No
San Diego Mission Rd																					
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	1.37	**F**	1.17	**F**	-0.20	1.07	**F**	0.98	**E**	-0.09	1.05	**F**	0.97	**E**	-0.09	-0.09	Sunday	No
10	Rancho Mission Rd to Mission Village Dr	4	Collector	0.73	D	0.64	C	-0.10	0.56	C	0.52	C	-0.04	0.54	C	0.50	C	-0.04	-0.04	Sunday	No
Camino Del Rio N																					
11	Fairmount Ave to Ward Rd	4	Collector	0.49	C	0.48	C	-0.01	0.33	A	0.33	A	-0.01	0.29	A	0.28	A	-0.01	-0.01	Saturday	No
12	Ward Rd to Mission City Pkwy	2	Collector[1]	0.66	C	0.69	D	0.03	0.36	B	0.36	B	0.00	0.29	A	0.29	A	0.00	0.03	Weekday	No
Rancho Mission Rd																					
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	0.75	D	0.76	D	0.01	0.54	C	0.53	C	-0.01	0.47	C	0.46	B	-0.01	0.01	Weekday	No
Mission Village Dr																					
14	North of Friars Rd	4	Major Arterial	0.40	B	0.40	B	0.00	0.32	A	0.32	A	0.00	0.29	A	0.28	A	0.00	0.00	Weekday	No
Friars Rd																					
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	0.85	D	0.83	C	-0.01	0.56	B	0.55	B	-0.01	0.47	B	0.46	B	-0.01	-0.01	Sunday	No
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	0.74	C	0.73	C	-0.01	0.55	B	0.54	B	-0.01	0.46	B	0.45	B	-0.01	-0.01	Saturday	No
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	0.89	D	0.88	D	-0.01	0.66	C	0.66	C	-0.01	0.58	B	0.57	B	-0.01	-0.01	Saturday	No
18	I-15 Ramps to Mission Village Dr	6	Expressway	1.03	**F**	0.95	**E**	-0.08	0.87	D	0.83	D	-0.04	0.78	D	0.75	C	-0.04	-0.04	Sunday	No
19	Mission Village Dr to Northside Dr	6	Expressway	0.86	D	0.79	D	-0.07	0.71	C	0.68	C	-0.03	0.66	C	0.63	C	-0.03	-0.03	Saturday	No
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	1.12	**F**	1.03	**F**	-0.10	0.87	D	0.83	C	-0.04	0.80	C	0.76	C	-0.04	-0.04	Sunday	No
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	1.13	**F**	1.04	**F**	-0.10	0.89	D	0.85	D	-0.04	0.82	C	0.78	C	-0.04	-0.04	Saturday	No
22	River Run Dr to Rio Bonito Way	6	Expressway	0.86	D	0.79	D	-0.07	0.67	C	0.64	C	-0.03	0.62	C	0.59	C	-0.03	-0.03	Saturday	No
23	Rio Bonito Way to Qualcomm Way	7	Expressway	0.76	D	0.70	C	-0.06	0.57	C	0.55	C	-0.03	0.53	C	0.51	B	-0.03	-0.03	Saturday	No
24	Qualcomm Way to Gill Village Way	8	Expressway	0.54	C	0.54	C	0.00	0.40	B	0.38	B	-0.01	0.36	A	0.35	A	-0.01	0.00	Weekday	No
25	Gill Village Way to Mission Center Dr	8	Expressway	0.58	C	0.58	C	0.00	0.42	B	0.41	B	-0.01	0.38	B	0.37	A	-0.01	0.00	Weekday	No
26	Mission Center Dr to Frazee Rd	7	Expressway	0.67	C	0.66	C	0.00	0.50	B	0.49	B	-0.01	0.45	B	0.44	B	-0.01	0.00	Weekday	No
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	0.78	C	0.78	C	0.00	0.61	C	0.60	C	-0.01	0.55	B	0.53	B	-0.01	0.00	Weekday	No
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	0.85	D	0.85	D	0.00	0.70	C	0.70	C	0.00	0.63	C	0.62	C	0.00	0.00	Sunday	No
Qualcomm Way																					
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	0.66	C	0.60	C	-0.05	0.47	B	0.44	B	-0.02	0.43	B	0.40	B	-0.02	-0.02	Sunday	No
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	0.77	C	0.71	C	-0.05	0.56	B	0.53	B	-0.02	0.52	B	0.49	B	-0.02	-0.02	Saturday	No

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Table 9-11
Freeway Segment Project Impact – 2019 Demolition Phase with Games (Weekday)

Location	2019 No Project AM				2019 Demolition Phase AM				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C Δ	Significant?	V/C Δ	Significant?
I-15												
Aero Dr to Friars Rd	0.87	D	0.71	C	0.87	D	0.71	C	0.000	No	0.000	No
Friars Rd to I-8	0.81	C	0.65	C	0.81	C	0.65	C	0.000	No	0.000	No
I-8												
Waring Rd to Fairmount Ave	0.58	B	0.89	D	0.58	B	0.89	D	0.000	No	0.000	No
Fairmount Ave to I-15	0.51	B	0.84	D	0.51	B	0.84	D	0.000	No	0.000	No
I-15 to I-805	0.54	B	1.05	F(0)	0.54	B	1.05	F(0)	0.000	No	0.000	No
I-805 to Qualcomm Way	0.49	B	0.93	E	0.49	B	0.93	E	0.000	No	0.000	No
Qualcomm Way to Mission Center Rd	0.51	B	1.06	F(0)	0.51	B	1.06	F(0)	0.000	No	0.000	No
Mission Center Rd to SR-163	0.38	A	0.99	E	0.38	A	0.99	E	0.000	No	0.000	No
SR-163												
Genesee Ave to Friars Rd	0.89	D	0.67	C	0.89	D	0.67	C	0.000	No	0.000	No
Friars Rd to I-8	0.73	C	0.85	D	0.73	C	0.85	D	0.000	No	0.000	No

Location	2019 No Project PM				2019 Demolition Phase PM				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C Δ	Significant?	V/C Δ	Significant?
I-15												
Aero Dr to Friars Rd	0.60	B	1.17	F(0)	0.61	B	1.13	F(0)	0.007	No	-0.038	No
Friars Rd to I-8	0.74	C	0.98	E	0.72	C	0.98	E	-0.020	No	0.000	No
I-8												
Waring Rd to Fairmount Ave	0.90	D	0.72	C	0.90	D	0.70	C	0.000	No	-0.018	No
Fairmount Ave to I-15	0.94	D	0.59	B	0.93	D	0.59	B	-0.015	No	0.000	No
I-15 to I-805	0.96	D	0.79	C	0.95	E	0.79	C	-0.012	No	0.000	No
I-805 to Qualcomm Way	0.88	D	0.68	C	0.88	D	0.68	C	0.000	No	0.000	No
Qualcomm Way to Mission Center Rd	1.06	E	0.91	D	1.04	F(0)	0.91	D	-0.024	No	0.000	No
Mission Center Rd to SR-163	0.86	C	0.88	D	0.83	D	0.88	D	-0.031	No	0.000	No
SR-163												
Genesee Ave to Friars Rd	0.79	C	0.88	D	0.79	C	0.91	D	0.000	No	0.030	No
Friars Rd to I-8	0.67	B	0.93	D	0.65	C	0.90	D	-0.017	No	-0.025	No

Table 9-12
Ramp Metering Project Impact – 2019 Demolition Phase with Games (Weekdays)

Ramp Location	Meter Rate Range (vphpl)	2019 No Project				2019 Construction Phase				Project Impact	
		Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Delay Δ (min)	Significant?
AM Peak Hour with Games											
I-15 NB: Friars Rd On-ramp	Min: 516	1,290	70	8	1,750	1290	70	8	1,750	0	No
	Max: 600		0	0	0		0	0	0	0	No
I-15 SB: WB Friars Rd On-ramp	Min: 660	700	40	4	1,000	700	40	4	1,000	0	No
	Max: 996		0	0	0		0	0	0	0	No
I-15 SB: EB Friars Rd On-ramp	Max: 996	610	0	0	0	610	0	0	0	0	No
I-8 EB: SB Fairmount Ave On-ramp	Min: 493	810	317	**39**	7,925	810	317	**39**	7,925	0	No
	Max: 996		0	0	0		0	0	0	0	No
PM Peak Hour with Games											
I-15 NB: Friars Rd On-ramp	Min: 386	1,445	271	**42**	6,775	1,510	300	**47**	7,500	4.5	No
	Max: 672		0	0	0		14	1	350	1.3	No
I-15 SB: WB Friars Rd On-ramp	Min: 660	730	70	6	1,750	730	70	6	1,750	0	No
	Max: 996		0	0	0		0	0	0	0	No
I-15 SB: EB Friars Rd On-ramp	Max: 996	1,020	24	1	600	1,020	24	1	600	0	No
I-8 EB: SB Fairmount Ave On-ramp	Min: 493	1,030	537	**65**	13,425	1,050	557	**68**	13,925	2.4	No
	Max: 996		34	2	850		54	3	1,350	1.2	No

9.1.3 Horizon Year (2035) Project Build Out with Games

Traffic impacts during the Horizon Year 2035 Project Build Out conditions with games are discussed in this Section.

Intersections

Table 9-13 through **Table 9-15** present the impact analysis for intersections during the Horizon Year 2035 Project Build Out conditions as compared to the Horizon Year 2035 No Project conditions. As shown in the table, none of the study intersections are expected to experience significant impacts under Project Build Out conditions.

Roadway Segments

Table 9-16 include the significant impact analysis on roadway segments during the 2035 Project Build Out conditions with games. As shown in the table, none of the roadway segments are expected to experience significant impacts under Project conditions.

Freeway Segments

Table 9-17 includes the significant impact analysis on freeway segments during the 2035 Project Build Out conditions with weekday game days. As shown in the table, none of the roadway segments are expected to experience significant impacts under Project conditions. The weekend impact analysis tables are not included in this section since all of the freeway segments are projected to operate at acceptable LOS D or better for all future Project conditions.

Ramp Meters

Table 9-18 presents the significant impact analysis on freeway ramp meters during the 2035 Project Build Out weekday conditions with games. As shown in the table, none of the ramp meters are expected to experience significant impacts under Project conditions.

Parking

The impact analysis measuring the exceedance of available parking spaces onsite compared to the anticipated parking deficiency during Horizon Year 2035 Project Build Out shows no significant impacts under Project conditions. The available onsite parking is 16,500 spaces with no anticipated parking deficiencies.

Table 9-13
Intersection Project Impact – 2035 Project Build Out with Games (Weekday)

ID	North-South Arterial	East-West Arterial	2035 No Project				2035 Build Out				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	10.6	B	36.9	D	10.6	B	33.1	C	0.0	No	(3.8)	No
2	Mission Gorge Rd	Twain Ave	23.7	C	38.5	D	23.7	C	36.8	D	0.0	No	(1.7)	No
3	Fairmount Ave	Twain Ave	16.5	B	228.2	**F**	16.5	B	191	**F**	0.0	No	(37.2)	No
4	Mission Gorge Rd	Fairmount Ave	90.5	**F**	134	**F**	90.5	**F**	121.2	**F**	0.0	No	(12.8)	No
5	Fairmount Ave	Alvarado Canyon Rd	12.2	B	237.1	**F**	12.2	B	206.3	**F**	0.0	No	(30.8)	No
6	Fairmount Ave	I-8 EB Ramps	15.9	B	89.8	**F**	15.9	B	88	**F**	0.0	No	(1.8)	No
7	Rancho Mission Rd	Friars Rd	13.0	B	22.8	C	13	B	21.3	C	0.0	No	(1.5)	No
8	Rancho Mission Rd	San Diego Mission Rd	27.7	C	53.5	D	27.7	C	49.5	D	0.0	No	(4.0)	No
9	Rancho Mission Rd	Ward Rd	11.9	B	75.5	**F**	11.9	B	56.4	**F**	0.0	No	(19.1)	No
10	Ward Rd	Camino Del Rio N	14.3	B	38.6	D	14.3	B	35	C	0.0	No	(3.6)	No
11	I-15 NB Ramps	Friars Rd	5.5	A	5.4	A	5.5	A	10.7	B	0.0	No	5.3	No
12	I-15 SB Ramps	Friars Rd	35.4	D	216.3	**F**	35.4	D	184.8	**F**	0.0	No	(31.5)	No
13	Mission Village Dr	Friars Rd WB	13.4	B	80.1	**F**	13.4	B	67.8	**E**	0.0	No	(12.3)	No
14	Mission Village Dr	Friars Rd EB	46.6	D	352.7	**F**	46.6	D	293.5	**F**	0.0	No	(59.2)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	28.5	C	234	**F**	28.5	C	211.9	**F**	0.0	No	(22.1)	No
17	Fenton Pkwy	Friars Rd	17.8	B	183.9	**F**	17.8	B	166.8	**F**	0.0	No	(17.1)	No
18	Qualcomm Way	Friars Rd WB	45.6	D	96.4	**F**	45.6	D	97	**F**	0.0	No	0.6	No
19	Qualcomm Way	Friars Rd EB	17.5	B	245.7	**F**	17.5	B	216.4	**F**	0.0	No	(29.3)	No
20	Qualcomm Way	Camino De La Reina	23.9	C	38.6	D	23.9	C	47.7	D	0.0	No	9.1	No
21	Qualcomm Way	I-8 WB Ramps	40.6	D	63.3	**E**	40.6	D	64.5	**E**	0.0	No	1.2	No
22	Frazee Rd	Friars Rd	29.0	C	79.6	**E**	29	C	79.7	**E**	0.0	No	0.1	No
23	SR-163 NB Ramps	Friars Rd	15.1	B	53.6	D	15.1	B	49.7	D	0.0	No	(3.9)	No
24	Ulric St	SR-163 SB On-ramp	5.1	A	19.1	C	5.1	A	19.1	C	0.0	No	0.0	No
25	Ulric St	Friars Rd	22.5	C	61.5	**E**	22.5	C	58.9	**E**	0.0	No	(2.6)	No
26	Mission Center Rd	Friars Rd WB	10.6	B	23.2	C	10.6	B	23.2	C	0.0	No	0.0	No
27	Mission Center Rd	Friars Rd EB	11.9	B	18.9	B	11.9	B	18.9	B	0.0	No	0.0	No

Table 9-14
Intersection Project Impact – 2035 Project Build Out with Games (Saturday)

ID	North-South Arterial	East-West Arterial	2035 No Project				2035 Build Out				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	8.2	A	36.7	D	8.2	A	33.1	C	0.0	No	(3.6)	No
2	Mission Gorge Rd	Twain Ave	15.5	B	38.5	D	15.5	B	36.8	D	0.0	No	(1.7)	No
3	Fairmount Ave	Twain Ave	12.6	B	228.2	**F**	12.6	B	191	**F**	0.0	No	(37.2)	No
4	Mission Gorge Rd	Fairmount Ave	50.5	D	134	**F**	50.5	D	117.8	**F**	0.0	No	(16.2)	No
5	Fairmount Ave	Alvarado Canyon Rd	29.6	C	237.1	**F**	29.6	C	234.1	**F**	0.0	No	(3.0)	No
6	Fairmount Ave	I-8 EB Ramps	10.3	B	89.8	**F**	10.3	B	88	**F**	0.0	No	(1.8)	No
7	Rancho Mission Rd	Friars Rd	19.0	B	22.8	C	19	B	21.3	C	0.0	No	(1.5)	No
8	Rancho Mission Rd	San Diego Mission Rd	18.8	B	53.5	D	18.8	B	49.5	D	0.0	No	(4.0)	No
9	Rancho Mission Rd	Ward Rd	10.0	A	75.5	**F**	10	A	56.4	**F**	0.0	No	(19.1)	No
10	Ward Rd	Camino Del Rio N	11.3	B	38.6	D	11.3	B	35	C	0.0	No	(3.6)	No
11	I-15 NB Ramps	Friars Rd	12.8	B	5.4	A	12.8	B	10.7	B	0.0	No	5.3	No
12	I-15 SB Ramps	Friars Rd	16.7	B	216.3	**F**	16.7	B	184.8	**F**	0.0	No	(31.5)	No
13	Mission Village Dr	Friars Rd WB	15.2	B	80.1	**F**	15.2	B	67.8	**E**	0.0	No	(12.3)	No
14	Mission Village Dr	Friars Rd EB	45.4	D	352.7	**F**	45.4	D	293.5	**F**	0.0	No	(59.2)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	19.2	B	234	**F**	19.2	B	216.6	**F**	0.0	No	(17.4)	No
17	Fenton Pkwy	Friars Rd	17.1	B	183.9	**F**	17.1	B	166.4	**F**	0.0	No	(17.5)	No
18	Qualcomm Way	Friars Rd WB	23.2	C	96.4	**F**	23.2	C	95.3	**F**	0.0	No	(1.1)	No
19	Qualcomm Way	Friars Rd EB	12.6	B	245.7	**F**	12.6	B	210.6	**F**	0.0	No	(35.1)	No
20	Qualcomm Way	Camino De La Reina	25.6	C	38.6	D	25.6	C	47.7	D	0.0	No	9.1	No
21	Qualcomm Way	I-8 WB Ramps	23.7	C	63.3	**E**	23.7	C	64.6	**E**	0.0	No	1.3	No
22	Frazee Rd	Friars Rd	22.9	C	79.6	**E**	22.9	C	79.7	**E**	0.0	No	0.1	No
23	SR-163 NB Ramps	Friars Rd	18.6	B	53.5	D	18.6	B	49.7	D	0.0	No	(3.8)	No
24	Ulric St	SR-163 SB On-ramp	10.5	B	19.1	C	10.5	B	19.1	**C**	0.0	No	0.0	No
25	Ulric St	Friars Rd	13.9	B	61.5	**E**	13.9	B	58.9	**E**	0.0	No	(2.6)	No
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 9-15
Intersection Project Impact – 2035 Project Build Out with Games (Sunday)

ID	North-South Arterial	East-West Arterial	2035 No Project				2035 Build Out				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	7.4	A	9.8	A	7.3	A	9.8	A	(0.1)	No	0.0	No
2	Mission Gorge Rd	Twain Ave	17.4	B	53.4	D	17.5	B	50.5	D	0.1	No	(2.9)	No
3	Fairmount Ave	Twain Ave	26.2	C	39	D	26.3	C	29.6	C	0.1	No	(9.4)	No
4	Mission Gorge Rd	Fairmount Ave	39.1	D	157.4	**F**	23.7	C	130.1	**F**	(15.4)	No	(27.3)	No
5	Fairmount Ave	Alvarado Canyon Rd	25.1	C	244.4	**F**	19.9	B	212	**F**	(5.2)	No	(32.4)	No
6	Fairmount Ave	I-8 EB Ramps	26.9	C	33.2	C	23.6	C	33.1	C	(3.3)	No	(0.1)	No
7	Rancho Mission Rd	Friars Rd	15.7	B	15.7	B	15.1	B	15	B	(0.6)	No	(0.7)	No
8	Rancho Mission Rd	San Diego Mission Rd	25.1	C	56.1	**E**	25	C	44.6	D	(0.1)	No	(11.5)	No
9	Rancho Mission Rd	Ward Rd	10.7	B	13.4	B	10.5	B	13	B	(0.2)	No	(0.4)	No
10	Ward Rd	Camino Del Rio N	14.6	B	16.7	B	14.8	B	16.7	B	0.2	No	0.0	No
11	I-15 NB Ramps	Friars Rd	3.0	A	324.7	**F**	3	A	272.3	**F**	0.0	No	(52.4)	No
12	I-15 SB Ramps	Friars Rd	30.9	C	121.6	**F**	30.5	C	92.9	**F**	(0.4)	No	(28.7)	No
13	Mission Village Dr	Friars Rd WB	18.5	B	37	D	18.9	B	38.3	D	0.4	No	1.3	No
14	Mission Village Dr	Friars Rd EB	49.0	D	438.6	**F**	46.9	D	379.5	**F**	(2.1)	No	(59.1)	No
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	24.2	C	83.9	**F**	26.6	C	65.8	**E**	2.4	No	(18.1)	No
17	Fenton Pkwy	Friars Rd	24.6	C	147.7	**F**	25.3	C	109.3	**F**	0.7	No	(38.4)	No
18	Qualcomm Way	Friars Rd WB	18.8	B	114.7	**F**	17.7	B	93.2	**F**	(1.1)	No	(21.5)	No
19	Qualcomm Way	Friars Rd EB	8.7	A	27.4	C	7.9	A	30.5	C	(0.8)	No	3.1	No
20	Qualcomm Way	Camino De La Reina	14.1	B	43.5	D	14.6	B	31.1	C	0.5	No	(12.4)	No
21	Qualcomm Way	I-8 WB Ramps	15.1	B	257.8	**F**	14.1	B	222.1	**F**	(1.0)	No	(35.7)	No
22	Frazee Rd	Friars Rd	26.2	C	43.4	D	18.7	B	45.8	D	(7.5)	No	2.4	No
23	SR-163 NB Ramps	Friars Rd	16.6	B	85	**F**	14.5	B	70.4	**E**	(2.1)	No	(14.6)	No
24	Ulric St	SR-163 SB On-ramp	9.0	A	18.3	C	4.7	A	18.3	C	(4.3)	No	0.0	No
25	Ulric St	Friars Rd	21.9	C	59.6	**E**	21.9	C	44.1	D	0.0	No	(15.5)	No
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 9-16
Roadway Segment Project Impact – 2035 Project Build Out with Games

ID	Roadway Segment	Lanes	Classification*	Weekday					Saturday					Sunday					Project Impact		
				No Project		With Project		Δ V/C	No Project		With Project		Δ V/C	No Project		With Project		Δ V/C	Max Δ V/C	Day of Week	Significant?
				V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS				
Mission Gorge Rd																					
1	Friars Rd to Vandever Ave	4	Collector	0.78	D	0.78	D	-0.01	0.63	C	0.62	C	-0.01	0.53	C	0.53	C	-0.01	-0.01	Weekday	No
2	Vandever Ave to Twain Ave	4	Collector	0.82	D	0.81	D	-0.01	0.67	C	0.66	C	-0.01	0.54	C	0.54	C	-0.01	-0.01	Weekday	No
3	Twain Ave to Mission Gorge Pl	4	Collector	1.03	**F**	1.01	**F**	-0.02	0.81	D	0.79	D	-0.02	0.66	C	0.64	C	-0.02	-0.02	Saturday	No
4	Mission Gorge Pl to Fairmount Ave	4	Collector	0.99	**E**	0.97	**E**	-0.02	0.85	**E**	0.83	D	-0.02	0.69	D	0.68	D	-0.02	-0.02	Saturday	No
Fairmount Ave																					
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector[1]	0.86	D	0.82	D	-0.04	0.64	C	0.61	C	-0.03	0.53	C	0.49	C	-0.03	-0.03	Sunday	No
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	1.48	**F**	1.44	**F**	-0.05	1.23	**F**	1.19	**F**	-0.04	1.05	**F**	1.01	**F**	-0.03	-0.03	Sunday	No
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	1.72	**F**	1.69	**F**	-0.03	1.33	**F**	1.30	**F**	-0.03	1.11	**F**	1.08	**F**	-0.03	-0.03	Saturday	No
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	1.26	**F**	1.24	**F**	-0.02	1.02	**F**	1.01	**F**	-0.02	0.85	D	0.83	D	-0.02	-0.02	Saturday	No
San Diego Mission Rd																					
9	Fairmount Ave to Rancho Mission Rd	2	Collector[1]	1.58	**F**	1.47	**F**	-0.11	1.21	**F**	1.12	**F**	-0.09	1.19	**F**	1.11	**F**	-0.09	-0.09	Saturday	No
10	Rancho Mission Rd to Mission Village Dr	4	Collector	0.75	D	0.69	D	-0.06	0.57	C	0.53	C	-0.04	0.54	C	0.50	C	-0.04	-0.04	Saturday	No
Camino Del Rio N																					
11	Fairmount Ave to Ward Rd	4	Collector	0.66	C	0.65	C	-0.01	0.45	B	0.44	B	-0.01	0.39	B	0.38	B	-0.01	-0.01	Saturday	No
12	Ward Rd to Mission City Pkwy	2	Collector[1]	1.19	**F**	1.19	**F**	0.00	0.65	C	0.65	C	0.00	0.53	C	0.53	C	0.00	0.00	Weekday	No
Rancho Mission Rd																					
13	San Diego Mission Rd to Caminito Cascara	4	Collector[1]	0.81	D	0.79	D	-0.01	0.57	C	0.56	C	-0.01	0.51	C	0.49	C	-0.01	-0.01	Weekday	No
Mission Village Dr																					
14	North of Friars Rd	4	Major Arterial	0.44	B	0.44	B	0.00	0.36	A	0.36	A	0.00	0.32	A	0.32	A	0.00	0.00	Weekday	No
Friars Rd																					
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	0.97	**E**	0.96	**E**	-0.01	0.64	C	0.63	C	-0.01	0.53	B	0.53	B	-0.01	-0.01	Sunday	No
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	0.82	C	0.81	C	-0.01	0.60	C	0.60	C	-0.01	0.51	B	0.50	B	-0.01	-0.01	Sunday	No
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	0.95	**E**	0.94	**E**	-0.01	0.71	C	0.70	C	-0.01	0.62	C	0.61	C	-0.01	-0.01	Saturday	No
18	I-15 Ramps to Mission Village Dr	6	Expressway	1.10	**F**	1.06	**F**	-0.05	0.93	**E**	0.89	**E**	-0.04	0.83	D	0.80	D	-0.04	-0.04	Saturday	No
19	Mission Village Dr to Northside Dr	6	Expressway	0.97	**E**	0.93	**E**	-0.04	0.80	D	0.77	D	-0.03	0.73	C	0.70	C	-0.03	-0.03	Sunday	No
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	1.26	**F**	1.21	**F**	-0.05	0.98	**E**	0.94	**E**	-0.04	0.89	D	0.85	D	-0.04	-0.04	Saturday	No
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	1.27	**F**	1.21	**F**	-0.05	0.99	**E**	0.95	**E**	-0.04	0.91	D	0.87	D	-0.04	-0.04	Saturday	No
22	River Run Dr to Rio Bonito Way	6	Expressway	0.99	**E**	0.95	**E**	-0.04	0.77	D	0.74	C	-0.03	0.71	C	0.68	C	-0.03	-0.03	Saturday	No
23	Rio Bonito Way to Qualcomm Way	7	Expressway	0.92	**E**	0.89	**E**	-0.03	0.69	C	0.66	C	-0.03	0.63	C	0.61	C	-0.03	-0.03	Saturday	No
24	Qualcomm Way to Gill Village Way	8	Expressway	0.67	C	0.65	C	-0.02	0.49	B	0.47	B	-0.01	0.44	B	0.43	B	-0.01	-0.01	Saturday	No
25	Gill Village Way to Mission Center Dr	8	Expressway	0.72	C	0.70	C	-0.02	0.52	B	0.50	B	-0.01	0.47	B	0.45	B	-0.01	-0.01	Saturday	No
26	Mission Center Dr to Frazee Rd	7	Expressway	0.87	D	0.85	D	-0.02	0.65	C	0.64	C	-0.01	0.58	C	0.57	C	-0.01	-0.01	Saturday	No
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	0.94	**E**	0.92	**E**	-0.02	0.74	C	0.72	C	-0.01	0.65	C	0.64	C	-0.01	-0.01	Saturday	No
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	0.98	**E**	0.98	**E**	-0.01	0.81	C	0.81	C	0.00	0.72	C	0.72	C	0.00	0.00	Saturday	No
Qualcomm Way																					
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	0.97	**E**	0.94	**E**	-0.03	0.67	C	0.64	C	-0.02	0.59	C	0.57	C	-0.02	-0.02	Saturday	No
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	0.86	D	0.83	D	-0.03	0.62	C	0.60	C	-0.02	0.57	C	0.55	B	-0.02	-0.02	Sunday	No

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Table 9-17
Freeway Segment Project Impact – 2035 Project Build Out with Games (Weekday)

Location	2035 No Project AM				2035 With Project AM				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C Δ	Significant?	V/C Δ	Significant?
I-15												
Aero Dr to Friars Rd	0.87	D	0.71	C	0.87	D	0.71	C	0.000	No	0.000	No
Friars Rd to I-8	0.81	C	0.66	C	0.81	C	0.66	C	0.000	No	0.000	No
I-8												
Waring Rd to Fairmount Ave	0.59	B	0.92	D	0.59	B	0.92	D	0.000	No	0.000	No
Fairmount Ave to I-15	0.55	B	0.89	D	0.55	B	0.89	D	0.000	No	0.000	No
I-15 to I-805	0.58	B	1.12	F(0)	0.58	B	1.12	F(0)	0.000	No	0.000	No
I-805 to Qualcomm Way	0.55	B	0.98	E	0.55	B	0.98	E	0.000	No	0.000	No
Qualcomm Way to Mission Center Rd	0.59	B	1.11	F(0)	0.59	B	1.11	F(0)	0.000	No	0.000	No
Mission Center Rd to SR-163	0.44	A	1.01	F(0)	0.44	B	1.01	F(0)	0.000	No	0.000	No
SR-163												
Genesee Ave to Friars Rd	0.93	D	0.68	C	0.93	E	0.68	C	0.000	No	0.000	No
Friars Rd to I-8	0.75	C	0.87	D	0.75	C	0.87	D	0.000	No	0.000	No

Location	2035 No Project PM				2035 With Project PM				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C Δ	Significant?	V/C Δ	Significant?
I-15												
Aero Dr to Friars Rd	0.60	B	1.17	F(0)	0.60	B	1.15	F(0)	0.000	No	-0.025	No
Friars Rd to I-8	0.74	C	1.03	F(0)	0.73	C	1.03	F(0)	-0.011	No	0.000	No
I-8												
Waring Rd to Fairmount Ave	0.95	D	0.73	C	0.95	E	0.72	C	0.000	No	-0.010	No
Fairmount Ave to I-15	1.00	D	0.62	B	0.99	E	0.62	B	-0.008	No	0.000	No
I-15 to I-805	1.04	D	0.84	D	1.04	F(0)	0.84	D	-0.006	No	0.000	No
I-805 to Qualcomm Way	0.94	D	0.74	C	0.94	E	0.74	C	0.000	No	0.000	No
Qualcomm Way to Mission Center Rd	1.13	E	0.99	E	1.12	F(0)	0.99	E	-0.013	No	0.000	No
Mission Center Rd to SR-163	0.93	C	0.91	D	0.92	D	0.91	D	-0.017	No	0.000	No
SR-163												
Genesee Ave to Friars Rd	0.83	C	0.90	D	0.83	D	0.89	D	0.000	No	-0.016	No
Friars Rd to I-8	0.67	B	0.97	E	0.66	C	0.96	E	-0.009	No	-0.014	No

Table 9-18
Ramp Metering Project Impact – 2035 Project Build Out with Games (Weekdays)

Ramp Location	Meter Rate Range (vphpl)	2035 No Project				2035 Project Build Out				Project Impact	
		Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Delay Δ (min)	Significant?
AM Peak Hour on Game Days											
I-15 NB: Friars Rd On-ramp	Min: 516	1,330	89	10	2,225	1330	89	10	2,225	0	No
	Max: 600		5	0	125		5	0	125	0	No
I-15 SB: WB Friars Rd On-ramp	Min: 660	880	220	**20**	5,500	880	220	**20**	5,500	0	No
	Max: 996		0	0	0		0	0	0	0	No
I-15 SB: EB Friars Rd On-ramp	Max: 996	630	0	0	0	630	0	0	0	0	No
I-8 EB: SB Fairmount Ave On-ramp	Min: 493	890	397	**48**	9,925	890	397	**48**	9,925	0	No
	Max: 996		0	0	0		0	0	0	0	No
PM Peak Hour on Game Days											
I-15 NB: Friars Rd On-ramp	Min: 386	1,475	284	**44**	7,100	1,475	284	**44**	7,100	0	No
	Max: 672		0	0	0		0	0	0	0	No
I-15 SB: WB Friars Rd On-ramp	Min: 660	950	290	**26**	7,250	950	290	**26**	7,250	0	No
	Max: 996		0	0	0		0	0	0	0	No
I-15 SB: EB Friars Rd On-ramp	Max: 996	1,050	54	3	1,350	1,050	54	3	1,350	0	No
I-8 EB: SB Fairmount Ave On-ramp	Min: 493	1,090	597	**73**	14,925	1,090	597	**73**	14,925	0	No
	Max: 996		94	6	2,350		94	6	2,350	0	No

9.1.4 Summary of Mitigation Measures

The following facilities are projected to be significantly impacted under Project conditions. The table below identifies Mitigation Measures for each of the roadway facilities to mitigate the significant impacts occurring in each of the future scenarios.

Table 9-19
Summary of Mitigation Measures

City of SD Impact Issue Area	Impact Significance Prior to Mitigation	Mitigation Measure(s)	Impact Significance With Incorporation of Mitigation
2019 Construction Phase			
Issue 2: Intersection: Rancho Mission Road at Ward Road	Additional 18.8 second delay on weekdays during PM peak hour	**Mitigation Measure MOB 1: Implement All-way Stops on Stadium Event Days.** Implement manual all-way stop control to the current two-way stop controlled intersection at Rancho Mission Road and Ward Road. Since the intersection is not anticipated to be significantly impacted by the Project on non-game days, the City should implement the improvement measures temporarily on days with major events only.	Mitigated to LOS C with manual all-way stop control on days with major events only.
2019 Demolition Phase			
Issue 2: Intersection: Rancho Mission Road at Ward Road	Additional 138 second delay on weekdays during PM peak hour	**Mitigation Measure MOB 1: Implement All-way Stops on Stadium Event Days.** Implement manual all-way stop control to the current two-way stop controlled intersection at Rancho Mission Road and Ward Road. Since the intersection is not anticipated to be significantly impacted by the Project on non-game days, the City should implement the improvement measures temporarily on days with major events only.	Mitigated to LOS C with manual all-way stop control on days with major events only.
Issue 4: Available public parking	Parking Deficiency	**Mitigation Measure MOB-2: Transportation Demand Management Plan.** A Transportation Demand Management Plan will be prepared by the City of San Diego. This TDM Plan will set performance goals and metrics to achieve a modal split that will address the parking deficiency of 1,780 parking spaces by reducing parking demand and/or locating offsite parking locations. The TDM Plan would be prepared before the start of the new stadium construction phase and would be implemented throughout the life of the Project and long-term operation.	Parking deficiencies of 1,780 parking spaces will be addressed by a modal shift or reduce in parking demand by the implementation of the Transportation Demand Management Plan.

9.1.5 Mobility and Alternative Transportation Improvement Recommendations

This section evaluates the mobility improvements recommended for the impacts resulted from the proposed project. A Transportation Demand Management Plan should also consider the following recommendations.

Transit Improvements

The following transit improvements should be implemented:

- Multi-modal connectivity should be encouraged to improve the usage of the Qualcomm Trolley Station and public transportation to and from the stadium.
- Decrease headways in both directions to accommodate for more trolley trips and faster ingress and egress into the stadium.
- MTS express bus service to supplement trolley service that run a fixed route only on game day.
- San Diego Transit Police to verify valid MTS transit passes on station platforms or pedestrian ramps rather than at station turnstiles to allow for more efficient entry into the stadium.

Pedestrian Circulation Improvements

The following pedestrian-related improvements should be implemented:

- Enhance sidewalks, landscaping, and pedestrian-friendly lighting on all major streets surrounding the project area and enable crossing large arterials utilizing traffic signal actuators.
- Provide multiple and direct street and sidewalk connections within the project area to the adjacent neighborhoods and community at large.
- Avoid creating barriers to pedestrian traffic on large arterials and provide wide crossings to accommodate large numbers of pedestrians.
- Consider public recreation and connections to the San Diego River Pathway and open space along the river connecting to surrounding neighborhoods and existing pathways.
- Provide clear way-finding and signage, especially during construction on ways for pedestrians to enter and exit the project site.
- Pedestrian connectivity to the San Diego River and the Qualcomm Trolley station should be emphasized.
- All sidewalks, crosswalks and access to the entrances should comply with the ADA guidelines.

All pedestrian circulation improvements within the project study area should be consistent with the City of San Diego San Diego Pedestrian Master Plan. Related excerpts to pedestrian circulation improvements from the City of San Diego Pedestrian Master Plan are included in **Appendix C.**

Bicycle Circulation Improvements

The following bicycle improvements should be implemented:

- Bicycle connectivity from the stadium to the San Diego River should be emphasized including the Murphy Canyon bike path connection.
- Provide additional bicycle parking near trolley station (Lockers and U-Loops) and near stadium entrance (U-loops). Provide temporary bicycle parking or bicycle valet service during large events.
- Consider public recreation and connections to the San Diego River Pathway and open space along the river connecting to surrounding neighborhoods and existing bikeways.
- Enhance bike lanes and crossings along Friars Road.

- Encourage bicycling to the games and provide incentives and programs including “bike pools” to and from the stadium.
- The City of San Diego Bicycle Master Plan recommends the implementation of the following bicycle facilities:
    - Texas Street/Qualcomm Way: Camino de la Reina/Camino del Rio North to Camino Del Rio South – A Class II bicycle lane connecting dense residential neighborhoods and key land uses in Mission Valley.
    - Mission Valley San Diego River Bike Path and Fashion Valley Road: Friars Rd to Hotel Circle South – Class I and Class II Bike Lane and upgrades to the existing Class III bicycle facility. This project provides a critical connection of Class I San Diego River Bike Path and the Fashion Valley Bike Path west to the Ocean Beach Bike Path.
    - Camino del Rio North: Mission City Parkway to I-15 - Class II bicycle facility connecting key land uses to Qualcomm Stadium.

The bicycle improvements proposed in the City of San Diego Bicycle Master Plan, the SANDAG Regional Bicycle Plan and the Mission Valley Community Plan should be implemented. Related excerpts to bicycle circulation improvements from the City of San Diego Bicycle Master Plan are included in **Appendix C.**

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APPENDIX A

EXISTING TRAFFIC DATA

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ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mission Gorge Rd and Friars Rd , San Diego

Date:	7/1/2015
Day:	Wednesday

Project #:	15-4208-001
City:	San Diego

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Mission Gorge Rd)

	Lanes 0	0	0		
AM	18	0	0	38	AM
NOON	0	0	0	0	NOON
PM	23	0	0	31	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1871	0	1072
0	0	0	0
3	489	0	1891
1	154	0	219

Westbound Approach

AM	NOON	PM	Lanes
38	0	31	0
1660	0	741	3
267	0	231	2
772	0	2376	

Northbound Approach

AM	421	193	0	283	AM
NOON	0	0	0	0	NOON
PM	450	308	0	485	PM
		1	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	18	38	AM
	0	0	NOON
	23	31	PM

West Leg			East Leg		
AM	NOON	PM			
1871	0	1072	1965	0	1003
643	0	2110	772	0	2376
			AM	NOON	PM

	South Leg	
AM	421	476
NOON	0	0
PM	450	793

Total Volume Per Leg

	North Leg
AM	56
NOON	0
PM	54

West Leg			East Leg		
AM	NOON	PM			
2514	0	3182	2737	0	3379
			AM	NOON	PM

	South Leg
AM	897
NOON	0
PM	1243

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mission Gorge Rd and Twain Ave , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-002

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Mission Gorge Rd)

	Lanes 0	2	1		
AM	55	395	10	883	AM
NOON	0	0	0	0	NOON
PM	48	593	20	774	PM

Eastbound Approach (Twain Ave)

Lanes	AM	NOON	PM
	264	0	168
1	34	0	107
1	25	0	160
0	54	0	174

Westbound Approach

AM	NOON	PM	Lanes
22	0	27	0
117	0	53	1
101	0	71	1
115	0	283	

Northbound Approach

AM	550	92	827	80	AM
NOON	0	0	0	0	NOON
PM	838	67	640	103	PM
		1	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	460	883	AM
	0	0	NOON
	661	774	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
264	0	168	240	0	151
113	0	441	115	0	283

	South Leg	
AM	550	999
NOON	0	0
PM	838	810

Total Volume Per Leg

	North Leg
AM	1343
NOON	0
PM	1435

West Leg AM	NOON	PM	East Leg AM	NOON	PM
377	0	609	355	0	434

	South Leg
AM	1549
NOON	0
PM	1648

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Fairmount Ave and Twain Ave , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-003

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Fairmount Ave)

	Lanes 0	1	1		
AM	70	94	12	256	AM
NOON	0	0	0	0	NOON
PM	103	151	39	213	PM

Eastbound Approach (Twain Ave)

	AM	NOON	PM
	333	0	329
0	37	0	95
1	69	0	200
1	60	0	101
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
41	0	18	0
155	0	114	2
47	0	50	0
129	0	328	
AM	NOON	PM	

Northbound Approach

AM	201	108	178	48	AM
NOON	0	0	0	0	NOON
PM	302	112	100	89	PM
		1	1	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	176	256	AM
	0	0	NOON
	293	213	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
333	0	329	243	0	182
166	0	396	129	0	328

	South Leg	
AM	201	334
NOON	0	0
PM	302	301

Total Volume Per Leg

	North Leg
AM	432
NOON	0
PM	506

West Leg AM	NOON	PM	East Leg AM	NOON	PM
499	0	725	372	0	510

	South Leg
AM	535
NOON	0
PM	603

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mission Gorge Rd and Fairmount Ave , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-004

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Mission Gorge Rd)

	Lanes 0	2	1		
AM	14	512	7	1047	AM
NOON	0	0	0	0	NOON
PM	27	730	11	710	PM

Eastbound Approach (Fairmount Ave)

Lanes	AM	NOON	PM
	548	0	327
0.3	4	0	8
0.3	0	0	2
1.3	242	0	410

Westbound Approach

AM	NOON	PM	Lanes
1	0	5	0
5	0	4	1
19	0	21	0
54	0	47	

Northbound Approach

AM	773	529	1042	47	AM
NOON	0	0	0	0	NOON
PM	1161	296	697	34	PM
		2	2	0	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
533	1047	AM
0	0	NOON
768	710	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
548	0	327	25	0	30
246	0	420	54	0	47

South Leg	
773	1618
0	0
1161	1027

Total Volume Per Leg

North Leg
1580
0
1478

West Leg AM	NOON	PM	East Leg AM	NOON	PM
794	0	747	79	0	77

South Leg
2391
0
2188

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Fairmount Ave and Alvarado Canyon Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-005

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Fairmount Ave)

	Lanes 1	2	2		
AM	59	704	14	1614	AM
NOON	0	0	0	0	NOON
PM	44	1145	11	1057	PM

Eastbound Approach (Alvarado Canyon Rd)

Lanes	AM	NOON	PM
	762	0	392
1.5	49	0	115
0.5	15	0	118
1	326	0	595

Westbound Approach

	AM	NOON	PM	Lanes
	345	0	231	1.5
	370	0	126	1
	367	0	622	1.5
	178	0	289	

CONTROL: Signalized

Northbound Approach

AM	1397	333	1220	149	AM
NOON	0	0	0	0	NOON
PM	2362	222	711	160	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	777	1614	AM
	0	0	NOON
	1200	1057	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
762	0	392	1082	0	979
390	0	828	178	0	289

	South Leg	
AM	1397	1702
NOON	0	0
PM	2362	1093

Total Volume Per Leg

	North Leg
AM	2391
NOON	0
PM	2257

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1152	0	1220	1260	0	1268

	South Leg
AM	3099
NOON	0
PM	3455

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Fairmount Ave and I-8 EB Ramps , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-006

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Fairmount Ave)

	Lanes 0	3	0		
AM	0	552	0	1704	AM
NOON	0	0	0	0	NOON
PM	0	1119	0	1095	PM

Eastbound Approach (I-8 EB Ramps)

Lanes	AM	NOON	PM
	122	0	28
2	1004	0	692
0	0	0	0
3	937	0	2313

Westbound Approach

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

Northbound Approach

AM	1489	122	700	0	AM
NOON	0	0	0	0	NOON
PM	3432	28	403	0	PM
		1	2	0	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	552	1704	AM
	0	0	NOON
	1119	1095	PM

West Leg			East Leg		
AM	NOON	PM			
122	0	28	0	0	0
1941	0	3005	0	0	0
			AM	NOON	PM

	South Leg	
AM	1489	822
NOON	0	0
PM	3432	431

Total Volume Per Leg

	North Leg
	2256 AM
	0 NOON
	2214 PM

West Leg			East Leg		
AM	NOON	PM			
2063	0	3033	0	0	0
			AM	NOON	PM

	South Leg
AM	2311
NOON	0
PM	3863

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Rancho Mission Rd and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-007

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Rancho Mission Rd)

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

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	2418	0	1740
0	0	0	0
3	1033	0	2306
1	222	0	466

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
1972	0	1402	4
63	0	84	1
1077	0	2452	

Northbound Approach

AM	285	446	0	44	AM
NOON	0	0	0	0	NOON
PM	550	338	0	146	PM
		1.5	0	1.5	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
0	0	AM
0	0	NOON
0	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
2418	0	1740	2035	0	1486
1255	0	2772	1077	0	2452

South Leg		
285	490	AM
0	0	NOON
550	484	PM

Total Volume Per Leg

North Leg
0 AM
0 NOON
0 PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
3673	0	4512	3112	0	3938

South Leg	
775	AM
0	NOON
1034	PM

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Rancho Mission Rd and San Diego Mission Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-008

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Rancho Mission Rd)

Lanes	1	1	1		
AM	55	131	108	276	AM
NOON	0	0	0	0	NOON
PM	89	174	121	462	PM

Eastbound Approach (San Diego Mission Rd)

Lanes	AM	NOON	PM
	384	0	260
1	40	0	118
2	72	0	325
0	76	0	273

Westbound Approach

AM	NOON	PM	Lanes
115	0	141	0
157	0	93	2
109	0	107	1
224	0	570	

Northbound Approach

AM	316	172	121	44	AM
NOON	0	0	0	0	NOON
PM	554	78	203	124	PM
		1	1	1	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	294	0	384
North Leg	276	0	462
West Leg	384	0	260
West Leg	188	0	716
East Leg	381	0	341
East Leg	224	0	570
South Leg	316	0	554
South Leg	337	0	405

Total Volume Per Leg

	AM	NOON	PM
North Leg	570	0	846
West Leg	572	0	976
East Leg	605	0	911
South Leg	653	0	959

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ward Rd and Rancho Mission Rd , San Diego

Date:	7/1/2015
Day:	Wednesday

Project #:	15-4208-009
City:	San Diego

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Ward Rd)

	Left	Thru	Right	
Lanes	0	2	0	
AM	12	323	0	306
NOON	0	0	0	0
PM	48	485	0	399

Eastbound Approach (Rancho Mission Rd)

	AM	NOON	PM
	26	0	85
1	24	0	23
0	0	0	0
1	59	0	25
Lanes	AM	NOON	PM

Westbound Approach

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

CONTROL

1-Way Stop (EB)

Northbound Approach

	Left	Thru	Right	
AM	382	14	282	0
NOON	0	0	0	0
PM	510	37	376	0
Lanes		0	2	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	
AM	335	306
NOON	0	0
PM	533	399

West Leg	AM	NOON	PM
	26	0	85
	83	0	48

East Leg	AM	NOON	PM
	0	0	0
	0	0	0

South Leg		
AM	382	296
NOON	0	0
PM	510	413

Total Volume Per Leg

North Leg	
AM	641
NOON	0
PM	932

West Leg	AM	NOON	PM
	109	0	133

East Leg	AM	NOON	PM
	0	0	0

South Leg	
AM	678
NOON	0
PM	923

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ward Rd and Camino Del Rio N , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-010

City: San Diego

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Ward Rd)

	Lanes 1	0	1		
AM	179	0	206	294	AM
NOON	0	0	0	0	NOON
PM	122	0	381	437	PM

Eastbound Approach (Camino Del Rio N)

Lanes	AM	NOON	PM
	549	0	255
1	35	0	252
2	41	0	401
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
259	0	185	1
370	0	133	2
0	0	0	0
247	0	782	

Northbound Approach

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

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
385	294	AM
0	0	NOON
503	437	PM

West Leg			East Leg		
AM	NOON	PM			
549	0	255	629	0	318
76	0	653	247	0	782
			AM	NOON	PM

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg		
679		AM
0		NOON
940		PM

West Leg			East Leg		
AM	NOON	PM			
625	0	908	876	0	1100
			AM	NOON	PM

South Leg	
0	AM
0	NOON
0	PM

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-15 NB Ramps and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-011

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (I-15 NB Ramps)

	Left	Thru	Right		
Lanes	1	0	0		
AM	371	0	0	1311	AM
NOON	0	0	0	0	NOON
PM	756	0	0	1360	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1760	0	1727
1	280	0	624
2	890	0	2018
0	0	0	0

Westbound Approach

	AM	NOON	PM	Lanes
	1031	0	736	1.5
	1389	0	971	2.5
	0	0	0	0
	1257	0	2788	

Northbound Approach

	Left	Thru	Right	
AM	0	0	367	AM
NOON	0	0	0	NOON
PM	0	0	770	PM
Lanes		0	0	1

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	371	1311	AM
	0	0	NOON
	756	1360	PM

West Leg	AM	NOON	PM
	1760	0	1727
	1170	0	2642

East Leg	AM	NOON	PM
	2420	0	1707
	1257	0	2788

	South Leg	
AM	0	367
NOON	0	0
PM	0	770

Total Volume Per Leg

	North Leg
AM	1682
NOON	0
PM	2116

West Leg	AM	NOON	PM
	2930	0	4369

East Leg	AM	NOON	PM
	3677	0	4495

	South Leg
AM	367
NOON	0
PM	770

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-15 SB Ramps and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-012

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (I-15 SB Ramps)

	Lanes 2	0.5	1.5		
AM	501	0	693	625	AM
NOON	0	0	0	0	NOON
PM	414	0	942	651	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1599	0	1532
1	210	0	331
3	480	0	1688
1	294	0	676

Westbound Approach

AM	NOON	PM	Lanes
415	0	320	1
1098	0	1118	3
253	0	288	1
1173	0	2630	

Northbound Approach

AM	547	0	0	0	AM
NOON	0	0	0	0	NOON
PM	964	0	0	0	PM
		0	0	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1194	625	AM
	0	0	NOON
	1356	651	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
1599	0	1532		1766	0	1726
984	0	2695		1173	0	2630

	South Leg	
AM	547	0
NOON	0	0
PM	964	0

Total Volume Per Leg

	North Leg
AM	1819
NOON	0
PM	2007

West Leg AM	NOON	PM		East Leg AM	NOON	PM
2583	0	4227		2939	0	4356

	South Leg
AM	547
NOON	0
PM	964

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mission Village Dr and Friars Rd WB , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-013

City: San Diego

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Mission Village Dr)

Lanes	1	2	0		
AM	177	297	1	596	AM
NOON	0	0	0	0	NOON
PM	387	775	0	602	PM

Eastbound Approach (Friars Rd WB)

	AM	NOON	PM
	299	0	540
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
301	0	288	1
0	0	0	1
64	0	203	0
1	0	0	
AM	NOON	PM	

Northbound Approach

AM	361	122	295	0	AM
NOON	0	0	0	0	NOON
PM	978	153	314	0	PM
		1	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	475	596	AM
	0	0	NOON
	1162	602	PM

West Leg			East Leg		
AM	NOON	PM			
299	0	540	365	0	491
0	0	0	1	0	0
			AM	NOON	PM

	South Leg	
AM	361	417
NOON	0	0
PM	978	467

Total Volume Per Leg

	North Leg
	1071 AM
	0 NOON
	1764 PM

West Leg			East Leg		
AM	NOON	PM			
299	0	540	366	0	491
			AM	NOON	PM

	South Leg
AM	778
NOON	0
PM	1445

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mission Village Dr and Friars Rd EB , San Diego

Date:	7/1/2015
Day:	Wednesday

Project #:	15-4208-014
City:	San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Mission Village Dr)

Lanes	0	2	1		
AM	0	138	237	418	AM
NOON	0	0	0	0	NOON
PM	0	605	378	465	PM

Eastbound Approach (Friars Rd EB)

Lanes	AM	NOON	PM
	0	0	0
0	108	0	245
1	0	0	1
1	69	0	263

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
305	0	531	

Northbound Approach

AM	207	0	310	68	AM
NOON	0	0	0	0	NOON
PM	868	0	220	152	PM
		0	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	375	418	AM
	0	0	NOON
	983	465	PM

West Leg				East Leg			
AM	NOON	PM		AM	NOON	PM	
0	0	0		0	0	0	
177	0	509		305	0	531	

	South Leg	
AM	207	378
NOON	0	0
PM	868	372

Total Volume Per Leg

	North Leg
	793 AM
	0 NOON
	1448 PM

West Leg				East Leg			
AM	NOON	PM		AM	NOON	PM	
177	0	509		305	0	531	

	South Leg
AM	585
NOON	0
PM	1240

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mission Village Dr and San Diego Mission Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-015

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Mission Village Dr)

	Left	Thru	Right		
Lanes	0	1.5	1.5		
AM	0	73	134	377	AM
NOON	0	0	0	0	NOON
PM	0	251	617	373	PM

Eastbound Approach (San Diego Mission Rd)

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

Westbound Approach

	AM	NOON	PM	Lanes
	361	0	195	1.5
	0	0	0	0
	16	0	17	0.5
	142	0	655	
	AM	NOON	PM	

Northbound Approach

	Left	Thru	Right	
AM	89	0	16	8	AM
NOON	0	0	0	0	NOON
PM	268	0	178	38	PM
Lanes		0	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	207	377	AM
	0	0	NOON
	868	373	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	377	0	212
0	0	0	142	0	655
			AM	NOON	PM

	South Leg	
AM	89	24
NOON	0	0
PM	268	216

Total Volume Per Leg

	North Leg
AM	584
NOON	0
PM	1241

West Leg			East Leg		
AM	NOON	PM			
0	0	0	519	0	867
			AM	NOON	PM

	South Leg
AM	113
NOON	0
PM	484

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Northside Dr and Friars Rd , San Diego

Date:	7/1/2015
Day:	Wednesday

Project #:	15-4208-016
City:	San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Northside Dr)

Lanes	1	1	2		
AM	114	32	160	71	AM
NOON	0	0	0	0	NOON
PM	65	23	76	278	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1266	0	1201
2	23	0	122
3	549	0	1914
1	191	0	240

Westbound Approach

Lanes	AM	NOON	PM
1	37	0	118
3	1079	0	905
2	424	0	533
	874	0	2711

Northbound Approach

					Lanes
AM	647	73	11	165	AM
NOON	0	0	0	0	NOON
PM	796	231	38	721	PM
		2	1	1	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	306	71	AM
	0	0	NOON
	164	278	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1266	0	1201	1540	0	1556
763	0	2276	874	0	2711

	South Leg	
AM	647	249
NOON	0	0
PM	796	990

Total Volume Per Leg

	North Leg
AM	377
NOON	0
PM	442

West Leg AM	NOON	PM	East Leg AM	NOON	PM
2029	0	3477	2414	0	4267

	South Leg
AM	896
NOON	0
PM	1786

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Fenton Pkwy and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-017

City: San Diego

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Fenton Pkwy)

	Lanes 1.5	0.5	2		
AM	139	17	54	43	AM
NOON	0	0	0	0	NOON
PM	67	6	17	199	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1304	0	1322
1	20	0	121
3	578	0	1858
1	63	0	369

Westbound Approach

Lanes	AM	NOON	PM
1	15	0	61
3	1083	0	961
2	165	0	185
	762	0	2270

Northbound Approach

				Lanes
AM	245	82	8	130	AM
NOON	0	0	0	0	NOON
PM	560	294	17	395	PM
		2	1	1	

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	210	0	90
	43	0	199
West Leg	1304	0	1322
	661	0	2348
East Leg	1263	0	1207
	762	0	2270
South Leg	245	0	560
	220	0	706

Total Volume Per Leg

	AM	NOON	PM
North Leg	253	0	289
West Leg	1965	0	3670
East Leg	2025	0	3477
South Leg	465	0	1266

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Qualcomm Way and Friars Rd WB , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-018

City: San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Qualcomm Way)

	Lanes 0	1	0		
AM	4	36	0	27	AM
NOON	0	0	0	0	NOON
PM	7	6	1	15	PM

Eastbound Approach (Friars Rd WB)

	AM	NOON	PM
	380	0	460
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
4	0	3	0
1	0	5	0.5
154	0	400	1.5
0	0	1	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	190	375	23	0	AM
NOON	0	0	0	0	NOON
PM	406	448	12	0	PM
		1	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	40	27	AM
	0	0	NOON
	14	15	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
380	0	460		159	0	408
0	0	0		0	0	1

	South Leg	
AM	190	398
NOON	0	0
PM	406	460

Total Volume Per Leg

	North Leg
AM	67
NOON	0
PM	29

West Leg AM	NOON	PM		East Leg AM	NOON	PM
380	0	460		159	0	409

	South Leg
AM	588
NOON	0
PM	866

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Qualcomm Way and Friars Rd EB , San Diego

Date:	7/1/2015
Day:	Wednesday

Project #:	15-4208-019
City:	San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Qualcomm Way)

	Lanes 0	2	1		
AM	0	171	16	397	AM
NOON	0	0	0	0	NOON
PM	0	392	15	460	PM

Eastbound Approach (Friars Rd EB)

Lanes	AM	NOON	PM
	0	0	2
0.5	64	0	44
0.5	2	0	5
1	103	0	265

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
188	0	352	

Northbound Approach

	0	2	1	Lanes
AM	274	0	333	170	AM
NOON	0	0	0	0	NOON
PM	657	2	416	332	PM

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	187	397	AM
	0	0	NOON
	407	460	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	2	0	0	0
169	0	314	188	0	352
			AM	NOON	PM

	South Leg	
AM	274	503
NOON	0	0
PM	657	750

Total Volume Per Leg

	North Leg
AM	584
NOON	0
PM	867

West Leg			East Leg		
AM	NOON	PM			
169	0	316	188	0	352
			AM	NOON	PM

	South Leg
AM	777
NOON	0
PM	1407

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Qualcomm Way and Camino De La Reina , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-020

City: San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Qualcomm Way)

	Lanes 0	3	2	
AM	43	361	74	898
NOON	0	0	0	0
PM	134	997	162	900

Eastbound Approach (Camino De La Reina)

Lanes	AM	NOON	PM
	229	0	493
1	44	0	163
1.5	76	0	341
1.5	96	0	347

Westbound Approach

Lanes	AM	NOON	PM
1	104	0	110
2	106	0	175
2	108	0	325
	465	0	679

CONTROL: Signalized

Northbound Approach

				Lanes
AM	565	80	750	315
NOON	0	0	0	0
PM	1669	184	627	176
Lanes		2	3	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	South Leg	East Leg	West Leg
AM	478	898	318	229
NOON	0	0	0	0
PM	1293	900	610	493
AM	565	1145	465	216
NOON	0	0	0	0
PM	1669	987	679	851

Total Volume Per Leg

	North Leg	East Leg	West Leg
AM	1376	783	445
NOON	0	0	0
PM	2193	1289	1344
AM	1710		
NOON	0		
PM	2656		

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Qualcomm Way and I-8 WB Ramps , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-021

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Qualcomm Way)

	Lanes 1	2	0	
AM	273	326	0	1104 AM
NOON	0	0	0	0 NOON
PM	593	1074	0	999 PM

Eastbound Approach (I-8 WB Ramps)

Lanes	AM	NOON	PM
	456	0	903
0	34	0	71
2	0	0	0
0	96	0	428

Westbound Approach

AM	NOON	PM	Lanes
369	0	311	1
91	0	142	0.5
21	0	31	0.5
0	0	0	

CONTROL: Signalized

Northbound Approach

AM	443	92	701	0 AM
NOON	0	0	0	0 NOON
PM	1533	168	617	0 PM
		1	3	0 Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	599	1104	AM
	0	0	NOON
	1667	999	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
456	0	903		481	0	484
130	0	499		0	0	0

	South Leg	
AM	443	793
NOON	0	0
PM	1533	785

Total Volume Per Leg

	North Leg
AM	1703
NOON	0
PM	2666

West Leg AM	NOON	PM	East Leg AM	NOON	PM
586	0	1402	481	0	484

	South Leg
AM	1236
NOON	0
PM	2318

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Frazee Rd and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-022

City: San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Frazee Rd)

	Lanes 0	2	2		
AM	200	28	22	932	AM
NOON	0	0	0	0	NOON
PM	611	69	120	615	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1426	0	2137
2	707	0	439
3	882	0	1979
1	423	0	566

Westbound Approach

AM	NOON	PM	Lanes
146	0	109	1
1114	0	1181	3
40	0	120	1
941	0	2223	

Northbound Approach

AM	491	112	79	37	AM
NOON	0	0	0	0	NOON
PM	755	345	67	124	PM
		2	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	250	932	AM
	0	0	NOON
	800	615	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1426	0	2137	1300	0	1410
2012	0	2984	941	0	2223

	South Leg	
AM	491	228
NOON	0	0
PM	755	536

Total Volume Per Leg

	North Leg
	1182 AM
	0 NOON
	1415 PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
3438	0	5121	2241	0	3633

	South Leg
AM	719
NOON	0
PM	1291

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

SR-163 NB Ramps and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-023

City: San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (SR-163 NB Ramps)

	Lanes 1	0	0		
AM	634	0	0	943	AM
NOON	0	0	0	0	NOON
PM	987	0	0	1616	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1544	0	2390
1	387	0	719
3	1199	0	2312
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
556	0	897	1
910	0	1403	2
0	0	0	0
2003	0	3007	

Northbound Approach

AM	0	0	0	804	AM
NOON	0	0	0	0	NOON
PM	0	0	0	695	PM
		0	0	1	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	634	943	AM
	0	0	NOON
	987	1616	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
1544	0	2390		1466	0	2300
1586	0	3031		2003	0	3007

	South Leg	
AM	0	804
NOON	0	0
PM	0	695

Total Volume Per Leg

	North Leg
AM	1577
NOON	0
PM	2603

West Leg AM	NOON	PM		East Leg AM	NOON	PM
3130	0	5421		3469	0	5307

	South Leg
AM	804
NOON	0
PM	695

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ulric St and SR-163 SB On-Ramp , San Diego

Date:	7/1/2015
Day:	Wednesday

Project #:	15-4208-024
City:	San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Ulric St)

	Lanes 0	2	1		
AM	0	359	453	421	AM
NOON	0	0	0	0	NOON
PM	0	585	338	828	PM

Eastbound Approach (SR-163 SB On-Ramp)

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

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
453	0	338	

CONTROL: No Control

Northbound Approach

AM	359	0	421	0	AM
NOON	0	0	0	0	NOON
PM	585	0	828	0	PM
		0	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	812	421	AM
	0	0	NOON
	923	828	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
0	0	0	0	0	0
0	0	0	453	0	338

	South Leg	
AM	359	421
NOON	0	0
PM	585	828

Total Volume Per Leg

	North Leg
AM	1233
NOON	0
PM	1751

West Leg AM	NOON	PM	East Leg AM	NOON	PM
0	0	0	453	0	338

	South Leg
AM	780
NOON	0
PM	1413

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ulric St and Friars Rd , San Diego

Date: 7/1/2015

Day: Wednesday

Project #: 15-4208-025

City: San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Ulric St)

Lanes	1	0	2		
AM	71	6	280	418	AM
NOON	0	0	0	0	NOON
PM	166	6	419	819	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	1144	0	1721
1	31	0	115
3	524	0	1661
1	294	0	675

Westbound Approach

Lanes	AM	NOON	PM
1	363	0	657
3	747	0	1154
0	0	0	0
	1568	0	2992

Northbound Approach

	1.5	0.5	1	Lanes
AM	300	326	24	764
NOON	0	0	0	0
PM	681	401	47	912

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	357	418	AM
NOON	0	0	NOON
PM	591	819	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
1144	0	1721	1110	0	1811
849	0	2451	1568	0	2992

	South Leg	
AM	300	1114
NOON	0	0
PM	681	1360

Total Volume Per Leg

	North Leg
AM	775
NOON	0
PM	1410

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
1993	0	4172	2678	0	4803

	South Leg
AM	1414
NOON	0
PM	2041

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Friars Rd @ Mission Gorge Rd

Date of Count: *Thursday, October 03, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Friars Rd @ Mission Gorge Rd

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	0	0	2	55	415	5	39	0	23	0	106	44	689
7:15 AM	0	0	4	66	564	7	47	0	29	0	118	37	872
7:30 AM	0	0	4	60	565	6	56	0	29	0	122	43	885
7:45 AM	0	0	3	97	432	10	54	0	48	0	132	57	833
8:00 AM	0	0	4	52	364	10	51	0	50	0	116	41	688
8:15 AM	0	0	3	61	374	12	56	0	65	0	128	39	738
8:30 AM	0	0	7	53	291	5	39	0	64	0	150	36	645
8:45 AM	0	0	3	49	261	6	44	0	60	0	112	41	576
Total	0	0	30	493	3,266	61	386	0	368	0	984	338	5,926

AM Intersection Peak Hour : **7:00 AM - 8:00 AM** Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	0	0	13	278	1,976	28	196	0	129	0	478	181	3,279
PHF	#####	#####	0.81	0.72	0.87	0.70	0.88	#####	0.67	#####	0.91	0.79	0.93
Movement PHF		0.81			0.90			0.80			0.87		0.93

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	0	0	4	62	198	4	66	0	95	0	332	69	830
4:15 PM	0	0	4	45	176	6	70	0	76	0	450	54	881
4:30 PM	0	0	3	58	154	11	101	0	126	0	360	50	863
4:45 PM	0	0	5	58	144	7	70	0	107	0	527	60	978
5:00 PM	0	0	6	54	215	8	102	0	120	0	466	60	1,031
5:15 PM	0	0	8	50	202	7	67	0	134	0	462	55	985
5:30 PM	0	0	9	42	162	4	68	0	103	0	465	80	933
5:45 PM	0	0	5	72	149	6	58	0	90	0	435	66	881
Total	0	0	44	441	1,400	53	602	0	851	0	3,497	494	7,382

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	0	0	28	204	723	26	307	0	464	0	1920	255	3927
PHF	#####	#####	0.778	0.879	0.841	0.813	0.752	#####	0.866	#####	0.911	0.797	0.95
Movement PHF		0.78			0.86			0.87			0.93		0.95

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Twain Ave @ Mission Gorge Rd

Date of Count: *Thursday, October 03, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Twain Ave @ Mission Gorge Rd

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	0	71	5	25	16	4	16	140	12	3	1	13	306
7:15 AM	0	107	5	30	21	7	15	171	17	9	3	9	394
7:30 AM	0	113	11	43	44	2	16	149	18	6	5	15	422
7:45 AM	4	131	20	41	55	1	32	200	29	7	7	19	546
8:00 AM	6	108	12	29	46	4	25	211	27	9	7	24	508
8:15 AM	2	113	13	23	17	3	29	242	15	6	4	29	496
8:30 AM	0	88	9	28	25	4	34	173	14	11	9	27	422
8:45 AM	1	97	12	22	22	2	22	205	9	9	8	20	429
Total	13	828	87	241	246	27	189	1,491	141	60	44	156	3,523

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.90**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	12	465	56	136	162	10	102	802	89	28	23	87	1,972
PHF	0.50	0.89	0.70	0.79	0.74	0.63	0.80	0.83	0.77	0.78	0.82	0.75	0.90
Movement PHF		0.86			0.79			0.87			0.86		0.90

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	5	188	13	16	9	7	18	178	20	18	29	19	520
4:15 PM	5	152	11	20	14	5	15	157	15	20	20	20	454
4:30 PM	6	168	13	34	7	10	20	216	25	25	29	29	582
4:45 PM	5	189	13	20	15	6	15	180	25	19	30	35	552
5:00 PM	4	198	8	25	11	4	25	214	41	20	30	43	623
5:15 PM	6	147	7	22	11	12	14	207	37	28	37	34	562
5:30 PM	4	164	12	16	11	6	18	163	31	26	22	20	493
5:45 PM	5	137	6	19	10	3	9	142	25	23	23	26	428
Total	40	1343	83	172	88	53	134	1,457	219	179	220	226	4,214

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	21	702	41	101	44	32	74	817	128	92	126	141	2319
PHF	0.88	0.886	0.788	0.743	0.733	0.667	0.74	0.946	0.78	0.821	0.851	0.82	0.93
Movement PHF		0.91			0.87			0.91			0.91		0.93

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Twain Ave @ Fairmount Ave

Date of Count: *Tuesday, October 08, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Twain Ave @ Fairmount Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	2	11	7	5	15	4	19	22	7	11	14	12	129
7:15 AM	1	10	10	7	29	6	13	19	8	7	20	13	143
7:30 AM	0	15	36	9	63	1	33	30	4	12	17	11	231
7:45 AM	1	22	81	10	71	10	27	42	11	16	19	26	336
8:00 AM	2	36	32	13	44	6	21	70	12	13	15	19	283
8:15 AM	3	21	20	16	39	5	27	53	12	13	7	12	228
8:30 AM	0	22	23	13	25	8	23	44	9	10	19	12	208
8:45 AM	3	30	13	7	14	5	26	32	12	17	15	12	186
Total	12	167	222	80	300	45	189	312	75	99	126	117	1,744

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.80**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	6	94	169	48	217	22	108	195	39	54	58	68	1,078
PHF	0.50	0.65	0.52	0.75	0.76	0.55	0.82	0.70	0.81	0.84	0.76	0.65	0.80
Movement PHF		0.65			0.79			0.83			0.74		0.80

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	5	37	25	14	22	5	31	17	17	5	25	33	236
4:15 PM	2	32	20	5	21	5	14	20	15	7	28	10	179
4:30 PM	8	40	27	8	27	5	21	25	22	17	35	24	259
4:45 PM	8	32	18	11	28	5	17	26	21	15	48	24	253
5:00 PM	13	51	36	10	23	6	25	18	10	16	40	26	274
5:15 PM	4	29	18	10	22	3	16	24	16	17	63	29	251
5:30 PM	3	29	22	7	19	4	14	17	15	6	50	29	215
5:45 PM	2	23	18	4	17	1	18	15	9	12	47	22	188
Total	45	273	184	69	179	34	156	162	125	95	336	197	1,855

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	33	152	99	39	100	19	79	93	69	65	186	103	1037
PHF	0.63	0.745	0.688	0.886	0.893	0.792	0.79	0.894	0.784	0.956	0.738	0.888	0.95
Movement PHF		0.71			0.90			0.89			0.81		0.95

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Mission Gorge Rd @ Fairmount Ave

Date of Count: *Thursday, October 03, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Mission Gorge Rd @ Fairmount Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	0	25	0	3	0	0	37	189	6	0	0	25	285
7:15 AM	2	146	2	4	0	0	87	223	6	1	0	68	539
7:30 AM	3	151	3	7	0	1	132	218	3	1	0	78	597
7:45 AM	2	162	5	0	1	0	152	304	3	1	0	100	730
8:00 AM	3	136	2	2	1	2	160	296	4	2	0	104	712
8:15 AM	1	145	3	3	0	0	139	310	15	3	2	74	695
8:30 AM	1	141	0	3	1	1	123	235	6	0	1	94	606
8:45 AM	1	130	5	3	0	0	118	270	5	3	0	99	634
Total	13	1,036	20	25	3	4	948	2,045	48	11	3	642	4,798

AM Intersection Peak Hour : **7:45 AM - 8:45 AM** Intersection PHF : **0.94**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	7	584	10	8	3	3	574	1,145	28	6	3	372	2,743
PHF	0.58	0.90	0.50	0.67	0.75	0.38	0.90	0.92	0.47	0.50	0.38	0.89	0.94
Movement PHF		0.89			0.70			0.94			0.90		0.94

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	3	170	0	9	0	0	63	215	6	3	1	71	541
4:15 PM	0	208	0	5	0	2	70	183	4	1	0	94	567
4:30 PM	4	228	4	5	0	1	64	230	4	4	1	81	626
4:45 PM	3	211	1	4	1	5	59	217	10	1	2	88	602
5:00 PM	2	223	1	10	3	0	59	251	6	3	0	78	636
5:15 PM	3	230	1	7	1	5	55	244	8	1	1	76	632
5:30 PM	2	237	3	9	1	2	49	212	8	2	0	76	601
5:45 PM	0	198	7	2	0	2	38	204	5	1	1	63	521
Total	17	1705	17	51	6	17	457	1,756	51	16	6	627	4,726

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	12	892	7	26	5	11	237	942	28	9	4	323	2496
PHF	0.75	0.97	0.438	0.65	0.417	0.55	0.926	0.938	0.7	0.563	0.5	0.918	0.98
Movement PHF		0.97			0.81			0.95			0.92		0.98

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Camino Del Rio N. @ Fairmount Ave

Date of Count: *Thursday, October 03, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Camino Del Rio N. @ Fairmount Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	6	152	34	110	81	80	64	169	27	48	3	65	839
7:15 AM	3	199	38	118	66	68	102	221	46	43	2	78	984
7:30 AM	5	203	55	114	118	82	84	239	41	43	7	68	1,059
7:45 AM	5	216	74	91	112	73	116	320	34	79	3	56	1,179
8:00 AM	3	223	56	110	100	83	103	330	37	51	5	68	1,169
8:15 AM	5	246	44	102	93	66	96	375	58	48	2	80	1,215
8:30 AM	8	207	54	107	82	94	82	250	41	27	3	57	1,012
8:45 AM	2	199	42	73	68	81	68	278	82	28	10	89	1,020
Total	37	1,645	397	825	720	627	715	2,182	366	367	35	561	8,477

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	18	888	229	417	423	304	399	1,264	170	221	17	272	4,622
PHF	0.90	0.90	0.77	0.91	0.90	0.92	0.86	0.84	0.73	0.70	0.61	0.85	0.95
Movement PHF		0.96			0.91			0.87			0.92		0.95

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	3	287	11	182	30	51	58	205	49	26	26	142	1,070
4:15 PM	5	312	14	155	36	44	47	187	33	22	23	145	1,023
4:30 PM	2	323	13	167	28	65	67	213	43	24	21	143	1,109
4:45 PM	4	303	16	169	35	52	60	207	44	22	24	148	1,084
5:00 PM	0	338	10	157	39	56	66	223	45	44	25	132	1,135
5:15 PM	3	324	9	170	37	50	71	204	45	33	36	158	1,140
5:30 PM	1	308	20	120	31	49	57	183	24	34	21	173	1,021
5:45 PM	6	271	7	112	21	49	47	165	28	29	20	121	876
Total	24	2466	100	1,232	257	416	473	1,587	311	234	196	1,162	8,458

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	9	1288	48	663	139	223	264	847	177	123	106	581	4468
PHF	0.56	0.953	0.75	0.975	0.891	0.858	0.93	0.95	0.983	0.699	0.736	0.919	0.98
Movement PHF		0.97			0.99			0.96			0.89		0.98

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: I-8 EB Off Ramp @ Fairmount Ave

Date of Count: *Thursday, October 03, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: I-8 EB Off Ramp @ Fairmount Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	0	100	0	0	0	0	15	103	0	163	0	0	381
7:15 AM	0	143	0	0	0	0	26	140	0	198	0	0	507
7:30 AM	0	140	0	0	0	0	27	183	0	226	0	0	576
7:45 AM	0	142	0	0	0	0	37	215	0	230	0	0	624
8:00 AM	0	179	0	0	0	0	32	203	0	243	0	0	657
8:15 AM	0	171	0	0	0	0	22	160	0	264	0	0	617
8:30 AM	0	152	0	0	0	0	20	144	0	237	0	0	553
8:45 AM	0	135	0	0	0	0	20	159	0	238	0	0	552
Total	0	1,162	0	0	0	0	199	1,307	0	1,799	0	0	4,467

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.94**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	0	632	0	0	0	0	118	761	0	963	0	0	2,474
PHF	#####	0.88	#####	#####	#####	#####	0.80	0.88	#####	0.91	#####	#####	0.94
Movement PHF		0.88			#DIV/0!			0.87			0.91		0.94

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	0	246	0	0	0	0	5	112	0	187	0	0	550
4:15 PM	0	297	0	0	0	0	8	113	0	173	0	0	591
4:30 PM	0	227	0	0	0	0	10	111	0	200	0	0	548
4:45 PM	0	279	0	0	0	0	4	121	0	196	0	0	600
5:00 PM	0	270	0	0	0	0	9	131	0	202	0	1	613
5:15 PM	0	295	0	0	0	0	8	137	0	163	0	0	603
5:30 PM	0	286	0	0	0	0	9	89	0	186	0	0	570
5:45 PM	0	235	0	0	0	0	8	89	0	160	0	0	492
Total	0	2135	0	0	0	0	61	903	0	1,467	0	1	4,567

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	0	1130	0	0	0	0	30	478	0	747	0	1	2386
PHF	#####	0.958	#####	#####	#####	#####	0.833	0.872	#####	0.925	#####	0.25	0.97
Movement PHF		0.96			#DIV/0!			0.88			0.92		0.97

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

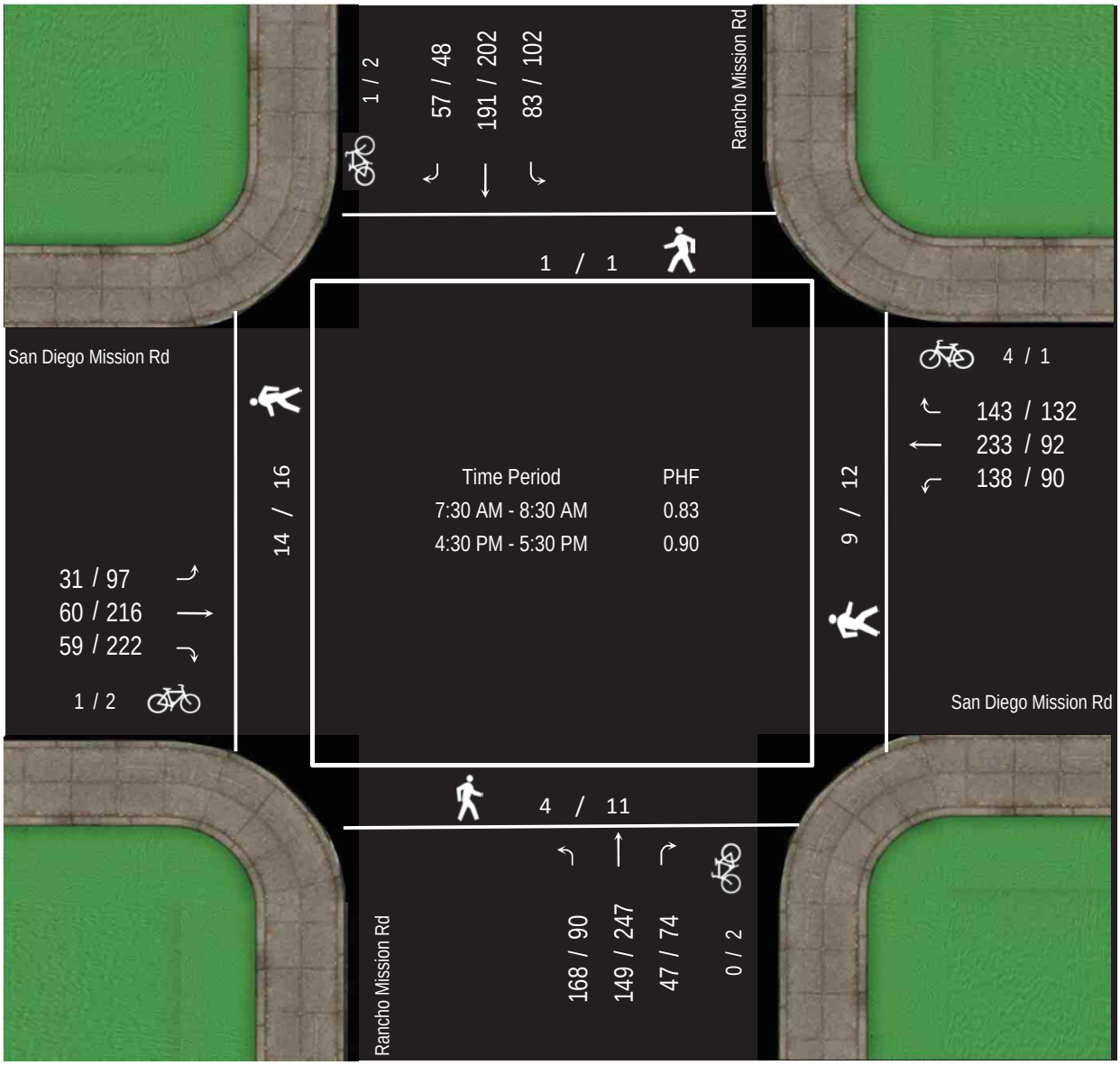
Location: San Diego Mission Rd @ Rancho Mission Rd

Date of Count: *Tuesday, October 08, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: San Diego Mission Rd @ Rancho Mission Rd

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	17	28	4	9	19	25	31	33	15	7	12	14	214
7:15 AM	19	39	11	15	24	34	49	46	8	13	14	10	282
7:30 AM	19	38	9	36	62	30	37	43	13	10	10	16	323
7:45 AM	26	62	12	39	80	36	53	51	11	6	17	18	411
8:00 AM	24	48	18	43	51	33	41	23	10	6	17	11	325
8:15 AM	14	43	18	20	40	44	37	32	13	9	16	14	300
8:30 AM	18	39	20	23	30	25	30	35	12	7	21	15	275
8:45 AM	17	30	14	12	25	22	23	22	5	7	18	16	211
Total	154	327	106	197	331	249	301	285	87	65	125	114	2,341

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.83**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	83	191	57	138	233	143	168	149	47	31	60	59	1,359
PHF	0.80	0.77	0.79	0.80	0.73	0.81	0.79	0.73	0.90	0.78	0.88	0.82	0.83
Movement PHF		0.83			0.83			0.79			0.91		0.83

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	21	44	15	16	36	31	28	42	5	18	32	43	331
4:15 PM	17	50	17	11	17	25	16	37	8	13	29	30	270
4:30 PM	24	38	12	28	26	36	16	62	13	22	41	55	373
4:45 PM	33	51	12	19	20	28	26	46	18	21	47	49	370
5:00 PM	26	56	6	25	23	47	24	67	17	24	57	49	421
5:15 PM	19	57	18	18	23	21	24	72	26	30	71	69	448
5:30 PM	27	47	13	14	11	24	23	45	17	26	62	60	369
5:45 PM	26	33	14	17	23	21	10	51	22	21	48	41	327
Total	193	376	107	148	179	233	167	422	126	175	387	396	2,909

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.90**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	102	202	48	90	92	132	90	247	74	97	216	222	1612
PHF	0.77	0.886	0.667	0.804	0.885	0.702	0.865	0.858	0.712	0.808	0.761	0.804	0.90
Movement PHF		0.92			0.83			0.84			0.79		0.90

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Friars Rd @ I-15 NB Ramps

Date of Count: *Tuesday, October 08, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Friars Rd @ I-15 NB Ramps

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	0	0	93	0	339	231	0	0	0	77	255	0	995
7:15 AM	0	0	73	0	438	229	0	0	0	102	254	0	1,096
7:30 AM	0	0	85	0	469	227	0	0	0	114	283	0	1,178
7:45 AM	0	0	123	0	461	203	0	0	0	89	409	0	1,285
8:00 AM	0	0	102	0	469	205	0	0	0	92	323	0	1,191
8:15 AM	0	0	151	0	401	238	0	0	0	69	322	0	1,181
8:30 AM	0	0	129	0	288	211	0	0	0	87	242	0	957
8:45 AM	0	0	171	0	260	178	0	0	0	81	324	0	1,014
Total	0	0	927	0	3,125	1,722	0	0	0	711	2,412	0	8,897

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.94**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	0	0	461	0	1,800	873	0	0	0	364	1,337	0	4,835
PHF	#####	#####	0.76	#####	0.96	0.92	#####	#####	#####	0.80	0.82	#####	0.94
Movement PHF		0.76			0.96			#DIV/0!			0.85		0.94

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	0	0	163	0	252	199	0	0	0	124	602	0	1,340
4:15 PM	0	0	152	0	220	180	0	0	0	142	736	0	1,430
4:30 PM	0	0	133	0	221	206	0	0	0	137	675	0	1,372
4:45 PM	0	0	144	0	257	178	0	0	0	143	780	0	1,502
5:00 PM	0	0	163	0	270	214	0	0	0	123	742	0	1,512
5:15 PM	0	0	153	0	215	203	0	0	0	140	853	0	1,564
5:30 PM	0	0	140	0	190	188	0	0	0	158	775	0	1,451
5:45 PM	0	0	119	0	204	166	0	0	0	121	703	0	1,313
Total	0	0	1167	0	1,829	1,534	0	0	0	1,088	5,866	0	11,484

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	0	0	600	0	932	783	0	0	0	564	3150	0	6029
PHF	#####	#####	0.92	#####	0.863	0.915	#####	#####	#####	0.892	0.923	#####	0.96
Movement PHF		0.92			0.89			#DIV/0!			0.94		0.96

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Friars Rd @ I-15 SB Ramps

Date of Count: *Tuesday, October 08, 2013*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *13-0106*

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Friars Rd @ I-15 SB Ramps

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
7:00 AM	126	0	108	72	215	145	0	0	0	49	119	72	906
7:15 AM	140	0	128	84	284	143	0	0	0	50	142	71	1,042
7:30 AM	175	0	128	92	356	106	0	0	0	71	138	76	1,142
7:45 AM	248	0	158	93	360	131	0	0	0	66	144	49	1,249
8:00 AM	169	0	141	86	436	49	0	0	0	32	137	66	1,116
8:15 AM	172	0	133	53	370	129	0	0	0	48	137	69	1,111
8:30 AM	133	0	123	46	244	127	0	0	0	59	152	57	941
8:45 AM	138	0	139	49	283	99	0	0	0	55	127	46	936
Total	1,301	0	1,058	575	2,548	929	0	0	0	430	1,096	506	8,443

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	764	0	560	324	1,522	415	0	0	0	217	556	260	4,618
PHF	0.77	#####	0.89	0.87	0.87	0.79	#####	#####	#####	0.76	0.97	0.86	0.92
Movement PHF		0.82			0.97			#DIV/0!			0.91		0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOTAL
4:00 PM	198	0	93	66	228	121	0	0	0	101	299	158	1,264
4:15 PM	259	0	94	68	242	62	0	0	0	71	330	125	1,251
4:30 PM	340	0	154	68	204	82	0	0	0	67	244	105	1,264
4:45 PM	270	0	200	61	255	85	0	0	0	62	357	100	1,390
5:00 PM	274	0	245	74	257	102	0	0	0	73	316	91	1,432
5:15 PM	316	0	217	73	236	59	0	0	0	85	369	81	1,436
5:30 PM	215	0	203	75	238	17	0	0	0	88	437	97	1,370
5:45 PM	307	2	138	47	197	79	0	0	0	74	286	120	1,250
Total	2179	2	1344	532	1,857	607	0	0	0	621	2,638	877	10,657

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	1075	0	865	283	986	263	0	0	0	308	1479	369	5628
PHF	0.85	#####	0.883	0.943	0.959	0.645	#####	#####	#####	0.875	0.846	0.923	0.98
Movement PHF		0.91			0.88			#DIV/0!			0.87		0.98

ITM Peak Hour Summary

Prepared by:

NDS

Mission Gorge Rd and Friars Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-001

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Mission Gorge Rd

Lanes	0	0	0		
AM	18	0	0	28	AM
NOON	0	0	0	0	NOON
PM	22	0	0	23	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	507	0	760
0	0	0	0
3	284	0	726
1	63	0	157
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
28	0	23	0
423	0	582	3
127	0	168	2
397	0	932	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	190	66	0	113	AM
NOON	0	0	0	0	NOON
PM	325	156	0	206	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
18	28	AM
0	0	NOON
22	23	PM

West Leg			East Leg		
AM	NOON	PM			
507	0	760	578	0	773
347	0	883	397	0	932
			AM	NOON	PM

South Leg		
190	179	AM
0	0	NOON
325	362	PM

Total Volume Per Leg

North Leg		
46		AM
0		NOON
45		PM

West Leg			East Leg		
AM	NOON	PM			
854	0	1643	975	0	1705
			AM	NOON	PM

South Leg	
369	AM
0	NOON
687	PM

ITM Peak Hour Summary

Prepared by:

NDS

Mission Gorge Rd and Twain Ave , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-002

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Mission Gorge Rd)

Lanes	0	2	1		
AM	28	172	5	240	AM
NOON	0	0	0	0	NOON
PM	32	368	11	439	PM

Eastbound Approach (Twain Ave)

	AM	NOON	PM
	86	0	96
1	33	0	56
1	28	0	43
0	19	0	42
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	8	0	13	0
	38	0	40	1
	52	0	55	1
	69	0	122	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	243	20	199	36	AM
NOON	0	0	0	0	NOON
PM	465	24	370	68	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
205	240	AM
0	0	NOON
411	439	PM

West Leg			East Leg		
AM	NOON	PM			
86	0	96	98	0	108
80	0	141	69	0	122
			AM	NOON	PM

South Leg		
243	255	AM
0	0	NOON
465	462	PM

Total Volume Per Leg

North Leg
445 AM
0 NOON
850 PM

West Leg			East Leg		
AM	NOON	PM			
166	0	237	167	0	230
			AM	NOON	PM

South Leg
498 AM
0 NOON
927 PM

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and Twain Ave , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-003
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Fairmount Ave

Lanes	0	1	1		
AM	17	34	3	78	AM
NOON	0	0	0	0	NOON
PM	41	44	5	77	PM

Twain Ave

Eastbound Approach

	AM	NOON	PM
	135	0	168
0	22	0	16
1	51	0	73
1	81	0	66
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
9	0	7	0
40	0	63	2
13	0	27	0
76	0	117	
AM	NOON	PM	

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	128	78	47	22
NOON	0	0	0	0
PM	137	64	54	39
		1	1	0

AM NOON PM Lanes

Total Ins & Outs

	AM	NOON	PM
North Leg	54	0	90
	78	0	77
East Leg	62	0	97
	76	0	117
South Leg	128	0	137
	147	0	157
West Leg	135	0	168
	154	0	155

Total Volume Per Leg

	AM	NOON	PM
North Leg	132	0	167
East Leg	138	0	214
South Leg	275	0	294
West Leg	289	0	323

ITM Peak Hour Summary

Prepared by:

NDS

Mission Gorge Rd and Fairmount Ave , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-004

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach — Mission Gorge Rd

Lanes	0	2	1		
AM	4	220	4	292	AM
NOON	0	0	0	0	NOON
PM	12	452	2	477	PM

Eastbound Approach — Fairmount Ave

	AM	NOON	PM
	240	0	249
0.3	5	0	11
0.3	1	0	1
1.3	159	0	260
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	2	0
	0	0	1	1
	5	0	11	0
	19	0	15	
	AM	NOON	PM	

Northbound Approach

AM	384	236	287	14	AM
NOON	0	0	0	0	NOON
PM	723	236	464	12	PM
		2	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg			East Leg			South Leg			West Leg		
AM	228	292	AM	5	0	14	384	537	AM	240	0	249
NOON	0	0	NOON	19	0	15	0	0	NOON	165	0	272
PM	466	477	PM	AM	NOON	PM	723	712	PM	AM	NOON	PM

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	520	24	921	405
NOON	0	0	0	0
PM	943	29	1435	521

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and Alvarado Canyon Rd , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-005
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Fairmount Ave

Lanes	1	2	2		
AM	42	339	10	543	AM
NOON	0	0	0	0	NOON
PM	69	658	6	717	PM

Eastbound Approach

Alvarado Canyon Rd

	AM	NOON	PM
	231	0	353
1.5	34	0	53
0.5	16	0	21
1	138	0	291
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

	AM	NOON	PM	Lanes
	152	0	148	1.5
	74	0	79	1
	170	0	303	1.5
	126	0	61	
	AM	NOON	PM	

Northbound Approach

AM	647	115	357	100	AM
NOON	0	0	0	0	NOON
PM	1252	205	516	34	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	391	543	AM
NOON	0	0	NOON
PM	733	717	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
231	0	353	396	0	530
188	0	365	126	0	61

	South Leg	
AM	647	572
NOON	0	0
PM	1252	755

Total Volume Per Leg

	North Leg
AM	934
NOON	0
PM	1450

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
419	0	718	522	0	591

	South Leg
AM	1219
NOON	0
PM	2007

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and I-8 EB Ramps , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-006

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Fairmount Ave)

	Left	Thru	Right	
Lanes	0	3	0	
AM	0	293	0	576 AM
NOON	0	0	0	0 NOON
PM	0	625	0	728 PM

Eastbound Approach (I-8 EB Ramps)

Lanes	AM	NOON	PM
	44	0	14
2	315	0	415
0	0	0	0
3	548	0	1417

Westbound Approach

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

CONTROL

Signalized

Northbound Approach

	Left	Thru	Right	
AM	841	44	261	0 AM
NOON	0	0	0	0 NOON
PM	2042	14	313	0 PM
Lanes		1	2	0 Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
AM	293	576	0	0	0	44	0	14	841	305
NOON	0	0	0	0	0	863	0	1832	0	0
PM	625	728	0	0	0				2042	327

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	869	0	907	1146
NOON	0	0	0	0
PM	1353	0	1846	2369

ITM Peak Hour Summary

Prepared by:

NDS

Rancho Mission Rd and Friars Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-007

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Rancho Mission Rd

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

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	703	0	1204
0	0	0	0
3	445	0	1018
1	182	0	336

Westbound Approach

Lanes	AM	NOON	PM
0	0	0	0
4	550	0	974
1	18	0	56
	482	0	1086

CONTROL

Signalized

Northbound Approach

AM	200	153	0	37
NOON	0	0	0	0
PM	392	230	0	68
Lanes		1.5	0	1.5

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	0	0	568	0	1030	703	0	1204
NOON	0	0	482	0	1086	627	0	1354
PM	0	0						
						AM	NOON	PM
						200	190	
						0	0	
						392	298	

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	0	1050	1330	390
NOON	0	0	0	0
PM	0	2116	2558	690

ITM Peak Hour Summary

Prepared by:

NDS

Rancho Mission Rd and San Diego Mission Rd , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-008
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Rancho Mission Rd

Lanes	1	1	1		
AM	23	46	65	119	AM
NOON	0	0	0	0	NOON
PM	55	102	102	216	PM

San Diego Mission Rd

Eastbound Approach

Lanes	AM	NOON	PM
	97	0	156
1	14	0	51
2	50	0	51
0	30	0	56

CONTROL

Signalized

Westbound Approach

Lanes	AM	NOON	PM
0	58	0	53
2	41	0	52
1	30	0	31
	143	0	190

Northbound Approach

Lanes	1	1	1	
AM	106	33	47	28
NOON	0	0	0	0
PM	189	49	112	37

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	134	119	129	136	97	156	106	108
NOON	0	0	0	0	0	0	0	0
PM	259	216	143	190	94	158	189	198

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	253	272	191	214
NOON	0	0	0	0
PM	475	326	314	387

ITM Peak Hour Summary

Prepared by:

NDS

Ward Rd and Rancho Mission Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-009

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach

Ward Rd

Lanes	0	2	0		
AM	13	108	1	91	AM
NOON	0	0	0	0	NOON
PM	15	162	0	187	PM

Eastbound Approach

Rancho Mission Rd

Lanes	AM	NOON	PM
	24	0	39
1	12	0	20
0	0	0	0
1	14	0	27

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	0	

CONTROL

1-Way Stop (EB)

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	122	11	79	0
NOON	0	0	0	0
PM	189	24	167	0
Lanes		0	2	0

Total Ins & Outs

North Leg		
122	91	AM
0	0	NOON
177	187	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
24	0	39	0	0	0
26	0	47	1	0	0

South Leg		
122	90	AM
0	0	NOON
189	191	PM

Total Volume Per Leg

North Leg		
213		AM
0		NOON
364		PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
50	0	86	1	0	0

South Leg	
212	AM
0	NOON
380	PM

ITM Peak Hour Summary

Prepared by:

NDS

Ward Rd and Camino Del Rio N , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-010
City:	San Diego

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach

Ward Rd

Lanes	1	0	1		
AM	24	0	98	92	AM
NOON	0	0	0	0	NOON
PM	40	0	159	191	PM

Eastbound Approach

Camino Del Rio N

	AM	NOON	PM
	62	0	139
1	11	0	76
2	20	0	87
0	0	0	0
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

AM	NOON	PM	Lanes
81	0	115	1
38	0	99	2
0	0	0	0
118	0	246	
AM	NOON	PM	

Northbound Approach

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

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	122	92	AM
	0	0	NOON
	199	191	PM

West Leg			East Leg		
AM	NOON	PM			
62	0	139	119	0	214
31	0	163	118	0	246
			AM	NOON	PM

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
	214 AM
	0 NOON
	390 PM

West Leg			East Leg		
AM	NOON	PM			
93	0	302	237	0	460
			AM	NOON	PM

	South Leg
AM	0
NOON	0
PM	0

ITM Peak Hour Summary

Prepared by:

NDS

I-15 NB Ramps and Friars Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-011

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

I-15 NB Ramps

Lanes	1	0	0		
AM	286	0	0	403	AM
NOON	0	0	0	0	NOON
PM	538	0	0	1098	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	731	0	1325
1	147	0	678
2	371	0	876
0	0	0	0
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

AM	NOON	PM	Lanes
256	0	420	1.5
445	0	787	2.5
0	0	0	0
628	0	1352	
AM	NOON	PM	

Northbound Approach

AM	0	0	0	257	AM
NOON	0	0	0	0	NOON
PM	0	0	0	476	PM
		0	0	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	286	403	AM
NOON	0	0	NOON
PM	538	1098	PM

West Leg			East Leg		
AM	NOON	PM			
731	0	1325	701	0	1207
518	0	1554	628	0	1352
			AM	NOON	PM

	South Leg	
AM	0	257
NOON	0	0
PM	0	476

Total Volume Per Leg

	North Leg
AM	689
NOON	0
PM	1636

West Leg			East Leg		
AM	NOON	PM			
1249	0	2879	1329	0	2559
			AM	NOON	PM

	South Leg
AM	257
NOON	0
PM	476

ITM Peak Hour Summary

Prepared by:

NDS

I-15 SB Ramps and Friars Rd , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-012
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

I-15 SB Ramps

Lanes	2	0.5	1.5		
AM	409	0	244	332	AM
NOON	0	0	0	0	NOON
PM	394	0	400	640	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	853	0	1283
1	139	0	354
3	269	0	1108
1	112	0	445
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
193	0	286	1
444	0	889	3
101	0	180	1
513	0	1508	
AM	NOON	PM	

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	213	0	0	0
NOON	0	0	0	0
PM	625	0	0	0
		0	0	0

Lanes

Total Ins & Outs

	North Leg		
AM	653	332	
NOON	0	0	
PM	794	640	

	AM	NOON	PM
West Leg	853	0	1283
	520	0	1907

	East Leg		
AM	738	0	1355
NOON	513	0	1508
PM			

	South Leg	
AM	213	0
NOON	0	0
PM	625	0

Total Volume Per Leg

	North Leg
AM	985
NOON	0
PM	1434

	AM	NOON	PM
West Leg	1373	0	3190

	East Leg		
AM	1251	0	2863
NOON			
PM			

	South Leg
AM	213
NOON	0
PM	625

ITM Peak Hour Summary

Prepared by:

NDS

Mission Village Dr and Friars Rd WB , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-013
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Mission Village Dr

Lanes	1	2	0		
AM	90	196	0	153	AM
NOON	0	0	0	0	NOON
PM	118	207	0	449	PM

Eastbound Approach

Friars Rd WB

	AM	NOON	PM
	127	0	248
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	86	0	206	1
	0	0	0	1
	311	0	36	0
	0	0	0	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	507	37	67	0	AM
NOON	0	0	0	0	NOON
PM	243	130	243	0	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	286	153	AM
	0	0	NOON
	325	449	PM

West Leg			East Leg		
AM	NOON	PM			
127	0	248	397	0	242
0	0	0	0	0	0
			AM	NOON	PM

South Leg		
507	104	AM
0	0	NOON
243	373	PM

Total Volume Per Leg

North Leg
439
0
774

West Leg			East Leg		
AM	NOON	PM			
127	0	248	397	0	242
			AM	NOON	PM

South Leg
611
0
616

ITM Peak Hour Summary

Prepared by:

NDS

Mission Village Dr and Friars Rd EB , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-014
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Mission Village Dr

Lanes	0	2	1		
AM	0	364	141	103	AM
NOON	0	0	0	0	NOON
PM	0	76	161	370	PM

Eastbound Approach

Friars Rd EB

	AM	NOON	PM
	0	0	0
0	39	0	152
1	0	0	3
1	114	0	124
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
177	0	501	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	478	0	64	36	AM
NOON	0	0	0	0	NOON
PM	200	0	218	337	PM
		0	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
505	103	AM
0	0	NOON
237	370	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	0	0	0
153	0	279	177	0	501
			AM	NOON	PM

South Leg		
478	100	AM
0	0	NOON
200	555	PM

Total Volume Per Leg

North Leg		
608		AM
0		NOON
607		PM

West Leg			East Leg		
AM	NOON	PM			
153	0	279	177	0	501
			AM	NOON	PM

South Leg	
578	AM
0	NOON
755	PM

ITM Peak Hour Summary

Prepared by:

NDS

Mission Village Dr and San Diego Mission Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-015

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Mission Village Dr

Lanes	0	1.5	1.5		
AM	0	392	86	99	AM
NOON	0	0	0	0	NOON
PM	0	41	159	553	PM

San Diego Mission Rd

Eastbound Approach

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

Westbound Approach

	AM	NOON	PM	Lanes
	75	0	131	1.5
	0	0	0	0
	15	0	5	0.5
	92	0	196	
	AM	NOON	PM	

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	407	0	24	6	AM
NOON	0	0	0	0	NOON
PM	46	0	422	37	PM
		0	2	0	Lanes

Total Ins & Outs

	North Leg		
AM	478	99	AM
NOON	0	0	NOON
PM	200	553	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
0	0	0		90	0	136
0	0	0		92	0	196

	South Leg	
AM	407	30
NOON	0	0
PM	46	459

Total Volume Per Leg

	North Leg
AM	577
NOON	0
PM	753

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
0	0	0		182	0	332

	South Leg
AM	437
NOON	0
PM	505

ITM Peak Hour Summary

Prepared by:

NDS

Northside Dr and Friars Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-016

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Northside Dr)

Lanes	1	1	2		
AM	59	21	44	68	AM
NOON	0	0	0	0	NOON
PM	83	22	81	209	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	417	0	928
2	27	0	104
3	308	0	964
1	77	0	293

Westbound Approach

Lanes	AM	NOON	PM
1	32	0	89
3	303	0	606
2	267	0	642
	549	0	1732

CONTROL: Signalized

Northbound Approach

Lanes	2	1	1	
AM	365	55	9	197	AM
NOON	0	0	0	0	NOON
PM	957	239	16	687	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	124	0	186
	68	0	209
East Leg	417	0	928
	602	0	1337
West Leg	412	0	1361
	549	0	1732
South Leg	365	0	957
	261	0	942

Total Volume Per Leg

	AM	NOON	PM
North Leg	192	0	395
East Leg	829	0	2289
West Leg	1151	0	3069
South Leg	626	0	1899

ITM Peak Hour Summary

Prepared by:

NDS

Fenton Pkwy and Friars Rd , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-017

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Fenton Pkwy

Lanes	1.5	0.5	2		
AM	68	15	21	41	AM
NOON	0	0	0	0	NOON
PM	68	15	35	172	PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	430	0	1071
1	12	0	101
3	316	0	871
1	50	0	313

Westbound Approach

Lanes	AM	NOON	PM
1	24	0	46
3	316	0	693
2	79	0	191
	410	0	1344

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	144	46	5	73
NOON	0	0	0	0
PM	519	310	25	438
Lanes		2	1	1

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	104	41	419	930	430	1071	144	124
NOON	0	0	0	0	0	0	0	0
PM	118	172	410	1344	378	1285	519	773

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	145	829	808	268
NOON	0	0	0	0
PM	290	2274	2356	1292

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and Friars Rd WB , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-018
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach — Qualcomm Way

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	2	0	3	PM

Eastbound Approach — Friars Rd WB

	AM	NOON	PM
	101	0	231
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
2	0	3	0.5
71	0	222	1.5
0	0	0	
AM	NOON	PM	

Northbound Approach

AM	71	99	0	0	AM
NOON	0	0	0	0	NOON
PM	224	228	3	0	PM
		1	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
						AM	NOON	PM		
AM	0	0	73	0	225	101	0	231	71	99
NOON	0	0	0	0	0	0	0	0	0	0
PM	2	3	AM	NOON	PM				224	231

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	0	73	101	170
NOON	0	0	0	0
PM	5	225	231	455

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and Friars Rd EB , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-019
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Qualcomm Way

Lanes	0	2	1		
AM	0	69	1	99	AM
NOON	0	0	0	0	NOON
PM	0	223	3	231	PM

Eastbound Approach

Friars Rd EB

	AM	NOON	PM
	0	0	1
0.5	25	0	36
0.5	0	0	3
1	20	0	77
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	88	0	262	
	AM	NOON	PM	

Northbound Approach

AM	89	0	74	87	AM
NOON	0	0	0	0	NOON
PM	300	1	195	256	PM
		0	2	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	70	99	AM
	0	0	NOON
	226	231	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	1	0	0	0
45	0	116	88	0	262
			AM	NOON	PM

	South Leg	
AM	89	161
NOON	0	0
PM	300	452

Total Volume Per Leg

	North Leg
	169 AM
	0 NOON
	457 PM

West Leg			East Leg		
AM	NOON	PM			
45	0	117	88	0	262
			AM	NOON	PM

	South Leg
AM	250
NOON	0
PM	752

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and Camino De La Reina , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-020
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach — Qualcomm Way

Lanes	0	3	2		
AM	29	188	2	249	AM
NOON	0	0	0	0	NOON
PM	110	522	22	749	PM

Eastbound Approach — Camino De La Reina

	AM	NOON	PM
	130	0	325
1	14	0	162
1.5	21	0	161
1.5	61	0	389
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
8	0	31	1
37	0	65	2
16	0	87	2
53	0	272	
AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

AM	265	64	227	30	AM
NOON	0	0	0	0	NOON
PM	998	150	556	89	PM
		2	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg			East Leg			South Leg			West Leg		
AM	219	249	AM	61	0	183	265	321	AM	130	0	325
NOON	0	0	NOON	53	0	272	0	0	NOON	96	0	712
PM	654	749	PM	AM	NOON	PM	998	795	PM	AM	NOON	PM

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	468	114	586	226
NOON	0	0	0	0
PM	1403	455	1793	1037

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and I-8 WB Ramps , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-021
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Qualcomm Way

Lanes	1	2	0		
AM	107	157	0	322	AM
NOON	0	0	0	0	NOON
PM	354	652	0	795	PM

Eastbound Approach

I-8 WB Ramps

	AM	NOON	PM
	220	0	630
0	9	0	58
2	0	0	5
0	57	0	418
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
93	0	200	1
51	0	122	0.5
6	0	12	0.5
187	0	286	
AM	NOON	PM	

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	220	62	220	187	AM
NOON	0	0	0	0	NOON
PM	1082	154	537	281	PM
		1	3	0	Lanes

Total Ins & Outs

North Leg	
264	322
0	0
1006	795

AM / NOON / PM

West Leg		
220	0	630
66	0	481

East Leg		
150	0	334
187	0	286

AM / NOON / PM

South Leg	
220	469
0	0
1082	972

AM / NOON / PM

Total Volume Per Leg

North Leg
586
0
1801

AM / NOON / PM

West Leg		
286	0	1111

East Leg		
337	0	620

AM / NOON / PM

South Leg
689
0
2054

AM / NOON / PM

ITM Peak Hour Summary

Prepared by:

NDS

Frazee Rd and Friars Rd , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-022
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Frazee Rd

Lanes	0	2	2		
AM	73	22	5	190	AM
NOON	0	0	0	0	NOON
PM	230	25	37	281	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	569	0	1623
2	145	0	181
3	287	0	1138
1	292	0	528
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

AM	NOON	PM	Lanes
30	0	55	1
401	0	950	3
32	0	82	1
304	0	1301	
AM	NOON	PM	

Northbound Approach

AM	346	95	15	12	AM
NOON	0	0	0	0	NOON
PM	635	443	45	126	PM
		2	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	100	190	AM
	0	0	NOON
	292	281	PM

AM	NOON	PM		East Leg		
569	0	1623		463	0	1087
724	0	1847		304	0	1301
West Leg				AM	NOON	PM

	South Leg	
AM	346	122
NOON	0	0
PM	635	614

Total Volume Per Leg

	North Leg
	290
	0
	573

AM	NOON	PM		East Leg		
1293	0	3470		767	0	2388
West Leg				AM	NOON	PM

	South Leg
AM	468
NOON	0
PM	1249

ITM Peak Hour Summary

Prepared by:

NDS

SR-163 NB Ramps and Friars Rd , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-023
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

SR-163 NB Ramps

Lanes	1	0	0		
AM	324	0	0	273	AM
NOON	0	0	0	0	NOON
PM	866	0	0	1299	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	761	0	1926
1	123	0	697
3	469	0	1237
0	0	0	0
Lanes	AM	NOON	PM

CONTROL

Signalized

Westbound Approach

	AM	NOON	PM	Lanes
	150	0	602	1
	437	0	1060	2
	0	0	0	0
	724	0	1847	
	AM	NOON	PM	

Northbound Approach

AM	0	0	0	255	AM
NOON	0	0	0	0	NOON
PM	0	0	0	610	PM
		0	0	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg			East Leg			South Leg			West Leg		
	324	273	AM	587	0	1662	0	255	AM	761	0	1926
	0	0	NOON	724	0	1847	0	0	NOON	592	0	1934
	866	1299	PM	AM	NOON	PM	0	610	PM	AM	NOON	PM

Total Volume Per Leg

	North Leg			East Leg			South Leg			West Leg		
	597	AM	1311	0	3509	255	AM	1353	0	3860
	0	NOON				0	NOON			
	2165	PM				610	PM			
			AM	NOON	PM			AM	NOON	PM

ITM Peak Hour Summary

Prepared by:

NDS

Ulric St and SR-163 SB On-Ramp , San Diego

Date: 7/12/2015

Day: Sunday

Project #: 15-4208-024

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Ulric St

Lanes	0	2	1		
AM	0	189	222	263	AM
NOON	0	0	0	0	NOON
PM	0	299	297	665	PM

Eastbound Approach

SR-163 SB On-Ramp

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

CONTROL

No Control

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	222	0	297	
	AM	NOON	PM	

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	189	0	263	0	AM
NOON	0	0	0	0	NOON
PM	299	0	665	0	PM
		0	2	0	Lanes

Total Ins & Outs

	AM	NOON	PM
North Leg	411	0	596
	263	0	665
East Leg	0	0	0
	0	0	0
	222	0	297
West Leg	0	0	0
	0	0	0
South Leg	189	0	299
	263	0	665

Total Volume Per Leg

	AM	NOON	PM
North Leg	674	0	1261
West Leg	0	0	0
East Leg	222	0	297
South Leg	452	0	964

ITM Peak Hour Summary

Prepared by:

NDS

Ulric St and Friars Rd , San Diego

Date:	7/12/2015
Day:	Sunday

Project #:	15-4208-025
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach

Ulric St

Lanes	1	0	2		
AM	59	0	129	266	AM
NOON	0	0	0	0	NOON
PM	74	4	211	649	PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	540	0	1512
1	35	0	117
3	212	0	1291
1	168	0	834

CONTROL

Signalized

Westbound Approach

Lanes	AM	NOON	PM
1	216	0	501
3	331	0	1063
0	0	0	0
	596	0	1940

Northbound Approach

Lanes	1.5	0.5	1	
AM	168	150	15	255
NOON	0	0	0	0
PM	838	375	31	438

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	188	266	547	0	1564	540	0	1512
NOON	0	0	596	0	1940	415	0	2242
PM	289	649	168	420				
NOON	0	0	0	0				
PM	838	844						

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	454	1143	955	588
NOON	0	0	0	0
PM	938	3504	3754	1682

ITM Peak Hour Summary

Prepared by:

NDS

Mission Gorge Rd and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-001
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Mission Gorge Rd

	Lanes 0	0	0		
AM	21	0	0	30	AM
NOON	0	0	0	0	NOON
PM	28	0	0	23	PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	799	0	867
0	0	0	0
3	419	0	805
1	110	0	168

Westbound Approach

Lanes	AM	NOON	PM
0	30	0	23
3	628	0	643
2	166	0	215
	593	0	1066

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

					Lanes
AM	276	150	0	174	AM
NOON	0	0	0	0	NOON
PM	383	196	0	261	PM
		1	2	0	Lanes

Total Ins & Outs

	AM	NOON	PM
North Leg	21	0	28
	30	0	23
East Leg	824	0	881
	593	0	1066
West Leg	799	0	867
	529	0	973
South Leg	276	0	383
	324	0	457

Total Volume Per Leg

	AM	NOON	PM
North Leg	51	0	51
East Leg	1417	0	1947
West Leg	1328	0	1840
South Leg	600	0	840

ITM Peak Hour Summary

Prepared by:

NDS

Mission Gorge Rd and Twain Ave , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-002
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Mission Gorge Rd

Lanes	0	2	1		
AM	21	289	6	461	AM
NOON	0	0	0	0	NOON
PM	33	439	15	532	PM

Eastbound Approach

Twain Ave

Lanes	AM	NOON	PM
	107	0	113
1	37	0	50
1	26	0	57
0	33	0	52
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
14	0	25	0
45	0	43	1
58	0	58	1
60	0	142	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	380	41	410	28	AM
NOON	0	0	0	0	NOON
PM	549	37	457	70	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	316	461	117	126	107	113	380	479
NOON	0	0	0	0	0	0	0	0
PM	487	532	60	142	96	159	549	564

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	777	177	203	859
NOON	0	0	0	0
PM	1019	268	272	1113

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and Twain Ave , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-003
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach

Fairmount Ave

Lanes	0	1	1		
AM	18	57	3	85	AM
NOON	0	0	0	0	NOON
PM	30	65	3	91	PM

Eastbound Approach

Twain Ave

	AM	NOON	PM
	87	0	169
0	19	0	23
1	38	0	75
1	40	0	59
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
9	0	9	0
29	0	66	2
43	0	34	0
89	0	129	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	140	40	57	48	AM
NOON	0	0	0	0	NOON
PM	158	73	59	51	PM
		1	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	78	85	81	109	87	169	140	145
NOON	0	0	0	0	0	0	0	0
PM	98	91	89	129	97	157	158	183

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	163	170	184	285
NOON	0	0	0	0
PM	189	238	326	341

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and Mission Gorge Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-004
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Fairmount Ave

Lanes	0	2	1		
AM	21	347	4	506	AM
NOON	0	0	0	0	NOON
PM	24	533	11	573	PM

Eastbound Approach

Mission Gorge Rd

Lanes	AM	NOON	PM
	378	0	326
0.3	11	0	22
0.3	3	0	3
1.3	254	0	321

Westbound Approach

AM	NOON	PM	Lanes
3	0	4	0
2	0	0	1
11	0	14	0
29	0	37	

CONTROL

Signalized

Northbound Approach

AM	612	355	492	22	AM
NOON	0	0	0	0	NOON
PM	868	302	547	23	PM
		2	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	372	506	16	18	378	326	612	869
NOON	0	0	0	0	0	0	0	0
PM	568	573	29	37	268	346	868	872

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	878	45	646	1481
NOON	0	0	0	0
PM	1141	55	672	1740

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and Alvarado Canyon Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-005
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Fairmount Ave

Lanes	1	2	2		
AM	55	557	12	867	AM
NOON	0	0	0	0	NOON
PM	78	804	14	872	PM

Eastbound Approach

Alvarado Canyon Rd

	AM	NOON	PM
	337	0	368
1.5	23	0	60
0.5	21	0	19
1	252	0	370
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
217	0	232	1.5
105	0	104	1
205	0	330	1.5
96	0	81	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	1014	177	627	63	AM
NOON	0	0	0	0	NOON
PM	1504	186	580	48	PM
		1	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
624	867	AM
0	0	NOON
896	872	PM

West Leg			East Leg		
AM	NOON	PM			
337	0	368	527	0	666
296	0	449	96	0	81
			AM	NOON	PM

South Leg		
1014	867	AM
0	0	NOON
1504	814	PM

Total Volume Per Leg

North Leg		
1491		AM
0		NOON
1768		PM

West Leg			East Leg		
AM	NOON	PM			
633	0	817	623	0	747
			AM	NOON	PM

South Leg	
1881	AM
0	NOON
2318	PM

ITM Peak Hour Summary

Prepared by:

NDS

Fairmount Ave and I-8 EB Ramps , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-006
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Fairmount Ave)

	Left	Thru	Right	
Lanes	0	3	0	
AM	0	420	1	867
NOON	0	0	0	0
PM	0	662	0	826

Eastbound Approach (I-8 EB Ramps)

	AM	NOON	PM
	20	0	19
2	478	0	519
0	0	0	0
3	547	0	1488
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	0	
	AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

	Left	Thru	Right	
AM	967	20	389	0
NOON	0	0	0	0
PM	2150	19	307	0
Lanes		1	2	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	South Leg	East Leg	West Leg
AM	421	967	0	20
NOON	0	0	0	0
PM	662	2150	1	1025
	867	409	0	19
	0	0	0	0
	826	326	0	2007

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	1288	1	1045	1376
NOON	0	0	0	0
PM	1488	0	2026	2476

ITM Peak Hour Summary

Prepared by:

NDS

Rancho Mission Rd and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-007
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Rancho Mission Rd

	Lanes	0	0	0		
AM		0	0	0	1	AM
NOON		0	0	0	0	NOON
PM		0	0	0	1	PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	1017	0	1349
0	1	0	1
3	703	0	1129
1	151	0	348

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
814	0	1102	4
35	0	82	1
745	0	1192	

CONTROL

Signalized

Northbound Approach

AM	186	203	0	42	AM
NOON	0	0	0	0	NOON
PM	430	247	0	63	PM
		1.5	0	1.5	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	0	1	849	0	1017	0	186	245
NOON	0	0	745	0	855	0	0	0
PM	0	1	1184	1192	1349	1478	430	310

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	1	1594	1872	431
NOON	0	0	0	0
PM	1	2376	2827	740

ITM Peak Hour Summary

Prepared by:

NDS

Rancho Mission Rd and San Diego Mission Rd , San Diego

Date: 7/11/2015

Day: Saturday

Project #: 15-4208-008

City: San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach

Rancho Mission Rd

Lanes	1	1	1		
AM	34	89	52	119	AM
NOON	0	0	0	0	NOON
PM	62	117	97	258	PM

Eastbound Approach

San Diego Mission Rd

Lanes	AM	NOON	PM
	111	0	181
1	21	0	52
2	44	0	77
0	49	0	77

Westbound Approach

AM	NOON	PM	Lanes
40	0	86	0
50	0	64	2
25	0	33	1
122	0	225	

CONTROL

Signalized

Northbound Approach

AM	163	27	58	26
NOON	0	0	0	0
PM	227	55	120	51
Lanes		1	1	1

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	175	119	115	183	111	181	163	111
NOON	0	0	0	0	0	0	0	0
PM	276	258	122	225	114	206	227	226

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	294	237	225	274
NOON	0	0	0	0
PM	534	408	387	453

ITM Peak Hour Summary

Prepared by:

NDS

Ward Rd and Rancho Mission Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-009
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Ward Rd)

	Lanes 0	2	0		
AM	20	141	0	104	AM
NOON	0	0	0	0	NOON
PM	30	206	0	203	PM

Eastbound Approach (Rancho Mission Rd)

	AM	NOON	PM
	32	0	58
1	19	0	27
0	0	0	0
1	23	0	23
Lanes	AM	NOON	PM

Westbound Approach

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

CONTROL

1-Way Stop (EB)

Northbound Approach

AM	164	12	85	0	AM
NOON	0	0	0	0	NOON
PM	229	28	176	0	PM
		0	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	161	104	0	0	32	42	164	97
NOON	0	0	0	0	0	0	0	0
PM	236	203	0	0	58	50	229	204

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	265	0	74	261
NOON	0	0	0	0
PM	439	0	108	433

ITM Peak Hour Summary

Prepared by:

NDS

Ward Rd and Camino Del Rio N , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-010
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Ward Rd)

Lanes	1	0	1		
AM	29	0	130	106	AM
NOON	0	0	0	0	NOON
PM	61	0	133	199	PM

Eastbound Approach (Camino Del Rio N)

	AM	NOON	PM
	87	0	152
1	19	0	56
2	16	0	97
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	87	0	143	1
	58	0	91	2
	0	0	0	0
	146	0	230	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

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

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	159	145	0	87
NOON	0	0	0	0
PM	194	146	0	35
	106	0	0	0
	0	234	0	152
	199	230	0	153

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	265	291	0	122
NOON	0	0	0	0
PM	393	464	0	305

ITM Peak Hour Summary

Prepared by:

NDS

I-15 NB Ramps and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-011
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach

I-15 NB Ramps

Lanes	1	0	0		
AM	358	0	0	626	AM
NOON	0	0	0	0	NOON
PM	589	0	0	1115	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	960	0	1437
1	205	0	659
2	508	0	959
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	421	0	456	1.5
	602	0	848	2.5
	0	0	0	0
	850	0	1474	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	0	0	342	AM
NOON	0	0	0	NOON
PM	0	0	515	PM
	0	0	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
358	626	AM
0	0	NOON
589	1115	PM

West Leg			East Leg		
AM	NOON	PM			
960	0	1437	1023	0	1304
713	0	1618	850	0	1474
			AM	NOON	PM

South Leg		
0	342	AM
0	0	NOON
0	515	PM

Total Volume Per Leg

North Leg
984 AM
0 NOON
1704 PM

West Leg			East Leg		
AM	NOON	PM			
1673	0	3055	1873	0	2778
			AM	NOON	PM

South Leg
342 AM
0 NOON
515 PM

ITM Peak Hour Summary

Prepared by:

NDS

I-15 SB Ramps and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-012
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach

I-15 SB Ramps

	Left	Thru	Right	
Lanes	2	0.5	1.5	
AM	451	0	330	396 AM
NOON	0	0	0	0 NOON
PM	524	1	469	670 PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	1053	0	1468
1	150	0	374
3	380	0	1146
1	182	0	483

Westbound Approach

Lanes	AM	NOON	PM
1	246	0	296
3	602	0	944
1	113	0	198
	710	0	1615

CONTROL

Signalized

Northbound Approach

	Left	Thru	Right	
AM	295	0	0	0 AM
NOON	0	0	0	0 NOON
PM	682	0	0	0 PM
Lanes		0	0	0 Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	South Leg	East Leg	West Leg
AM	781	295	961	1053
NOON	0	0	0	0
PM	994	682	1438	1468
AM	396	0	710	712
NOON	0	0	0	0
PM	670	0	1615	2003

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	1177	1671	295	1765
NOON	0	0	0	0
PM	1664	3053	682	3471

ITM Peak Hour Summary

Prepared by:

NDS

Mission Village Dr and Friars Rd WB , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-013
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Mission Village Dr)

Lanes	1	2	0		
AM	102	212	1	224	AM
NOON	0	0	0	0	NOON
PM	125	253	1	425	PM

Eastbound Approach (Friars Rd WB)

Lanes	AM	NOON	PM
	142	0	270
0	0	0	0
0	0	0	0
0	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
1	129	0	213
1	1	0	0
0	314	0	83
	1	0	1

CONTROL: Signalized

Northbound Approach

Lanes	1	2	0
AM	526	39	95	0
NOON	0	0	0	0
PM	336	145	212	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	315	444	526	142
NOON	0	1	0	0
PM	379	425	296	134	270	336	357
				0

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	539	445	660	142
NOON	0	0	0	0
PM	804	297	693	270

ITM Peak Hour Summary

Prepared by:

NDS

Mission Village Dr and Friars Rd EB , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-014
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Mission Village Dr)

Lanes	0	2	1		
AM	0	349	177	136	AM
NOON	0	0	0	0	NOON
PM	0	121	195	357	PM

Eastbound Approach (Friars Rd EB)

Lanes	AM	NOON	PM
	0	0	0
0	62	0	173
1	1	0	2
1	133	0	110

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	229	0	486	

Northbound Approach

AM	482	0	74	51	AM
NOON	0	0	0	0	NOON
PM	231	0	184	289	PM
		0	2	0	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	526	0	482	196
NOON	0	0	0	0
PM	316	229	231	285
	136	486	125	473
	0	0	0	0
	357	0	473	0

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	662	229	607	196
NOON	0	0	0	0
PM	673	486	704	285

ITM Peak Hour Summary

Prepared by:

NDS

Mission Village Dr and San Diego Mission Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-015
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach

Mission Village Dr

	Lanes 0	1.5	1.5		
AM	0	396	88	123	AM
NOON	0	0	0	0	NOON
PM	0	92	138	474	PM

Eastbound Approach

San Diego Mission Rd

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

Westbound Approach

AM	NOON	PM	Lanes
80	0	120	1.5
0	0	0	0
20	0	12	0.5
96	0	162	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	416	0	43	8	AM
NOON	0	0	0	0	NOON
PM	104	0	354	24	PM
		0	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
AM	484	123	100	0	132	0	0	0	416	51
NOON	0	0	96	0	162	0	0	0	0	0
PM	230	474	AM	NOON	PM	AM	NOON	PM	104	378

Total Volume Per Leg

	North Leg	East Leg			West Leg			South Leg
AM	607	196	0	294	0	0	0	467
NOON	0	AM	NOON	PM	AM	NOON	PM	0
PM	704							482

ITM Peak Hour Summary

Prepared by:

NDS

Northside Dr and Friars Rd , San Diego

Date:	7/11/2015	Project #:	15-4208-016
Day:	Saturday	City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Northside Dr)

	Lanes 1	Lanes 1	Lanes 2		
AM	84	25	68	74	AM
NOON	0	0	0	0	NOON
PM	89	25	65	218	PM

Eastbound Approach (Friars Rd)

Lanes	AM	NOON	PM
	516	0	1034
2	33	0	88
3	351	0	1044
1	137	0	254

Westbound Approach

Lanes	AM	NOON	PM
1	27	0	101
3	372	0	738
2	346	0	682
	694	0	1819

CONTROL: Signalized

Northbound Approach

	Lanes 2	Lanes 1	Lanes 1	
AM	508	60	14	275	AM
NOON	0	0	0	0	NOON
PM	961	207	29	710	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	177	745	508	516
NOON	0	0	0	0
PM	179	1521	961	1034
AM	74	694	349	521
NOON	0	0	0	0
PM	218	1819	946	1386

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	251	1439	857	1037
NOON	0	0	0	0
PM	397	3340	1907	2420

ITM Peak Hour Summary

Prepared by:

NDS

Fenton Pkwy and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-017
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Fenton Pkwy

Lanes	1.5	0.5	2		
AM	80	11	31	52	AM
NOON	0	0	0	0	NOON
PM	81	19	41	156	PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	536	0	1126
1	22	0	87
3	382	0	992
1	68	0	346

Westbound Approach

Lanes	AM	NOON	PM
1	23	0	39
3	394	0	739
2	105	0	235
	519	0	1419

CONTROL

Signalized

Northbound Approach

AM	184	62	7	106	AM
NOON	0	0	0	0	NOON
PM	600	306	30	386	PM
		2	1	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	122	52	536	522	472	536	184	175
NOON	0	0	0	0	0	0	0	0
PM	141	156	1126	1013	1425	1126	600	722

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	174	1041	1008	359
NOON	0	0	0	0
PM	297	2432	2551	1322

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and Friars Rd WB , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-018
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach — Qualcomm Way

	Left	Thru	Right	
Lanes	0	1	0	
AM	0	6	0	3
NOON	0	0	0	0
PM	0	0	0	1

Eastbound Approach — Friars Rd WB

	AM	NOON	PM
	133	0	238
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	1	0	0	0
	0	0	4	0.5
	102	0	262	1.5
	0	0	0	
	AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

	Left	Thru	Right	
AM	108	133	2	0
NOON	0	0	0	0
PM	262	234	1	0
Lanes		1	1	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	6	103	108	133
NOON	0	0	0	0
PM	1	266	235	238
AM	3	133	135	0
NOON	0	0	0	0
PM	0	0	262	0

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	9	103	243	133
NOON	0	0	0	0
PM	1	266	497	238

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and Friars Rd EB , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-019
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach — Qualcomm Way

Lanes	0	2	1		
AM	0	106	4	135	AM
NOON	0	0	0	0	NOON
PM	0	253	2	230	PM

Eastbound Approach — Friars Rd EB

	AM	NOON	PM
	1	0	1
0.5	30	0	36
0.5	1	0	7
1	32	0	114
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
93	0	286	
AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

AM	138	1	105	88	AM
NOON	0	0	0	0	NOON
PM	367	1	194	277	PM
		0	2	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	110	135	0	0	1	1	138	194
NOON	0	0	0	0	0	0	0	0
PM	255	230	93	286	63	157	367	472

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	245	93	64	332
NOON	0	0	0	0
PM	485	286	158	839

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and Camino De La Reina , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-020
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach

Qualcomm Way

Lanes	0	3	2		
AM	36	214	9	369	AM
NOON	0	0	0	0	NOON
PM	165	580	41	743	PM

Eastbound Approach

Camino De La Reina

	AM	NOON	PM
	135	0	420
1	32	0	197
1.5	23	0	159
1.5	52	0	383
Lanes	AM	NOON	PM

Westbound Approach

Lanes	AM	NOON	PM
1	25	0	31
2	32	0	77
2	42	0	98
	81	0	325
	AM	NOON	PM

CONTROL

Signalized

Northbound Approach

AM	308	67	312	49	AM
NOON	0	0	0	0	NOON
PM	1061	178	515	125	PM
		2	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	259	369	99	206	135	420	308	428
NOON	0	0	0	0	0	0	0	0
PM	786	743	81	325	107	739	1061	818

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	628	180	242	736
NOON	0	0	0	0
PM	1529	531	1159	1879

ITM Peak Hour Summary

Prepared by:

NDS

Qualcomm Way and I-8 WB Ramps , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-021
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Qualcomm Way)

Lanes	1	2	0		
AM	143	164	0	432	AM
NOON	0	0	0	0	NOON
PM	376	685	0	830	PM

Eastbound Approach (I-8 WB Ramps)

	AM	NOON	PM
	320	0	697
0	12	0	72
2	0	0	0
0	72	0	391
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
166	0	249	1
86	0	132	0.5
16	0	16	0.5
221	0	242	
AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

AM	252	91	254	221	AM
NOON	0	0	0	0	NOON
PM	1092	189	509	242	PM
		1	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	307	268	252	320
NOON	0	0	0	0
PM	1061	397	566	697
		221	1092	84
		0	0	0
		242	940	463

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	739	489	818	404
NOON	0	0	0	0
PM	1891	639	2032	1160

ITM Peak Hour Summary

Prepared by:

NDS

Frazee Rd and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-022
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Frazee Rd

Lanes	0	2	2		
AM	125	18	18	323	AM
NOON	0	0	0	0	NOON
PM	227	49	43	436	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	673	0	1610
2	241	0	318
3	637	0	957
1	254	0	679
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
47	0	55	1
462	0	951	3
27	0	128	1
696	0	1139	
AM	NOON	PM	

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	299	86	35	41	AM
NOON	0	0	0	0	NOON
PM	856	432	63	139	PM
		2	2	0	Lanes

Total Ins & Outs

	AM	NOON	PM
North Leg	161	0	319
	323	0	436
East Leg	536	0	1134
	696	0	1139
South Leg	299	0	856
	162	0	634
West Leg	673	0	1610
	1132	0	1954

Total Volume Per Leg

	AM	NOON	PM
North Leg	484	0	755
East Leg	1232	0	2273
South Leg	461	0	1490
West Leg	1805	0	3564

ITM Peak Hour Summary

Prepared by:

NDS

SR-163 NB Ramps and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-023
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

SR-163 NB Ramps

Lanes	1	0	0		
AM	456	0	0	387	AM
NOON	0	0	0	0	NOON
PM	952	0	0	1385	PM

Eastbound Approach

Friars Rd

	AM	NOON	PM
	966	0	2036
1	159	0	775
3	708	0	1325
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
228	0	610	1
510	0	1084	2
0	0	0	0
1133	0	1952	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	0	0	0	425	AM
NOON	0	0	0	0	NOON
PM	0	0	0	627	PM
		0	0	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
456	387	AM
0	0	NOON
952	1385	PM

West Leg			East Leg		
AM	NOON	PM			
966	0	2036	738	0	1694
867	0	2100	1133	0	1952
			AM	NOON	PM

South Leg		
0	425	AM
0	0	NOON
0	627	PM

Total Volume Per Leg

North Leg		
843		AM
0		NOON
2337		PM

West Leg			East Leg		
AM	NOON	PM			
1833	0	4136	1871	0	3646
			AM	NOON	PM

South Leg		
425		AM
0		NOON
627		PM

ITM Peak Hour Summary

Prepared by:

NDS

Ulric St and SR-163 SB On-Ramp , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-024
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Ulric St)

Lanes	0	2	1		
AM	0	222	344	297	AM
NOON	0	0	0	0	NOON
PM	0	295	318	666	PM

Eastbound Approach (SR-163 SB On-Ramp)

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

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	346	0	319	
	AM	NOON	PM	

CONTROL

No Control

Northbound Approach

AM	222	0	297	2	AM
NOON	0	0	0	0	NOON
PM	295	0	666	1	PM
		0	2	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	566	0	222	0
NOON	0	346	0	0
PM	613	319	295	0
		AM NOON PM	AM NOON PM	AM NOON PM
		0 0 0	222 299	0 0 0
		346 0 319	0 0	0 0 0
			295 667	

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	863	346	521	0
NOON	0	0	0	0
PM	1279	319	962	0

ITM Peak Hour Summary

Prepared by:

NDS

Ulric St and Friars Rd , San Diego

Date:	7/11/2015
Day:	Saturday

Project #:	15-4208-025
City:	San Diego

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Ulric St

Lanes	1	0	2		
AM	50	5	167	302	AM
NOON	0	0	0	0	NOON
PM	97	5	213	654	PM

Eastbound Approach

Friars Rd

Lanes	AM	NOON	PM
	785	0	1723
1	31	0	93
3	330	0	1331
1	210	0	844

Westbound Approach

Lanes	AM	NOON	PM
1	253	0	522
3	477	0	1116
0	0	0	0
	863	0	2100

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	215	258	18	366
NOON	0	0	0	0
PM	849	510	39	556
Lanes		1.5	0.5	1

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	222	302	730	1638	785	1723	215	642
NOON	0	0	0	0	0	0	0	0
PM	315	654	863	2100	571	2268	849	1105

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	524	1593	1356	857
NOON	0	0	0	0
PM	969	3738	3991	1954

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Orcutt Ave & Rainier Ave

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_001

DAILY TOTALS	NB	SB	EB	WB	Total
	9,873	7,915	0	0	17,788

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	23		14						37		**12:00**	169		141						310	
00:15	7		13						20		**12:15**	192		148						340	
00:30	13		9						22		**12:30**	177		135						312	
00:45	17	60	12	48					29	108	**12:45**	167	705	139	563					306	1268
01:00	9		10						19		**13:00**	171		129						300	
01:15	12		10						22		**13:15**	147		143						290	
01:30	10		5						15		**13:30**	180		125						305	
01:45	3	34	9	34					12	68	**13:45**	168	666	142	539					310	1205
02:00	11		10						21		**14:00**	164		118						282	
02:15	15		13						28		**14:15**	212		151						363	
02:30	14		12						26		**14:30**	197		125						322	
02:45	13	53	3	38					16	91	**14:45**	194	767	128	522					322	1289
03:00	13		11						24		**15:00**	186		115						301	
03:15	9		6						15		**15:15**	177		141						318	
03:30	5		11						16		**15:30**	195		147						342	
03:45	8	35	9	37					17	72	**15:45**	194	752	151	554					345	1306
04:00	16		13						29		**16:00**	184		126						310	
04:15	21		12						33		**16:15**	201		148						349	
04:30	26		14						40		**16:30**	210		120						330	
04:45	30	93	26	65					56	158	**16:45**	165	760	123	517					288	1277
05:00	30		16						46		**17:00**	228		128						356	
05:15	45		36						81		**17:15**	203		118						321	
05:30	70		59						129		**17:30**	191		132						323	
05:45	63	208	53	164					116	372	**17:45**	139	761	126	504					265	1265
06:00	76		59						135		**18:00**	145		150						295	
06:15	115		78						193		**18:15**	171		134						305	
06:30	189		109						298		**18:30**	122		105						227	
06:45	148	528	122	368					270	896	**18:45**	150	588	109	498					259	1086
07:00	86		81						167		**19:00**	130		97						227	
07:15	109		82						191		**19:15**	126		101						227	
07:30	124		139						263		**19:30**	111		100						211	
07:45	157	476	123	425					280	901	**19:45**	111	478	103	401					214	879
08:00	114		109						223		**20:00**	74		74						148	
08:15	113		126						239		**20:15**	73		87						160	
08:30	125		99						224		**20:30**	79		81						160	
08:45	125	477	98	432					223	909	**20:45**	68	294	74	316					142	610
09:00	124		99						223		**21:00**	72		60						132	
09:15	129		103						232		**21:15**	65		60						125	
09:30	110		99						209		**21:30**	54		62						116	
09:45	109	472	88	389					197	861	**21:45**	51	242	44	226					95	468
10:00	129		123						252		**22:00**	53		36						89	
10:15	119		93						212		**22:15**	53		40						93	
10:30	122		104						226		**22:30**	70		50						120	
10:45	119	489	132	452					251	941	**22:45**	50	226	55	181					105	407
11:00	151		114						265		**23:00**	39		41						80	
11:15	135		121						256		**23:15**	19		36						55	
11:30	137		140						277		**23:30**	36		31						67	
11:45	172	595	141	516					313	1111	**23:45**	20	114	18	126					38	240
TOTALS		3520		2968						**6488**	**TOTALS**		6353		4947						**11300**
SPLIT %		54.3%		45.7%						**36.5%**	**SPLIT %**		56.2%		43.8%						**63.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	9,873	7,915	0	0	17,788

AM Peak Hour	11:45	11:30			**11:45**	**PM Peak Hour**	16:30	15:30			**15:30**
AM Pk Volume	710	570			**1275**	**PM Pk Volume**	806	572			**1346**
Pk Hr Factor	0.924	0.963			**0.938**	**Pk Hr Factor**	0.884	0.947			**0.964**
7 - 9 Volume	953	857	0	0	**1810**	**4 - 6 Volume**	1521	1021	0	0	**2542**
7 - 9 Peak Hour	07:45	07:30			**07:30**	**4 - 6 Peak Hour**	16:30	16:15			**16:15**
7 - 9 Pk Volume	509	497	0	0	**1005**	**4 - 6 Pk Volume**	806	519	0	0	**1323**
Pk Hr Factor	0.811	0.894	0.000	0.000	**0.897**	**Pk Hr Factor**	0.884	0.877	0.000	0.000	**0.929**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Vandever Ave & Twain Ave

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_002

DAILY TOTALS	NB	SB	EB	WB	Total
	11,019	8,880	0	0	19,899

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	24		19						43		12:00	215		150						365	
00:15	14		18						32		12:15	226		166						392	
00:30	12		11						23		12:30	196		175						371	
00:45	14	64	11	59					25	123	12:45	211	848	160	651					371	1499
01:00	10		10						20		13:00	190		117						307	
01:15	15		11						26		13:15	175		186						361	
01:30	10		15						25		13:30	209		162						371	
01:45	9	44	14	50					23	94	13:45	193	767	143	608					336	1375
02:00	8		11						19		14:00	206		164						370	
02:15	16		12						28		14:15	207		135						342	
02:30	10		10						20		14:30	213		146						359	
02:45	13	47	7	40					20	87	14:45	214	840	136	581					350	1421
03:00	6		8						14		15:00	182		151						333	
03:15	6		1						7		15:15	202		180						382	
03:30	6		10						16		15:30	196		199						395	
03:45	3	21	4	23					7	44	15:45	204	784	170	700					374	1484
04:00	14		7						21		16:00	200		186						386	
04:15	21		13						34		16:15	206		182						388	
04:30	22		6						28		16:30	193		190						383	
04:45	31	88	13	39					44	127	16:45	181	780	172	730					353	1510
05:00	27		13						40		17:00	200		213						413	
05:15	52		17						69		17:15	186		169						355	
05:30	80		38						118		17:30	177		133						310	
05:45	69	228	38	106					107	334	17:45	175	738	132	647					307	1385
06:00	81		45						126		18:00	145		153						298	
06:15	143		59						202		18:15	148		146						294	
06:30	186		65						251		18:30	147		125						272	
06:45	150	560	82	251					232	811	18:45	126	566	118	542					244	1108
07:00	159		59						218		19:00	121		118						239	
07:15	166		89						255		19:15	120		133						253	
07:30	176		123						299		19:30	110		118						228	
07:45	229	730	105	376					334	1106	19:45	103	454	129	498					232	952
08:00	208		97						305		20:00	99		124						223	
08:15	190		118						308		20:15	75		101						176	
08:30	195		103						298		20:30	75		88						163	
08:45	159	752	116	434					275	1186	20:45	81	330	80	393					161	723
09:00	156		102						258		21:00	73		80						153	
09:15	142		114						256		21:15	56		77						133	
09:30	136		106						242		21:30	53		47						100	
09:45	132	566	126	448					258	1014	21:45	55	237	57	261					112	498
10:00	134		123						257		22:00	53		47						100	
10:15	147		128						275		22:15	44		36						80	
10:30	129		124						253		22:30	37		49						86	
10:45	157	567	128	503					285	1070	22:45	45	179	34	166					79	345
11:00	172		141						313		23:00	36		48						84	
11:15	171		143						314		23:15	25		39						64	
11:30	151		152						303		23:30	43		66						109	
11:45	202	696	161	597					363	1293	23:45	29	133	24	177					53	310
TOTALS		4363		2926						7289	TOTALS		6656		5954						12610
SPLIT %		59.9%		40.1%						36.6%	SPLIT %		52.8%		47.2%						63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,019	8,880	0	0	19,899

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	16:15			15:30
AM Pk Volume	839	652			1491	PM Pk Volume	848	757			1543
Pk Hr Factor	0.928	0.931			0.951	Pk Hr Factor	0.938	0.888			0.977
7 - 9 Volume	1482	810	0	0	2292	4 - 6 Volume	1518	1377	0	0	2895
7 - 9 Peak Hour	07:45	07:30			07:30	4 - 6 Peak Hour	16:00	16:15			16:15
7 - 9 Pk Volume	822	443	0	0	1246	4 - 6 Pk Volume	780	757	0	0	1537
Pk Hr Factor	0.897	0.900	0.000	0.000	0.933	Pk Hr Factor	0.947	0.888	0.000	0.000	0.930

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Twain Ave & Mission Gorge Pl

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_003

DAILY TOTALS	NB	SB	EB	WB	Total
	12,868	10,198	0	0	23,066

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	23		20						43		12:00	228		172						400	
00:15	15		17						32		12:15	256		186						442	
00:30	12		17						29		12:30	239		193						432	
00:45	12	62	14	68					26	130	12:45	256	979	180	731					436	1710
01:00	16		10						26		13:00	224		142						366	
01:15	17		12						29		13:15	228		178						406	
01:30	8		12						20		13:30	246		223						469	
01:45	14	55	14	48					28	103	13:45	211	909	165	708					376	1617
02:00	10		14						24		14:00	228		172						400	
02:15	14		14						28		14:15	229		130						359	
02:30	12		13						25		14:30	252		105						357	
02:45	11	47	5	46					16	93	14:45	242	951	133	540					375	1491
03:00	4		6						10		15:00	214		181						395	
03:15	6		4						10		15:15	241		210						451	
03:30	7		12						19		15:30	237		233						470	
03:45	3	20	5	27					8	47	15:45	222	914	213	837					435	1751
04:00	13		7						20		16:00	220		221						441	
04:15	23		14						37		16:15	218		206						424	
04:30	32		11						43		16:30	211		220						431	
04:45	31	99	13	45					44	144	16:45	201	850	226	873					427	1723
05:00	35		25						60		17:00	241		234						475	
05:15	48		26						74		17:15	226		202						428	
05:30	85		46						131		17:30	184		171						355	
05:45	93	261	59	156					152	417	17:45	186	837	153	760					339	1597
06:00	91		62						153		18:00	180		179						359	
06:15	150		65						215		18:15	186		147						333	
06:30	211		88						299		18:30	157		139						296	
06:45	193	645	84	299					277	944	18:45	145	668	126	591					271	1259
07:00	168		81						249		19:00	152		140						292	
07:15	189		105						294		19:15	143		147						290	
07:30	195		141						336		19:30	117		138						255	
07:45	290	842	125	452					415	1294	19:45	117	529	139	564					256	1093
08:00	275		113						388		20:00	95		142						237	
08:15	222		140						362		20:15	107		125						232	
08:30	240		143						383		20:30	89		109						198	
08:45	198	935	134	530					332	1465	20:45	87	378	101	477					188	855
09:00	195		132						327		21:00	89		86						175	
09:15	168		131						299		21:15	62		89						151	
09:30	174		144						318		21:30	70		50						120	
09:45	176	713	143	550					319	1263	21:45	48	269	62	287					110	556
10:00	202		155						357		22:00	60		56						116	
10:15	173		142						315		22:15	64		38						102	
10:30	167		135						302		22:30	66		47						113	
10:45	190	732	158	590					348	1322	22:45	35	225	36	177					71	402
11:00	201		171						372		23:00	39		47						86	
11:15	200		142						342		23:15	43		43						86	
11:30	169		181						350		23:30	32		61						93	
11:45	239	809	165	659					404	1468	23:45	25	139	32	183					57	322
TOTALS		5220		3470						8690	TOTALS		7648		6728						14376
SPLIT %		60.1%		39.9%						37.7%	SPLIT %		53.2%		46.8%						62.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,868	10,198	0	0	23,066

AM Peak Hour	07:45	11:45			11:45	PM Peak Hour	12:00	16:15			15:15
AM Pk Volume	1027	716			1678	PM Pk Volume	979	886			1797
Pk Hr Factor	0.885	0.927			0.949	Pk Hr Factor	0.956	0.947			0.956
7 - 9 Volume	1777	982	0	0	2759	4 - 6 Volume	1687	1633	0	0	3320
7 - 9 Peak Hour	07:45	08:00			07:45	4 - 6 Peak Hour	16:30	16:15			16:30
7 - 9 Pk Volume	1027	530	0	0	1548	4 - 6 Pk Volume	879	886	0	0	1761
Pk Hr Factor	0.885	0.927	0.000	0.000	0.933	Pk Hr Factor	0.912	0.947	0.000	0.000	0.927

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Mission Gorge Pl & Fairmount Ave

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_004

DAILY TOTALS	NB	SB	EB	WB	Total
	11,014	10,092	0	0	21,106

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	16		24						40		12:00	202		164						366	
00:15	11		18						29		12:15	225		183						408	
00:30	7		14						21		12:30	207		177						384	
00:45	6	40	17	73					23	113	12:45	215	849	161	685					376	1534
01:00	5		11						16		13:00	209		145						354	
01:15	9		14						23		13:15	193		174						367	
01:30	4		14						18		13:30	204		198						402	
01:45	12	30	12	51					24	81	13:45	197	803	158	675					355	1478
02:00	6		15						21		14:00	208		141						349	
02:15	6		18						24		14:15	201		178						379	
02:30	10		9						19		14:30	208		131						339	
02:45	7	29	6	48					13	77	14:45	208	825	173	623					381	1448
03:00	3		9						12		15:00	181		182						363	
03:15	4		3						7		15:15	217		208						425	
03:30	4		10						14		15:30	216		212						428	
03:45	4	15	7	29					11	44	15:45	170	784	203	805					373	1589
04:00	10		8						18		16:00	187		198						385	
04:15	16		12						28		16:15	206		193						399	
04:30	19		9						28		16:30	203		192						395	
04:45	20	65	12	41					32	106	16:45	175	771	205	788					380	1559
05:00	25		25						50		17:00	204		180						384	
05:15	27		27						54		17:15	207		196						403	
05:30	53		41						94		17:30	159		162						321	
05:45	55	160	59	152					114	312	17:45	181	751	160	698					341	1449
06:00	71		59						130		18:00	168		179						347	
06:15	123		58						181		18:15	178		144						322	
06:30	145		80						225		18:30	163		147						310	
06:45	127	466	80	277					207	743	18:45	135	644	154	624					289	1268
07:00	161		93						254		19:00	110		164						274	
07:15	174		103						277		19:15	117		154						271	
07:30	231		144						375		19:30	92		141						233	
07:45	279	845	106	446					385	1291	19:45	86	405	129	588					215	993
08:00	234		119						353		20:00	78		145						223	
08:15	205		125						330		20:15	89		148						237	
08:30	221		134						355		20:30	80		140						220	
08:45	213	873	135	513					348	1386	20:45	84	331	97	530					181	861
09:00	187		132						319		21:00	80		85						165	
09:15	154		122						276		21:15	58		97						155	
09:30	118		151						269		21:30	60		55						115	
09:45	110	569	143	548					253	1117	21:45	35	233	67	304					102	537
10:00	137		150						287		22:00	57		61						118	
10:15	133		141						274		22:15	53		50						103	
10:30	129		137						266		22:30	54		51						105	
10:45	163	562	150	578					313	1140	22:45	33	197	36	198					69	395
11:00	142		163						305		23:00	35		47						82	
11:15	153		142						295		23:15	35		45						80	
11:30	139		166						305		23:30	29		61						90	
11:45	213	647	161	632					374	1279	23:45	21	120	33	186					54	306
TOTALS		4301		3388						7689	TOTALS		6713		6704						13417
SPLIT %		55.9%		44.1%						36.4%	SPLIT %		50.0%		50.0%						63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,014	10,092	0	0	21,106

AM Peak Hour	07:30	11:45			11:45	PM Peak Hour	12:15	15:15			15:15
AM Pk Volume	949	685			1532	PM Pk Volume	856	821			1611
Pk Hr Factor	0.850	0.936			0.939	Pk Hr Factor	0.951	0.968			0.941
7 - 9 Volume	1718	959	0	0	2677	4 - 6 Volume	1522	1486	0	0	3008
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	16:30	16:00			16:30
7 - 9 Pk Volume	949	513	0	0	1443	4 - 6 Pk Volume	789	788	0	0	1562
Pk Hr Factor	0.850	0.950	0.000	0.000	0.937	Pk Hr Factor	0.953	0.961	0.000	0.000	0.969

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. San Diego Mission Rd & Mission Gorge Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_005

DAILY TOTALS	NB	SB	EB	WB	Total
	3,677	3,483	0	0	7,160

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	4		4						8		12:00	76		55						131	
00:15	2		6						8		12:15	78		65						143	
00:30	0		2						2		12:30	74		60						134	
00:45	0	6	3	15					3	21	12:45	58	286	83	263					141	549
01:00	2		0						2		13:00	79		75						154	
01:15	6		3						9		13:15	69		63						132	
01:30	1		0						1		13:30	75		71						146	
01:45	3	12	3	6					6	18	13:45	90	313	61	270					151	583
02:00	0		2						2		14:00	65		72						137	
02:15	0		0						0		14:15	80		88						168	
02:30	1		1						2		14:30	81		79						160	
02:45	3	4	0	3					3	7	14:45	58	284	73	312					131	596
03:00	3		1						4		15:00	63		79						142	
03:15	1		2						3		15:15	73		73						146	
03:30	0		3						3		15:30	66		78						144	
03:45	1	5	2	8					3	13	15:45	79	281	76	306					155	587
04:00	2		0						2		16:00	70		75						145	
04:15	1		3						4		16:15	53		67						120	
04:30	4		6						10		16:30	70		76						146	
04:45	9	16	8	17					17	33	16:45	66	259	82	300					148	559
05:00	13		2						15		17:00	68		86						154	
05:15	25		5						30		17:15	65		71						136	
05:30	35		7						42		17:30	38		67						105	
05:45	30	103	15	29					45	132	17:45	47	218	46	270					93	488
06:00	30		16						46		18:00	43		58						101	
06:15	43		24						67		18:15	50		45						95	
06:30	34		24						58		18:30	38		40						78	
06:45	74	181	32	96					106	277	18:45	32	163	37	180					69	343
07:00	48		30						78		19:00	26		38						64	
07:15	59		42						101		19:15	23		23						46	
07:30	64		51						115		19:30	23		32						55	
07:45	75	246	59	182					134	428	19:45	19	91	37	130					56	221
08:00	86		62						148		20:00	3		26						29	
08:15	87		53						140		20:15	16		13						29	
08:30	78		50						128		20:30	23		20						43	
08:45	67	318	47	212					114	530	20:45	18	60	17	76					35	136
09:00	50		55						105		21:00	7		15						22	
09:15	48		46						94		21:15	13		8						21	
09:30	56		69						125		21:30	10		7						17	
09:45	58	212	62	232					120	444	21:45	10	40	8	38					18	78
10:00	71		59						130		22:00	8		5						13	
10:15	59		58						117		22:15	9		7						16	
10:30	55		65						120		22:30	7		6						13	
10:45	67	252	64	246					131	498	22:45	3	27	1	19					4	46
11:00	75		63						138		23:00	1		1						2	
11:15	65		72						137		23:15	4		2						6	
11:30	65		46						111		23:30	9		4						13	
11:45	72	277	81	262					153	539	23:45	9	23	4	11					13	34
TOTALS		1632		1308						2940	TOTALS		2045		2175						4220
SPLIT %		55.5%		44.5%						41.1%	SPLIT %		48.5%		51.5%						58.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,677	3,483	0	0	7,160

AM Peak Hour	07:45	10:30			11:45	PM Peak Hour	13:45	14:15			13:45
AM Pk Volume	326	264			561	PM Pk Volume	316	319			616
Pk Hr Factor	0.937	0.917			0.917	Pk Hr Factor	0.878	0.906			0.917
7 - 9 Volume	564	394	0	0	958	4 - 6 Volume	477	570	0	0	1047
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	326	225	0	0	550	4 - 6 Pk Volume	269	315	0	0	584
Pk Hr Factor	0.937	0.907	0.000	0.000	0.929	Pk Hr Factor	0.961	0.916	0.000	0.000	0.948

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Mission Gorge Rd & Alvarado Canyon Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_006

DAILY TOTALS	NB	SB	EB	WB	Total
	17,781	14,649	0	0	32,430

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	19		18						37		12:00	291		242						533	
00:15	20		24						44		12:15	305		264						569	
00:30	17		17						34		12:30	312		263						575	
00:45	17	73	20	79					37	152	12:45	302	1210	239	1008					541	2218
01:00	15		18						33		13:00	310		248						558	
01:15	19		14						33		13:15	314		247						561	
01:30	12		15						27		13:30	337		235						572	
01:45	13	59	18	65					31	124	13:45	314	1275	259	989					573	2264
02:00	6		19						25		14:00	287		190						477	
02:15	13		17						30		14:15	319		262						581	
02:30	11		15						26		14:30	338		214						552	
02:45	13	43	8	59					21	102	14:45	320	1264	271	937					591	2201
03:00	8		8						16		15:00	247		259						506	
03:15	10		9						19		15:15	255		279						534	
03:30	16		11						27		15:30	294		282						576	
03:45	10	44	9	37					19	81	15:45	256	1052	275	1095					531	2147
04:00	23		11						34		16:00	233		309						542	
04:15	29		18						47		16:15	263		285						548	
04:30	47		13						60		16:30	256		271						527	
04:45	50	149	18	60					68	209	16:45	280	1032	286	1151					566	2183
05:00	60		28						88		17:00	266		282						548	
05:15	84		34						118		17:15	245		299						544	
05:30	144		49						193		17:30	257		272						529	
05:45	165	453	64	175					229	628	17:45	269	1037	272	1125					541	2162
06:00	153		80						233		18:00	219		251						470	
06:15	220		105						325		18:15	233		222						455	
06:30	291		116						407		18:30	185		215						400	
06:45	323	987	118	419					441	1406	18:45	202	839	223	911					425	1750
07:00	280		121						401		19:00	192		212						404	
07:15	357		157						514		19:15	180		207						387	
07:30	397		177						574		19:30	145		211						356	
07:45	451	1485	183	638					634	2123	19:45	152	669	178	808					330	1477
08:00	393		207						600		20:00	147		188						335	
08:15	363		197						560		20:15	102		181						283	
08:30	347		183						530		20:30	119		178						297	
08:45	335	1438	206	793					541	2231	20:45	113	481	132	679					245	1160
09:00	290		196						486		21:00	115		131						246	
09:15	286		209						495		21:15	80		111						191	
09:30	289		220						509		21:30	72		76						148	
09:45	305	1170	235	860					540	2030	21:45	73	340	84	402					157	742
10:00	325		235						560		22:00	74		83						157	
10:15	267		241						508		22:15	58		65						123	
10:30	281		206						487		22:30	57		65						122	
10:45	272	1145	219	901					491	2046	22:45	43	232	44	257					87	489
11:00	283		245						528		23:00	53		57						110	
11:15	288		248						536		23:15	32		51						83	
11:30	279		237						516		23:30	45		73						118	
11:45	296	1146	235	965					531	2111	23:45	28	158	55	236					83	394
TOTALS		8192		5051						13243	TOTALS		9589		9598						19187
SPLIT %		61.9%		38.1%						40.8%	SPLIT %		50.0%		50.0%						59.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	17,781	14,649	0	0	32,430

AM Peak Hour	07:30	11:45			07:30	PM Peak Hour	13:00	15:30			13:00
AM Pk Volume	1604	1004			2368	PM Pk Volume	1275	1151			2264
Pk Hr Factor	0.889	0.951			0.934	Pk Hr Factor	0.946	0.931			0.988
7 - 9 Volume	2923	1431	0	0	4354	4 - 6 Volume	2069	2276	0	0	4345
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	16:15	16:00			16:15
7 - 9 Pk Volume	1604	793	0	0	2368	4 - 6 Pk Volume	1065	1151	0	0	2189
Pk Hr Factor	0.889	0.958	0.000	0.000	0.934	Pk Hr Factor	0.951	0.931	0.000	0.000	0.967

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Alvarado Canyon Rd & I-8 WB Ramps

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_007

DAILY TOTALS	NB	SB	EB	WB	Total
	17,571	26,931	0	0	44,502

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	28		77						105		**12:00**	274		453						727	
00:15	29		52						81		**12:15**	343		443						786	
00:30	18		43						61		**12:30**	292		436						728	
00:45	17	92	34	206					51	298	**12:45**	313	1222	416	1748					729	2970
01:00	18		32						50		**13:00**	290		415						705	
01:15	19		27						46		**13:15**	280		434						714	
01:30	11		20						31		**13:30**	304		417						721	
01:45	18	66	34	113					52	179	**13:45**	279	1153	413	1679					692	2832
02:00	5		32						37		**14:00**	271		394						665	
02:15	13		29						42		**14:15**	281		442						723	
02:30	15		25						40		**14:30**	309		449						758	
02:45	15	48	28	114					43	162	**14:45**	301	1162	487	1772					788	2934
03:00	13		18						31		**15:00**	267		519						786	
03:15	24		20						44		**15:15**	272		518						790	
03:30	18		26						44		**15:30**	315		567						882	
03:45	12	67	24	88					36	155	**15:45**	283	1137	544	2148					827	3285
04:00	23		26						49		**16:00**	234		570						804	
04:15	32		29						61		**16:15**	275		583						858	
04:30	44		40						84		**16:30**	253		562						815	
04:45	49	148	41	136					90	284	**16:45**	278	1040	577	2292					855	3332
05:00	63		68						131		**17:00**	277		599						876	
05:15	71		69						140		**17:15**	253		599						852	
05:30	137		87						224		**17:30**	237		593						830	
05:45	169	440	97	321					266	761	**17:45**	270	1037	523	2314					793	3351
06:00	164		156						320		**18:00**	200		477						677	
06:15	224		173						397		**18:15**	214		417						631	
06:30	279		199						478		**18:30**	257		390						647	
06:45	336	1003	236	764					572	1767	**18:45**	226	897	397	1681					623	2578
07:00	285		265						550		**19:00**	178		387						565	
07:15	356		298						654		**19:15**	183		391						574	
07:30	420		323						743		**19:30**	145		356						501	
07:45	449	1510	337	1223					786	2733	**19:45**	133	639	346	1480					479	2119
08:00	405		366						771		**20:00**	131		327						458	
08:15	348		342						690		**20:15**	117		288						405	
08:30	343		349						692		**20:30**	113		302						415	
08:45	327	1423	370	1427					697	2850	**20:45**	116	477	233	1150					349	1627
09:00	271		322						593		**21:00**	104		250						354	
09:15	299		350						649		**21:15**	87		221						308	
09:30	265		373						638		**21:30**	90		162						252	
09:45	256	1091	363	1408					619	2499	**21:45**	75	356	157	790					232	1146
10:00	293		376						669		**22:00**	67		164						231	
10:15	240		378						618		**22:15**	80		145						225	
10:30	252		375						627		**22:30**	73		136						209	
10:45	264	1049	378	1507					642	2556	**22:45**	56	276	98	543					154	819
11:00	259		409						668		**23:00**	49		124						173	
11:15	280		388						668		**23:15**	39		94						133	
11:30	254		404						658		**23:30**	39		119						158	
11:45	294	1087	400	1601					694	2688	**23:45**	24	151	89	426					113	577
TOTALS		8024		8908						**16932**	**TOTALS**		9547		18023						**27570**
SPLIT %		47.4%		52.6%						**38.0%**	**SPLIT %**		34.6%		65.4%						**62.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	17,571	26,931	0	0	44,502

AM Peak Hour	07:15	11:45			**07:30**	**PM Peak Hour**	12:15	16:45			**16:45**
AM Pk Volume	1630	1732			**2990**	**PM Pk Volume**	1238	2368			**3413**
Pk Hr Factor	0.908	0.956			**0.951**	**Pk Hr Factor**	0.902	0.988			**0.974**
7 - 9 Volume	2933	2650	0	0	**5583**	**4 - 6 Volume**	2077	4606	0	0	**6683**
7 - 9 Peak Hour	07:15	08:00			**07:30**	**4 - 6 Peak Hour**	16:15	16:45			**16:45**
7 - 9 Pk Volume	1630	1427	0	0	**2990**	**4 - 6 Pk Volume**	1083	2368	0	0	**3413**
Pk Hr Factor	0.908	0.964	0.000	0.000	**0.951**	**Pk Hr Factor**	0.974	0.988	0.000	0.000	**0.974**

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. I-8 WB Ramps & I-8 EB Ramps

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_008

DAILY TOTALS	NB	SB	EB	WB	Total
	17,958	16,601	0	0	34,559

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	28		56						84		12:00	260		272						532	
00:15	30		40						70		12:15	321		273						594	
00:30	17		29						46		12:30	302		259						561	
00:45	17	92	26	151					43	243	12:45	320	1203	247	1051					567	2254
01:00	18		26						44		13:00	291		253						544	
01:15	19		20						39		13:15	287		270						557	
01:30	11		13						24		13:30	315		257						572	
01:45	18	66	22	81					40	147	13:45	315	1208	242	1022					557	2230
02:00	5		17						22		14:00	268		239						507	
02:15	13		17						30		14:15	275		283						558	
02:30	15		14						29		14:30	325		279						604	
02:45	15	48	19	67					34	115	14:45	300	1168	317	1118					617	2286
03:00	13		14						27		15:00	276		332						608	
03:15	24		12						36		15:15	302		325						627	
03:30	18		14						32		15:30	313		366						679	
03:45	12	67	8	48					20	115	15:45	287	1178	367	1390					654	2568
04:00	24		12						36		16:00	271		372						643	
04:15	32		11						43		16:15	287		380						667	
04:30	45		16						61		16:30	254		391						645	
04:45	47	148	20	59					67	207	16:45	256	1068	393	1536					649	2604
05:00	64		26						90		17:00	248		409						657	
05:15	75		27						102		17:15	262		446						708	
05:30	144		35						179		17:30	230		382						612	
05:45	178	461	43	131					221	592	17:45	256	996	328	1565					584	2561
06:00	168		61						229		18:00	203		320						523	
06:15	228		69						297		18:15	212		296						508	
06:30	304		98						402		18:30	278		254						532	
06:45	333	1033	105	333					438	1366	18:45	228	921	257	1127					485	2048
07:00	308		142						450		19:00	189		255						444	
07:15	372		124						496		19:15	191		267						458	
07:30	427		159						586		19:30	149		216						365	
07:45	461	1568	201	626					662	2194	19:45	136	665	215	953					351	1618
08:00	418		188						606		20:00	134		194						328	
08:15	370		209						579		20:15	122		175						297	
08:30	338		214						552		20:30	116		167						283	
08:45	331	1457	222	833					553	2290	20:45	116	488	151	687					267	1175
09:00	279		184						463		21:00	103		158						261	
09:15	317		194						511		21:15	89		144						233	
09:30	266		220						486		21:30	91		107						198	
09:45	255	1117	216	814					471	1931	21:45	75	358	113	522					188	880
10:00	309		219						528		22:00	67		114						181	
10:15	267		216						483		22:15	82		104						186	
10:30	260		213						473		22:30	75		84						159	
10:45	279	1115	243	891					522	2006	22:45	56	280	68	370					124	650
11:00	253		244						497		23:00	48		83						131	
11:15	281		230						511		23:15	40		66						106	
11:30	267		221						488		23:30	40		80						120	
11:45	299	1100	250	945					549	2045	23:45	25	153	52	281					77	434
TOTALS		8272		4979						13251	TOTALS		9686		11622						21308
SPLIT %		62.4%		37.6%						38.3%	SPLIT %		45.5%		54.5%						61.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	17,958	16,601	0	0	34,559

AM Peak Hour	07:15	11:45			07:30	PM Peak Hour	12:15	16:30			16:30
AM Pk Volume	1678	1054			2433	PM Pk Volume	1234	1639			2659
Pk Hr Factor	0.910	0.965			0.919	Pk Hr Factor	0.961	0.919			0.939
7 - 9 Volume	3025	1459	0	0	4484	4 - 6 Volume	2064	3101	0	0	5165
7 - 9 Peak Hour	07:15	08:00			07:30	4 - 6 Peak Hour	16:00	16:30			16:30
7 - 9 Pk Volume	1678	833	0	0	2433	4 - 6 Pk Volume	1068	1639	0	0	2659
Pk Hr Factor	0.910	0.938	0.000	0.000	0.919	Pk Hr Factor	0.930	0.919	0.000	0.000	0.939

Prepared by NDS/ATD

VOLUME

San Diego Mission Rd Bet. Fairmount Ave & Rancho Mission Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,223	3,693	6,916

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		8		12		12:00			45		67		112	
00:15			3		2		5		12:15			53		46		99	
00:30			3		1		4		12:30			60		67		127	
00:45			4	14	4	15	8	29	12:45			72	230	59	239	131	469
01:00			5		3		8		13:00			62		67		129	
01:15			2		9		11		13:15			64		72		136	
01:30			4		2		6		13:30			76		89		165	
01:45			1	12	6	20	7	32	13:45			45	247	67	295	112	542
02:00			1		1		2		14:00			66		86		152	
02:15			2		1		3		14:15			67		100		167	
02:30			0		2		2		14:30			52		82		134	
02:45			1	4	4	8	5	12	14:45			50	235	66	334	116	569
03:00			2		2		4		15:00			45		80		125	
03:15			1		0		1		15:15			58		77		135	
03:30			1		0		1		15:30			54		73		127	
03:45			0	4	0	2	0	6	15:45			67	224	60	290	127	514
04:00			2		1		3		16:00			70		91		161	
04:15			6		1		7		16:15			64		72		136	
04:30			9		6		15		16:30			99		79		178	
04:45			3	20	5	13	8	33	16:45			97	330	80	322	177	652
05:00			3		3		6		17:00			98		104		202	
05:15			4		8		12		17:15			138		66		204	
05:30			14		11		25		17:30			90		68		158	
05:45			17	38	11	33	28	71	17:45			81	407	34	272	115	679
06:00			9		35		44		18:00			62		49		111	
06:15			21		39		60		18:15			58		55		113	
06:30			25		35		60		18:30			41		35		76	
06:45			32	87	51	160	83	247	18:45			32	193	31	170	63	363
07:00			23		49		72		19:00			33		30		63	
07:15			50		56		106		19:15			24		31		55	
07:30			39		86		125		19:30			29		23		52	
07:45			47	159	82	273	129	432	19:45			23	109	35	119	58	228
08:00			47		75		122		20:00			25		27		52	
08:15			48		66		114		20:15			15		23		38	
08:30			52		53		105		20:30			17		27		44	
08:45			42	189	72	266	114	455	20:45			22	79	28	105	50	184
09:00			38		41		79		21:00			18		19		37	
09:15			38		53		91		21:15			12		17		29	
09:30			42		46		88		21:30			14		20		34	
09:45			46	164	60	200	106	364	21:45			8	52	7	63	15	115
10:00			49		36		85		22:00			8		8		16	
10:15			33		51		84		22:15			8		7		15	
10:30			59		42		101		22:30			7		9		16	
10:45			54	195	49	178	103	373	22:45			6	29	10	34	16	63
11:00			33		55		88		23:00			11		5		16	
11:15			49		54		103		23:15			2		7		9	
11:30			41		72		113		23:30			1		10		11	
11:45			60	183	73	254	133	437	23:45			5	19	6	28	11	47
TOTALS				1069		1422		2491	TOTALS				2154		2271		4425
SPLIT %				42.9%		57.1%		36.0%	SPLIT %				48.7%		51.3%		64.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,223	3,693	6,916

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:30	13:30	16:30
AM Pk Volume			218	309	490	PM Pk Volume			432	342	761
Pk Hr Factor			0.908	0.898	0.950	Pk Hr Factor			0.783	0.855	0.933
7 - 9 Volume	0	0	348	539	887	4 - 6 Volume	0	0	737	594	1331
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			16:30	16:15	16:30
7 - 9 Pk Volume	0	0	194	309	490	4 - 6 Pk Volume	0	0	432	335	761
Pk Hr Factor	0.000	0.000	0.933	0.898	0.950	Pk Hr Factor	0.000	0.000	0.783	0.805	0.933

Prepared by NDS/ATD

VOLUME

San Diego Mission Rd W/O Rancho Mission Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,316	3,983	8,299

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		14		22		12:00			80		63		143	
00:15			2		8		10		12:15			54		59		113	
00:30			3		3		6		12:30			71		66		137	
00:45			4	17	2	27	6	44	12:45			64	269	77	265	141	534
01:00			7		13		20		13:00			63		68		131	
01:15			3		7		10		13:15			59		69		128	
01:30			3		3		6		13:30			77		74		151	
01:45			4	17	7	30	11	47	13:45			53	252	49	260	102	512
02:00			3		5		8		14:00			68		64		132	
02:15			5		7		12		14:15			72		75		147	
02:30			3		1		4		14:30			72		80		152	
02:45			3	14	5	18	8	32	14:45			61	273	68	287	129	560
03:00			3		4		7		15:00			52		70		122	
03:15			4		4		8		15:15			75		78		153	
03:30			3		6		9		15:30			86		66		152	
03:45			2	12	5	19	7	31	15:45			85	298	47	261	132	559
04:00			2		3		5		16:00			110		69		179	
04:15			9		5		14		16:15			109		67		176	
04:30			4		8		12		16:30			150		66		216	
04:45			7	22	7	23	14	45	16:45			164	533	61	263	225	796
05:00			11		7		18		17:00			191		74		265	
05:15			17		9		26		17:15			212		70		282	
05:30			21		17		38		17:30			155		63		218	
05:45			19	68	12	45	31	113	17:45			127	685	59	266	186	951
06:00			19		24		43		18:00			103		52		155	
06:15			23		20		43		18:15			68		55		123	
06:30			19		62		81		18:30			74		42		116	
06:45			30	91	68	174	98	265	18:45			51	296	46	195	97	491
07:00			26		70		96		19:00			57		40		97	
07:15			33		111		144		19:15			42		39		81	
07:30			39		119		158		19:30			50		38		88	
07:45			46	144	118	418	164	562	19:45			46	195	36	153	82	348
08:00			44		89		133		20:00			32		36		68	
08:15			40		85		125		20:15			35		38		73	
08:30			46		78		124		20:30			42		46		88	
08:45			48	178	62	314	110	492	20:45			34	143	30	150	64	293
09:00			42		39		81		21:00			35		37		72	
09:15			42		42		84		21:15			22		24		46	
09:30			43		44		87		21:30			29		29		58	
09:45			39	166	47	172	86	338	21:45			21	107	13	103	34	210
10:00			38		36		74		22:00			15		18		33	
10:15			43		67		110		22:15			13		8		21	
10:30			60		45		105		22:30			16		14		30	
10:45			54	195	48	196	102	391	22:45			14	58	13	53	27	111
11:00			55		53		108		23:00			19		12		31	
11:15			60		52		112		23:15			7		19		26	
11:30			56		60		116		23:30			11		16		27	
11:45			59	230	74	239	133	469	23:45			16	53	5	52	21	105
TOTALS				1154		1675		2829	TOTALS				3162		2308		5470
SPLIT %				40.8%		59.2%		34.1%	SPLIT %				57.8%		42.2%		65.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,316	3,983	8,299

AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:45	14:30	16:45
AM Pk Volume			264	437	599	PM Pk Volume			722	296	990
Pk Hr Factor			0.825	0.918	0.913	Pk Hr Factor			0.851	0.925	0.878
7 - 9 Volume	0	0	322	732	1054	4 - 6 Volume	0	0	1218	529	1747
7 - 9 Peak Hour			08:00	07:15	07:15	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	178	437	599	4 - 6 Pk Volume	0	0	722	271	990
Pk Hr Factor	0.000	0.000	0.927	0.918	0.913	Pk Hr Factor	0.000	0.000	0.851	0.916	0.878

Prepared by NDS/ATD

VOLUME

Camino Del Rio N Bet. Fairmount Ave & Ward Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,848	5,430	11,278

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		8		17		12:00			106		74		180	
00:15			7		19		26		12:15			87		98		185	
00:30			12		10		22		12:30			92		99		191	
00:45			8	36	4	41	12	77	12:45			88	373	100	371	188	744
01:00			3		8		11		13:00			88		84		172	
01:15			8		9		17		13:15			85		86		171	
01:30			3		4		7		13:30			87		91		178	
01:45			10	24	5	26	15	50	13:45			80	340	76	337	156	677
02:00			5		5		10		14:00			72		63		135	
02:15			4		8		12		14:15			95		67		162	
02:30			4		4		8		14:30			113		77		190	
02:45			6	19	2	19	8	38	14:45			98	378	81	288	179	666
03:00			3		5		8		15:00			129		75		204	
03:15			6		5		11		15:15			111		65		176	
03:30			1		8		9		15:30			126		66		192	
03:45			2	12	0	18	2	30	15:45			129	495	66	272	195	767
04:00			6		5		11		16:00			188		83		271	
04:15			7		9		16		16:15			173		68		241	
04:30			3		18		21		16:30			191		51		242	
04:45			7	23	15	47	22	70	16:45			189	741	99	301	288	1042
05:00			17		19		36		17:00			239		87		326	
05:15			10		30		40		17:15			195		66		261	
05:30			16		38		54		17:30			173		51		224	
05:45			20	63	49	136	69	199	17:45			146	753	81	285	227	1038
06:00			31		41		72		18:00			107		80		187	
06:15			26		57		83		18:15			101		52		153	
06:30			36		105		141		18:30			104		60		164	
06:45			44	137	143	346	187	483	18:45			67	379	49	241	116	620
07:00			38		157		195		19:00			93		50		143	
07:15			57		163		220		19:15			93		50		143	
07:30			61		182		243		19:30			78		46		124	
07:45			57	213	166	668	223	881	19:45			74	338	52	198	126	536
08:00			55		142		197		20:00			46		39		85	
08:15			58		159		217		20:15			53		32		85	
08:30			58		145		203		20:30			52		44		96	
08:45			60	231	93	539	153	770	20:45			36	187	39	154	75	341
09:00			41		84		125		21:00			46		43		89	
09:15			55		86		141		21:15			35		37		72	
09:30			54		82		136		21:30			31		31		62	
09:45			44	194	64	316	108	510	21:45			43	155	30	141	73	296
10:00			48		68		116		22:00			36		23		59	
10:15			61		63		124		22:15			40		28		68	
10:30			68		61		129		22:30			24		20		44	
10:45			60	237	65	257	125	494	22:45			30	130	24	95	54	225
11:00			79		58		137		23:00			29		20		49	
11:15			67		67		134		23:15			12		15		27	
11:30			77		72		149		23:30			17		17		34	
11:45			99	322	78	275	177	597	23:45			10	68	7	59	17	127
TOTALS				1511		2688		4199	TOTALS				4337		2742		7079
SPLIT %				36.0%		64.0%		37.2%	SPLIT %				61.3%		38.7%		62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,848	5,430	11,278

AM Peak Hour			11:45	07:00	07:15	PM Peak Hour			16:30	12:15	16:30
AM Pk Volume			384	668	883	PM Pk Volume			814	381	1117
Pk Hr Factor			0.906	0.918	0.908	Pk Hr Factor			0.851	0.953	0.857
7 - 9 Volume	0	0	444	1207	1651	4 - 6 Volume	0	0	1494	586	2080
7 - 9 Peak Hour			07:30	07:00	07:15	4 - 6 Peak Hour			16:30	16:15	16:30
7 - 9 Pk Volume	0	0	231	668	883	4 - 6 Pk Volume	0	0	814	305	1117
Pk Hr Factor	0.000	0.000	0.947	0.918	0.908	Pk Hr Factor	0.000	0.000	0.851	0.770	0.857

Prepared by NDS/ATD

VOLUME

Camino Del Rio N Bet. Ward Rd & Mission City Pkwy

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,887	3,986	7,873

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			3		1		4		12:00			90		65		155	
00:15			3		3		6		12:15			65		83		148	
00:30			4		4		8		12:30			62		87		149	
00:45			6	16	1	9	7	25	12:45			78	295	74	309	152	604
01:00			5		4		9		13:00			68		65		133	
01:15			8		2		10		13:15			64		66		130	
01:30			1		3		4		13:30			69		73		142	
01:45			2	16	2	11	4	27	13:45			60	261	60	264	120	525
02:00			4		6		10		14:00			52		52		104	
02:15			2		1		3		14:15			75		51		126	
02:30			0		3		3		14:30			81		48		129	
02:45			0	6	0	10	0	16	14:45			75	283	49	200	124	483
03:00			1		0		1		15:00			84		59		143	
03:15			2		3		5		15:15			80		48		128	
03:30			0		1		1		15:30			96		58		154	
03:45			0	3	0	4	0	7	15:45			100	360	57	222	157	582
04:00			1		0		1		16:00			136		57		193	
04:15			2		5		7		16:15			120		46		166	
04:30			4		16		20		16:30			156		47		203	
04:45			2	9	12	33	14	42	16:45			163	575	65	215	228	790
05:00			1		13		14		17:00			202		77		279	
05:15			0		19		19		17:15			167		43		210	
05:30			5		23		28		17:30			125		57		182	
05:45			2	8	25	80	27	88	17:45			95	589	46	223	141	812
06:00			11		40		51		18:00			82		45		127	
06:15			6		36		42		18:15			67		35		102	
06:30			9		86		95		18:30			64		39		103	
06:45			8	34	90	252	98	286	18:45			47	260	34	153	81	413
07:00			17		107		124		19:00			53		25		78	
07:15			21		110		131		19:15			48		31		79	
07:30			18		138		156		19:30			43		21		64	
07:45			28	84	141	496	169	580	19:45			37	181	26	103	63	284
08:00			21		131		152		20:00			32		13		45	
08:15			29		174		203		20:15			41		15		56	
08:30			26		119		145		20:30			29		18		47	
08:45			31	107	99	523	130	630	20:45			22	124	19	65	41	189
09:00			29		72		101		21:00			37		14		51	
09:15			23		81		104		21:15			19		17		36	
09:30			26		77		103		21:30			25		10		35	
09:45			33	111	50	280	83	391	21:45			25	106	13	54	38	160
10:00			24		48		72		22:00			18		10		28	
10:15			33		40		73		22:15			19		11		30	
10:30			37		57		94		22:30			12		4		16	
10:45			33	127	55	200	88	327	22:45			11	60	6	31	17	91
11:00			46		49		95		23:00			13		7		20	
11:15			53		61		114		23:15			4		13		17	
11:30			55		57		112		23:30			10		3		13	
11:45			77	231	58	225	135	456	23:45			14	41	1	24	15	65
TOTALS				752		2123		**2875**	TOTALS				3135		1863		**4998**
SPLIT %				26.2%		73.8%		**36.5%**	SPLIT %				62.7%		37.3%		**63.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,887	3,986	7,873

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			16:30	12:00	**16:30**
AM Pk Volume			294	584	**680**	**PM Pk Volume**			688	309	**920**
Pk Hr Factor			0.817	0.839	**0.837**	**Pk Hr Factor**			0.851	0.888	**0.824**
7 - 9 Volume	0	0	191	1019	**1210**	**4 - 6 Volume**	0	0	1164	438	**1602**
7 - 9 Peak Hour			08:00	07:30	**07:30**	**4 - 6 Peak Hour**			16:30	16:45	**16:30**
7 - 9 Pk Volume	0	0	107	584	**680**	**4 - 6 Pk Volume**	0	0	688	242	**920**
Pk Hr Factor	0.000	0.000	0.863	0.839	**0.837**	**Pk Hr Factor**	0.000	0.000	0.851	0.786	**0.824**

Prepared by NDS/ATD

VOLUME

Rancho Mission Rd Bet. San Diego Mission Rd & Caminito Cascara

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_013

DAILY TOTALS	NB	SB	EB	WB	Total
	4,375	5,277	0	0	9,652

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	6		9						15		12:00	61		86						147	
00:15	15		7						22		12:15	72		70						142	
00:30	11		6						17		12:30	75		92						167	
00:45	2	34	7	29					9	63	12:45	86	294	63	311					149	605
01:00	8		6						14		13:00	54		75						129	
01:15	8		7						15		13:15	71		75						146	
01:30	5		6						11		13:30	71		86						157	
01:45	5	26	6	25					11	51	13:45	70	266	83	319					153	585
02:00	8		10						18		14:00	55		70						125	
02:15	11		6						17		14:15	64		83						147	
02:30	3		7						10		14:30	72		93						165	
02:45	1	23	6	29					7	52	14:45	79	270	81	327					160	597
03:00	4		5						9		15:00	58		98						156	
03:15	3		3						6		15:15	60		99						159	
03:30	8		3						11		15:30	71		117						188	
03:45	0	15	1	12					1	27	15:45	62	251	117	431					179	682
04:00	6		3						9		16:00	89		133						222	
04:15	6		6						12		16:15	76		105						181	
04:30	6		9						15		16:30	81		141						222	
04:45	8	26	8	26					16	52	16:45	96	342	137	516					233	858
05:00	8		16						24		17:00	124		122						246	
05:15	15		17						32		17:15	113		152						265	
05:30	21		15						36		17:30	81		138						219	
05:45	24	68	21	69					45	137	17:45	84	402	102	514					186	916
06:00	25		36						61		18:00	83		106						189	
06:15	31		37						68		18:15	56		99						155	
06:30	72		48						120		18:30	57		91						148	
06:45	99	227	55	176					154	403	18:45	59	255	68	364					127	619
07:00	89		59						148		19:00	53		70						123	
07:15	83		66						149		19:15	68		76						144	
07:30	111		67						178		19:30	49		54						103	
07:45	85	368	88	280					173	648	19:45	44	214	51	251					95	465
08:00	72		81						153		20:00	41		51						92	
08:15	71		82						153		20:15	34		52						86	
08:30	77		85						162		20:30	40		49						89	
08:45	48	268	87	335					135	603	20:45	34	149	41	193					75	342
09:00	49		60						109		21:00	45		56						101	
09:15	55		55						110		21:15	35		34						69	
09:30	46		57						103		21:30	28		36						64	
09:45	51	201	50	222					101	423	21:45	35	143	51	177					86	320
10:00	37		48						85		22:00	20		37						57	
10:15	49		51						100		22:15	21		23						44	
10:30	57		61						118		22:30	22		17						39	
10:45	46	189	71	231					117	420	22:45	15	78	22	99					37	177
11:00	43		79						122		23:00	19		21						40	
11:15	55		63						118		23:15	14		17						31	
11:30	46		62						108		23:30	18		19						37	
11:45	62	206	73	277					135	483	23:45	9	60	7	64					16	124
TOTALS		1651		1711						3362	TOTALS		2724		3566						6290
SPLIT %		49.1%		50.9%						34.8%	SPLIT %		43.3%		56.7%						65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,375	5,277	0	0	9,652

AM Peak Hour	06:45	07:45			07:30	PM Peak Hour	16:30	16:30			16:30
AM Pk Volume	382	336			657	PM Pk Volume	414	552			966
Pk Hr Factor	0.860	0.955			0.923	Pk Hr Factor	0.835	0.908			0.911
7 - 9 Volume	636	615	0	0	1251	4 - 6 Volume	744	1030	0	0	1774
7 - 9 Peak Hour	07:00	07:45			07:30	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	368	336	0	0	657	4 - 6 Pk Volume	414	552	0	0	966
Pk Hr Factor	0.829	0.955	0.000	0.000	0.923	Pk Hr Factor	0.835	0.908	0.000	0.000	0.911

Prepared by NDS/ATD

VOLUME

Mission Village Dr Bet. Ronda Ave & Friars Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_014

DAILY TOTALS	NB	SB	EB	WB	Total
	7,054	7,640	0	0	14,694

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	8		8						16		12:00	103		89						192	
00:15	12		11						23		12:15	110		90						200	
00:30	8		7						15		12:30	112		118						230	
00:45	13	41	6	32					19	73	12:45	107	432	98	395					205	827
01:00	7		4						11		13:00	112		96						208	
01:15	8		1						9		13:15	92		89						181	
01:30	12		0						12		13:30	109		85						194	
01:45	1	28	3	8					4	36	13:45	103	416	94	364					197	780
02:00	8		3						11		14:00	87		105						192	
02:15	7		7						14		14:15	104		96						200	
02:30	3		0						3		14:30	117		96						213	
02:45	5	23	4	14					9	37	14:45	113	421	101	398					214	819
03:00	6		5						11		15:00	99		103						202	
03:15	5		5						10		15:15	149		120						269	
03:30	5		8						13		15:30	105		115						220	
03:45	2	18	6	24					8	42	15:45	122	475	149	487					271	962
04:00	7		6						13		16:00	135		197						332	
04:15	4		10						14		16:15	127		194						321	
04:30	6		18						24		16:30	137		242						379	
04:45	5	22	25	59					30	81	16:45	143	542	255	888					398	1430
05:00	7		23						30		17:00	164		312						476	
05:15	13		33						46		17:15	166		290						456	
05:30	26		54						80		17:30	143		294						437	
05:45	17	63	51	161					68	224	17:45	125	598	241	1137					366	1735
06:00	32		52						84		18:00	123		201						324	
06:15	44		64						108		18:15	107		135						242	
06:30	72		81						153		18:30	96		125						221	
06:45	99	247	90	287					189	534	18:45	118	444	98	559					216	1003
07:00	132		86						218		19:00	96		102						198	
07:15	147		125						272		19:15	124		86						210	
07:30	160		117						277		19:30	105		79						184	
07:45	174	613	98	426					272	1039	19:45	84	409	55	322					139	731
08:00	129		119						248		20:00	68		53						121	
08:15	122		111						233		20:15	102		41						143	
08:30	128		135						263		20:30	83		59						142	
08:45	105	484	112	477					217	961	20:45	80	333	57	210					137	543
09:00	89		108						197		21:00	80		39						119	
09:15	52		84						136		21:15	61		36						97	
09:30	72		93						165		21:30	60		48						108	
09:45	66	279	80	365					146	644	21:45	59	260	45	168					104	428
10:00	58		80						138		22:00	66		27						93	
10:15	77		75						152		22:15	38		35						73	
10:30	75		89						164		22:30	31		21						52	
10:45	92	302	84	328					176	630	22:45	29	164	12	95					41	259
11:00	88		99						187		23:00	23		12						35	
11:15	68		88						156		23:15	24		18						42	
11:30	97		100						197		23:30	19		11						30	
11:45	103	356	89	376					192	732	23:45	18	84	19	60					37	144
TOTALS		2476		2557						5033	TOTALS		4578		5083						9661
SPLIT %		49.2%		50.8%						34.3%	SPLIT %		47.4%		52.6%						65.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,054	7,640	0	0	14,694

AM Peak Hour	07:00	08:00			07:15	PM Peak Hour	16:45	16:45			16:45
AM Pk Volume	613	477			1069	PM Pk Volume	616	1151			1767
Pk Hr Factor	0.881	0.883			0.965	Pk Hr Factor	0.928	0.922			0.928
7 - 9 Volume	1097	903	0	0	2000	4 - 6 Volume	1140	2025	0	0	3165
7 - 9 Peak Hour	07:00	08:00			07:15	4 - 6 Peak Hour	16:45	16:45			16:45
7 - 9 Pk Volume	613	477	0	0	1069	4 - 6 Pk Volume	616	1151	0	0	1767
Pk Hr Factor	0.881	0.883	0.000	0.000	0.965	Pk Hr Factor	0.928	0.922	0.000	0.000	0.928

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Riverdale St & Santo Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_015

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,895	23,518	45,413

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			38		33		71		12:00			325		381		706	
00:15			31		17		48		12:15			338		367		705	
00:30			27		21		48		12:30			343		395		738	
00:45			28	124	22	93	50	217	12:45			331	1337	372	1515	703	2852
01:00			12		20		32		13:00			348		333		681	
01:15			15		23		38		13:15			316		372		688	
01:30			25		27		52		13:30			352		388		740	
01:45			22	74	17	87	39	161	13:45			382	1398	343	1436	725	2834
02:00			18		21		39		14:00			378		362		740	
02:15			20		21		41		14:15			418		399		817	
02:30			16		33		49		14:30			410		452		862	
02:45			19	73	16	91	35	164	14:45			394	1600	386	1599	780	3199
03:00			24		29		53		15:00			448		411		859	
03:15			21		26		47		15:15			441		414		855	
03:30			19		36		55		15:30			441		441		882	
03:45			34	98	22	113	56	211	15:45			484	1814	374	1640	858	3454
04:00			37		31		68		16:00			492		412		904	
04:15			42		42		84		16:15			537		353		890	
04:30			49		75		124		16:30			571		390		961	
04:45			57	185	72	220	129	405	16:45			547	2147	333	1488	880	3635
05:00			64		93		157		17:00			567		463		1030	
05:15			100		87		187		17:15			577		375		952	
05:30			155		152		307		17:30			597		336		933	
05:45			154	473	161	493	315	966	17:45			501	2242	307	1481	808	3723
06:00			168		252		420		18:00			464		259		723	
06:15			189		364		553		18:15			439		287		726	
06:30			213		470		683		18:30			399		268		667	
06:45			187	757	468	1554	655	2311	18:45			298	1600	277	1091	575	2691
07:00			166		538		704		19:00			271		279		550	
07:15			194		480		674		19:15			245		257		502	
07:30			203		598		801		19:30			216		255		471	
07:45			217	780	487	2103	704	2883	19:45			198	930	217	1008	415	1938
08:00			247		450		697		20:00			177		238		415	
08:15			256		469		725		20:15			212		178		390	
08:30			237		423		660		20:30			169		202		371	
08:45			289	1029	342	1684	631	2713	20:45			144	702	178	796	322	1498
09:00			250		320		570		21:00			137		174		311	
09:15			263		334		597		21:15			129		122		251	
09:30			257		330		587		21:30			136		115		251	
09:45			289	1059	279	1263	568	2322	21:45			108	510	118	529	226	1039
10:00			297		299		596		22:00			105		125		230	
10:15			255		277		532		22:15			84		77		161	
10:30			307		356		663		22:30			80		78		158	
10:45			268	1127	280	1212	548	2339	22:45			85	354	75	355	160	709
11:00			316		338		654		23:00			61		58		119	
11:15			287		318		605		23:15			51		83		134	
11:30			323		310		633		23:30			37		149		186	
11:45			371	1297	361	1327	732	2624	23:45			36	185	50	340	86	525
TOTALS				7076		10240		17316	TOTALS				14819		13278		28097
SPLIT %				40.9%		59.1%		38.1%	SPLIT %				52.7%		47.3%		61.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,895	23,518	45,413

AM Peak Hour			11:45	07:00	07:30	PM Peak Hour			16:45	14:30	16:30
AM Pk Volume			1377	2103	2927	PM Pk Volume			2288	1663	3823
Pk Hr Factor			0.928	0.879	0.914	Pk Hr Factor			0.958	0.920	0.928
7 - 9 Volume	0	0	1809	3787	5596	4 - 6 Volume	0	0	4389	2969	7358
7 - 9 Peak Hour			08:00	07:00	07:30	4 - 6 Peak Hour			16:45	16:30	16:30
7 - 9 Pk Volume	0	0	1029	2103	2927	4 - 6 Pk Volume	0	0	2288	1561	3823
Pk Hr Factor	0.000	0.000	0.890	0.879	0.914	Pk Hr Factor	0.000	0.000	0.958	0.843	0.928

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Santo Rd & Rancho Mission Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_016

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,231	23,380	46,611

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			44		30		74		12:00			381		386		767	
00:15			33		38		71		12:15			331		319		650	
00:30			30		29		59		12:30			360		380		740	
00:45			32	139	22	119	54	258	12:45			357	1429	371	1456	728	2885
01:00			28		16		44		13:00			360		365		725	
01:15			24		11		35		13:15			355		366		721	
01:30			29		31		60		13:30			339		374		713	
01:45			25	106	15	73	40	179	13:45			422	1476	424	1529	846	3005
02:00			25		10		35		14:00			360		356		716	
02:15			19		13		32		14:15			426		394		820	
02:30			18		26		44		14:30			358		442		800	
02:45			37	99	16	65	53	164	14:45			415	1559	355	1547	770	3106
03:00			23		22		45		15:00			439		414		853	
03:15			24		18		42		15:15			430		364		794	
03:30			23		29		52		15:30			464		428		892	
03:45			27	97	25	94	52	191	15:45			444	1777	315	1521	759	3298
04:00			43		32		75		16:00			516		367		883	
04:15			54		43		97		16:15			578		338		916	
04:30			54		68		122		16:30			601		319		920	
04:45			72	223	78	221	150	444	16:45			573	2268	361	1385	934	3653
05:00			72		83		155		17:00			603		375		978	
05:15			102		119		221		17:15			580		348		928	
05:30			153		176		329		17:30			585		357		942	
05:45			163	490	173	551	336	1041	17:45			609	2377	306	1386	915	3763
06:00			160		251		411		18:00			481		304		785	
06:15			206		322		528		18:15			324		295		619	
06:30			194		439		633		18:30			234		263		497	
06:45			207	767	467	1479	674	2246	18:45			195	1234	249	1111	444	2345
07:00			168		477		645		19:00			240		274		514	
07:15			201		544		745		19:15			191		271		462	
07:30			244		577		821		19:30			249		221		470	
07:45			251	864	522	2120	773	2984	19:45			215	895	240	1006	455	1901
08:00			257		438		695		20:00			258		202		460	
08:15			263		457		720		20:15			250		204		454	
08:30			272		439		711		20:30			265		161		426	
08:45			299	1091	372	1706	671	2797	20:45			183	956	202	769	385	1725
09:00			242		338		580		21:00			171		177		348	
09:15			304		321		625		21:15			168		139		307	
09:30			273		313		586		21:30			158		156		314	
09:45			267	1086	317	1289	584	2375	21:45			115	612	107	579	222	1191
10:00			285		269		554		22:00			118		126		244	
10:15			292		310		602		22:15			143		123		266	
10:30			300		302		602		22:30			147		109		256	
10:45			374	1251	298	1179	672	2430	22:45			134	542	121	479	255	1021
11:00			359		304		663		23:00			94		91		185	
11:15			378		303		681		23:15			124		104		228	
11:30			379		343		722		23:30			118		152		270	
11:45			346	1462	323	1273	669	2735	23:45			95	431	96	443	191	874
TOTALS				7675		10169		17844	TOTALS				15556		13211		28767
SPLIT %				43.0%		57.0%		38.3%	SPLIT %				54.1%		45.9%		61.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,231	23,380	46,611

AM Peak Hour			10:45	07:00	07:15	PM Peak Hour			17:00	13:45	16:45
AM Pk Volume			1490	2120	3034	PM Pk Volume			2377	1616	3782
Pk Hr Factor			0.983	0.919	0.924	Pk Hr Factor			0.976	0.914	0.967
7 - 9 Volume	0	0	1955	3826	5781	4 - 6 Volume	0	0	4645	2771	7416
7 - 9 Peak Hour			08:00	07:00	07:15	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	1091	2120	3034	4 - 6 Pk Volume	0	0	2377	1441	3782
Pk Hr Factor	0.000	0.000	0.912	0.919	0.924	Pk Hr Factor	0.000	0.000	0.976	0.961	0.967

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rancho Mission Rd & I-15 NB Ramps

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_017

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	28,303	27,334	55,637

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			59		35		94		12:00			462		434		896	
00:15			47		36		83		12:15			450		366		816	
00:30			46		31		77		12:30			393		402		795	
00:45			53	205	24	126	77	331	12:45			442	1747	405	1607	847	3354
01:00			37		15		52		13:00			447		430		877	
01:15			39		18		57		13:15			411		393		804	
01:30			40		27		67		13:30			421		434		855	
01:45			34	150	20	80	54	230	13:45			467	1746	457	1714	924	3460
02:00			27		15		42		14:00			479		425		904	
02:15			26		14		40		14:15			512		442		954	
02:30			27		20		47		14:30			484		472		956	
02:45			36	116	17	66	53	182	14:45			503	1978	414	1753	917	3731
03:00			30		24		54		15:00			506		453		959	
03:15			31		18		49		15:15			506		447		953	
03:30			24		30		54		15:30			551		480		1031	
03:45			33	118	30	102	63	220	15:45			512	2075	377	1757	889	3832
04:00			43		31		74		16:00			601		398		999	
04:15			53		44		97		16:15			671		411		1082	
04:30			59		66		125		16:30			702		440		1142	
04:45			82	237	79	220	161	457	16:45			676	2650	395	1644	1071	4294
05:00			80		86		166		17:00			666		452		1118	
05:15			111		130		241		17:15			658		403		1061	
05:30			167		200		367		17:30			723		396		1119	
05:45			196	554	196	612	392	1166	17:45			652	2699	316	1567	968	4266
06:00			176		264		440		18:00			446		239		685	
06:15			231		342		573		18:15			300		295		595	
06:30			221		478		699		18:30			254		307		561	
06:45			240	868	442	1526	682	2394	18:45			293	1293	320	1161	613	2454
07:00			196		574		770		19:00			264		348		612	
07:15			233		587		820		19:15			266		351		617	
07:30			289		648		937		19:30			333		345		678	
07:45			298	1016	610	2419	908	3435	19:45			287	1150	315	1359	602	2509
08:00			273		531		804		20:00			352		278		630	
08:15			303		513		816		20:15			316		277		593	
08:30			315		519		834		20:30			349		200		549	
08:45			364	1255	422	1985	786	3240	20:45			268	1285	251	1006	519	2291
09:00			294		373		667		21:00			249		215		464	
09:15			335		317		652		21:15			242		196		438	
09:30			331		369		700		21:30			236		197		433	
09:45			310	1270	329	1388	639	2658	21:45			194	921	151	759	345	1680
10:00			357		300		657		22:00			216		208		424	
10:15			340		334		674		22:15			261		180		441	
10:30			373		341		714		22:30			249		196		445	
10:45			408	1478	347	1322	755	2800	22:45			259	985	183	767	442	1752
11:00			412		356		768		23:00			216		197		413	
11:15			443		357		800		23:15			230		242		472	
11:30			432		386		818		23:30			199		252		451	
11:45			420	1707	372	1471	792	3178	23:45			155	800	232	923	387	1723
TOTALS				8974		11317		20291	TOTALS				19329		16017		35346
SPLIT %				44.2%		55.8%		36.5%	SPLIT %				54.7%		45.3%		63.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	28,303	27,334	55,637

AM Peak Hour			11:30	07:00	07:15	PM Peak Hour			16:45	13:45	16:15
AM Pk Volume			1764	2419	3469	PM Pk Volume			2723	1796	4413
Pk Hr Factor			0.955	0.933	0.926	Pk Hr Factor			0.942	0.951	0.966
7 - 9 Volume	0	0	2271	4404	6675	4 - 6 Volume	0	0	5349	3211	8560
7 - 9 Peak Hour			08:00	07:00	07:15	4 - 6 Peak Hour			16:45	16:15	16:15
7 - 9 Pk Volume	0	0	1255	2419	3469	4 - 6 Pk Volume	0	0	2723	1698	4413
Pk Hr Factor	0.000	0.000	0.862	0.933	0.926	Pk Hr Factor	0.000	0.000	0.942	0.939	0.966

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. I-15 SB Ramps & Mission Village Dr

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_018

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,896	26,791	51,687

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			59		32		91		12:00			391		436		827	
00:15			49		35		84		12:15			429		408		837	
00:30			35		33		68		12:30			468		417		885	
00:45			35	178	30	130	65	308	12:45			409	1697	490	1751	899	3448
01:00			40		18		58		13:00			461		447		908	
01:15			20		22		42		13:15			403		466		869	
01:30			21		16		37		13:30			426		472		898	
01:45			26	107	12	68	38	175	13:45			412	1702	438	1823	850	3525
02:00			17		14		31		14:00			416		484		900	
02:15			14		13		27		14:15			474		453		927	
02:30			11		17		28		14:30			465		417		882	
02:45			13	55	14	58	27	113	14:45			481	1836	539	1893	1020	3729
03:00			13		13		26		15:00			502		537		1039	
03:15			25		7		32		15:15			461		600		1061	
03:30			15		15		30		15:30			515		557		1072	
03:45			30	83	25	60	55	143	15:45			503	1981	540	2234	1043	4215
04:00			32		23		55		16:00			617		455		1072	
04:15			26		26		52		16:15			615		396		1011	
04:30			28		45		73		16:30			633		438		1071	
04:45			42	128	39	133	81	261	16:45			646	2511	380	1669	1026	4180
05:00			54		59		113		17:00			653		402		1055	
05:15			69		64		133		17:15			686		362		1048	
05:30			127		144		271		17:30			673		369		1042	
05:45			123	373	170	437	293	810	17:45			610	2622	366	1499	976	4121
06:00			127		160		287		18:00			583		242		825	
06:15			146		234		380		18:15			430		379		809	
06:30			171		265		436		18:30			358		304		662	
06:45			173	617	327	986	500	1603	18:45			338	1709	368	1293	706	3002
07:00			195		306		501		19:00			384		345		729	
07:15			230		393		623		19:15			314		339		653	
07:30			258		430		688		19:30			325		341		666	
07:45			209	892	443	1572	652	2464	19:45			313	1336	251	1276	564	2612
08:00			229		399		628		20:00			309		434		743	
08:15			259		358		617		20:15			302		467		769	
08:30			266		347		613		20:30			269		261		530	
08:45			233	987	344	1448	577	2435	20:45			267	1147	261	1423	528	2570
09:00			269		378		647		21:00			238		271		509	
09:15			218		385		603		21:15			177		281		458	
09:30			266		374		640		21:30			156		281		437	
09:45			213	966	339	1476	552	2442	21:45			132	703	248	1081	380	1784
10:00			260		367		627		22:00			120		291		411	
10:15			279		384		663		22:15			124		295		419	
10:30			305		355		660		22:30			92		295		387	
10:45			340	1184	395	1501	735	2685	22:45			75	411	172	1053	247	1464
11:00			331		371		702		23:00			56		63		119	
11:15			371		356		727		23:15			47		55		102	
11:30			395		431		826		23:30			46		153		199	
11:45			392	1489	403	1561	795	3050	23:45			33	182	95	366	128	548
TOTALS				7059		9430		16489	TOTALS				17837		17361		35198
SPLIT %				42.8%		57.2%		31.9%	SPLIT %				50.7%		49.3%		68.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,896	26,791	51,687

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:45	15:00	15:15
AM Pk Volume			1680	1678	3344	PM Pk Volume			2658	2234	4248
Pk Hr Factor			0.897	0.962	0.945	Pk Hr Factor			0.969	0.931	0.991
7 - 9 Volume	0	0	1879	3020	4899	4 - 6 Volume	0	0	5133	3168	8301
7 - 9 Peak Hour			08:00	07:15	07:15	4 - 6 Peak Hour			16:45	16:00	16:30
7 - 9 Pk Volume	0	0	987	1665	2591	4 - 6 Pk Volume	0	0	2658	1669	4200
Pk Hr Factor	0.000	0.000	0.928	0.940	0.941	Pk Hr Factor	0.000	0.000	0.969	0.917	0.980

Prepared by NDS/ATD

VOLUME

Friars Rd E/O Northside Dr

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_019

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,629	20,380	42,009

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			30		29		59		12:00			314		348		662	
00:15			27		26		53		12:15			342		391		733	
00:30			35		24		59		12:30			325		370		695	
00:45			31	123	17	96	48	219	12:45			340	1321	363	1472	703	2793
01:00			27		14		41		13:00			306		341		647	
01:15			20		10		30		13:15			363		331		694	
01:30			17		18		35		13:30			315		356		671	
01:45			23	87	23	65	46	152	13:45			315	1299	335	1363	650	2662
02:00			16		15		31		14:00			346		319		665	
02:15			15		16		31		14:15			353		365		718	
02:30			9		9		18		14:30			339		322		661	
02:45			8	48	21	61	29	109	14:45			410	1448	315	1321	725	2769
03:00			12		11		23		15:00			361		333		694	
03:15			12		7		19		15:15			369		361		730	
03:30			8		10		18		15:30			363		330		693	
03:45			15	47	16	44	31	91	15:45			398	1491	301	1325	699	2816
04:00			18		20		38		16:00			593		322		915	
04:15			15		11		26		16:15			570		324		894	
04:30			17		29		46		16:30			660		374		1034	
04:45			22	72	35	95	57	167	16:45			600	2423	334	1354	934	3777
05:00			36		29		65		17:00			735		361		1096	
05:15			54		61		115		17:15			647		409		1056	
05:30			76		127		203		17:30			629		366		995	
05:45			54	220	126	343	180	563	17:45			581	2592	388	1524	969	4116
06:00			80		170		250		18:00			350		321		671	
06:15			81		221		302		18:15			275		340		615	
06:30			114		271		385		18:30			314		282		596	
06:45			127	402	280	942	407	1344	18:45			318	1257	296	1239	614	2496
07:00			192		288		480		19:00			270		269		539	
07:15			170		375		545		19:15			332		248		580	
07:30			200		430		630		19:30			250		243		493	
07:45			218	780	432	1525	650	2305	19:45			277	1129	229	989	506	2118
08:00			204		371		575		20:00			184		221		405	
08:15			193		360		553		20:15			200		142		342	
08:30			198		310		508		20:30			254		140		394	
08:45			218	813	292	1333	510	2146	20:45			272	910	127	630	399	1540
09:00			137		287		424		21:00			394		109		503	
09:15			155		265		420		21:15			300		87		387	
09:30			174		318		492		21:30			354		104		458	
09:45			133	599	318	1188	451	1787	21:45			285	1333	84	384	369	1717
10:00			197		314		511		22:00			232		69		301	
10:15			246		335		581		22:15			262		47		309	
10:30			247		361		608		22:30			129		51		180	
10:45			237	927	330	1340	567	2267	22:45			148	771	35	202	183	973
11:00			263		345		608		23:00			101		40		141	
11:15			277		341		618		23:15			124		36		160	
11:30			310		363		673		23:30			93		42		135	
11:45			299	1149	347	1396	646	2545	23:45			70	388	31	149	101	537
TOTALS				5267		8428		13695	TOTALS				16362		11952		28314
SPLIT %				38.5%		61.5%		32.6%	SPLIT %				57.8%		42.2%		67.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,629	20,380	42,009

AM Peak Hour			11:45	07:15	11:45	PM Peak Hour			16:30	17:00	16:30
AM Pk Volume			1280	1608	2736	PM Pk Volume			2642	1524	4120
Pk Hr Factor			0.936	0.931	0.933	Pk Hr Factor			0.899	0.932	0.940
7 - 9 Volume	0	0	1593	2858	4451	4 - 6 Volume	0	0	5015	2878	7893
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	815	1608	2408	4 - 6 Pk Volume	0	0	2642	1524	4120
Pk Hr Factor	0.000	0.000	0.935	0.931	0.926	Pk Hr Factor	0.000	0.000	0.899	0.932	0.940

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Northside Dr & Fenton Pkwy

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,931	17,385	40,316

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			129		297		426		12:00			358		271		629	
00:15			107		264		371		12:15			338		276		614	
00:30			42		192		234		12:30			374		259		633	
00:45			26	304	15	768	41	1072	12:45			333	1403	284	1090	617	2493
01:00			24		14		38		13:00			359		291		650	
01:15			21		12		33		13:15			341		278		619	
01:30			20		10		30		13:30			363		274		637	
01:45			24	89	7	43	31	132	13:45			332	1395	287	1130	619	2525
02:00			12		6		18		14:00			376		254		630	
02:15			15		9		24		14:15			356		277		633	
02:30			8		7		15		14:30			355		268		623	
02:45			5	40	5	27	10	67	14:45			426	1513	273	1072	699	2585
03:00			11		10		21		15:00			378		285		663	
03:15			12		3		15		15:15			461		272		733	
03:30			6		6		12		15:30			372		294		666	
03:45			11	40	10	29	21	69	15:45			493	1704	293	1144	786	2848
04:00			18		7		25		16:00			515		225		740	
04:15			8		14		22		16:15			484		245		729	
04:30			13		19		32		16:30			556		301		857	
04:45			17	56	18	58	35	114	16:45			508	2063	264	1035	772	3098
05:00			28		28		56		17:00			600		284		884	
05:15			41		40		81		17:15			519		331		850	
05:30			60		81		141		17:30			511		276		787	
05:45			61	190	113	262	174	452	17:45			511	2141	272	1163	783	3304
06:00			75		114		189		18:00			414		158		572	
06:15			84		148		232		18:15			323		158		481	
06:30			115		210		325		18:30			391		172		563	
06:45			116	390	219	691	335	1081	18:45			376	1504	148	636	524	2140
07:00			132		252		384		19:00			401		132		533	
07:15			160		324		484		19:15			395		140		535	
07:30			173		359		532		19:30			359		155		514	
07:45			189	654	332	1267	521	1921	19:45			406	1561	153	580	559	2141
08:00			201		268		469		20:00			299		189		488	
08:15			215		286		501		20:15			259		128		387	
08:30			201		243		444		20:30			282		162		444	
08:45			203	820	264	1061	467	1881	20:45			337	1177	112	591	449	1768
09:00			171		250		421		21:00			345		148		493	
09:15			188		250		438		21:15			314		132		446	
09:30			172		231		403		21:30			330		118		448	
09:45			195	726	191	922	386	1648	21:45			263	1252	95	493	358	1745
10:00			219		220		439		22:00			285		108		393	
10:15			245		226		471		22:15			275		135		410	
10:30			265		219		484		22:30			263		175		438	
10:45			255	984	233	898	488	1882	22:45			216	1039	163	581	379	1620
11:00			274		245		519		23:00			148		177		325	
11:15			304		227		531		23:15			179		228		407	
11:30			314		262		576		23:30			200		196		396	
11:45			318	1210	257	991	575	2201	23:45			149	676	252	853	401	1529
TOTALS				5503		7017		12520	TOTALS				17428		10368		27796
SPLIT %				44.0%		56.0%		31.1%	SPLIT %				62.7%		37.3%		68.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,931	17,385	40,316

AM Peak Hour			11:45	07:15	11:45	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			1388	1283	2451	PM Pk Volume			2183	1180	3363
Pk Hr Factor			0.928	0.893	0.968	Pk Hr Factor			0.910	0.891	0.951
7 - 9 Volume	0	0	1474	2328	3802	4 - 6 Volume	0	0	4204	2198	6402
7 - 9 Peak Hour			08:00	07:15	07:30	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	820	1283	2023	4 - 6 Pk Volume	0	0	2183	1180	3363
Pk Hr Factor	0.000	0.000	0.953	0.893	0.951	Pk Hr Factor	0.000	0.000	0.910	0.891	0.951

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fenton Pkwy & River Run Dr

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,566	18,483	41,049

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			74		302		376		12:00			344		296		640	
00:15			75		270		345		12:15			326		305		631	
00:30			61		237		298		12:30			354		267		621	
00:45			25	235	16	825	41	1060	12:45			322	1346	297	1165	619	2511
01:00			24		10		34		13:00			369		302		671	
01:15			24		13		37		13:15			321		323		644	
01:30			26		9		35		13:30			348		279		627	
01:45			18	92	7	39	25	131	13:45			321	1359	308	1212	629	2571
02:00			14		6		20		14:00			370		251		621	
02:15			15		9		24		14:15			363		265		628	
02:30			9		5		14		14:30			390		293		683	
02:45			8	46	6	26	14	72	14:45			372	1495	273	1082	645	2577
03:00			10		5		15		15:00			424		287		711	
03:15			8		5		13		15:15			447		266		713	
03:30			5		4		9		15:30			477		295		772	
03:45			11	34	11	25	22	59	15:45			453	1801	319	1167	772	2968
04:00			10		10		20		16:00			508		301		809	
04:15			12		12		24		16:15			491		273		764	
04:30			10		22		32		16:30			616		292		908	
04:45			9	41	29	73	38	114	16:45			519	2134	317	1183	836	3317
05:00			15		29		44		17:00			591		303		894	
05:15			28		37		65		17:15			552		345		897	
05:30			40		84		124		17:30			505		288		793	
05:45			50	133	122	272	172	405	17:45			522	2170	265	1201	787	3371
06:00			54		122		176		18:00			426		222		648	
06:15			67		157		224		18:15			333		179		512	
06:30			100		215		315		18:30			346		226		572	
06:45			82	303	239	733	321	1036	18:45			361	1466	205	832	566	2298
07:00			113		260		373		19:00			388		155		543	
07:15			128		304		432		19:15			417		174		591	
07:30			134		321		455		19:30			412		184		596	
07:45			178	553	356	1241	534	1794	19:45			347	1564	195	708	542	2272
08:00			184		280		464		20:00			329		213		542	
08:15			179		299		478		20:15			265		167		432	
08:30			174		242		416		20:30			291		177		468	
08:45			184	721	255	1076	439	1797	20:45			326	1211	146	703	472	1914
09:00			171		256		427		21:00			292		146		438	
09:15			186		236		422		21:15			299		130		429	
09:30			203		246		449		21:30			284		102		386	
09:45			211	771	181	919	392	1690	21:45			252	1127	80	458	332	1585
10:00			226		207		433		22:00			275		98		373	
10:15			230		232		462		22:15			251		80		331	
10:30			268		253		521		22:30			247		131		378	
10:45			268	992	230	922	498	1914	22:45			253	1026	154	463	407	1489
11:00			290		244		534		23:00			227		173		400	
11:15			312		248		560		23:15			176		306		482	
11:30			329		287		616		23:30			159		315		474	
11:45			353	1284	277	1056	630	2340	23:45			100	662	308	1102	408	1764
TOTALS				5205		7207		12412	TOTALS				17361		11276		28637
SPLIT %				41.9%		58.1%		30.2%	SPLIT %				60.6%		39.4%		69.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,566	18,483	41,049

AM Peak Hour			11:45	07:15	11:45	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			1377	1261	2522	PM Pk Volume			2278	1257	3535
Pk Hr Factor			0.972	0.886	0.985	Pk Hr Factor			0.925	0.911	0.973
7 - 9 Volume	0	0	1274	2317	3591	4 - 6 Volume	0	0	4304	2384	6688
7 - 9 Peak Hour			08:00	07:15	07:30	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	721	1261	1931	4 - 6 Pk Volume	0	0	2278	1257	3535
Pk Hr Factor	0.000	0.000	0.980	0.886	0.904	Pk Hr Factor	0.000	0.000	0.925	0.911	0.973

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. River Run Dr & Rio Bonito Way

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_022

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,731	18,666	41,397

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			73		285		358		12:00			341		299		640	
00:15			74		291		365		12:15			370		297		667	
00:30			61		244		305		12:30			364		269		633	
00:45			59	267	215	1035	274	1302	12:45			346	1421	283	1148	629	2569
01:00			42		203		245		13:00			372		315		687	
01:15			25		12		37		13:15			328		303		631	
01:30			28		9		37		13:30			372		281		653	
01:45			19	114	8	232	27	346	13:45			339	1411	285	1184	624	2595
02:00			14		5		19		14:00			371		255		626	
02:15			17		9		26		14:15			375		262		637	
02:30			8		6		14		14:30			412		278		690	
02:45			6	45	5	25	11	70	14:45			395	1553	280	1075	675	2628
03:00			10		2		12		15:00			443		276		719	
03:15			7		7		14		15:15			453		274		727	
03:30			5		4		9		15:30			483		295		778	
03:45			9	31	13	26	22	57	15:45			473	1852	324	1169	797	3021
04:00			9		9		18		16:00			524		359		883	
04:15			6		13		19		16:15			481		319		800	
04:30			11		24		35		16:30			495		338		833	
04:45			9	35	30	76	39	111	16:45			523	2023	306	1322	829	3345
05:00			14		26		40		17:00			447		304		751	
05:15			24		42		66		17:15			400		289		689	
05:30			36		80		116		17:30			439		243		682	
05:45			49	123	98	246	147	369	17:45			428	1714	228	1064	656	2778
06:00			53		102		155		18:00			440		218		658	
06:15			65		140		205		18:15			370		211		581	
06:30			101		184		285		18:30			340		249		589	
06:45			90	309	214	640	304	949	18:45			419	1569	219	897	638	2466
07:00			124		228		352		19:00			416		168		584	
07:15			143		271		414		19:15			439		196		635	
07:30			165		294		459		19:30			452		218		670	
07:45			191	623	297	1090	488	1713	19:45			351	1658	210	792	561	2450
08:00			180		272		452		20:00			314		218		532	
08:15			173		290		463		20:15			280		167		447	
08:30			174		250		424		20:30			294		177		471	
08:45			192	719	241	1053	433	1772	20:45			346	1234	160	722	506	1956
09:00			182		238		420		21:00			302		138		440	
09:15			185		233		418		21:15			319		124		443	
09:30			200		236		436		21:30			277		106		383	
09:45			221	788	182	889	403	1677	21:45			271	1169	72	440	343	1609
10:00			227		210		437		22:00			281		104		385	
10:15			247		213		460		22:15			255		83		338	
10:30			266		250		516		22:30			257		125		382	
10:45			263	1003	221	894	484	1897	22:45			263	1056	152	464	415	1520
11:00			279		245		524		23:00			272		180		452	
11:15			331		250		581		23:15			180		311		491	
11:30			331		280		611		23:30			167		313		480	
11:45			352	1293	283	1058	635	2351	23:45			102	721	321	1125	423	1846
TOTALS				5350		7264		12614	TOTALS				17381		11402		28783
SPLIT %				42.4%		57.6%		30.5%	SPLIT %				60.4%		39.6%		69.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,731	18,666	41,397

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:00	15:45	16:00
AM Pk Volume			1427	1159	2575	PM Pk Volume			2023	1340	3345
Pk Hr Factor			0.964	0.969	0.965	Pk Hr Factor			0.965	0.933	0.947
7 - 9 Volume	0	0	1342	2143	3485	4 - 6 Volume	0	0	3737	2386	6123
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	719	1153	1862	4 - 6 Pk Volume	0	0	2023	1322	3345
Pk Hr Factor	0.000	0.000	0.936	0.971	0.954	Pk Hr Factor	0.000	0.000	0.965	0.921	0.947

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rio Bonito Way & Qualcomm Way

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_023

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,190	19,269	42,459

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			64		293		357		12:00			331		335		666	
00:15			62		297		359		12:15			365		312		677	
00:30			60		252		312		12:30			364		279		643	
00:45			57	243	222	1064	279	1307	12:45			351	1411	290	1216	641	2627
01:00			38		200		238		13:00			360		306		666	
01:15			38		55		93		13:15			334		320		654	
01:30			28		8		36		13:30			363		281		644	
01:45			18	122	8	271	26	393	13:45			339	1396	297	1204	636	2600
02:00			14		7		21		14:00			342		266		608	
02:15			16		8		24		14:15			367		302		669	
02:30			7		6		13		14:30			399		293		692	
02:45			6	43	4	25	10	68	14:45			389	1497	288	1149	677	2646
03:00			10		2		12		15:00			398		305		703	
03:15			7		6		13		15:15			436		286		722	
03:30			6		4		10		15:30			455		292		747	
03:45			7	30	11	23	18	53	15:45			470	1759	362	1245	832	3004
04:00			10		8		18		16:00			548		382		930	
04:15			6		12		18		16:15			497		333		830	
04:30			12		23		35		16:30			508		410		918	
04:45			7	35	30	73	37	108	16:45			542	2095	328	1453	870	3548
05:00			14		24		38		17:00			464		330		794	
05:15			26		36		62		17:15			433		331		764	
05:30			47		66		113		17:30			461		273		734	
05:45			70	157	80	206	150	363	17:45			443	1801	239	1173	682	2974
06:00			57		100		157		18:00			490		233		723	
06:15			80		119		199		18:15			429		218		647	
06:30			108		165		273		18:30			403		280		683	
06:45			114	359	198	582	312	941	18:45			459	1781	252	983	711	2764
07:00			148		209		357		19:00			514		223		737	
07:15			180		256		436		19:15			467		220		687	
07:30			190		279		469		19:30			478		224		702	
07:45			225	743	283	1027	508	1770	19:45			329	1788	208	875	537	2663
08:00			192		259		451		20:00			295		215		510	
08:15			190		277		467		20:15			269		182		451	
08:30			172		251		423		20:30			286		171		457	
08:45			198	752	221	1008	419	1760	20:45			335	1185	159	727	494	1912
09:00			183		245		428		21:00			287		132		419	
09:15			204		227		431		21:15			309		139		448	
09:30			211		234		445		21:30			274		104		378	
09:45			228	826	203	909	431	1735	21:45			278	1148	74	449	352	1597
10:00			229		204		433		22:00			287		116		403	
10:15			251		219		470		22:15			255		86		341	
10:30			273		237		510		22:30			256		124		380	
10:45			259	1012	221	881	480	1893	22:45			254	1052	150	476	404	1528
11:00			282		276		558		23:00			265		184		449	
11:15			322		260		582		23:15			175		309		484	
11:30			329		295		624		23:30			156		316		472	
11:45			328	1261	278	1109	606	2370	23:45			98	694	332	1141	430	1835
TOTALS				5583		7178		12761	TOTALS				17607		12091		29698
SPLIT %				43.8%		56.2%		30.1%	SPLIT %				59.3%		40.7%		69.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,190	19,269	42,459

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:00	15:45	16:00
AM Pk Volume			1388	1220	2592	PM Pk Volume			2095	1487	3548
Pk Hr Factor			0.951	0.910	0.957	Pk Hr Factor			0.956	0.907	0.954
7 - 9 Volume	0	0	1495	2035	3530	4 - 6 Volume	0	0	3896	2626	6522
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	797	1098	1895	4 - 6 Pk Volume	0	0	2095	1453	3548
Pk Hr Factor	0.000	0.000	0.886	0.970	0.933	Pk Hr Factor	0.000	0.000	0.956	0.886	0.954

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Qualcomm Way & Gill Village Way

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,876	20,343	41,219

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			57		256		313		12:00			316		354		670	
00:15			55		267		322		12:15			320		328		648	
00:30			52		204		256		12:30			352		313		665	
00:45			51	215	193	920	244	1135	12:45			305	1293	327	1322	632	2615
01:00			33		180		213		13:00			351		334		685	
01:15			36		57		93		13:15			321		316		637	
01:30			30		24		54		13:30			319		324		643	
01:45			23	122	24	285	47	407	13:45			305	1296	297	1271	602	2567
02:00			25		20		45		14:00			334		286		620	
02:15			16		8		24		14:15			334		292		626	
02:30			9		8		17		14:30			365		327		692	
02:45			7	57	3	39	10	96	14:45			385	1418	293	1198	678	2616
03:00			13		7		20		15:00			327		312		639	
03:15			8		6		14		15:15			377		318		695	
03:30			6		8		14		15:30			430		302		732	
03:45			7	34	7	28	14	62	15:45			473	1607	318	1250	791	2857
04:00			11		13		24		16:00			475		376		851	
04:15			9		11		20		16:15			490		329		819	
04:30			12		28		40		16:30			525		374		899	
04:45			13	45	36	88	49	133	16:45			497	1987	340	1419	837	3406
05:00			16		26		42		17:00			552		398		950	
05:15			33		41		74		17:15			415		392		807	
05:30			47		67		114		17:30			314		354		668	
05:45			61	157	84	218	145	375	17:45			358	1639	301	1445	659	3084
06:00			64		103		167		18:00			359		300		659	
06:15			78		134		212		18:15			294		281		575	
06:30			104		186		290		18:30			292		336		628	
06:45			116	362	235	658	351	1020	18:45			368	1313	271	1188	639	2501
07:00			138		230		368		19:00			453		240		693	
07:15			177		297		474		19:15			435		243		678	
07:30			182		314		496		19:30			381		239		620	
07:45			205	702	330	1171	535	1873	19:45			308	1577	216	938	524	2515
08:00			188		307		495		20:00			292		218		510	
08:15			172		288		460		20:15			255		202		457	
08:30			180		286		466		20:30			261		186		447	
08:45			195	735	270	1151	465	1886	20:45			289	1097	168	774	457	1871
09:00			175		259		434		21:00			252		133		385	
09:15			179		235		414		21:15			279		158		437	
09:30			216		246		462		21:30			234		106		340	
09:45			208	778	194	934	402	1712	21:45			233	998	88	485	321	1483
10:00			218		215		433		22:00			232		110		342	
10:15			223		230		453		22:15			205		96		301	
10:30			242		259		501		22:30			217		108		325	
10:45			232	915	204	908	436	1823	22:45			205	859	133	447	338	1306
11:00			261		256		517		23:00			212		153		365	
11:15			271		285		556		23:15			135		295		430	
11:30			304		306		610		23:30			124		289		413	
11:45			290	1126	325	1172	615	2298	23:45			73	544	297	1034	370	1578
TOTALS				5248		7572		12820	TOTALS				15628		12771		28399
SPLIT %				40.9%		59.1%		31.1%	SPLIT %				55.0%		45.0%		68.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,876	20,343	41,219

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:15	16:30	16:15
AM Pk Volume			1278	1320	2598	PM Pk Volume			2064	1504	3505
Pk Hr Factor			0.908	0.932	0.969	Pk Hr Factor			0.935	0.945	0.922
7 - 9 Volume	0	0	1437	2322	3759	4 - 6 Volume	0	0	3626	2864	6490
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:15	16:30	16:15
7 - 9 Pk Volume	0	0	752	1248	2000	4 - 6 Pk Volume	0	0	2064	1504	3505
Pk Hr Factor	0.000	0.000	0.917	0.945	0.935	Pk Hr Factor	0.000	0.000	0.935	0.945	0.922

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Gill Village Way & Mission Center Dr

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_025

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,884	20,165	45,049

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			73		267		340		12:00			368		338		706	
00:15			70		266		336		12:15			342		314		656	
00:30			67		207		274		12:30			396		306		702	
00:45			62	272	188	928	250	1200	12:45			369	1475	323	1281	692	2756
01:00			43		179		222		13:00			400		324		724	
01:15			46		62		108		13:15			355		316		671	
01:30			37		23		60		13:30			361		320		681	
01:45			34	160	23	287	57	447	13:45			368	1484	294	1254	662	2738
02:00			34		19		53		14:00			396		285		681	
02:15			31		11		42		14:15			388		300		688	
02:30			14		7		21		14:30			418		317		735	
02:45			11	90	3	40	14	130	14:45			408	1610	302	1204	710	2814
03:00			18		6		24		15:00			392		321		713	
03:15			6		10		16		15:15			431		335		766	
03:30			7		7		14		15:30			467		308		775	
03:45			12	43	7	30	19	73	15:45			560	1850	325	1289	885	3139
04:00			10		14		24		16:00			509		373		882	
04:15			9		11		20		16:15			571		331		902	
04:30			12		25		37		16:30			581		363		944	
04:45			12	43	33	83	45	126	16:45			554	2215	340	1407	894	3622
05:00			15		29		44		17:00			649		392		1041	
05:15			34		43		77		17:15			619		374		993	
05:30			49		58		107		17:30			574		343		917	
05:45			60	158	85	215	145	373	17:45			525	2367	301	1410	826	3777
06:00			65		90		155		18:00			612		284		896	
06:15			74		125		199		18:15			593		277		870	
06:30			101		173		274		18:30			525		328		853	
06:45			113	353	224	612	337	965	18:45			500	2230	267	1156	767	3386
07:00			152		219		371		19:00			577		237		814	
07:15			178		300		478		19:15			506		240		746	
07:30			189		316		505		19:30			504		234		738	
07:45			203	722	337	1172	540	1894	19:45			383	1970	211	922	594	2892
08:00			184		304		488		20:00			342		213		555	
08:15			193		296		489		20:15			298		196		494	
08:30			184		282		466		20:30			284		183		467	
08:45			206	767	257	1139	463	1906	20:45			309	1233	170	762	479	1995
09:00			223		263		486		21:00			274		131		405	
09:15			196		237		433		21:15			301		156		457	
09:30			240		242		482		21:30			273		110		383	
09:45			239	898	193	935	432	1833	21:45			235	1083	82	479	317	1562
10:00			232		220		452		22:00			241		110		351	
10:15			259		224		483		22:15			226		98		324	
10:30			273		256		529		22:30			233		103		336	
10:45			258	1022	206	906	464	1928	22:45			214	914	137	448	351	1362
11:00			301		250		551		23:00			217		157		374	
11:15			313		282		595		23:15			155		295		450	
11:30			347		307		654		23:30			158		299		457	
11:45			343	1304	329	1168	672	2472	23:45			91	621	287	1038	378	1659
TOTALS				5832		7515		13347	TOTALS				19052		12650		31702
SPLIT %				43.7%		56.3%		29.6%	SPLIT %				60.1%		39.9%		70.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,884	20,165	45,049

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			1449	1288	2736	PM Pk Volume			2403	1469	3872
Pk Hr Factor			0.915	0.953	0.969	Pk Hr Factor			0.926	0.937	0.930
7 - 9 Volume	0	0	1489	2311	3800	4 - 6 Volume	0	0	4582	2817	7399
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	769	1257	2022	4 - 6 Pk Volume	0	0	2403	1469	3872
Pk Hr Factor	0.000	0.000	0.947	0.932	0.936	Pk Hr Factor	0.000	0.000	0.926	0.937	0.930

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Mission Center Dr & Frazee Rd

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_026

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,439	21,090	44,529

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			67		234		301		12:00			323		347		670	
00:15			68		252		320		12:15			326		320		646	
00:30			65		191		256		12:30			333		302		635	
00:45			61	261	199	876	260	1137	12:45			351	1333	311	1280	662	2613
01:00			38		187		225		13:00			343		321		664	
01:15			43		66		109		13:15			329		312		641	
01:30			34		31		65		13:30			351		292		643	
01:45			35	150	30	314	65	464	13:45			319	1342	330	1255	649	2597
02:00			33		28		61		14:00			382		311		693	
02:15			37		10		47		14:15			354		320		674	
02:30			21		16		37		14:30			374		320		694	
02:45			11	102	5	59	16	161	14:45			378	1488	327	1278	705	2766
03:00			17		10		27		15:00			343		335		678	
03:15			4		7		11		15:15			372		295		667	
03:30			8		8		16		15:30			442		320		762	
03:45			12	41	9	34	21	75	15:45			493	1650	349	1299	842	2949
04:00			10		18		28		16:00			505		346		851	
04:15			12		12		24		16:15			536		273		809	
04:30			16		32		48		16:30			523		329		852	
04:45			14	52	44	106	58	158	16:45			555	2119	371	1319	926	3438
05:00			17		48		65		17:00			560		361		921	
05:15			36		60		96		17:15			564		347		911	
05:30			48		82		130		17:30			545		358		903	
05:45			68	169	103	293	171	462	17:45			529	2198	322	1388	851	3586
06:00			75		113		188		18:00			545		326		871	
06:15			87		125		212		18:15			514		311		825	
06:30			124		223		347		18:30			483		324		807	
06:45			122	408	235	696	357	1104	18:45			441	1983	286	1247	727	3230
07:00			162		260		422		19:00			471		266		737	
07:15			180		291		471		19:15			479		253		732	
07:30			202		338		540		19:30			490		276		766	
07:45			242	786	350	1239	592	2025	19:45			345	1785	233	1028	578	2813
08:00			226		324		550		20:00			333		256		589	
08:15			235		301		536		20:15			274		200		474	
08:30			201		306		507		20:30			242		212		454	
08:45			265	927	271	1202	536	2129	20:45			270	1119	205	873	475	1992
09:00			247		271		518		21:00			279		160		439	
09:15			226		266		492		21:15			275		179		454	
09:30			218		253		471		21:30			242		130		372	
09:45			265	956	222	1012	487	1968	21:45			196	992	90	559	286	1551
10:00			231		257		488		22:00			229		127		356	
10:15			245		261		506		22:15			200		103		303	
10:30			277		268		545		22:30			195		101		296	
10:45			255	1008	250	1036	505	2044	22:45			186	810	144	475	330	1285
11:00			277		265		542		23:00			188		159		347	
11:15			321		293		614		23:15			172		291		463	
11:30			265		322		587		23:30			137		295		432	
11:45			316	1179	316	1196	632	2375	23:45			84	581	281	1026	365	1607
TOTALS				6039		8063		14102	TOTALS				17400		13027		30427
SPLIT %				42.8%		57.2%		31.7%	SPLIT %				57.2%		42.8%		68.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,439	21,090	44,529

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			1298	1313	2583	PM Pk Volume			2224	1437	3661
Pk Hr Factor			0.974	0.938	0.964	Pk Hr Factor			0.986	0.968	0.988
7 - 9 Volume	0	0	1713	2441	4154	4 - 6 Volume	0	0	4317	2707	7024
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	927	1313	2218	4 - 6 Pk Volume	0	0	2224	1437	3661
Pk Hr Factor	0.000	0.000	0.875	0.938	0.937	Pk Hr Factor	0.000	0.000	0.986	0.968	0.988

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Frazee Rd & SR-163 NB Ramps

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_027

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	33,314	28,083	61,397

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			96		254		350		12:00			485		507		992	
00:15			76		247		323		12:15			504		426		930	
00:30			85		203		288		12:30			488		426		914	
00:45			70	327	213	917	283	1244	12:45			548	2025	430	1789	978	3814
01:00			49		179		228		13:00			511		447		958	
01:15			57		76		133		13:15			527		454		981	
01:30			37		40		77		13:30			510		401		911	
01:45			50	193	46	341	96	534	13:45			488	2036	446	1748	934	3784
02:00			34		29		63		14:00			521		436		957	
02:15			41		21		62		14:15			520		436		956	
02:30			34		34		68		14:30			543		451		994	
02:45			26	135	25	109	51	244	14:45			533	2117	488	1811	1021	3928
03:00			18		17		35		15:00			505		454		959	
03:15			8		12		20		15:15			489		450		939	
03:30			10		13		23		15:30			560		488		1048	
03:45			23	59	13	55	36	114	15:45			605	2159	472	1864	1077	4023
04:00			21		20		41		16:00			674		529		1203	
04:15			23		15		38		16:15			644		478		1122	
04:30			37		37		74		16:30			728		539		1267	
04:45			34	115	46	118	80	233	16:45			749	2795	556	2102	1305	4897
05:00			45		44		89		17:00			697		547		1244	
05:15			80		63		143		17:15			787		546		1333	
05:30			111		90		201		17:30			676		530		1206	
05:45			143	379	109	306	252	685	17:45			730	2890	426	2049	1156	4939
06:00			186		119		305		18:00			576		450		1026	
06:15			237		121		358		18:15			598		433		1031	
06:30			239		215		454		18:30			503		416		919	
06:45			285	947	256	711	541	1658	18:45			483	2160	343	1642	826	3802
07:00			321		286		607		19:00			513		389		902	
07:15			383		348		731		19:15			494		334		828	
07:30			428		354		782		19:30			536		406		942	
07:45			535	1667	352	1340	887	3007	19:45			456	1999	352	1481	808	3480
08:00			453		338		791		20:00			412		362		774	
08:15			476		327		803		20:15			358		286		644	
08:30			445		363		808		20:30			327		279		606	
08:45			499	1873	318	1346	817	3219	20:45			312	1409	326	1253	638	2662
09:00			449		328		777		21:00			311		261		572	
09:15			429		304		733		21:15			335		253		588	
09:30			450		332		782		21:30			276		243		519	
09:45			437	1765	286	1250	723	3015	21:45			249	1171	179	936	428	2107
10:00			407		344		751		22:00			236		185		421	
10:15			430		351		781		22:15			204		160		364	
10:30			430		378		808		22:30			252		147		399	
10:45			429	1696	355	1428	784	3124	22:45			211	903	191	683	402	1586
11:00			445		372		817		23:00			205		197		402	
11:15			467		404		871		23:15			185		339		524	
11:30			468		456		924		23:30			157		294		451	
11:45			469	1849	448	1680	917	3529	23:45			98	645	294	1124	392	1769
TOTALS				11005		9601		20606	TOTALS				22309		18482		40791
SPLIT %				53.4%		46.6%		33.6%	SPLIT %				54.7%		45.3%		66.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	33,314	28,083	61,397

AM Peak Hour			11:45	11:30	11:30	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			1946	1837	3763	PM Pk Volume			2961	2188	5149
Pk Hr Factor			0.965	0.906	0.948	Pk Hr Factor			0.941	0.984	0.966
7 - 9 Volume	0	0	3540	2686	6226	4 - 6 Volume	0	0	5685	4151	9836
7 - 9 Peak Hour			07:45	07:15	07:45	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	1909	1392	3289	4 - 6 Pk Volume	0	0	2961	2188	5149
Pk Hr Factor	0.000	0.000	0.892	0.983	0.927	Pk Hr Factor	0.000	0.000	0.941	0.984	0.966

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. SR-163 NB Ramps & SR-163 SB Ramps

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_028

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	31,621	31,268	62,889

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			84		164		248		12:00			454		563		1017	
00:15			62		171		233		12:15			483		522		1005	
00:30			63		142		205		12:30			529		537		1066	
00:45			50	259	128	605	178	864	12:45			465	1931	524	2146	989	4077
01:00			48		103		151		13:00			479		504		983	
01:15			29		70		99		13:15			452		490		942	
01:30			27		49		76		13:30			475		477		952	
01:45			23	127	58	280	81	407	13:45			481	1887	514	1985	995	3872
02:00			24		43		67		14:00			466		514		980	
02:15			23		28		51		14:15			466		548		1014	
02:30			21		34		55		14:30			508		497		1005	
02:45			15	83	30	135	45	218	14:45			484	1924	541	2100	1025	4024
03:00			18		39		57		15:00			528		553		1081	
03:15			9		21		30		15:15			514		528		1042	
03:30			11		18		29		15:30			568		557		1125	
03:45			12	50	22	100	34	150	15:45			631	2241	526	2164	1157	4405
04:00			14		28		42		16:00			612		562		1174	
04:15			20		20		40		16:15			660		522		1182	
04:30			29		39		68		16:30			731		554		1285	
04:45			29	92	53	140	82	232	16:45			744	2747	576	2214	1320	4961
05:00			37		49		86		17:00			720		596		1316	
05:15			73		76		149		17:15			743		600		1343	
05:30			92		107		199		17:30			710		560		1270	
05:45			110	312	126	358	236	670	17:45			684	2857	486	2242	1170	5099
06:00			144		157		301		18:00			635		523		1158	
06:15			199		135		334		18:15			671		521		1192	
06:30			204		216		420		18:30			601		499		1100	
06:45			231	778	296	804	527	1582	18:45			571	2478	421	1964	992	4442
07:00			274		315		589		19:00			587		490		1077	
07:15			342		310		652		19:15			568		410		978	
07:30			385		419		804		19:30			573		414		987	
07:45			396	1397	411	1455	807	2852	19:45			450	2178	404	1718	854	3896
08:00			381		386		767		20:00			426		425		851	
08:15			395		386		781		20:15			366		341		707	
08:30			401		390		791		20:30			387		306		693	
08:45			431	1608	350	1512	781	3120	20:45			334	1513	340	1412	674	2925
09:00			371		350		721		21:00			375		292		667	
09:15			330		389		719		21:15			400		292		692	
09:30			368		408		776		21:30			286		251		537	
09:45			356	1425	400	1547	756	2972	21:45			229	1290	238	1073	467	2363
10:00			361		391		752		22:00			217		216		433	
10:15			376		425		801		22:15			195		207		402	
10:30			373		454		827		22:30			180		200		380	
10:45			370	1480	459	1729	829	3209	22:45			179	771	181	804	360	1575
11:00			396		445		841		23:00			164		167		331	
11:15			428		470		898		23:15			145		238		383	
11:30			405		541		946		23:30			119		181		300	
11:45			420	1649	534	1990	954	3639	23:45			116	544	205	791	321	1335
TOTALS				9260		10655		19915	TOTALS				22361		20613		42974
SPLIT %				46.5%		53.5%		31.7%	SPLIT %				52.0%		48.0%		68.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	31,621	31,268	62,889

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:30	16:45	16:30
AM Pk Volume			1886	2160	4042	PM Pk Volume			2938	2332	5264
Pk Hr Factor			0.891	0.959	0.948	Pk Hr Factor			0.987	0.972	0.980
7 - 9 Volume	0	0	3005	2967	5972	4 - 6 Volume	0	0	5604	4456	10060
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:30	16:45	16:30
7 - 9 Pk Volume	0	0	1608	1602	3159	4 - 6 Pk Volume	0	0	2938	2332	5264
Pk Hr Factor	0.000	0.000	0.933	0.956	0.979	Pk Hr Factor	0.000	0.000	0.987	0.972	0.980

Prepared by NDS/ATD

VOLUME

Qualcomm Way Bet. Friars Rd & Rio San Diego Dr

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_029

DAILY TOTALS	NB	SB	EB	WB	Total
	9,672	7,257	0	0	16,929

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	43		57						100		12:00	165		114						279	
00:15	32		66						98		12:15	167		101						268	
00:30	24		69						93		12:30	165		122						287	
00:45	28	127	51	243					79	370	12:45	182	679	123	460					305	1139
01:00	25		43						68		13:00	168		116						284	
01:15	13		12						25		13:15	163		132						295	
01:30	14		12						26		13:30	158		92						250	
01:45	4	56	4	71					8	127	13:45	149	638	99	439					248	1077
02:00	9		4						13		14:00	132		108						240	
02:15	6		5						11		14:15	158		99						257	
02:30	3		3						6		14:30	149		106						255	
02:45	2	20	3	15					5	35	14:45	163	602	103	416					266	1018
03:00	3		1						4		15:00	178		112						290	
03:15	1		1						2		15:15	180		120						300	
03:30	4		1						5		15:30	173		129						302	
03:45	2	10	2	5					4	15	15:45	168	699	151	512					319	1211
04:00	6		1						7		16:00	205		131						336	
04:15	3		1						4		16:15	170		147						317	
04:30	9		6						15		16:30	216		165						381	
04:45	8	26	5	13					13	39	16:45	177	768	165	608					342	1376
05:00	7		6						13		17:00	232		161						393	
05:15	12		8						20		17:15	171		199						370	
05:30	18		10						28		17:30	196		186						382	
05:45	45	82	14	38					59	120	17:45	152	751	140	686					292	1437
06:00	31		31						62		18:00	188		135						323	
06:15	65		30						95		18:15	167		149						316	
06:30	74		39						113		18:30	151		168						319	
06:45	88	258	35	135					123	393	18:45	128	634	168	620					296	1254
07:00	93		47						140		19:00	115		165						280	
07:15	95		61						156		19:15	131		156						287	
07:30	113		69						182		19:30	117		107						224	
07:45	137	438	70	247					207	685	19:45	110	473	87	515					197	988
08:00	133		72						205		20:00	102		94						196	
08:15	110		82						192		20:15	120		77						197	
08:30	109		76						185		20:30	116		67						183	
08:45	117	469	71	301					188	770	20:45	126	464	50	288					176	752
09:00	90		67						157		21:00	94		66						160	
09:15	102		73						175		21:15	99		50						149	
09:30	100		80						180		21:30	87		37						124	
09:45	95	387	75	295					170	682	21:45	92	372	22	175					114	547
10:00	95		77						172		22:00	79		45						124	
10:15	118		71						189		22:15	79		34						113	
10:30	134		82						216		22:30	69		35						104	
10:45	110	457	87	317					197	774	22:45	86	313	51	165					137	478
11:00	124		120						244		23:00	92		53						145	
11:15	166		103						269		23:15	95		67						162	
11:30	157		111						268		23:30	76		69						145	
11:45	183	630	104	438					287	1068	23:45	56	319	66	255					122	574
TOTALS		2960		2118						5078	TOTALS		6712		5139						11851
SPLIT %		58.3%		41.7%						30.0%	SPLIT %		56.6%		43.4%						70.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,672	7,257	0	0	16,929

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	16:30	16:45			16:45
AM Pk Volume	680	441			1121	PM Pk Volume	796	711			1487
Pk Hr Factor	0.929	0.904			0.976	Pk Hr Factor	0.858	0.893			0.946
7 - 9 Volume	907	548	0	0	1455	4 - 6 Volume	1519	1294	0	0	2813
7 - 9 Peak Hour	07:30	08:00			07:45	4 - 6 Peak Hour	16:30	16:45			16:45
7 - 9 Pk Volume	493	301	0	0	789	4 - 6 Pk Volume	796	711	0	0	1487
Pk Hr Factor	0.900	0.918	0.000	0.000	0.953	Pk Hr Factor	0.858	0.893	0.000	0.000	0.946

Prepared by NDS/ATD

VOLUME

Qualcomm Way N/O Camino Del Rio N

Day: Tuesday
Date: 7/7/2015

City: San Diego
Project #: CA15_4209_030

DAILY TOTALS	NB	SB	EB	WB	Total
	11,396	13,665	0	0	25,061

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	26		155						181		**12:00**	240		203						443	
00:15	27		118						145		**12:15**	214		222						436	
00:30	27		106						133		**12:30**	223		235						458	
00:45	27	107	65	444					92	551	**12:45**	194	871	244	904					438	1775
01:00	23		69						92		**13:00**	185		246						431	
01:15	19		31						50		**13:15**	167		228						395	
01:30	19		26						45		**13:30**	187		212						399	
01:45	21	82	21	147					42	229	**13:45**	152	691	234	920					386	1611
02:00	7		12						19		**14:00**	192		231						423	
02:15	7		7						14		**14:15**	178		213						391	
02:30	2		7						9		**14:30**	155		225						380	
02:45	3	19	4	30					7	49	**14:45**	171	696	226	895					397	1591
03:00	5		7						12		**15:00**	169		275						444	
03:15	2		5						7		**15:15**	220		258						478	
03:30	3		1						4		**15:30**	197		269						466	
03:45	1	11	6	19					7	30	**15:45**	210	796	300	1102					510	1898
04:00	3		4						7		**16:00**	225		270						495	
04:15	0		5						5		**16:15**	221		284						505	
04:30	6		15						21		**16:30**	222		361						583	
04:45	5	14	20	44					25	58	**16:45**	196	864	332	1247					528	2111
05:00	9		14						23		**17:00**	200		309						509	
05:15	12		20						32		**17:15**	241		252						493	
05:30	17		40						57		**17:30**	234		353						587	
05:45	48	86	45	119					93	205	**17:45**	227	902	246	1160					473	2062
06:00	44		65						109		**18:00**	231		225						456	
06:15	58		60						118		**18:15**	233		175						408	
06:30	77		68						145		**18:30**	235		132						367	
06:45	99	278	89	282					188	560	**18:45**	224	923	152	684					376	1607
07:00	169		96						265		**19:00**	226		211						437	
07:15	233		102						335		**19:15**	126		239						365	
07:30	233		116						349		**19:30**	142		199						341	
07:45	253	888	114	428					367	1316	**19:45**	159	653	180	829					339	1482
08:00	225		118						343		**20:00**	98		176						274	
08:15	202		130						332		**20:15**	105		172						277	
08:30	190		138						328		**20:30**	88		144						232	
08:45	154	771	91	477					245	1248	**20:45**	67	358	134	626					201	984
09:00	114		125						239		**21:00**	77		120						197	
09:15	154		122						276		**21:15**	66		97						163	
09:30	173		144						317		**21:30**	73		85						158	
09:45	137	578	121	512					258	1090	**21:45**	66	282	62	364					128	646
10:00	144		125						269		**22:00**	51		70						121	
10:15	133		132						265		**22:15**	72		67						139	
10:30	116		170						286		**22:30**	57		75						132	
10:45	128	521	178	605					306	1126	**22:45**	49	229	96	308					145	537
11:00	137		199						336		**23:00**	56		132						188	
11:15	157		200						357		**23:15**	42		190						232	
11:30	143		222						365		**23:30**	43		201						244	
11:45	163	600	200	821					363	1421	**23:45**	35	176	175	698					210	874
TOTALS		3955		3928						**7883**	**TOTALS**		7441		9737						**17178**
SPLIT %		50.2%		49.8%						**31.5%**	**SPLIT %**		43.3%		56.7%						**68.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	11,396	13,665	0	0	25,061

AM Peak Hour	07:15	11:45			**11:45**	**PM Peak Hour**	17:15	16:15			**16:15**
AM Pk Volume	944	860			**1700**	**PM Pk Volume**	933	1286			**2125**
Pk Hr Factor	0.933	0.915			**0.928**	**Pk Hr Factor**	0.968	0.891			**0.911**
7 - 9 Volume	1659	905	0	0	**2564**	**4 - 6 Volume**	1766	2407	0	0	**4173**
7 - 9 Peak Hour	07:15	07:45			**07:15**	**4 - 6 Peak Hour**	17:00	16:15			**16:15**
7 - 9 Pk Volume	944	500	0	0	**1394**	**4 - 6 Pk Volume**	902	1286	0	0	**2125**
Pk Hr Factor	0.933	0.906	0.000	0.000	**0.950**	**Pk Hr Factor**	0.936	0.891	0.000	0.000	**0.911**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Orcutt Ave & Rainier Ave

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_001

DAILY TOTALS	NB	SB	EB	WB	Total
	7,739	6,414	0	0	14,153

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	29		38						67		12:00	174		119						293	
00:15	33		29						62		12:15	139		128						267	
00:30	23		34						57		12:30	144		130						274	
00:45	25	110	23	124					48	234	12:45	140	597	106	483					246	1080
01:00	18		19						37		13:00	141		112						253	
01:15	17		16						33		13:15	128		107						235	
01:30	16		34						50		13:30	147		115						262	
01:45	17	68	22	91					39	159	13:45	140	556	115	449					255	1005
02:00	21		25						46		14:00	155		107						262	
02:15	18		21						39		14:15	153		125						278	
02:30	13		17						30		14:30	145		127						272	
02:45	16	68	9	72					25	140	14:45	163	616	114	473					277	1089
03:00	15		15						30		15:00	182		120						302	
03:15	11		13						24		15:15	187		116						303	
03:30	12		9						21		15:30	151		112						263	
03:45	15	53	7	44					22	97	15:45	118	638	126	474					244	1112
04:00	8		16						24		16:00	136		104						240	
04:15	11		8						19		16:15	113		85						198	
04:30	22		14						36		16:30	106		84						190	
04:45	18	59	12	50					30	109	16:45	101	456	83	356					184	812
05:00	14		12						26		17:00	95		96						191	
05:15	21		14						35		17:15	83		80						163	
05:30	27		20						47		17:30	95		96						191	
05:45	46	108	34	80					80	188	17:45	101	374	88	360					189	734
06:00	34		29						63		18:00	99		88						187	
06:15	65		36						101		18:15	97		84						181	
06:30	109		53						162		18:30	116		100						216	
06:45	121	329	87	205					208	534	18:45	120	432	75	347					195	779
07:00	53		44						97		19:00	109		76						185	
07:15	49		54						103		19:15	90		99						189	
07:30	69		62						131		19:30	93		77						170	
07:45	86	257	77	237					163	494	19:45	76	368	64	316					140	684
08:00	71		51						122		20:00	88		56						144	
08:15	67		67						134		20:15	74		69						143	
08:30	79		79						158		20:30	67		67						134	
08:45	96	313	92	289					188	602	20:45	73	302	62	254					135	556
09:00	99		85						184		21:00	58		49						107	
09:15	101		73						174		21:15	55		53						108	
09:30	79		88						167		21:30	69		53						122	
09:45	91	370	73	319					164	689	21:45	68	250	48	203					116	453
10:00	122		95						217		22:00	50		49						99	
10:15	121		118						239		22:15	47		35						82	
10:30	116		112						228		22:30	67		34						101	
10:45	143	502	97	422					240	924	22:45	71	235	50	168					121	403
11:00	126		98						224		23:00	50		37						87	
11:15	128		120						248		23:15	40		32						72	
11:30	129		121						250		23:30	33		29						62	
11:45	144	527	133	472					277	999	23:45	28	151	28	126					56	277
TOTALS		2764		2405						5169	TOTALS		4975		4009						8984
SPLIT %		53.5%		46.5%						36.5%	SPLIT %		55.4%		44.6%						63.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,739	6,414	0	0	14,153

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	14:45	14:15			14:30
AM Pk Volume	601	510			1111	PM Pk Volume	683	486			1154
Pk Hr Factor	0.864	0.959			0.948	Pk Hr Factor	0.913	0.957			0.952
7 - 9 Volume	570	526	0	0	1096	4 - 6 Volume	830	716	0	0	1546
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	17:00			16:00
7 - 9 Pk Volume	313	289	0	0	602	4 - 6 Pk Volume	456	360	0	0	812
Pk Hr Factor	0.815	0.785	0.000	0.000	0.801	Pk Hr Factor	0.838	0.938	0.000	0.000	0.846

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Vandever Ave & Twain Ave

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_002

DAILY TOTALS	NB	SB	EB	WB	Total
	8,650	7,487	0	0	16,137

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	33		35						68		12:00	193		155						348	
00:15	22		34						56		12:15	178		157						335	
00:30	24		27						51		12:30	186		144						330	
00:45	20	99	28	124					48	223	12:45	182	739	129	585					311	1324
01:00	28		19						47		13:00	168		139						307	
01:15	19		21						40		13:15	164		147						311	
01:30	20		42						62		13:30	164		139						303	
01:45	21	88	22	104					43	192	13:45	175	671	146	571					321	1242
02:00	19		24						43		14:00	153		142						295	
02:15	31		23						54		14:15	160		140						300	
02:30	17		21						38		14:30	149		132						281	
02:45	11	78	12	80					23	158	14:45	153	615	128	542					281	1157
03:00	7		19						26		15:00	139		137						276	
03:15	13		9						22		15:15	151		146						297	
03:30	16		16						32		15:30	147		139						286	
03:45	10	46	9	53					19	99	15:45	141	578	144	566					285	1144
04:00	11		15						26		16:00	133		133						266	
04:15	11		8						19		16:15	120		106						226	
04:30	9		14						23		16:30	143		124						267	
04:45	21	52	13	50					34	102	16:45	124	520	112	475					236	995
05:00	14		15						29		17:00	127		116						243	
05:15	20		11						31		17:15	114		91						205	
05:30	30		18						48		17:30	96		102						198	
05:45	36	100	22	66					58	166	17:45	105	442	120	429					225	871
06:00	33		34						67		18:00	115		87						202	
06:15	57		28						85		18:15	122		94						216	
06:30	79		33						112		18:30	125		102						227	
06:45	98	267	38	133					136	400	18:45	107	469	75	358					182	827
07:00	68		31						99		19:00	89		82						171	
07:15	72		44						116		19:15	88		101						189	
07:30	80		71						151		19:30	93		90						183	
07:45	120	340	73	219					193	559	19:45	93	363	86	359					179	722
08:00	89		80						169		20:00	77		75						152	
08:15	86		71						157		20:15	89		94						183	
08:30	128		71						199		20:30	87		84						171	
08:45	132	435	101	323					233	758	20:45	84	337	85	338					169	675
09:00	116		103						219		21:00	72		70						142	
09:15	126		97						223		21:15	65		62						127	
09:30	111		103						214		21:30	79		81						160	
09:45	131	484	109	412					240	896	21:45	80	296	54	267					134	563
10:00	147		126						273		22:00	63		68						131	
10:15	171		142						313		22:15	55		40						95	
10:30	161		125						286		22:30	52		37						89	
10:45	150	629	123	516					273	1145	22:45	53	223	43	188					96	411
11:00	147		131						278		23:00	47		36						83	
11:15	155		125						280		23:15	43		37						80	
11:30	156		142						298		23:30	45		54						99	
11:45	159	617	157	555					316	1172	23:45	27	162	47	174					74	336
TOTALS		3235		2635						**5870**	**TOTALS**		5415		4852						**10267**
SPLIT %		55.1%		44.9%						**36.4%**	**SPLIT %**		52.7%		47.3%						**63.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	8,650	7,487	0	0	16,137

AM Peak Hour	11:45	11:45			**11:45**	**PM Peak Hour**	12:00	12:00			**12:00**
AM Pk Volume	716	613			**1329**	**PM Pk Volume**	739	585			**1324**
Pk Hr Factor	0.927	0.976			**0.955**	**Pk Hr Factor**	0.957	0.932			**0.951**
7 - 9 Volume	775	542	0	0	**1317**	**4 - 6 Volume**	962	904	0	0	**1866**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:00			**16:00**
7 - 9 Pk Volume	435	323	0	0	**758**	**4 - 6 Pk Volume**	520	475	0	0	**995**
Pk Hr Factor	0.824	0.800	0.000	0.000	**0.813**	**Pk Hr Factor**	0.909	0.893	0.000	0.000	**0.932**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Twain Ave & Mission Gorge Pl

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_003

DAILY TOTALS	NB	SB	EB	WB	Total
	9,366	8,462	0	0	17,828

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	40		33						73		12:00	191		172						363	
00:15	25		42						67		12:15	185		174						359	
00:30	31		28						59		12:30	203		170						373	
00:45	24	120	33	136					57	256	12:45	196	775	149	665					345	1440
01:00	28		18						46		13:00	185		153						338	
01:15	20		26						46		13:15	175		142						317	
01:30	21		41						62		13:30	183		161						344	
01:45	22	91	21	106					43	197	13:45	189	732	162	618					351	1350
02:00	23		23						46		14:00	177		158						335	
02:15	25		21						46		14:15	177		163						340	
02:30	21		25						46		14:30	155		159						314	
02:45	14	83	11	80					25	163	14:45	156	665	149	629					305	1294
03:00	9		18						27		15:00	147		160						307	
03:15	13		13						26		15:15	146		173						319	
03:30	18		19						37		15:30	164		156						320	
03:45	13	53	9	59					22	112	15:45	152	609	159	648					311	1257
04:00	8		17						25		16:00	150		150						300	
04:15	12		9						21		16:15	145		123						268	
04:30	14		16						30		16:30	135		138						273	
04:45	18	52	10	52					28	104	16:45	132	562	117	528					249	1090
05:00	17		16						33		17:00	158		134						292	
05:15	27		11						38		17:15	118		116						234	
05:30	31		25						56		17:30	119		114						233	
05:45	33	108	20	72					53	180	17:45	115	510	123	487					238	997
06:00	37		41						78		18:00	127		106						233	
06:15	58		30						88		18:15	145		108						253	
06:30	83		42						125		18:30	132		105						237	
06:45	105	283	41	154					146	437	18:45	91	495	89	408					180	903
07:00	71		45						116		19:00	99		91						190	
07:15	76		56						132		19:15	93		98						191	
07:30	86		79						165		19:30	101		106						207	
07:45	128	361	92	272					220	633	19:45	93	386	107	402					200	788
08:00	103		84						187		20:00	83		80						163	
08:15	104		91						195		20:15	87		94						181	
08:30	134		93						227		20:30	86		80						166	
08:45	142	483	106	374					248	857	20:45	91	347	89	343					180	690
09:00	123		118						241		21:00	74		76						150	
09:15	132		115						247		21:15	61		61						122	
09:30	117		121						238		21:30	87		91						178	
09:45	145	517	124	478					269	995	21:45	83	305	52	280					135	585
10:00	181		145						326		22:00	77		76						153	
10:15	181		159						340		22:15	63		46						109	
10:30	163		141						304		22:30	67		44						111	
10:45	158	683	153	598					311	1281	22:45	63	270	48	214					111	484
11:00	164		160						324		23:00	53		46						99	
11:15	197		170						367		23:15	53		41						94	
11:30	162		149						311		23:30	47		67						114	
11:45	169	692	178	657					347	1349	23:45	31	184	48	202					79	386
TOTALS		3526		3038						6564	TOTALS		5840		5424						11264
SPLIT %		53.7%		46.3%						36.8%	SPLIT %		51.8%		48.2%						63.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,366	8,462	0	0	17,828

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	12:00			12:00
AM Pk Volume	748	694			1442	PM Pk Volume	775	665			1440
Pk Hr Factor	0.921	0.975			0.966	Pk Hr Factor	0.954	0.955			0.965
7 - 9 Volume	844	646	0	0	1490	4 - 6 Volume	1072	1015	0	0	2087
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:15	16:00			16:00
7 - 9 Pk Volume	483	374	0	0	857	4 - 6 Pk Volume	570	528	0	0	1090
Pk Hr Factor	0.850	0.882	0.000	0.000	0.864	Pk Hr Factor	0.902	0.880	0.000	0.000	0.908

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Mission Gorge Pl & Fairmount Ave

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_004

DAILY TOTALS	NB	SB	EB	WB	Total
	9,464	8,712	0	0	18,176

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	40		33						73		12:00	175		174						349	
00:15	25		40						65		12:15	187		176						363	
00:30	31		28						59		12:30	192		168						360	
00:45	23	119	33	134					56	253	12:45	200	754	153	671					353	1425
01:00	24		20						44		13:00	185		144						329	
01:15	21		25						46		13:15	159		156						315	
01:30	24		44						68		13:30	174		164						338	
01:45	24	93	24	113					48	206	13:45	198	716	162	626					360	1342
02:00	24		29						53		14:00	158		182						340	
02:15	25		17						42		14:15	163		165						328	
02:30	20		26						46		14:30	165		168						333	
02:45	24	93	14	86					38	179	14:45	166	652	159	674					325	1326
03:00	10		17						27		15:00	151		169						320	
03:15	15		14						29		15:15	158		171						329	
03:30	16		16						32		15:30	149		163						312	
03:45	12	53	10	57					22	110	15:45	143	601	165	668					308	1269
04:00	8		20						28		16:00	160		153						313	
04:15	14		11						25		16:15	136		131						267	
04:30	18		17						35		16:30	132		152						284	
04:45	24	64	11	59					35	123	16:45	135	563	123	559					258	1122
05:00	18		16						34		17:00	170		147						317	
05:15	28		11						39		17:15	118		116						234	
05:30	35		24						59		17:30	119		126						245	
05:45	41	122	19	70					60	192	17:45	107	514	126	515					233	1029
06:00	40		35						75		18:00	127		123						250	
06:15	58		36						94		18:15	139		105						244	
06:30	81		42						123		18:30	132		104						236	
06:45	115	294	42	155					157	449	18:45	92	490	103	435					195	925
07:00	73		41						114		19:00	96		105						201	
07:15	81		52						133		19:15	95		97						192	
07:30	81		77						158		19:30	91		109						200	
07:45	145	380	83	253					228	633	19:45	103	385	113	424					216	809
08:00	108		81						189		20:00	90		86						176	
08:15	108		86						194		20:15	87		86						173	
08:30	126		95						221		20:30	81		96						177	
08:45	139	481	100	362					239	843	20:45	93	351	89	357					182	708
09:00	128		118						246		21:00	74		87						161	
09:15	144		118						262		21:15	65		69						134	
09:30	127		117						244		21:30	91		85						176	
09:45	145	544	127	480					272	1024	21:45	84	314	56	297					140	611
10:00	189		148						337		22:00	70		81						151	
10:15	190		152						342		22:15	62		46						108	
10:30	165		146						311		22:30	63		51						114	
10:45	188	732	166	612					354	1344	22:45	70	265	57	235					127	500
11:00	185		170						355		23:00	49		48						97	
11:15	172		157						329		23:15	58		50						108	
11:30	170		157						327		23:30	51		68						119	
11:45	167	694	172	656					339	1350	23:45	32	190	48	214					80	404
TOTALS		3669		3037						**6706**	**TOTALS**		5795		5675						**11470**
SPLIT %		54.7%		45.3%						**36.9%**	**SPLIT %**		50.5%		49.5%						**63.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	9,464	8,712	0	0	18,176

AM Peak Hour	10:00	11:45			**11:45**	**PM Peak Hour**	12:15	13:45			**12:00**
AM Pk Volume	732	690			**1411**	**PM Pk Volume**	764	677			**1425**
Pk Hr Factor	0.963	0.980			**0.972**	**Pk Hr Factor**	0.955	0.930			**0.981**
7 - 9 Volume	861	615	0	0	**1476**	**4 - 6 Volume**	1077	1074	0	0	**2151**
7 - 9 Peak Hour	07:45	08:00			**08:00**	**4 - 6 Peak Hour**	16:15	16:00			**16:15**
7 - 9 Pk Volume	487	362	0	0	**843**	**4 - 6 Pk Volume**	573	559	0	0	**1126**
Pk Hr Factor	0.840	0.905	0.000	0.000	**0.882**	**Pk Hr Factor**	0.843	0.913	0.000	0.000	**0.888**

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. San Diego Mission Rd & Mission Gorge Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_005

DAILY TOTALS	NB	SB	EB	WB	Total
	2,272	2,697	0	0	4,969

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		2						5		12:00	63		69						132	
00:15	2		9						11		12:15	57		69						126	
00:30	7		4						11		12:30	56		60						116	
00:45	2	14	4	19					6	33	12:45	50	226	69	267					119	493
01:00	2		4						6		13:00	55		75						130	
01:15	3		4						7		13:15	50		69						119	
01:30	5		4						9		13:30	52		60						112	
01:45	3	13	1	13					4	26	13:45	40	197	62	266					102	463
02:00	1		3						4		14:00	46		57						103	
02:15	2		2						4		14:15	46		64						110	
02:30	0		3						3		14:30	48		57						105	
02:45	0	3	0	8					0	11	14:45	51	191	61	239					112	430
03:00	1		4						5		15:00	49		57						106	
03:15	1		0						1		15:15	50		52						102	
03:30	1		1						2		15:30	66		68						134	
03:45	1	4	0	5					1	9	15:45	41	206	39	216					80	422
04:00	0		0						0		16:00	44		33						77	
04:15	5		4						9		16:15	51		37						88	
04:30	2		4						6		16:30	33		43						76	
04:45	3	10	2	10					5	20	16:45	36	164	40	153					76	317
05:00	3		2						5		17:00	48		27						75	
05:15	6		6						12		17:15	44		50						94	
05:30	8		3						11		17:30	26		31						57	
05:45	8	25	4	15					12	40	17:45	30	148	42	150					72	298
06:00	8		7						15		18:00	21		30						51	
06:15	9		5						14		18:15	26		36						62	
06:30	11		13						24		18:30	24		57						81	
06:45	23	51	15	40					38	91	18:45	22	93	25	148					47	241
07:00	8		12						20		19:00	16		26						42	
07:15	18		24						42		19:15	23		27						50	
07:30	16		32						48		19:30	19		21						40	
07:45	29	71	31	99					60	170	19:45	13	71	31	105					44	176
08:00	26		25						51		20:00	19		17						36	
08:15	27		40						67		20:15	18		14						32	
08:30	30		31						61		20:30	15		10						25	
08:45	33	116	37	133					70	249	20:45	9	61	15	56					24	117
09:00	37		41						78		21:00	18		9						27	
09:15	45		42						87		21:15	13		11						24	
09:30	41		38						79		21:30	11		6						17	
09:45	34	157	44	165					78	322	21:45	5	47	5	31					10	78
10:00	37		61						98		22:00	4		8						12	
10:15	43		56						99		22:15	6		6						12	
10:30	39		53						92		22:30	5		8						13	
10:45	48	167	70	240					118	407	22:45	6	21	3	25					9	46
11:00	41		61						102		23:00	3		7						10	
11:15	40		68						108		23:15	3		5						8	
11:30	54		56						110		23:30	3		3						6	
11:45	66	201	91	276					157	477	23:45	6	15	3	18					9	33
TOTALS		832		1023						1855	TOTALS		1440		1674						3114
SPLIT %		44.9%		55.1%						37.3%	SPLIT %		46.2%		53.8%						62.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,272	2,697	0	0	4,969

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	12:15			12:00
AM Pk Volume	242	289			531	PM Pk Volume	226	273			493
Pk Hr Factor	0.917	0.794			0.846	Pk Hr Factor	0.897	0.910			0.934
7 - 9 Volume	187	232	0	0	419	4 - 6 Volume	312	303	0	0	615
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:15	16:30			16:30
7 - 9 Pk Volume	116	133	0	0	249	4 - 6 Pk Volume	168	160	0	0	321
Pk Hr Factor	0.879	0.831	0.000	0.000	0.889	Pk Hr Factor	0.824	0.800	0.000	0.000	0.854

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Mission Gorge Rd & Alvarado Canyon Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_006

DAILY TOTALS	NB	SB	EB	WB	Total
	14,179	12,653	0	0	26,832

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	48		41						89		12:00	269		274						543	
00:15	30		53						83		12:15	255		268						523	
00:30	40		34						74		12:30	281		261						542	
00:45	30	148	39	167					69	315	12:45	291	1096	247	1050					538	2146
01:00	28		27						55		13:00	301		223						524	
01:15	30		34						64		13:15	260		253						513	
01:30	25		49						74		13:30	249		266						515	
01:45	27	110	27	137					54	247	13:45	265	1075	237	979					502	2054
02:00	27		28						55		14:00	240		267						507	
02:15	32		25						57		14:15	265		244						509	
02:30	22		35						57		14:30	249		276						525	
02:45	22	103	16	104					38	207	14:45	249	1003	251	1038					500	2041
03:00	11		25						36		15:00	238		238						476	
03:15	14		13						27		15:15	236		260						496	
03:30	16		19						35		15:30	230		279						509	
03:45	13	54	11	68					24	122	15:45	211	915	242	1019					453	1934
04:00	8		17						25		16:00	254		243						497	
04:15	16		14						30		16:15	224		227						451	
04:30	22		21						43		16:30	205		223						428	
04:45	38	84	13	65					51	149	16:45	189	872	185	878					374	1750
05:00	21		25						46		17:00	223		232						455	
05:15	39		18						57		17:15	181		175						356	
05:30	48		25						73		17:30	183		209						392	
05:45	68	176	30	98					98	274	17:45	171	758	194	810					365	1568
06:00	64		49						113		18:00	166		154						320	
06:15	96		56						152		18:15	180		128						308	
06:30	129		59						188		18:30	164		152						316	
06:45	182	471	72	236					254	707	18:45	136	646	140	574					276	1220
07:00	135		70						205		19:00	118		128						246	
07:15	148		81						229		19:15	134		114						248	
07:30	177		111						288		19:30	127		120						247	
07:45	232	692	135	397					367	1089	19:45	135	514	128	490					263	1004
08:00	190		159						349		20:00	114		118						232	
08:15	201		153						354		20:15	105		122						227	
08:30	231		132						363		20:30	110		112						222	
08:45	246	868	166	610					412	1478	20:45	115	444	101	453					216	897
09:00	218		180						398		21:00	98		96						194	
09:15	234		168						402		21:15	91		83						174	
09:30	237		194						431		21:30	109		90						199	
09:45	259	948	189	731					448	1679	21:45	89	387	61	330					150	717
10:00	289		230						519		22:00	73		75						148	
10:15	300		242						542		22:15	70		49						119	
10:30	288		222						510		22:30	78		55						133	
10:45	316	1193	273	967					589	2160	22:45	73	294	66	245					139	539
11:00	269		254						523		23:00	63		42						105	
11:15	289		247						536		23:15	59		43						102	
11:30	264		238						502		23:30	51		56						107	
11:45	292	1114	286	1025					578	2139	23:45	41	214	41	182					82	396
TOTALS		5961		4605						**10566**	**TOTALS**		8218		8048						**16266**
SPLIT %		56.4%		43.6%						**39.4%**	**SPLIT %**		50.5%		49.5%						**60.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	14,179	12,653	0	0	26,832

AM Peak Hour	10:00	11:45			**11:45**	**PM Peak Hour**	12:30	12:00			**12:00**
AM Pk Volume	1193	1089			**2186**	**PM Pk Volume**	1133	1050			**2146**
Pk Hr Factor	0.944	0.952			**0.946**	**Pk Hr Factor**	0.941	0.958			**0.988**
7 - 9 Volume	1560	1007	0	0	**2567**	**4 - 6 Volume**	1630	1688	0	0	**3318**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:00			**16:00**
7 - 9 Pk Volume	868	610	0	0	**1478**	**4 - 6 Pk Volume**	872	878	0	0	**1750**
Pk Hr Factor	0.882	0.919	0.000	0.000	**0.897**	**Pk Hr Factor**	0.858	0.903	0.000	0.000	**0.880**

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Alvarado Canyon Rd & I-8 WB Ramps

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_007

DAILY TOTALS	NB	SB	EB	WB	Total
	11,535	22,401	0	0	33,936

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	36		97						133		12:00	209		410						619	
00:15	29		98						127		12:15	202		454						656	
00:30	28		81						109		12:30	225		433						658	
00:45	28	121	73	349					101	470	12:45	219	855	396	1693					615	2548
01:00	25		53						78		13:00	216		395						611	
01:15	17		73						90		13:15	202		405						607	
01:30	23		73						96		13:30	191		432						623	
01:45	28	93	55	254					83	347	13:45	201	810	394	1626					595	2436
02:00	24		60						84		14:00	178		401						579	
02:15	29		47						76		14:15	196		424						620	
02:30	29		62						91		14:30	182		421						603	
02:45	18	100	42	211					60	311	14:45	184	740	415	1661					599	2401
03:00	10		46						56		15:00	178		359						537	
03:15	13		32						45		15:15	172		420						592	
03:30	15		35						50		15:30	175		445						620	
03:45	8	46	33	146					41	192	15:45	171	696	393	1617					564	2313
04:00	7		25						32		16:00	212		407						619	
04:15	9		30						39		16:15	212		419						631	
04:30	14		29						43		16:30	209		381						590	
04:45	34	64	34	118					68	182	16:45	172	805	328	1535					500	2340
05:00	18		42						60		17:00	215		361						576	
05:15	29		38						67		17:15	178		349						527	
05:30	40		50						90		17:30	176		352						528	
05:45	55	142	61	191					116	333	17:45	183	752	335	1397					518	2149
06:00	59		83						142		18:00	119		289						408	
06:15	69		105						174		18:15	116		287						403	
06:30	99		105						204		18:30	127		283						410	
06:45	139	366	115	408					254	774	18:45	92	454	269	1128					361	1582
07:00	150		132						282		19:00	100		268						368	
07:15	148		143						291		19:15	99		271						370	
07:30	181		199						380		19:30	85		285						370	
07:45	223	702	182	656					405	1358	19:45	104	388	253	1077					357	1465
08:00	194		258						452		20:00	83		252						335	
08:15	202		257						459		20:15	81		240						321	
08:30	245		244						489		20:30	88		225						313	
08:45	226	867	281	1040					507	1907	20:45	81	333	216	933					297	1266
09:00	168		291						459		21:00	81		214						295	
09:15	173		284						457		21:15	64		227						291	
09:30	187		299						486		21:30	80		200						280	
09:45	221	749	313	1187					534	1936	21:45	70	295	226	867					296	1162
10:00	204		362						566		22:00	67		199						266	
10:15	221		360						581		22:15	55		140						195	
10:30	219		376						595		22:30	64		154						218	
10:45	247	891	419	1517					666	2408	22:45	58	244	159	652					217	896
11:00	191		397						588		23:00	56		138						194	
11:15	223		400						623		23:15	52		144						196	
11:30	207		379						586		23:30	42		140						182	
11:45	212	833	425	1601					637	2434	23:45	39	189	115	537					154	726
TOTALS		4974		7678						12652	TOTALS		6561		14723						21284
SPLIT %		39.3%		60.7%						37.3%	SPLIT %		30.8%		69.2%						62.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,535	22,401	0	0	33,936

AM Peak Hour	10:00	11:45			11:45	PM Peak Hour	12:15	12:00			12:00
AM Pk Volume	891	1722			2570	PM Pk Volume	862	1693			2548
Pk Hr Factor	0.902	0.948			0.976	Pk Hr Factor	0.958	0.932			0.968
7 - 9 Volume	1569	1696	0	0	3265	4 - 6 Volume	1557	2932	0	0	4489
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:15	16:00			16:00
7 - 9 Pk Volume	867	1040	0	0	1907	4 - 6 Pk Volume	808	1535	0	0	2340
Pk Hr Factor	0.885	0.925	0.000	0.000	0.940	Pk Hr Factor	0.940	0.916	0.000	0.000	0.927

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. I-8 WB Ramps & I-8 EB Ramps

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_008

DAILY TOTALS	NB	SB	EB	WB	Total
	14,243	13,763	0	0	28,006

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	51		68						119		12:00	262		244						506	
00:15	38		61						99		12:15	273		287						560	
00:30	39		56						95		12:30	265		271						536	
00:45	38	166	45	230					83	396	12:45	269	1069	248	1050					517	2119
01:00	27		41						68		13:00	284		249						533	
01:15	19		53						72		13:15	252		267						519	
01:30	25		55						80		13:30	245		255						500	
01:45	33	104	38	187					71	291	13:45	258	1039	262	1033					520	2072
02:00	30		38						68		14:00	245		253						498	
02:15	41		33						74		14:15	239		260						499	
02:30	30		39						69		14:30	222		262						484	
02:45	22	123	24	134					46	257	14:45	272	978	252	1027					524	2005
03:00	16		26						42		15:00	303		216						519	
03:15	19		17						36		15:15	304		258						562	
03:30	24		15						39		15:30	239		288						527	
03:45	11	70	21	79					32	149	15:45	219	1065	228	990					447	2055
04:00	9		15						24		16:00	216		236						452	
04:15	12		18						30		16:15	205		252						457	
04:30	20		10						30		16:30	216		228						444	
04:45	37	78	17	60					54	138	16:45	189	826	204	920					393	1746
05:00	26		19						45		17:00	223		231						454	
05:15	38		17						55		17:15	176		223						399	
05:30	62		19						81		17:30	180		223						403	
05:45	70	196	33	88					103	284	17:45	178	757	213	890					391	1647
06:00	79		41						120		18:00	144		184						328	
06:15	82		42						124		18:15	160		178						338	
06:30	133		54						187		18:30	156		186						342	
06:45	171	465	60	197					231	662	18:45	134	594	191	739					325	1333
07:00	163		62						225		19:00	129		198						327	
07:15	148		78						226		19:15	134		177						311	
07:30	176		92						268		19:30	122		177						299	
07:45	226	713	102	334					328	1047	19:45	123	508	168	720					291	1228
08:00	194		128						322		20:00	127		174						301	
08:15	197		120						317		20:15	112		179						291	
08:30	248		131						379		20:30	119		145						264	
08:45	230	869	159	538					389	1407	20:45	124	482	159	657					283	1139
09:00	215		164						379		21:00	94		140						234	
09:15	231		158						389		21:15	116		141						257	
09:30	246		156						402		21:30	105		140						245	
09:45	279	971	180	658					459	1629	21:45	95	410	158	579					253	989
10:00	260		218						478		22:00	71		142						213	
10:15	284		207						491		22:15	73		91						164	
10:30	284		198						482		22:30	85		109						194	
10:45	302	1130	258	881					560	2011	22:45	93	322	117	459					210	781
11:00	251		232						483		23:00	60		107						167	
11:15	281		207						488		23:15	62		104						166	
11:30	256		238						494		23:30	65		91						156	
11:45	275	1063	259	936					534	1999	23:45	58	245	75	377					133	622
TOTALS		5948		4322						**10270**	**TOTALS**		8295		9441						**17736**
SPLIT %		57.9%		42.1%						**36.7%**	**SPLIT %**		46.8%		53.2%						**63.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	14,243	13,763	0	0	28,006

AM Peak Hour	10:00	11:45			**11:45**	**PM Peak Hour**	14:45	12:15			**12:15**
AM Pk Volume	1130	1061			**2136**	**PM Pk Volume**	1118	1055			**2146**
Pk Hr Factor	0.935	0.924			**0.954**	**Pk Hr Factor**	0.919	0.919			**0.958**
7 - 9 Volume	1582	872	0	0	**2454**	**4 - 6 Volume**	1583	1810	0	0	**3393**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:15	16:00			**16:15**
7 - 9 Pk Volume	869	538	0	0	**1407**	**4 - 6 Pk Volume**	833	920	0	0	**1748**
Pk Hr Factor	0.876	0.846	0.000	0.000	**0.904**	**Pk Hr Factor**	0.934	0.913	0.000	0.000	**0.956**

Prepared by NDS/ATD

VOLUME

San Diego Mission Rd Bet. Fairmount Ave & Rancho Mission Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,340	2,403	4,743

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			5		6		11		12:00			59		56		115	
00:15			11		11		22		12:15			49		54		103	
00:30			4		11		15		12:30			49		60		109	
00:45			2	22	7	35	9	57	12:45			53	210	66	236	119	446
01:00			6		8		14		13:00			51		52		103	
01:15			4		5		9		13:15			47		67		114	
01:30			3		4		7		13:30			41		51		92	
01:45			1	14	5	22	6	36	13:45			45	184	51	221	96	405
02:00			8		5		13		14:00			41		45		86	
02:15			6		7		13		14:15			54		50		104	
02:30			1		6		7		14:30			38		55		93	
02:45			1	16	1	19	2	35	14:45			37	170	27	177	64	347
03:00			1		2		3		15:00			57		51		108	
03:15			1		3		4		15:15			38		63		101	
03:30			2		3		5		15:30			49		48		97	
03:45			1	5	2	10	3	15	15:45			38	182	56	218	94	400
04:00			1		1		2		16:00			38		38		76	
04:15			6		1		7		16:15			38		40		78	
04:30			6		3		9		16:30			38		37		75	
04:45			3	16	6	11	9	27	16:45			42	156	39	154	81	310
05:00			2		4		6		17:00			21		43		64	
05:15			7		4		11		17:15			38		45		83	
05:30			2		4		6		17:30			38		35		73	
05:45			4	15	5	17	9	32	17:45			27	124	29	152	56	276
06:00			4		4		8		18:00			35		23		58	
06:15			8		14		22		18:15			37		34		71	
06:30			16		17		33		18:30			40		44		84	
06:45			17	45	17	52	34	97	18:45			35	147	33	134	68	281
07:00			15		10		25		19:00			27		18		45	
07:15			16		8		24		19:15			24		26		50	
07:30			29		20		49		19:30			22		22		44	
07:45			20	80	16	54	36	134	19:45			26	99	16	82	42	181
08:00			21		21		42		20:00			20		25		45	
08:15			24		10		34		20:15			17		21		38	
08:30			29		24		53		20:30			17		19		36	
08:45			33	107	21	76	54	183	20:45			16	70	21	86	37	156
09:00			33		28		61		21:00			13		11		24	
09:15			35		30		65		21:15			19		24		43	
09:30			39		30		69		21:30			10		14		24	
09:45			43	150	35	123	78	273	21:45			9	51	6	55	15	106
10:00			43		40		83		22:00			12		15		27	
10:15			34		51		85		22:15			11		10		21	
10:30			40		35		75		22:30			15		12		27	
10:45			57	174	46	172	103	346	22:45			10	48	7	44	17	92
11:00			53		49		102		23:00			10		11		21	
11:15			64		50		114		23:15			11		4		15	
11:30			59		62		121		23:30			11		7		18	
11:45			43	219	65	226	108	445	23:45			4	36	5	27	9	63
TOTALS				863		817		1680	TOTALS				1477		1586		3063
SPLIT %				51.4%		48.6%		35.4%	SPLIT %				48.2%		51.8%		64.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,340	2,403	4,743

AM Peak Hour			10:45	11:30	11:15	PM Peak Hour			12:00	12:30	12:00
AM Pk Volume			233	237	458	PM Pk Volume			210	245	446
Pk Hr Factor			0.910	0.912	0.946	Pk Hr Factor			0.890	0.914	0.937
7 - 9 Volume	0	0	187	130	317	4 - 6 Volume	0	0	280	306	586
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:30	16:00
7 - 9 Pk Volume	0	0	107	76	183	4 - 6 Pk Volume	0	0	156	164	310
Pk Hr Factor	0.000	0.000	0.811	0.792	0.847	Pk Hr Factor	0.000	0.000	0.929	0.911	0.957

Prepared by NDS/ATD

VOLUME

San Diego Mission Rd W/O Rancho Mission Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,801	2,731	5,532

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			14		17		31		12:00			56		55		111	
00:15			13		15		28		12:15			58		54		112	
00:30			4		12		16		12:30			55		61		116	
00:45			8	39	11	55	19	94	12:45			64	233	63	233	127	466
01:00			8		15		23		13:00			57		62		119	
01:15			6		7		13		13:15			42		54		96	
01:30			4		11		15		13:30			58		50		108	
01:45			5	23	8	41	13	64	13:45			42	199	47	213	89	412
02:00			6		7		13		14:00			48		54		102	
02:15			5		10		15		14:15			54		60		114	
02:30			2		7		9		14:30			37		48		85	
02:45			5	18	3	27	8	45	14:45			56	195	43	205	99	400
03:00			4		4		8		15:00			53		52		105	
03:15			2		11		13		15:15			51		55		106	
03:30			2		10		12		15:30			43		54		97	
03:45			1	9	6	31	7	40	15:45			46	193	46	207	92	400
04:00			1		2		3		16:00			42		48		90	
04:15			2		2		4		16:15			51		46		97	
04:30			3		3		6		16:30			51		37		88	
04:45			7	13	9	16	16	29	16:45			39	183	39	170	78	353
05:00			6		7		13		17:00			47		47		94	
05:15			7		6		13		17:15			45		30		75	
05:30			3		6		9		17:30			37		38		75	
05:45			10	26	7	26	17	52	17:45			43	172	35	150	78	322
06:00			6		4		10		18:00			40		26		66	
06:15			12		16		28		18:15			45		48		93	
06:30			15		20		35		18:30			31		42		73	
06:45			20	53	8	48	28	101	18:45			35	151	37	153	72	304
07:00			17		12		29		19:00			35		27		62	
07:15			21		11		32		19:15			36		36		72	
07:30			28		23		51		19:30			51		35		86	
07:45			19	85	19	65	38	150	19:45			33	155	21	119	54	274
08:00			16		13		29		20:00			31		31		62	
08:15			36		21		57		20:15			33		24		57	
08:30			32		30		62		20:30			28		22		50	
08:45			31	115	22	86	53	201	20:45			27	119	24	101	51	220
09:00			29		34		63		21:00			26		26		52	
09:15			40		38		78		21:15			29		28		57	
09:30			40		37		77		21:30			32		26		58	
09:45			38	147	43	152	81	299	21:45			29	116	27	107	56	223
10:00			41		40		81		22:00			21		33		54	
10:15			44		34		78		22:15			23		21		44	
10:30			46		45		91		22:30			33		17		50	
10:45			69	200	44	163	113	363	22:45			22	99	24	95	46	194
11:00			45		41		86		23:00			14		24		38	
11:15			45		50		95		23:15			16		7		23	
11:30			58		61		119		23:30			23		19		42	
11:45			44	192	52	204	96	396	23:45			13	66	14	64	27	130
TOTALS				920		914		1834	TOTALS				1881		1817		3698
SPLIT %				50.2%		49.8%		33.2%	SPLIT %				50.9%		49.1%		66.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,801	2,731	5,532

AM Peak Hour			10:45	11:30	11:30	PM Peak Hour			12:15	12:15	12:15
AM Pk Volume			217	222	438	PM Pk Volume			234	240	474
Pk Hr Factor			0.786	0.910	0.920	Pk Hr Factor			0.914	0.952	0.933
7 - 9 Volume	0	0	200	151	351	4 - 6 Volume	0	0	355	320	675
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:00	16:15
7 - 9 Pk Volume	0	0	115	86	201	4 - 6 Pk Volume	0	0	188	170	357
Pk Hr Factor	0.000	0.000	0.799	0.717	0.810	Pk Hr Factor	0.000	0.000	0.922	0.885	0.920

Prepared by NDS/ATD

VOLUME

Camino Del Rio N Bet. Fairmount Ave & Ward Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,832	3,554	7,386

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			18		10		28		12:00			90		69		159	
00:15			14		15		29		12:15			91		65		156	
00:30			22		7		29		12:30			62		70		132	
00:45			10	64	19	51	29	115	12:45			70	313	82	286	152	599
01:00			10		11		21		13:00			88		78		166	
01:15			10		3		13		13:15			59		56		115	
01:30			9		5		14		13:30			71		70		141	
01:45			7	36	12	31	19	67	13:45			63	281	70	274	133	555
02:00			14		9		23		14:00			55		71		126	
02:15			7		12		19		14:15			73		56		129	
02:30			9		7		16		14:30			80		59		139	
02:45			6	36	6	34	12	70	14:45			75	283	53	239	128	522
03:00			5		8		13		15:00			60		63		123	
03:15			3		4		7		15:15			59		69		128	
03:30			5		2		7		15:30			87		55		142	
03:45			3	16	4	18	7	34	15:45			63	269	50	237	113	506
04:00			5		3		8		16:00			63		55		118	
04:15			2		3		5		16:15			62		63		125	
04:30			3		7		10		16:30			57		74		131	
04:45			5	15	4	17	9	32	16:45			52	234	54	246	106	480
05:00			3		7		10		17:00			71		65		136	
05:15			4		11		15		17:15			51		36		87	
05:30			2		16		18		17:30			69		58		127	
05:45			10	19	22	56	32	75	17:45			43	234	31	190	74	424
06:00			13		16		29		18:00			49		49		98	
06:15			17		17		34		18:15			56		55		111	
06:30			18		19		37		18:30			47		28		75	
06:45			18	66	21	73	39	139	18:45			45	197	56	188	101	385
07:00			16		26		42		19:00			57		38		95	
07:15			26		29		55		19:15			45		50		95	
07:30			34		15		49		19:30			60		40		100	
07:45			36	112	32	102	68	214	19:45			55	217	49	177	104	394
08:00			21		30		51		20:00			44		43		87	
08:15			33		45		78		20:15			47		37		84	
08:30			40		37		77		20:30			42		27		69	
08:45			42	136	37	149	79	285	20:45			36	169	38	145	74	314
09:00			44		54		98		21:00			45		29		74	
09:15			40		46		86		21:15			49		19		68	
09:30			48		53		101		21:30			32		35		67	
09:45			49	181	71	224	120	405	21:45			62	188	37	120	99	308
10:00			66		61		127		22:00			35		22		57	
10:15			61		57		118		22:15			29		32		61	
10:30			61		56		117		22:30			32		28		60	
10:45			72	260	69	243	141	503	22:45			48	144	37	119	85	263
11:00			62		60		122		23:00			28		25		53	
11:15			70		71		141		23:15			29		21		50	
11:30			69		67		136		23:30			16		23		39	
11:45			67	268	57	255	124	523	23:45			21	94	11	80	32	174
TOTALS				1209		1253		**2462**	TOTALS				2623		2301		**4924**
SPLIT %				49.1%		50.9%		**33.3%**	SPLIT %				53.3%		46.7%		**66.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,832	3,554	7,386

AM Peak Hour			11:30	10:45	**11:30**	**PM Peak Hour**			12:00	12:15	**12:15**
AM Pk Volume			317	267	**575**	**PM Pk Volume**			313	295	**606**
Pk Hr Factor			0.871	0.940	**0.904**	**Pk Hr Factor**			0.860	0.899	**0.913**
7 - 9 Volume	0	0	248	251	**499**	**4 - 6 Volume**	0	0	468	436	**904**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:45	16:15	**16:15**
7 - 9 Pk Volume	0	0	136	149	**285**	**4 - 6 Pk Volume**	0	0	243	256	**498**
Pk Hr Factor	0.000	0.000	0.810	0.828	**0.902**	**Pk Hr Factor**	0.000	0.000	0.856	0.865	**0.915**

Prepared by NDS/ATD

VOLUME

Camino Del Rio N Bet. Ward Rd & Mission City Pkwy

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,145	2,151	4,296

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		4		11		12:00			49		56		105	
00:15			6		6		12		12:15			41		45		86	
00:30			13		2		15		12:30			40		34		74	
00:45			3	29	2	14	5	43	12:45			47	177	54	189	101	366
01:00			4		8		12		13:00			48		47		95	
01:15			6		1		7		13:15			36		53		89	
01:30			5		2		7		13:30			53		46		99	
01:45			3	18	2	13	5	31	13:45			38	175	51	197	89	372
02:00			6		2		8		14:00			38		35		73	
02:15			4		3		7		14:15			62		43		105	
02:30			3		0		3		14:30			48		36		84	
02:45			2	15	3	8	5	23	14:45			51	199	49	163	100	362
03:00			2		0		2		15:00			43		39		82	
03:15			0		1		1		15:15			42		36		78	
03:30			1		1		2		15:30			57		43		100	
03:45			1	4	1	3	2	7	15:45			37	179	31	149	68	328
04:00			0		1		1		16:00			43		34		77	
04:15			1		2		3		16:15			40		32		72	
04:30			0		3		3		16:30			44		31		75	
04:45			1	2	1	7	2	9	16:45			41	168	30	127	71	295
05:00			0		4		4		17:00			42		36		78	
05:15			1		3		4		17:15			42		30		72	
05:30			1		14		15		17:30			36		32		68	
05:45			4	6	10	31	14	37	17:45			42	162	26	124	68	286
06:00			3		7		10		18:00			32		29		61	
06:15			2		7		9		18:15			31		33		64	
06:30			2		9		11		18:30			26		27		53	
06:45			3	10	13	36	16	46	18:45			42	131	26	115	68	246
07:00			2		8		10		19:00			29		37		66	
07:15			6		13		19		19:15			31		23		54	
07:30			5		16		21		19:30			28		27		55	
07:45			8	21	17	54	25	75	19:45			29	117	28	115	57	232
08:00			8		19		27		20:00			25		27		52	
08:15			9		22		31		20:15			25		21		46	
08:30			8		22		30		20:30			29		14		43	
08:45			13	38	22	85	35	123	20:45			21	100	23	85	44	185
09:00			18		32		50		21:00			32		15		47	
09:15			13		28		41		21:15			24		14		38	
09:30			15		38		53		21:30			22		17		39	
09:45			20	66	36	134	56	200	21:45			44	122	13	59	57	181
10:00			27		45		72		22:00			23		7		30	
10:15			25		42		67		22:15			18		15		33	
10:30			27		26		53		22:30			15		15		30	
10:45			31	110	56	169	87	279	22:45			20	76	13	50	33	126
11:00			33		43		76		23:00			17		10		27	
11:15			52		51		103		23:15			21		11		32	
11:30			30		52		82		23:30			10		4		14	
11:45			46	161	47	193	93	354	23:45			11	59	6	31	17	90
TOTALS				480		747		1227	TOTALS				1665		1404		3069
SPLIT %				39.1%		60.9%		28.6%	SPLIT %				54.3%		45.7%		71.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,145	2,151	4,296

AM Peak Hour			11:15	11:15	11:15	PM Peak Hour			14:15	12:45	12:45
AM Pk Volume			177	206	383	PM Pk Volume			204	200	384
Pk Hr Factor			0.851	0.920	0.912	Pk Hr Factor			0.823	0.926	0.950
7 - 9 Volume	0	0	59	139	198	4 - 6 Volume	0	0	330	251	581
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	38	85	123	4 - 6 Pk Volume	0	0	169	129	296
Pk Hr Factor	0.000	0.000	0.731	0.966	0.879	Pk Hr Factor	0.000	0.000	0.960	0.896	0.949

Prepared by NDS/ATD

VOLUME

Rancho Mission Rd Bet. San Diego Mission Rd & Caminito Cascara

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_013

DAILY TOTALS	NB	SB	EB	WB	Total
	3,197	3,521	0	0	6,718

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	9		12						21		12:00	55		82						137	
00:15	15		12						27		12:15	64		41						105	
00:30	11		9						20		12:30	57		68						125	
00:45	12	47	8	41					20	88	12:45	66	242	70	261					136	503
01:00	9		8						17		13:00	68		83						151	
01:15	5		12						17		13:15	52		65						117	
01:30	7		13						20		13:30	66		69						135	
01:45	11	32	12	45					23	77	13:45	52	238	52	269					104	507
02:00	8		13						21		14:00	66		69						135	
02:15	11		9						20		14:15	60		51						111	
02:30	6		10						16		14:30	46		68						114	
02:45	6	31	4	36					10	67	14:45	50	222	45	233					95	455
03:00	7		7						14		15:00	65		60						125	
03:15	4		7						11		15:15	71		62						133	
03:30	5		4						9		15:30	57		55						112	
03:45	8	24	1	19					9	43	15:45	54	247	58	235					112	482
04:00	3		4						7		16:00	49		56						105	
04:15	1		2						3		16:15	53		54						107	
04:30	5		2						7		16:30	52		44						96	
04:45	5	14	5	13					10	27	16:45	58	212	43	197					101	409
05:00	3		2						5		17:00	65		56						121	
05:15	10		8						18		17:15	47		63						110	
05:30	7		7						14		17:30	44		54						98	
05:45	12	32	11	28					23	60	17:45	50	206	55	228					105	434
06:00	7		8						15		18:00	53		54						107	
06:15	15		12						27		18:15	44		61						105	
06:30	12		16						28		18:30	33		56						89	
06:45	12	46	11	47					23	93	18:45	51	181	58	229					109	410
07:00	13		18						31		19:00	27		55						82	
07:15	21		35						56		19:15	48		41						89	
07:30	17		31						48		19:30	31		48						79	
07:45	20	71	39	123					59	194	19:45	42	148	45	189					87	337
08:00	14		41						55		20:00	40		45						85	
08:15	25		46						71		20:15	40		59						99	
08:30	27		42						69		20:30	33		34						67	
08:45	34	100	40	169					74	269	20:45	36	149	29	167					65	316
09:00	35		43						78		21:00	30		44						74	
09:15	41		51						92		21:15	30		29						59	
09:30	47		53						100		21:30	38		38						76	
09:45	58	181	65	212					123	393	21:45	42	140	40	151					82	291
10:00	38		48						86		22:00	39		20						59	
10:15	38		69						107		22:15	28		25						53	
10:30	62		55						117		22:30	18		25						43	
10:45	52	190	71	243					123	433	22:45	40	125	23	93					63	218
11:00	56		50						106		23:00	31		28						59	
11:15	64		52						116		23:15	24		26						50	
11:30	56		55						111		23:30	25		13						38	
11:45	51	227	54	211					105	438	23:45	12	92	15	82					27	174
TOTALS		995		1187						**2182**	**TOTALS**		2202		2334						**4536**
SPLIT %		45.6%		54.4%						**32.5%**	**SPLIT %**		48.5%		51.5%						**67.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	3,197	3,521	0	0	6,718

AM Peak Hour	10:30	10:15			**11:45**	**PM Peak Hour**	12:15	12:45			**12:45**
AM Pk Volume	234	245			**472**	**PM Pk Volume**	255	287			**539**
Pk Hr Factor	0.914	0.863			**0.861**	**Pk Hr Factor**	0.938	0.864			**0.892**
7 - 9 Volume	171	292	0	0	**463**	**4 - 6 Volume**	418	425	0	0	**843**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:15	17:00			**17:00**
7 - 9 Pk Volume	100	169	0	0	**269**	**4 - 6 Pk Volume**	228	228	0	0	**434**
Pk Hr Factor	0.735	0.918	0.000	0.000	**0.909**	**Pk Hr Factor**	0.877	0.905	0.000	0.000	**0.897**

Prepared by NDS/ATD

VOLUME

Mission Village Dr Bet. Ronda Ave & Friars Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_014

DAILY TOTALS	NB	SB	EB	WB	Total
	6,123	5,775	0	0	11,898

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	38		22						60		12:00	101		99						200	
00:15	26		15						41		12:15	116		115						231	
00:30	24		20						44		12:30	95		104						199	
00:45	21	109	9	66					30	175	12:45	120	432	103	421					223	853
01:00	31		17						48		13:00	107		105						212	
01:15	13		5						18		13:15	112		105						217	
01:30	20		7						27		13:30	95		105						200	
01:45	12	76	8	37					20	113	13:45	100	414	91	406					191	820
02:00	18		9						27		14:00	97		100						197	
02:15	16		3						19		14:15	93		91						184	
02:30	13		6						19		14:30	98		69						167	
02:45	7	54	3	21					10	75	14:45	87	375	100	360					187	735
03:00	11		5						16		15:00	103		100						203	
03:15	10		7						17		15:15	95		99						194	
03:30	6		6						12		15:30	96		87						183	
03:45	8	35	5	23					13	58	15:45	102	396	83	369					185	765
04:00	5		8						13		16:00	129		72						201	
04:15	7		5						12		16:15	92		105						197	
04:30	6		9						15		16:30	95		99						194	
04:45	5	23	11	33					16	56	16:45	110	426	74	350					184	776
05:00	6		17						23		17:00	124		109						233	
05:15	8		18						26		17:15	114		78						192	
05:30	18		19						37		17:30	111		95						206	
05:45	11	43	15	69					26	112	17:45	103	452	65	347					168	799
06:00	9		25						34		18:00	110		76						186	
06:15	12		27						39		18:15	107		81						188	
06:30	15		33						48		18:30	96		71						167	
06:45	25	61	45	130					70	191	18:45	91	404	91	319					182	723
07:00	23		46						69		19:00	89		79						168	
07:15	27		54						81		19:15	118		70						188	
07:30	34		52						86		19:30	80		65						145	
07:45	40	124	78	230					118	354	19:45	74	361	65	279					139	640
08:00	50		48						98		20:00	99		53						152	
08:15	57		81						138		20:15	95		56						151	
08:30	58		102						160		20:30	88		51						139	
08:45	59	224	83	314					142	538	20:45	75	357	47	207					122	564
09:00	72		85						157		21:00	74		52						126	
09:15	67		96						163		21:15	68		45						113	
09:30	80		114						194		21:30	72		54						126	
09:45	81	300	100	395					181	695	21:45	66	280	45	196					111	476
10:00	70		93						163		22:00	75		42						117	
10:15	100		103						203		22:15	67		40						107	
10:30	96		119						215		22:30	48		34						82	
10:45	93	359	122	437					215	796	22:45	59	249	27	143					86	392
11:00	83		118						201		23:00	48		42						90	
11:15	107		106						213		23:15	49		29						78	
11:30	88		152						240		23:30	36		27						63	
11:45	105	383	120	496					225	879	23:45	53	186	29	127					82	313
TOTALS		1791		2251						**4042**	**TOTALS**		4332		3524						**7856**
SPLIT %		44.3%		55.7%						**34.0%**	**SPLIT %**		55.1%		44.9%						**66.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	6,123	5,775	0	0	11,898

AM Peak Hour	11:45	10:45			**11:30**	**PM Peak Hour**	16:45	12:15			**12:15**
AM Pk Volume	417	498			**896**	**PM Pk Volume**	459	427			**865**
Pk Hr Factor	0.899	0.819			**0.933**	**Pk Hr Factor**	0.925	0.928			**0.936**
7 - 9 Volume	348	544	0	0	**892**	**4 - 6 Volume**	878	697	0	0	**1575**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:45	16:15			**16:45**
7 - 9 Pk Volume	224	314	0	0	**538**	**4 - 6 Pk Volume**	459	387	0	0	**815**
Pk Hr Factor	0.949	0.770	0.000	0.000	**0.841**	**Pk Hr Factor**	0.925	0.888	0.000	0.000	**0.874**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Riverdale St & Santo Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_015

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,314	14,027	29,341

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			71		47		118		12:00			260		287		547	
00:15			50		39		89		12:15			273		259		532	
00:30			56		35		91		12:30			271		239		510	
00:45			38	215	29	150	67	365	12:45			299	1103	276	1061	575	2164
01:00			49		41		90		13:00			270		290		560	
01:15			25		39		64		13:15			274		277		551	
01:30			39		58		97		13:30			281		250		531	
01:45			36	149	53	191	89	340	13:45			283	1108	236	1053	519	2161
02:00			31		33		64		14:00			264		271		535	
02:15			36		42		78		14:15			280		272		552	
02:30			23		36		59		14:30			289		273		562	
02:45			30	120	18	129	48	249	14:45			318	1151	228	1044	546	2195
03:00			22		26		48		15:00			257		243		500	
03:15			16		24		40		15:15			268		248		516	
03:30			17		23		40		15:30			249		246		495	
03:45			15	70	23	96	38	166	15:45			271	1045	234	971	505	2016
04:00			23		24		47		16:00			260		210		470	
04:15			28		23		51		16:15			271		213		484	
04:30			23		28		51		16:30			231		239		470	
04:45			35	109	24	99	59	208	16:45			263	1025	207	869	470	1894
05:00			23		30		53		17:00			248		211		459	
05:15			37		46		83		17:15			233		226		459	
05:30			46		52		98		17:30			238		200		438	
05:45			69	175	41	169	110	344	17:45			214	933	168	805	382	1738
06:00			74		60		134		18:00			211		196		407	
06:15			92		68		160		18:15			239		203		442	
06:30			119		93		212		18:30			251		194		445	
06:45			152	437	91	312	243	749	18:45			206	907	175	768	381	1675
07:00			76		91		167		19:00			213		142		355	
07:15			145		114		259		19:15			219		187		406	
07:30			143		133		276		19:30			178		177		355	
07:45			157	521	144	482	301	1003	19:45			172	782	155	661	327	1443
08:00			150		149		299		20:00			180		144		324	
08:15			162		188		350		20:15			161		131		292	
08:30			170		172		342		20:30			155		138		293	
08:45			210	692	191	700	401	1392	20:45			140	636	131	544	271	1180
09:00			190		215		405		21:00			129		117		246	
09:15			222		195		417		21:15			125		113		238	
09:30			205		244		449		21:30			146		94		240	
09:45			216	833	235	889	451	1722	21:45			115	515	114	438	229	953
10:00			220		219		439		22:00			116		93		209	
10:15			232		239		471		22:15			134		86		220	
10:30			207		242		449		22:30			108		83		191	
10:45			249	908	247	947	496	1855	22:45			121	479	69	331	190	810
11:00			240		245		485		23:00			109		71		180	
11:15			263		251		514		23:15			89		53		142	
11:30			280		269		549		23:30			79		98		177	
11:45			277	1060	279	1044	556	2104	23:45			64	341	52	274	116	615
TOTALS				5289		5208		10497	TOTALS				10025		8819		18844
SPLIT %				50.4%		49.6%		35.8%	SPLIT %				53.2%		46.8%		64.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,314	14,027	29,341

AM Peak Hour			11:30	11:30	11:30	PM Peak Hour			14:00	12:45	12:45
AM Pk Volume			1090	1094	2184	PM Pk Volume			1151	1093	2217
Pk Hr Factor			0.973	0.953	0.982	Pk Hr Factor			0.905	0.942	0.964
7 - 9 Volume	0	0	1213	1182	2395	4 - 6 Volume	0	0	1958	1674	3632
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:30	16:00
7 - 9 Pk Volume	0	0	692	700	1392	4 - 6 Pk Volume	0	0	1025	883	1894
Pk Hr Factor	0.000	0.000	0.824	0.916	0.868	Pk Hr Factor	0.000	0.000	0.946	0.924	0.978

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Santo Rd & Rancho Mission Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_016

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,506	16,686	34,192

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			78		58		136		12:00			300		264		564	
00:15			76		49		125		12:15			306		279		585	
00:30			64		44		108		12:30			330		289		619	
00:45			40	258	33	184	73	442	12:45			330	1266	285	1117	615	2383
01:00			50		47		97		13:00			290		308		598	
01:15			44		48		92		13:15			298		314		612	
01:30			48		71		119		13:30			327		293		620	
01:45			39	181	63	229	102	410	13:45			301	1216	285	1200	586	2416
02:00			39		38		77		14:00			312		334		646	
02:15			48		52		100		14:15			311		308		619	
02:30			33		41		74		14:30			350		296		646	
02:45			35	155	23	154	58	309	14:45			316	1289	262	1200	578	2489
03:00			28		29		57		15:00			286		287		573	
03:15			22		26		48		15:15			293		278		571	
03:30			27		30		57		15:30			299		304		603	
03:45			21	98	26	111	47	209	15:45			285	1163	288	1157	573	2320
04:00			32		27		59		16:00			304		284		588	
04:15			32		26		58		16:15			314		273		587	
04:30			37		44		81		16:30			280		293		573	
04:45			41	142	31	128	72	270	16:45			318	1216	289	1139	607	2355
05:00			35		44		79		17:00			311		278		589	
05:15			58		50		108		17:15			293		293		586	
05:30			77		67		144		17:30			272		324		596	
05:45			97	267	57	218	154	485	17:45			274	1150	229	1124	503	2274
06:00			95		81		176		18:00			251		227		478	
06:15			129		84		213		18:15			247		237		484	
06:30			170		111		281		18:30			267		214		481	
06:45			159	553	98	374	257	927	18:45			222	987	211	889	433	1876
07:00			118		110		228		19:00			243		200		443	
07:15			163		131		294		19:15			208		223		431	
07:30			156		173		329		19:30			199		203		402	
07:45			168	605	185	599	353	1204	19:45			194	844	170	796	364	1640
08:00			164		170		334		20:00			194		156		350	
08:15			169		210		379		20:15			171		155		326	
08:30			188		230		418		20:30			156		190		346	
08:45			226	747	239	849	465	1596	20:45			149	670	133	634	282	1304
09:00			236		226		462		21:00			140		136		276	
09:15			220		249		469		21:15			151		123		274	
09:30			224		273		497		21:30			165		125		290	
09:45			223	903	258	1006	481	1909	21:45			137	593	131	515	268	1108
10:00			265		276		541		22:00			153		138		291	
10:15			247		249		496		22:15			147		121		268	
10:30			241		283		524		22:30			144		97		241	
10:45			280	1033	302	1110	582	2143	22:45			125	569	81	437	206	1006
11:00			262		261		523		23:00			114		88		202	
11:15			305		280		585		23:15			107		72		179	
11:30			329		303		632		23:30			92		128		220	
11:45			314	1210	328	1172	642	2382	23:45			78	391	56	344	134	735
TOTALS				6152		6134		12286	TOTALS				11354		10552		21906
SPLIT %				50.1%		49.9%		35.9%	SPLIT %				51.8%		48.2%		64.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,506	16,686	34,192

AM Peak Hour			11:45	11:15	11:15	PM Peak Hour			14:00	13:15	13:45
AM Pk Volume			1250	1175	2423	PM Pk Volume			1289	1226	2497
Pk Hr Factor			0.947	0.896	0.944	Pk Hr Factor			0.921	0.918	0.966
7 - 9 Volume	0	0	1352	1448	2800	4 - 6 Volume	0	0	2366	2263	4629
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:45	16:45
7 - 9 Pk Volume	0	0	747	849	1596	4 - 6 Pk Volume	0	0	1223	1184	2378
Pk Hr Factor	0.000	0.000	0.826	0.888	0.858	Pk Hr Factor	0.000	0.000	0.961	0.914	0.979

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rancho Mission Rd & I-15 NB Ramps

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_017

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,040	19,888	40,928

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			99		66		165		12:00			365		351		716	
00:15			107		58		165		12:15			366		328		694	
00:30			75		55		130		12:30			412		339		751	
00:45			61	342	42	221	103	563	12:45			385	1528	347	1365	732	2893
01:00			60		56		116		13:00			365		364		729	
01:15			66		58		124		13:15			366		366		732	
01:30			59		83		142		13:30			367		344		711	
01:45			46	231	70	267	116	498	13:45			355	1453	338	1412	693	2865
02:00			58		40		98		14:00			368		379		747	
02:15			62		58		120		14:15			364		360		724	
02:30			38		49		87		14:30			393		360		753	
02:45			40	198	29	176	69	374	14:45			365	1490	295	1394	660	2884
03:00			35		32		67		15:00			363		345		708	
03:15			31		30		61		15:15			347		325		672	
03:30			33		36		69		15:30			357		369		726	
03:45			29	128	30	128	59	256	15:45			356	1423	325	1364	681	2787
04:00			35		33		68		16:00			330		338		668	
04:15			35		29		64		16:15			375		313		688	
04:30			41		42		83		16:30			334		361		695	
04:45			40	151	37	141	77	292	16:45			389	1428	325	1337	714	2765
05:00			41		53		94		17:00			373		322		695	
05:15			61		64		125		17:15			382		318		700	
05:30			89		78		167		17:30			324		381		705	
05:45			109	300	77	272	186	572	17:45			344	1423	281	1302	625	2725
06:00			111		109		220		18:00			302		278		580	
06:15			145		111		256		18:15			320		306		626	
06:30			190		151		341		18:30			306		287		593	
06:45			170	616	116	487	286	1103	18:45			282	1210	247	1118	529	2328
07:00			132		135		267		19:00			298		224		522	
07:15			186		154		340		19:15			245		251		496	
07:30			162		231		393		19:30			245		236		481	
07:45			188	668	214	734	402	1402	19:45			243	1031	210	921	453	1952
08:00			172		213		385		20:00			234		201		435	
08:15			205		242		447		20:15			220		191		411	
08:30			221		270		491		20:30			195		206		401	
08:45			254	852	285	1010	539	1862	20:45			189	838	160	758	349	1596
09:00			268		269		537		21:00			182		155		337	
09:15			259		288		547		21:15			198		146		344	
09:30			248		321		569		21:30			198		156		354	
09:45			291	1066	295	1173	586	2239	21:45			183	761	157	614	340	1375
10:00			298		310		608		22:00			207		158		365	
10:15			286		321		607		22:15			207		153		360	
10:30			293		354		647		22:30			181		125		306	
10:45			333	1210	347	1332	680	2542	22:45			157	752	97	533	254	1285
11:00			317		318		635		23:00			152		91		243	
11:15			358		349		707		23:15			128		94		222	
11:30			386		365		751		23:30			119		144		263	
11:45			369	1430	391	1423	760	2853	23:45			112	511	77	406	189	917
TOTALS				7192		7364		14556	TOTALS				13848		12524		26372
SPLIT %				49.4%		50.6%		35.6%	SPLIT %				52.5%		47.5%		64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,040	19,888	40,928

AM Peak Hour			11:45	11:15	11:15	PM Peak Hour			12:00	13:45	12:30
AM Pk Volume			1512	1456	2934	PM Pk Volume			1528	1437	2944
Pk Hr Factor			0.917	0.931	0.965	Pk Hr Factor			0.927	0.948	0.980
7 - 9 Volume	0	0	1520	1744	3264	4 - 6 Volume	0	0	2851	2639	5490
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:45	16:45
7 - 9 Pk Volume	0	0	852	1010	1862	4 - 6 Pk Volume	0	0	1478	1346	2814
Pk Hr Factor	0.000	0.000	0.839	0.886	0.864	Pk Hr Factor	0.000	0.000	0.950	0.883	0.985

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. I-15 SB Ramps & Mission Village Dr

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_018

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,967	20,652	43,619

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			77		60		137		12:00			408		471		879	
00:15			70		47		117		12:15			423		401		824	
00:30			55		37		92		12:30			433		455		888	
00:45			41	243	40	184	81	427	12:45			391	1655	431	1758	822	3413
01:00			37		35		72		13:00			405		407		812	
01:15			42		35		77		13:15			449		383		832	
01:30			35		32		67		13:30			452		396		848	
01:45			31	145	36	138	67	283	13:45			433	1739	409	1595	842	3334
02:00			34		34		68		14:00			437		361		798	
02:15			35		36		71		14:15			394		409		803	
02:30			20		40		60		14:30			445		369		814	
02:45			26	115	32	142	58	257	14:45			421	1697	382	1521	803	3218
03:00			20		19		39		15:00			464		341		805	
03:15			16		21		37		15:15			488		351		839	
03:30			21		24		45		15:30			486		336		822	
03:45			14	71	28	92	42	163	15:45			467	1905	283	1311	750	3216
04:00			18		25		43		16:00			454		336		790	
04:15			9		17		26		16:15			522		329		851	
04:30			13		30		43		16:30			499		377		876	
04:45			23	63	42	114	65	177	16:45			458	1933	392	1434	850	3367
05:00			18		32		50		17:00			528		369		897	
05:15			26		62		88		17:15			442		318		760	
05:30			33		71		104		17:30			438		346		784	
05:45			49	126	111	276	160	402	17:45			502	1910	292	1325	794	3235
06:00			67		88		155		18:00			441		257		698	
06:15			55		99		154		18:15			426		256		682	
06:30			76		124		200		18:30			379		260		639	
06:45			92	290	129	440	221	730	18:45			309	1555	229	1002	538	2557
07:00			84		148		232		19:00			349		225		574	
07:15			130		138		268		19:15			366		232		598	
07:30			121		194		315		19:30			378		209		587	
07:45			137	472	226	706	363	1178	19:45			339	1432	185	851	524	2283
08:00			130		202		332		20:00			324		162		486	
08:15			166		267		433		20:15			269		172		441	
08:30			194		275		469		20:30			293		158		451	
08:45			222	712	297	1041	519	1753	20:45			294	1180	136	628	430	1808
09:00			181		337		518		21:00			250		124		374	
09:15			202		350		552		21:15			248		135		383	
09:30			230		389		619		21:30			220		126		346	
09:45			216	829	441	1517	657	2346	21:45			194	912	97	482	291	1394
10:00			257		397		654		22:00			225		107		332	
10:15			297		437		734		22:15			183		95		278	
10:30			301		403		704		22:30			154		98		252	
10:45			336	1191	463	1700	799	2891	22:45			162	724	87	387	249	1111
11:00			369		432		801		23:00			147		83		230	
11:15			390		415		805		23:15			122		74		196	
11:30			420		378		798		23:30			155		85		240	
11:45			360	1539	485	1710	845	3249	23:45			105	529	56	298	161	827
TOTALS				5796		8060		**13856**	**TOTALS**				17171		12592		**29763**
SPLIT %				41.8%		58.2%		**31.8%**	**SPLIT %**				57.7%		42.3%		**68.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,967	20,652	43,619

AM Peak Hour			11:45	11:45	**11:45**	**PM Peak Hour**			16:15	12:00	**16:15**
AM Pk Volume			1624	1812	**3436**	**PM Pk Volume**			2007	1758	**3474**
Pk Hr Factor			0.938	0.934	**0.967**	**Pk Hr Factor**			0.950	0.933	**0.968**
7 - 9 Volume	0	0	1184	1747	**2931**	**4 - 6 Volume**	0	0	3843	2759	**6602**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:15	16:15	**16:15**
7 - 9 Pk Volume	0	0	712	1041	**1753**	**4 - 6 Pk Volume**	0	0	2007	1467	**3474**
Pk Hr Factor	0.000	0.000	0.802	0.876	**0.844**	**Pk Hr Factor**	0.000	0.000	0.950	0.936	**0.968**

Prepared by NDS/ATD

VOLUME

Friars Rd E/O Northside Dr

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_019

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,152	17,224	34,376

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			55		48		103		12:00			278		399		677	
00:15			31		38		69		12:15			313		357		670	
00:30			24		39		63		12:30			355		355		710	
00:45			35	145	39	164	74	309	12:45			318	1264	339	1450	657	2714
01:00			37		28		65		13:00			340		330		670	
01:15			33		22		55		13:15			320		301		621	
01:30			27		20		47		13:30			297		316		613	
01:45			33	130	42	112	75	242	13:45			368	1325	328	1275	696	2600
02:00			32		21		53		14:00			284		315		599	
02:15			19		22		41		14:15			263		328		591	
02:30			24		17		41		14:30			317		282		599	
02:45			25	100	26	86	51	186	14:45			267	1131	276	1201	543	2332
03:00			23		16		39		15:00			268		266		534	
03:15			10		23		33		15:15			333		308		641	
03:30			19		14		33		15:30			332		308		640	
03:45			12	64	16	69	28	133	15:45			313	1246	316	1198	629	2444
04:00			13		20		33		16:00			469		357		826	
04:15			18		11		29		16:15			424		383		807	
04:30			16		15		31		16:30			444		383		827	
04:45			13	60	30	76	43	136	16:45			474	1811	343	1466	817	3277
05:00			14		13		27		17:00			479		384		863	
05:15			18		30		48		17:15			414		342		756	
05:30			30		36		66		17:30			418		330		748	
05:45			14	76	68	147	82	223	17:45			399	1710	304	1360	703	3070
06:00			26		51		77		18:00			280		232		512	
06:15			42		65		107		18:15			247		255		502	
06:30			45		92		137		18:30			232		236		468	
06:45			26	139	124	332	150	471	18:45			237	996	217	940	454	1936
07:00			103		97		200		19:00			245		208		453	
07:15			109		87		196		19:15			227		193		420	
07:30			103		151		254		19:30			172		182		354	
07:45			113	428	166	501	279	929	19:45			254	898	169	752	423	1650
08:00			167		139		306		20:00			198		154		352	
08:15			160		179		339		20:15			164		140		304	
08:30			185		204		389		20:30			201		121		322	
08:45			190	702	214	736	404	1438	20:45			184	747	111	526	295	1273
09:00			154		228		382		21:00			173		100		273	
09:15			128		250		378		21:15			171		86		257	
09:30			178		309		487		21:30			128		88		216	
09:45			218	678	329	1116	547	1794	21:45			129	601	90	364	219	965
10:00			248		330		578		22:00			152		73		225	
10:15			224		353		577		22:15			104		77		181	
10:30			220		375		595		22:30			102		72		174	
10:45			320	1012	365	1423	685	2435	22:45			100	458	54	276	154	734
11:00			258		368		626		23:00			82		69		151	
11:15			280		342		622		23:15			102		33		135	
11:30			277		372		649		23:30			62		56		118	
11:45			312	1127	372	1454	684	2581	23:45			58	304	42	200	100	504
TOTALS				4661		6216		10877	TOTALS				12491		11008		23499
SPLIT %				42.9%		57.1%		31.6%	SPLIT %				53.2%		46.8%		68.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,152	17,224	34,376

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:15	16:15	16:15
AM Pk Volume			1258	1500	2741	PM Pk Volume			1821	1493	3314
Pk Hr Factor			0.886	0.940	0.965	Pk Hr Factor			0.950	0.972	0.960
7 - 9 Volume	0	0	1130	1237	2367	4 - 6 Volume	0	0	3521	2826	6347
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	702	736	1438	4 - 6 Pk Volume	0	0	1821	1493	3314
Pk Hr Factor	0.000	0.000	0.924	0.860	0.890	Pk Hr Factor	0.000	0.000	0.950	0.972	0.960

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Northside Dr & Fenton Pkwy

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,580	13,426	30,006

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			58		38		96		12:00			327		319		646	
00:15			66		29		95		12:15			333		245		578	
00:30			40		19		59		12:30			334		301		635	
00:45			42	206	25	111	67	317	12:45			327	1321	282	1147	609	2468
01:00			33		29		62		13:00			331		288		619	
01:15			35		15		50		13:15			361		273		634	
01:30			32		24		56		13:30			335		288		623	
01:45			30	130	15	83	45	213	13:45			328	1355	283	1132	611	2487
02:00			28		15		43		14:00			305		275		580	
02:15			20		16		36		14:15			284		287		571	
02:30			34		23		57		14:30			353		287		640	
02:45			20	102	22	76	42	178	14:45			333	1275	253	1102	586	2377
03:00			24		14		38		15:00			324		252		576	
03:15			15		11		26		15:15			316		280		596	
03:30			16		20		36		15:30			344		258		602	
03:45			13	68	21	66	34	134	15:45			344	1328	237	1027	581	2355
04:00			13		8		21		16:00			387		246		633	
04:15			13		9		22		16:15			354		250		604	
04:30			18		14		32		16:30			312		259		571	
04:45			11	55	16	47	27	102	16:45			381	1434	254	1009	635	2443
05:00			11		11		22		17:00			340		263		603	
05:15			7		22		29		17:15			315		237		552	
05:30			24		39		63		17:30			310		224		534	
05:45			30	72	37	109	67	181	17:45			299	1264	238	962	537	2226
06:00			44		41		85		18:00			294		201		495	
06:15			42		37		79		18:15			238		201		439	
06:30			59		61		120		18:30			233		195		428	
06:45			63	208	41	180	104	388	18:45			225	990	184	781	409	1771
07:00			68		50		118		19:00			243		180		423	
07:15			76		63		139		19:15			226		182		408	
07:30			73		99		172		19:30			225		172		397	
07:45			99	316	120	332	219	648	19:45			198	892	154	688	352	1580
08:00			116		102		218		20:00			218		121		339	
08:15			126		126		252		20:15			169		121		290	
08:30			139		151		290		20:30			164		134		298	
08:45			141	522	138	517	279	1039	20:45			157	708	98	474	255	1182
09:00			169		141		310		21:00			167		92		259	
09:15			179		158		337		21:15			170		109		279	
09:30			200		210		410		21:30			132		93		225	
09:45			195	743	224	733	419	1476	21:45			156	625	82	376	238	1001
10:00			219		221		440		22:00			147		78		225	
10:15			245		236		481		22:15			130		64		194	
10:30			236		235		471		22:30			96		67		163	
10:45			253	953	243	935	496	1888	22:45			111	484	74	283	185	767
11:00			309		254		563		23:00			92		59		151	
11:15			286		256		542		23:15			108		60		168	
11:30			314		266		580		23:30			77		57		134	
11:45			279	1188	275	1051	554	2239	23:45			64	341	29	205	93	546
TOTALS				4563		4240		8803	TOTALS				12017		9186		21203
SPLIT %				51.8%		48.2%		29.3%	SPLIT %				56.7%		43.3%		70.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,580	13,426	30,006

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:00	12:00	12:30
AM Pk Volume			1273	1140	2413	PM Pk Volume			1434	1147	2497
Pk Hr Factor			0.953	0.893	0.934	Pk Hr Factor			0.926	0.899	0.983
7 - 9 Volume	0	0	838	849	1687	4 - 6 Volume	0	0	2698	1971	4669
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	522	517	1039	4 - 6 Pk Volume	0	0	1434	1026	2443
Pk Hr Factor	0.000	0.000	0.926	0.856	0.896	Pk Hr Factor	0.000	0.000	0.926	0.975	0.962

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fenton Pkwy & River Run Dr

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,884	14,230	31,114

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			66		42		108		12:00			343		309		652	
00:15			68		30		98		12:15			351		279		630	
00:30			45		21		66		12:30			337		288		625	
00:45			39	218	26	119	65	337	12:45			342	1373	279	1155	621	2528
01:00			43		21		64		13:00			347		305		652	
01:15			39		18		57		13:15			376		298		674	
01:30			41		23		64		13:30			340		299		639	
01:45			35	158	14	76	49	234	13:45			314	1377	301	1203	615	2580
02:00			32		15		47		14:00			332		262		594	
02:15			33		17		50		14:15			302		281		583	
02:30			43		25		68		14:30			350		248		598	
02:45			28	136	18	75	46	211	14:45			342	1326	253	1044	595	2370
03:00			19		16		35		15:00			309		265		574	
03:15			11		5		16		15:15			321		277		598	
03:30			10		17		27		15:30			313		275		588	
03:45			15	55	23	61	38	116	15:45			327	1270	246	1063	573	2333
04:00			11		6		17		16:00			368		284		652	
04:15			10		10		20		16:15			394		276		670	
04:30			15		15		30		16:30			288		295		583	
04:45			7	43	19	50	26	93	16:45			373	1423	274	1129	647	2552
05:00			7		12		19		17:00			340		307		647	
05:15			7		18		25		17:15			349		244		593	
05:30			19		40		59		17:30			320		277		597	
05:45			30	63	38	108	68	171	17:45			297	1306	301	1129	598	2435
06:00			35		46		81		18:00			270		269		539	
06:15			41		43		84		18:15			228		252		480	
06:30			48		61		109		18:30			249		221		470	
06:45			57	181	55	205	112	386	18:45			228	975	209	951	437	1926
07:00			55		61		116		19:00			254		185		439	
07:15			70		71		141		19:15			221		200		421	
07:30			53		106		159		19:30			224		191		415	
07:45			102	280	121	359	223	639	19:45			209	908	159	735	368	1643
08:00			92		107		199		20:00			216		137		353	
08:15			102		126		228		20:15			208		143		351	
08:30			125		159		284		20:30			157		135		292	
08:45			149	468	135	527	284	995	20:45			152	733	90	505	242	1238
09:00			183		148		331		21:00			161		114		275	
09:15			213		150		363		21:15			158		100		258	
09:30			212		218		430		21:30			142		94		236	
09:45			236	844	226	742	462	1586	21:45			160	621	89	397	249	1018
10:00			235		243		478		22:00			137		84		221	
10:15			284		235		519		22:15			139		57		196	
10:30			242		256		498		22:30			95		67		162	
10:45			290	1051	250	984	540	2035	22:45			115	486	77	285	192	771
11:00			321		279		600		23:00			93		37		130	
11:15			336		295		631		23:15			106		63		169	
11:30			295		295		590		23:30			69		63		132	
11:45			303	1255	263	1132	566	2387	23:45			66	334	33	196	99	530
TOTALS				4752		4438		9190	TOTALS				12132		9792		21924
SPLIT %				51.7%		48.3%		29.5%	SPLIT %				55.3%		44.7%		70.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,884	14,230	31,114

AM Peak Hour			11:45	11:15	11:45	PM Peak Hour			16:00	13:00	12:45
AM Pk Volume			1334	1162	2473	PM Pk Volume			1423	1203	2586
Pk Hr Factor			0.950	0.940	0.948	Pk Hr Factor			0.903	0.986	0.959
7 - 9 Volume	0	0	748	886	1634	4 - 6 Volume	0	0	2729	2258	4987
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	468	527	995	4 - 6 Pk Volume	0	0	1423	1152	2552
Pk Hr Factor	0.000	0.000	0.785	0.829	0.876	Pk Hr Factor	0.000	0.000	0.903	0.938	0.952

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. River Run Dr & Rio Bonito Way

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_022

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,105	14,043	31,148

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			69		42		111		12:00			344		307		651	
00:15			64		29		93		12:15			361		275		636	
00:30			43		21		64		12:30			339		295		634	
00:45			43	219	26	118	69	337	12:45			363	1407	301	1178	664	2585
01:00			43		21		64		13:00			353		289		642	
01:15			43		15		58		13:15			372		296		668	
01:30			35		22		57		13:30			362		312		674	
01:45			37	158	16	74	53	232	13:45			317	1404	301	1198	618	2602
02:00			30		16		46		14:00			354		260		614	
02:15			27		17		44		14:15			317		289		606	
02:30			40		20		60		14:30			362		237		599	
02:45			25	122	14	67	39	189	14:45			360	1393	266	1052	626	2445
03:00			22		18		40		15:00			325		267		592	
03:15			13		5		18		15:15			338		296		634	
03:30			12		18		30		15:30			322		257		579	
03:45			13	60	23	64	36	124	15:45			343	1328	246	1066	589	2394
04:00			15		6		21		16:00			330		250		580	
04:15			9		13		22		16:15			323		278		601	
04:30			15		15		30		16:30			322		254		576	
04:45			8	47	16	50	24	97	16:45			335	1310	279	1061	614	2371
05:00			8		13		21		17:00			293		260		553	
05:15			6		20		26		17:15			326		235		561	
05:30			18		40		58		17:30			324		241		565	
05:45			30	62	26	99	56	161	17:45			258	1201	253	989	511	2190
06:00			37		49		86		18:00			274		262		536	
06:15			38		39		77		18:15			234		250		484	
06:30			46		62		108		18:30			259		213		472	
06:45			60	181	62	212	122	393	18:45			237	1004	205	930	442	1934
07:00			54		64		118		19:00			271		188		459	
07:15			70		71		141		19:15			233		207		440	
07:30			67		107		174		19:30			234		197		431	
07:45			100	291	91	333	191	624	19:45			218	956	153	745	371	1701
08:00			97		112		209		20:00			223		138		361	
08:15			106		111		217		20:15			220		128		348	
08:30			125		173		298		20:30			168		144		312	
08:45			127	455	131	527	258	982	20:45			161	772	92	502	253	1274
09:00			190		162		352		21:00			163		117		280	
09:15			206		159		365		21:15			168		97		265	
09:30			227		206		433		21:30			151		99		250	
09:45			222	845	240	767	462	1612	21:45			164	646	84	397	248	1043
10:00			245		236		481		22:00			147		81		228	
10:15			282		232		514		22:15			143		65		208	
10:30			248		255		503		22:30			105		66		171	
10:45			298	1073	258	981	556	2054	22:45			114	509	74	286	188	795
11:00			334		281		615		23:00			103		38		141	
11:15			335		294		629		23:15			105		56		161	
11:30			311		311		622		23:30			79		63		142	
11:45			325	1305	271	1157	596	2462	23:45			70	357	33	190	103	547
TOTALS				4818		4449		9267	TOTALS				12287		9594		21881
SPLIT %				52.0%		48.0%		29.8%	SPLIT %				56.2%		43.8%		70.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,105	14,043	31,148

AM Peak Hour			11:45	11:15	11:45	PM Peak Hour			12:45	12:45	12:45
AM Pk Volume			1369	1183	2517	PM Pk Volume			1450	1198	2648
Pk Hr Factor			0.948	0.951	0.967	Pk Hr Factor			0.974	0.960	0.982
7 - 9 Volume	0	0	746	860	1606	4 - 6 Volume	0	0	2511	2050	4561
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	455	527	982	4 - 6 Pk Volume	0	0	1310	1071	2371
Pk Hr Factor	0.000	0.000	0.896	0.762	0.824	Pk Hr Factor	0.000	0.000	0.978	0.960	0.965

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rio Bonito Way & Qualcomm Way

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_023

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,210	14,039	30,249

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			64		29		93		12:00			336		296		632	
00:15			62		18		80		12:15			331		287		618	
00:30			39		14		53		12:30			323		290		613	
00:45			41	206	21	82	62	288	12:45			348	1338	308	1181	656	2519
01:00			38		13		51		13:00			330		290		620	
01:15			43		14		57		13:15			357		295		652	
01:30			35		17		52		13:30			329		304		633	
01:45			38	154	12	56	50	210	13:45			322	1338	310	1199	632	2537
02:00			28		11		39		14:00			324		278		602	
02:15			26		12		38		14:15			304		285		589	
02:30			43		15		58		14:30			333		240		573	
02:45			23	120	11	49	34	169	14:45			342	1303	271	1074	613	2377
03:00			18		16		34		15:00			300		271		571	
03:15			12		7		19		15:15			319		293		612	
03:30			13		13		26		15:30			310		256		566	
03:45			13	56	21	57	34	113	15:45			333	1262	268	1088	601	2350
04:00			16		9		25		16:00			313		254		567	
04:15			9		12		21		16:15			311		268		579	
04:30			14		13		27		16:30			316		265		581	
04:45			8	47	16	50	24	97	16:45			314	1254	277	1064	591	2318
05:00			9		13		22		17:00			266		279		545	
05:15			6		18		24		17:15			309		235		544	
05:30			20		29		49		17:30			290		234		524	
05:45			35	70	26	86	61	156	17:45			235	1100	259	1007	494	2107
06:00			35		53		88		18:00			257		269		526	
06:15			41		38		79		18:15			214		251		465	
06:30			41		65		106		18:30			242		224		466	
06:45			61	178	63	219	124	397	18:45			220	933	211	955	431	1888
07:00			48		65		113		19:00			252		187		439	
07:15			60		62		122		19:15			223		210		433	
07:30			67		110		177		19:30			204		202		406	
07:45			97	272	87	324	184	596	19:45			205	884	158	757	363	1641
08:00			97		106		203		20:00			210		142		352	
08:15			99		111		210		20:15			207		138		345	
08:30			121		165		286		20:30			166		140		306	
08:45			119	436	131	513	250	949	20:45			152	735	95	515	247	1250
09:00			180		154		334		21:00			161		117		278	
09:15			178		154		332		21:15			161		95		256	
09:30			219		206		425		21:30			147		93		240	
09:45			211	788	237	751	448	1539	21:45			165	634	91	396	256	1030
10:00			236		238		474		22:00			145		74		219	
10:15			273		232		505		22:15			143		77		220	
10:30			232		255		487		22:30			101		58		159	
10:45			283	1024	260	985	543	2009	22:45			112	501	80	289	192	790
11:00			325		276		601		23:00			96		39		135	
11:15			307		292		599		23:15			99		58		157	
11:30			302		297		599		23:30			79		63		142	
11:45			303	1237	287	1152	590	2389	23:45			66	340	30	190	96	530
TOTALS				4588		4324		8912	TOTALS				11622		9715		21337
SPLIT %				51.5%		48.5%		29.5%	SPLIT %				54.5%		45.5%		70.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,210	14,039	30,249

AM Peak Hour			11:45	11:15	11:45	PM Peak Hour			12:45	13:00	12:45
AM Pk Volume			1293	1172	2453	PM Pk Volume			1364	1199	2561
Pk Hr Factor			0.962	0.987	0.970	Pk Hr Factor			0.955	0.967	0.976
7 - 9 Volume	0	0	708	837	1545	4 - 6 Volume	0	0	2354	2071	4425
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	436	513	949	4 - 6 Pk Volume	0	0	1254	1089	2318
Pk Hr Factor	0.000	0.000	0.901	0.777	0.830	Pk Hr Factor	0.000	0.000	0.992	0.976	0.981

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Qualcomm Way & Gill Village Way

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,019	14,207	29,226

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			50		49		99		12:00			314		305		619	
00:15			58		28		86		12:15			306		282		588	
00:30			36		26		62		12:30			300		276		576	
00:45			34	178	29	132	63	310	12:45			324	1244	323	1186	647	2430
01:00			41		19		60		13:00			289		302		591	
01:15			38		22		60		13:15			326		283		609	
01:30			33		24		57		13:30			290		312		602	
01:45			34	146	17	82	51	228	13:45			297	1202	296	1193	593	2395
02:00			25		18		43		14:00			271		268		539	
02:15			25		18		43		14:15			270		288		558	
02:30			38		23		61		14:30			304		267		571	
02:45			20	108	10	69	30	177	14:45			305	1150	256	1079	561	2229
03:00			14		19		33		15:00			275		297		572	
03:15			13		5		18		15:15			312		268		580	
03:30			11		15		26		15:30			267		260		527	
03:45			13	51	20	59	33	110	15:45			306	1160	256	1081	562	2241
04:00			11		12		23		16:00			307		249		556	
04:15			8		12		20		16:15			297		264		561	
04:30			15		18		33		16:30			300		262		562	
04:45			10	44	18	60	28	104	16:45			283	1187	258	1033	541	2220
05:00			5		12		17		17:00			237		272		509	
05:15			5		19		24		17:15			297		240		537	
05:30			21		25		46		17:30			280		240		520	
05:45			31	62	26	82	57	144	17:45			236	1050	256	1008	492	2058
06:00			29		43		72		18:00			232		247		479	
06:15			39		55		94		18:15			198		240		438	
06:30			46		72		118		18:30			218		226		444	
06:45			57	171	72	242	129	413	18:45			209	857	224	937	433	1794
07:00			46		72		118		19:00			216		191		407	
07:15			52		75		127		19:15			231		193		424	
07:30			65		125		190		19:30			181		193		374	
07:45			88	251	85	357	173	608	19:45			187	815	174	751	361	1566
08:00			98		112		210		20:00			191		143		334	
08:15			92		107		199		20:15			189		141		330	
08:30			110		155		265		20:30			159		144		303	
08:45			109	409	154	528	263	937	20:45			143	682	114	542	257	1224
09:00			179		167		346		21:00			145		114		259	
09:15			194		166		360		21:15			160		104		264	
09:30			216		196		412		21:30			141		117		258	
09:45			206	795	233	762	439	1557	21:45			157	603	96	431	253	1034
10:00			236		230		466		22:00			140		89		229	
10:15			237		239		476		22:15			117		65		182	
10:30			199		236		435		22:30			95		75		170	
10:45			283	955	255	960	538	1915	22:45			104	456	86	315	190	771
11:00			289		281		570		23:00			81		40		121	
11:15			272		270		542		23:15			106		56		162	
11:30			289		296		585		23:30			71		62		133	
11:45			273	1123	269	1116	542	2239	23:45			62	320	44	202	106	522
TOTALS				4293		4449		**8742**	TOTALS				10726		9758		**20484**
SPLIT %				49.1%		50.9%		**29.9%**	SPLIT %				52.4%		47.6%		**70.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,019	14,207	29,226

AM Peak Hour			11:45	11:30	**11:30**	**PM Peak Hour**			12:00	12:45	**12:45**
AM Pk Volume			1193	1152	**2334**	**PM Pk Volume**			1244	1220	**2449**
Pk Hr Factor			0.950	0.944	**0.943**	**Pk Hr Factor**			0.960	0.944	**0.946**
7 - 9 Volume	0	0	660	885	**1545**	**4 - 6 Volume**	0	0	2237	2041	**4278**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:00	16:15	**16:00**
7 - 9 Pk Volume	0	0	409	528	**937**	**4 - 6 Pk Volume**	0	0	1187	1056	**2220**
Pk Hr Factor	0.000	0.000	0.930	0.852	**0.884**	**Pk Hr Factor**	0.000	0.000	0.967	0.971	**0.988**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Gill Village Way & Mission Center Dr

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_025

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,380	13,967	31,347

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			48		43		91		12:00			360		299		659	
00:15			52		28		80		12:15			361		276		637	
00:30			35		25		60		12:30			360		285		645	
00:45			42	177	29	125	71	302	12:45			360	1441	316	1176	676	2617
01:00			34		16		50		13:00			347		291		638	
01:15			38		22		60		13:15			365		278		643	
01:30			30		24		54		13:30			332		303		635	
01:45			38	140	14	76	52	216	13:45			336	1380	279	1151	615	2531
02:00			28		18		46		14:00			296		268		564	
02:15			22		17		39		14:15			315		277		592	
02:30			37		24		61		14:30			355		256		611	
02:45			24	111	10	69	34	180	14:45			339	1305	248	1049	587	2354
03:00			12		17		29		15:00			311		284		595	
03:15			13		7		20		15:15			348		276		624	
03:30			14		17		31		15:30			314		253		567	
03:45			15	54	20	61	35	115	15:45			350	1323	255	1068	605	2391
04:00			14		13		27		16:00			335		250		585	
04:15			12		12		24		16:15			340		254		594	
04:30			16		19		35		16:30			311		247		558	
04:45			9	51	19	63	28	114	16:45			333	1319	253	1004	586	2323
05:00			8		12		20		17:00			275		267		542	
05:15			8		20		28		17:15			352		233		585	
05:30			23		24		47		17:30			313		243		556	
05:45			32	71	26	82	58	153	17:45			282	1222	252	995	534	2217
06:00			32		40		72		18:00			284		245		529	
06:15			43		52		95		18:15			233		239		472	
06:30			44		72		116		18:30			271		216		487	
06:45			70	189	66	230	136	419	18:45			256	1044	225	925	481	1969
07:00			47		73		120		19:00			251		195		446	
07:15			58		72		130		19:15			274		176		450	
07:30			81		124		205		19:30			226		194		420	
07:45			92	278	91	360	183	638	19:45			241	992	171	736	412	1728
08:00			100		105		205		20:00			233		144		377	
08:15			108		107		215		20:15			201		137		338	
08:30			127		158		285		20:30			188		140		328	
08:45			141	476	155	525	296	1001	20:45			187	809	117	538	304	1347
09:00			190		172		362		21:00			168		114		282	
09:15			218		163		381		21:15			197		97		294	
09:30			267		207		474		21:30			182		119		301	
09:45			235	910	222	764	457	1674	21:45			176	723	92	422	268	1145
10:00			275		222		497		22:00			169		86		255	
10:15			281		237		518		22:15			142		67		209	
10:30			221		236		457		22:30			125		68		193	
10:45			320	1097	247	942	567	2039	22:45			131	567	85	306	216	873
11:00			341		276		617		23:00			111		41		152	
11:15			301		269		570		23:15			126		56		182	
11:30			347		290		637		23:30			94		58		152	
11:45			307	1296	269	1104	576	2400	23:45			74	405	41	196	115	601
TOTALS				4850		4401		**9251**	**TOTALS**				12530		9566		**22096**
SPLIT %				52.4%		47.6%		**29.5%**	**SPLIT %**				56.7%		43.3%		**70.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,380	13,967	31,347

AM Peak Hour			11:45	11:30	**11:45**	**PM Peak Hour**			12:00	12:45	**12:00**
AM Pk Volume			1388	1134	**2517**	**PM Pk Volume**			1441	1188	**2617**
Pk Hr Factor			0.961	0.948	**0.955**	**Pk Hr Factor**			0.998	0.940	**0.968**
7 - 9 Volume	0	0	754	885	**1639**	**4 - 6 Volume**	0	0	2541	1999	**4540**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:00	16:15	**16:00**
7 - 9 Pk Volume	0	0	476	525	**1001**	**4 - 6 Pk Volume**	0	0	1319	1021	**2323**
Pk Hr Factor	0.000	0.000	0.844	0.831	**0.845**	**Pk Hr Factor**	0.000	0.000	0.970	0.956	**0.978**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Mission Center Dr & Frazee Rd

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_026

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,130	15,701	32,831

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			91		54		145		12:00			335		300		635	
00:15			67		52		119		12:15			341		324		665	
00:30			55		36		91		12:30			329		317		646	
00:45			65	278	42	184	107	462	12:45			313	1318	330	1271	643	2589
01:00			50		29		79		13:00			328		303		631	
01:15			50		37		87		13:15			316		308		624	
01:30			43		36		79		13:30			312		332		644	
01:45			55	198	21	123	76	321	13:45			290	1246	285	1228	575	2474
02:00			38		21		59		14:00			277		291		568	
02:15			38		24		62		14:15			275		304		579	
02:30			52		28		80		14:30			334		276		610	
02:45			25	153	11	84	36	237	14:45			296	1182	281	1152	577	2334
03:00			23		18		41		15:00			305		305		610	
03:15			14		9		23		15:15			325		311		636	
03:30			19		15		34		15:30			290		287		577	
03:45			19	75	22	64	41	139	15:45			342	1262	293	1196	635	2458
04:00			13		10		23		16:00			230		284		514	
04:15			17		14		31		16:15			334		265		599	
04:30			15		22		37		16:30			289		291		580	
04:45			9	54	19	65	28	119	16:45			301	1154	282	1122	583	2276
05:00			15		17		32		17:00			331		268		599	
05:15			13		29		42		17:15			254		317		571	
05:30			21		31		52		17:30			350		299		649	
05:45			29	78	31	108	60	186	17:45			222	1157	294	1178	516	2335
06:00			34		40		74		18:00			253		274		527	
06:15			42		60		102		18:15			253		261		514	
06:30			43		75		118		18:30			255		249		504	
06:45			60	179	75	250	135	429	18:45			272	1033	239	1023	511	2056
07:00			78		58		136		19:00			253		244		497	
07:15			72		73		145		19:15			263		205		468	
07:30			147		102		249		19:30			200		207		407	
07:45			113	410	98	331	211	741	19:45			245	961	207	863	452	1824
08:00			167		106		273		20:00			239		177		416	
08:15			153		111		264		20:15			190		147		337	
08:30			209		148		357		20:30			194		173		367	
08:45			173	702	166	531	339	1233	20:45			219	842	134	631	353	1473
09:00			166		191		357		21:00			177		146		323	
09:15			207		185		392		21:15			170		126		296	
09:30			248		207		455		21:30			176		150		326	
09:45			242	863	239	822	481	1685	21:45			169	692	129	551	298	1243
10:00			267		258		525		22:00			169		107		276	
10:15			254		252		506		22:15			140		88		228	
10:30			239		270		509		22:30			131		84		215	
10:45			270	1030	279	1059	549	2089	22:45			133	573	115	394	248	967
11:00			348		288		636		23:00			119		63		182	
11:15			297		294		591		23:15			130		78		208	
11:30			300		299		599		23:30			114		68		182	
11:45			301	1246	314	1195	615	2441	23:45			81	444	67	276	148	720
TOTALS				5266		4816		10082	TOTALS				11864		10885		22749
SPLIT %				52.2%		47.8%		30.7%	SPLIT %				52.2%		47.8%		69.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,130	15,701	32,831

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			12:00	12:15	12:00
AM Pk Volume			1306	1255	2561	PM Pk Volume			1318	1274	2589
Pk Hr Factor			0.957	0.968	0.963	Pk Hr Factor			0.966	0.965	0.973
7 - 9 Volume	0	0	1112	862	1974	4 - 6 Volume	0	0	2311	2300	4611
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	17:00	16:45
7 - 9 Pk Volume	0	0	702	531	1233	4 - 6 Pk Volume	0	0	1255	1178	2402
Pk Hr Factor	0.000	0.000	0.840	0.800	0.863	Pk Hr Factor	0.000	0.000	0.939	0.929	0.925

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Frazee Rd & SR-163 NB Ramps

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_027

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	25,782	21,809	47,591

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			107		89		196		12:00			485		375		860	
00:15			81		85		166		12:15			518		423		941	
00:30			71		59		130		12:30			485		405		890	
00:45			80	339	57	290	137	629	12:45			468	1956	454	1657	922	3613
01:00			67		55		122		13:00			456		405		861	
01:15			61		58		119		13:15			465		362		827	
01:30			60		48		108		13:30			429		428		857	
01:45			67	255	44	205	111	460	13:45			446	1796	367	1562	813	3358
02:00			53		33		86		14:00			412		388		800	
02:15			46		34		80		14:15			443		378		821	
02:30			57		39		96		14:30			441		404		845	
02:45			40	196	19	125	59	321	14:45			447	1743	384	1554	831	3297
03:00			39		20		59		15:00			442		367		809	
03:15			22		21		43		15:15			449		421		870	
03:30			22		26		48		15:30			428		362		790	
03:45			23	106	28	95	51	201	15:45			414	1733	412	1562	826	3295
04:00			19		17		36		16:00			483		405		888	
04:15			28		17		45		16:15			498		449		947	
04:30			23		25		48		16:30			476		425		901	
04:45			21	91	23	82	44	173	16:45			491	1948	417	1696	908	3644
05:00			30		21		51		17:00			498		419		917	
05:15			30		34		64		17:15			453		404		857	
05:30			45		40		85		17:30			501		424		925	
05:45			59	164	25	120	84	284	17:45			423	1875	458	1705	881	3580
06:00			65		55		120		18:00			415		363		778	
06:15			81		70		151		18:15			360		329		689	
06:30			94		89		183		18:30			378		354		732	
06:45			115	355	86	300	201	655	18:45			370	1523	342	1388	712	2911
07:00			121		84		205		19:00			384		321		705	
07:15			134		112		246		19:15			360		333		693	
07:30			202		149		351		19:30			320		301		621	
07:45			231	688	140	485	371	1173	19:45			324	1388	287	1242	611	2630
08:00			220		174		394		20:00			333		298		631	
08:15			244		142		386		20:15			287		242		529	
08:30			321		203		524		20:30			269		263		532	
08:45			351	1136	211	730	562	1866	20:45			266	1155	269	1072	535	2227
09:00			312		232		544		21:00			257		237		494	
09:15			351		225		576		21:15			258		219		477	
09:30			424		234		658		21:30			216		248		464	
09:45			416	1503	248	939	664	2442	21:45			236	967	244	948	480	1915
10:00			423		342		765		22:00			223		173		396	
10:15			396		314		710		22:15			192		170		362	
10:30			394		343		737		22:30			157		146		303	
10:45			430	1643	329	1328	759	2971	22:45			193	765	183	672	376	1437
11:00			502		378		880		23:00			158		117		275	
11:15			464		361		825		23:15			158		174		332	
11:30			469		400		869		23:30			127		126		253	
11:45			472	1907	389	1528	861	3435	23:45			107	550	107	524	214	1074
TOTALS				8383		6227		14610	TOTALS				17399		15582		32981
SPLIT %				57.4%		42.6%		30.7%	SPLIT %				52.8%		47.2%		69.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	25,782	21,809	47,591

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:15	16:15	16:15
AM Pk Volume			1960	1592	3552	PM Pk Volume			1963	1710	3673
Pk Hr Factor			0.946	0.941	0.944	Pk Hr Factor			0.985	0.952	0.970
7 - 9 Volume	0	0	1824	1215	3039	4 - 6 Volume	0	0	3823	3401	7224
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	1136	730	1866	4 - 6 Pk Volume	0	0	1963	1710	3673
Pk Hr Factor	0.000	0.000	0.809	0.865	0.830	Pk Hr Factor	0.000	0.000	0.985	0.952	0.970

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. SR-163 NB Ramps & SR-163 SB Ramps

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_028

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	25,722	26,108	51,830

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			87		114		201		12:00			468		474		942	
00:15			75		112		187		12:15			480		418		898	
00:30			62		95		157		12:30			486		397		883	
00:45			50	274	79	400	129	674	12:45			465	1899	415	1704	880	3603
01:00			63		82		145		13:00			435		375		810	
01:15			29		80		109		13:15			479		407		886	
01:30			39		72		111		13:30			422		404		826	
01:45			31	162	83	317	114	479	13:45			483	1819	380	1566	863	3385
02:00			23		58		81		14:00			448		406		854	
02:15			18		52		70		14:15			450		395		845	
02:30			25		61		86		14:30			450		411		861	
02:45			23	89	39	210	62	299	14:45			452	1800	401	1613	853	3413
03:00			19		36		55		15:00			480		418		898	
03:15			14		24		38		15:15			445		418		863	
03:30			9		31		40		15:30			459		441		900	
03:45			22	64	29	120	51	184	15:45			490	1874	442	1719	932	3593
04:00			18		35		53		16:00			519		480		999	
04:15			20		24		44		16:15			535		534		1069	
04:30			20		29		49		16:30			505		505		1010	
04:45			16	74	37	125	53	199	16:45			535	2094	504	2023	1039	4117
05:00			25		30		55		17:00			470		500		970	
05:15			28		39		67		17:15			499		464		963	
05:30			38		56		94		17:30			522		511		1033	
05:45			38	129	48	173	86	302	17:45			470	1961	463	1938	933	3899
06:00			47		80		127		18:00			468		441		909	
06:15			65		77		142		18:15			460		462		922	
06:30			75		98		173		18:30			419		438		857	
06:45			86	273	128	383	214	656	18:45			419	1766	447	1788	866	3554
07:00			104		128		232		19:00			429		412		841	
07:15			119		131		250		19:15			408		393		801	
07:30			175		196		371		19:30			371		368		739	
07:45			165	563	195	650	360	1213	19:45			386	1594	375	1548	761	3142
08:00			175		188		363		20:00			372		348		720	
08:15			201		221		422		20:15			388		348		736	
08:30			241		265		506		20:30			354		305		659	
08:45			253	870	295	969	548	1839	20:45			330	1444	269	1270	599	2714
09:00			273		302		575		21:00			311		267		578	
09:15			287		316		603		21:15			328		264		592	
09:30			389		362		751		21:30			250		228		478	
09:45			341	1290	417	1397	758	2687	21:45			239	1128	244	1003	483	2131
10:00			355		456		811		22:00			250		223		473	
10:15			360		450		810		22:15			235		194		429	
10:30			374		435		809		22:30			193		171		364	
10:45			386	1475	477	1818	863	3293	22:45			178	856	148	736	326	1592
11:00			410		514		924		23:00			152		153		305	
11:15			408		500		908		23:15			185		132		317	
11:30			435		549		984		23:30			119		136		255	
11:45			408	1661	527	2090	935	3751	23:45			107	563	127	548	234	1111
TOTALS				6924		8652		**15576**	**TOTALS**				18798		17456		**36254**
SPLIT %				44.5%		55.5%		**30.1%**	**SPLIT %**				51.9%		48.1%		**69.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	25,722	26,108	51,830

AM Peak Hour			11:45	11:00	**11:15**	**PM Peak Hour**			16:00	16:15	**16:00**
AM Pk Volume			1842	2090	**3769**	**PM Pk Volume**			2094	2043	**4117**
Pk Hr Factor			0.948	0.952	**0.958**	**Pk Hr Factor**			0.979	0.956	**0.963**
7 - 9 Volume	0	0	1433	1619	**3052**	**4 - 6 Volume**	0	0	4055	3961	**8016**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:00	16:15	**16:00**
7 - 9 Pk Volume	0	0	870	969	**1839**	**4 - 6 Pk Volume**	0	0	2094	2043	**4117**
Pk Hr Factor	0.000	0.000	0.860	0.821	**0.839**	**Pk Hr Factor**	0.000	0.000	0.979	0.956	**0.963**

Prepared by NDS/ATD

VOLUME

Qualcomm Way Bet. Friars Rd & Rio San Diego Dr

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_029

DAILY TOTALS	NB	SB	EB	WB	Total
	6,303	4,545	0	0	10,848

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	30		9						39		**12:00**	130		101						231	
00:15	16		11						27		**12:15**	116		101						217	
00:30	19		9						28		**12:30**	116		92						208	
00:45	17	82	5	34					22	116	**12:45**	151	513	100	394					251	907
01:00	12		13						25		**13:00**	151		97						248	
01:15	13		3						16		**13:15**	125		122						247	
01:30	13		5						18		**13:30**	136		93						229	
01:45	11	49	6	27					17	76	**13:45**	130	542	100	412					230	954
02:00	10		4						14		**14:00**	127		89						216	
02:15	7		5						12		**14:15**	133		96						229	
02:30	11		3						14		**14:30**	125		79						204	
02:45	7	35	5	17					12	52	**14:45**	134	519	79	343					213	862
03:00	9		4						13		**15:00**	128		88						216	
03:15	2		3						5		**15:15**	108		97						205	
03:30	7		4						11		**15:30**	118		88						206	
03:45	6	24	6	17					12	41	**15:45**	113	467	77	350					190	817
04:00	9		1						10		**16:00**	101		80						181	
04:15	3		2						5		**16:15**	104		91						195	
04:30	6		1						7		**16:30**	102		90						192	
04:45	1	19	1	5					2	24	**16:45**	128	435	93	354					221	789
05:00	5		4						9		**17:00**	114		96						210	
05:15	6		1						7		**17:15**	126		88						214	
05:30	5		9						14		**17:30**	112		82						194	
05:45	16	32	6	20					22	52	**17:45**	97	449	75	341					172	790
06:00	13		11						24		**18:00**	104		72						176	
06:15	29		6						35		**18:15**	94		80						174	
06:30	24		14						38		**18:30**	106		81						187	
06:45	22	88	9	40					31	128	**18:45**	90	394	64	297					154	691
07:00	28		11						39		**19:00**	87		52						139	
07:15	38		18						56		**19:15**	74		73						147	
07:30	38		12						50		**19:30**	77		66						143	
07:45	29	133	22	63					51	196	**19:45**	96	334	58	249					154	583
08:00	41		22						63		**20:00**	77		49						126	
08:15	38		38						76		**20:15**	84		52						136	
08:30	49		48						97		**20:30**	49		44						93	
08:45	69	197	28	136					97	333	**20:45**	62	272	37	182					99	454
09:00	72		47						119		**21:00**	60		44						104	
09:15	68		56						124		**21:15**	50		32						82	
09:30	80		67						147		**21:30**	68		37						105	
09:45	70	290	73	243					143	533	**21:45**	60	238	36	149					96	387
10:00	82		76						158		**22:00**	44		24						68	
10:15	116		58						174		**22:15**	43		38						81	
10:30	105		97						202		**22:30**	38		16						54	
10:45	106	409	99	330					205	739	**22:45**	39	164	18	96					57	260
11:00	138		78						216		**23:00**	34		15						49	
11:15	109		95						204		**23:15**	26		22						48	
11:30	128		105						233		**23:30**	24		22						46	
11:45	126	501	98	376					224	877	**23:45**	33	117	11	70					44	187
TOTALS		1859		1308						**3167**	**TOTALS**		4444		3237						**7681**
SPLIT %		58.7%		41.3%						**29.2%**	**SPLIT %**		57.9%		42.1%						**70.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	6,303	4,545	0	0	10,848

AM Peak Hour	11:00	11:30			**11:30**	**PM Peak Hour**	12:45	12:45			**12:45**
AM Pk Volume	501	405			**905**	**PM Pk Volume**	563	412			**975**
Pk Hr Factor	0.908	0.964			**0.971**	**Pk Hr Factor**	0.932	0.844			**0.971**
7 - 9 Volume	330	199	0	0	**529**	**4 - 6 Volume**	884	695	0	0	**1579**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:45	16:15			**16:45**
7 - 9 Pk Volume	197	136	0	0	**333**	**4 - 6 Pk Volume**	480	370	0	0	**839**
Pk Hr Factor	0.714	0.708	0.000	0.000	**0.858**	**Pk Hr Factor**	0.938	0.964	0.000	0.000	**0.949**

Prepared by NDS/ATD

VOLUME

Qualcomm Way N/O Camino Del Rio N

Day: Saturday
Date: 7/11/2015

City: San Diego
Project #: CA15_4209_030

DAILY TOTALS	NB	SB	EB	WB	Total
	7,467	9,500	0	0	16,967

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	21		27						48		12:00	153		235						388	
00:15	12		30						42		12:15	184		195						379	
00:30	21		26						47		12:30	187		192						379	
00:45	19	73	20	103					39	176	12:45	189	713	199	821					388	1534
01:00	13		26						39		13:00	191		181						372	
01:15	13		15						28		13:15	164		219						383	
01:30	11		14						25		13:30	187		214						401	
01:45	10	47	26	81					36	128	13:45	204	746	224	838					428	1584
02:00	8		13						21		14:00	155		205						360	
02:15	4		14						18		14:15	139		198						337	
02:30	10		13						23		14:30	134		172						306	
02:45	7	29	15	55					22	84	14:45	84	512	173	748					257	1260
03:00	4		5						9		15:00	91		173						264	
03:15	6		10						16		15:15	100		187						287	
03:30	8		9						17		15:30	131		161						292	
03:45	4	22	9	33					13	55	15:45	135	457	169	690					304	1147
04:00	3		3						6		16:00	182		172						354	
04:15	2		3						5		16:15	183		176						359	
04:30	7		13						20		16:30	211		211						422	
04:45	0	12	4	23					4	35	16:45	168	744	205	764					373	1508
05:00	4		13						17		17:00	171		194						365	
05:15	2		14						16		17:15	193		176						369	
05:30	6		24						30		17:30	168		141						309	
05:45	7	19	18	69					25	88	17:45	132	664	181	692					313	1356
06:00	4		27						31		18:00	114		175						289	
06:15	16		20						36		18:15	96		152						248	
06:30	19		28						47		18:30	102		174						276	
06:45	20	59	30	105					50	164	18:45	76	388	129	630					205	1018
07:00	49		32						81		19:00	77		128						205	
07:15	45		51						96		19:15	76		139						215	
07:30	68		36						104		19:30	101		116						217	
07:45	42	204	58	177					100	381	19:45	77	331	110	493					187	824
08:00	79		41						120		20:00	79		101						180	
08:15	69		73						142		20:15	72		98						170	
08:30	113		69						182		20:30	59		104						163	
08:45	113	374	79	262					192	636	20:45	56	266	84	387					140	653
09:00	76		92						168		21:00	43		92						135	
09:15	75		99						174		21:15	40		62						102	
09:30	76		106						182		21:30	50		86						136	
09:45	112	339	125	422					237	761	21:45	39	172	63	303					102	475
10:00	100		149						249		22:00	41		59						100	
10:15	106		135						241		22:15	37		58						95	
10:30	138		201						339		22:30	17		53						70	
10:45	144	488	181	666					325	1154	22:45	25	120	57	227					82	347
11:00	139		168						307		23:00	31		48						79	
11:15	121		185						306		23:15	43		38						81	
11:30	174		215						389		23:30	15		49						64	
11:45	141	575	174	742					315	1317	23:45	24	113	34	169					58	282
TOTALS		2241		2738						4979	TOTALS		5226		6762						11988
SPLIT %		45.0%		55.0%						29.3%	SPLIT %		43.6%		56.4%						70.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,467	9,500	0	0	16,967

AM Peak Hour	11:45	11:30			11:30	PM Peak Hour	12:15	13:15			13:00
AM Pk Volume	665	819			1471	PM Pk Volume	751	862			1584
Pk Hr Factor	0.889	0.871			0.945	Pk Hr Factor	0.983	0.962			0.925
7 - 9 Volume	578	439	0	0	1017	4 - 6 Volume	1408	1456	0	0	2864
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	16:15			16:30
7 - 9 Pk Volume	374	262	0	0	636	4 - 6 Pk Volume	744	786	0	0	1529
Pk Hr Factor	0.827	0.829	0.000	0.000	0.828	Pk Hr Factor	0.882	0.931	0.000	0.000	0.906

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Orcutt Ave & Rainier Ave

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_001

DAILY TOTALS	NB	SB	EB	WB	Total
	6,499	5,299	0	0	11,798

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	43		22						65		**12:00**	122		80						202	
00:15	32		24						56		**12:15**	119		105						224	
00:30	26		23						49		**12:30**	121		115						236	
00:45	17	118	20	89					37	207	**12:45**	122	484	101	401					223	885
01:00	20		20						40		**13:00**	105		108						213	
01:15	26		21						47		**13:15**	124		86						210	
01:30	9		16						25		**13:30**	137		91						228	
01:45	21	76	17	74					38	150	**13:45**	144	510	84	369					228	879
02:00	17		15						32		**14:00**	119		89						208	
02:15	22		21						43		**14:15**	133		121						254	
02:30	15		18						33		**14:30**	123		104						227	
02:45	13	67	26	80					39	147	**14:45**	165	540	114	428					279	968
03:00	9		13						22		**15:00**	113		82						195	
03:15	14		9						23		**15:15**	108		94						202	
03:30	8		17						25		**15:30**	98		88						186	
03:45	14	45	6	45					20	90	**15:45**	124	443	93	357					217	800
04:00	7		12						19		**16:00**	87		90						177	
04:15	15		12						27		**16:15**	102		77						179	
04:30	10		7						17		**16:30**	81		80						161	
04:45	11	43	10	41					21	84	**16:45**	114	384	91	338					205	722
05:00	12		9						21		**17:00**	87		87						174	
05:15	14		7						21		**17:15**	93		84						177	
05:30	22		13						35		**17:30**	84		85						169	
05:45	37	85	17	46					54	131	**17:45**	98	362	85	341					183	703
06:00	19		18						37		**18:00**	92		71						163	
06:15	43		37						80		**18:15**	110		74						184	
06:30	102		43						145		**18:30**	125		93						218	
06:45	121	285	59	157					180	442	**18:45**	108	435	72	310					180	745
07:00	32		39						71		**19:00**	81		69						150	
07:15	52		31						83		**19:15**	70		53						123	
07:30	39		41						80		**19:30**	73		62						135	
07:45	66	189	49	160					115	349	**19:45**	72	296	56	240					128	536
08:00	42		39						81		**20:00**	61		63						124	
08:15	41		41						82		**20:15**	71		37						108	
08:30	79		66						145		**20:30**	59		42						101	
08:45	68	230	59	205					127	435	**20:45**	60	251	53	195					113	446
09:00	64		58						122		**21:00**	54		53						107	
09:15	80		63						143		**21:15**	47		42						89	
09:30	93		82						175		**21:30**	49		33						82	
09:45	87	324	79	282					166	606	**21:45**	48	198	37	165					85	363
10:00	83		76						159		**22:00**	40		38						78	
10:15	96		82						178		**22:15**	49		46						95	
10:30	100		84						184		**22:30**	49		48						97	
10:45	113	392	96	338					209	730	**22:45**	45	183	51	183					96	366
11:00	108		92						200		**23:00**	25		22						47	
11:15	121		89						210		**23:15**	23		26						49	
11:30	101		100						201		**23:30**	23		26						49	
11:45	127	457	87	368					214	825	**23:45**	31	102	13	87					44	189
TOTALS		2311		1885						**4196**	**TOTALS**		4188		3414						**7602**
SPLIT %		55.1%		44.9%						**35.6%**	**SPLIT %**		55.1%		44.9%						**64.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	6,499	5,299	0	0	11,798

AM Peak Hour	11:45	11:45			**11:45**	**PM Peak Hour**	14:00	12:15			**14:00**
AM Pk Volume	489	387			**876**	**PM Pk Volume**	540	429			**968**
Pk Hr Factor	0.963	0.841			**0.928**	**Pk Hr Factor**	0.818	0.933			**0.867**
7 - 9 Volume	419	365	0	0	**784**	**4 - 6 Volume**	746	679	0	0	**1425**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:45			**16:45**
7 - 9 Pk Volume	230	205	0	0	**435**	**4 - 6 Pk Volume**	384	347	0	0	**725**
Pk Hr Factor	0.728	0.777	0.000	0.000	**0.750**	**Pk Hr Factor**	0.842	0.953	0.000	0.000	**0.884**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Vandever Ave & Twain Ave

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_002

DAILY TOTALS	NB	SB	EB	WB	Total
	7,017	5,845	0	0	12,862

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	34		25						59		**12:00**	164		100						264	
00:15	34		32						66		**12:15**	118		107						225	
00:30	31		23						54		**12:30**	144		130						274	
00:45	30	129	21	101					51	230	**12:45**	131	557	105	442					236	999
01:00	21		16						37		**13:00**	127		121						248	
01:15	20		21						41		**13:15**	141		112						253	
01:30	16		20						36		**13:30**	139		121						260	
01:45	32	89	20	77					52	166	**13:45**	161	568	102	456					263	1024
02:00	22		19						41		**14:00**	153		122						275	
02:15	24		23						47		**14:15**	129		102						231	
02:30	16		32						48		**14:30**	121		97						218	
02:45	22	84	23	97					45	181	**14:45**	147	550	97	418					244	968
03:00	16		15						31		**15:00**	125		107						232	
03:15	8		12						20		**15:15**	114		94						208	
03:30	10		11						21		**15:30**	110		131						241	
03:45	8	42	3	41					11	83	**15:45**	147	496	103	435					250	931
04:00	7		11						18		**16:00**	124		115						239	
04:15	10		11						21		**16:15**	108		101						209	
04:30	7		5						12		**16:30**	108		94						202	
04:45	13	37	7	34					20	71	**16:45**	114	454	107	417					221	871
05:00	6		2						8		**17:00**	106		90						196	
05:15	17		8						25		**17:15**	106		101						207	
05:30	19		9						28		**17:30**	96		86						182	
05:45	23	65	8	27					31	92	**17:45**	125	433	87	364					212	797
06:00	23		18						41		**18:00**	116		86						202	
06:15	38		21						59		**18:15**	115		79						194	
06:30	58		26						84		**18:30**	114		92						206	
06:45	85	204	19	84					104	288	**18:45**	87	432	90	347					177	779
07:00	35		33						68		**19:00**	78		72						150	
07:15	46		37						83		**19:15**	88		75						163	
07:30	67		46						113		**19:30**	81		95						176	
07:45	75	223	39	155					114	378	**19:45**	83	330	85	327					168	657
08:00	64		33						97		**20:00**	68		73						141	
08:15	56		47						103		**20:15**	70		70						140	
08:30	57		75						132		**20:30**	69		59						128	
08:45	66	243	54	209					120	452	**20:45**	59	266	63	265					122	531
09:00	78		46						124		**21:00**	56		64						120	
09:15	90		78						168		**21:15**	40		77						117	
09:30	99		91						190		**21:30**	54		46						100	
09:45	77	344	75	290					152	634	**21:45**	49	199	35	222					84	421
10:00	97		83						180		**22:00**	49		35						84	
10:15	112		96						208		**22:15**	44		33						77	
10:30	116		94						210		**22:30**	46		28						74	
10:45	124	449	90	363					214	812	**22:45**	40	179	35	131					75	310
11:00	131		95						226		**23:00**	27		37						64	
11:15	126		85						211		**23:15**	25		27						52	
11:30	136		123						259		**23:30**	29		43						72	
11:45	140	533	103	406					243	939	**23:45**	30	111	30	137					60	248
TOTALS		2442		1884						**4326**	**TOTALS**		4575		3961						**8536**
SPLIT %		56.4%		43.6%						**33.6%**	**SPLIT %**		53.6%		46.4%						**66.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	7,017	5,845	0	0	12,862

AM Peak Hour	11:15	11:45			**11:45**	**PM Peak Hour**	13:15	12:30			**13:15**
AM Pk Volume	566	440			**1006**	**PM Pk Volume**	594	468			**1051**
Pk Hr Factor	0.863	0.846			**0.918**	**Pk Hr Factor**	0.922	0.900			**0.955**
7 - 9 Volume	466	364	0	0	**830**	**4 - 6 Volume**	887	781	0	0	**1668**
7 - 9 Peak Hour	07:30	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:00			**16:00**
7 - 9 Pk Volume	262	209	0	0	**452**	**4 - 6 Pk Volume**	454	417	0	0	**871**
Pk Hr Factor	0.873	0.697	0.000	0.000	**0.856**	**Pk Hr Factor**	0.915	0.907	0.000	0.000	**0.911**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Twain Ave & Mission Gorge Pl

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_003

DAILY TOTALS	NB	SB	EB	WB	Total
	7,254	6,677	0	0	13,931

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	34		29						63		12:00	156		124						280	
00:15	28		35						63		12:15	164		121						285	
00:30	31		31						62		12:30	118		136						254	
00:45	24	117	21	116					45	233	12:45	140	578	119	500					259	1078
01:00	19		20						39		13:00	109		136						245	
01:15	14		16						30		13:15	114		129						243	
01:30	20		22						42		13:30	122		148						270	
01:45	29	82	18	76					47	158	13:45	130	475	139	552					269	1027
02:00	13		20						33		14:00	154		132						286	
02:15	23		23						46		14:15	159		129						288	
02:30	20		35						55		14:30	132		117						249	
02:45	26	82	25	103					51	185	14:45	139	584	108	486					247	1070
03:00	13		19						32		15:00	103		130						233	
03:15	9		11						20		15:15	130		91						221	
03:30	9		11						20		15:30	116		144						260	
03:45	7	38	8	49					15	87	15:45	160	509	117	482					277	991
04:00	7		10						17		16:00	116		114						230	
04:15	11		12						23		16:15	114		110						224	
04:30	7		7						14		16:30	118		113						231	
04:45	9	34	9	38					18	72	16:45	96	444	107	444					203	888
05:00	8		4						12		17:00	124		106						230	
05:15	19		8						27		17:15	118		122						240	
05:30	22		13						35		17:30	138		109						247	
05:45	22	71	9	34					31	105	17:45	104	484	104	441					208	925
06:00	19		28						47		18:00	107		99						206	
06:15	41		26						67		18:15	102		87						189	
06:30	70		29						99		18:30	135		112						247	
06:45	81	211	22	105					103	316	18:45	109	453	94	392					203	845
07:00	30		34						64		19:00	73		90						163	
07:15	51		51						102		19:15	77		85						162	
07:30	67		44						111		19:30	89		93						182	
07:45	81	229	46	175					127	404	19:45	85	324	93	361					178	685
08:00	69		39						108		20:00	75		95						170	
08:15	59		49						108		20:15	74		81						155	
08:30	51		84						135		20:30	65		69						134	
08:45	69	248	67	239					136	487	20:45	55	269	72	317					127	586
09:00	79		64						143		21:00	75		63						138	
09:15	100		92						192		21:15	74		71						145	
09:30	98		109						207		21:30	68		56						124	
09:45	102	379	95	360					197	739	21:45	46	263	43	233					89	496
10:00	111		94						205		22:00	35		46						81	
10:15	131		113						244		22:15	40		36						76	
10:30	126		112						238		22:30	50		33						83	
10:45	146	514	87	406					233	920	22:45	54	179	39	154					93	333
11:00	138		111						249		23:00	43		32						75	
11:15	119		101						220		23:15	30		27						57	
11:30	149		136						285		23:30	35		44						79	
11:45	153	559	131	479					284	1038	23:45	20	128	32	135					52	263
TOTALS		2564		2180						**4744**	**TOTALS**		4690		4497						**9187**
SPLIT %		54.0%		46.0%						**34.1%**	**SPLIT %**		51.1%		48.9%						**65.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	7,254	6,677	0	0	13,931

AM Peak Hour	11:30	11:30			**11:30**	**PM Peak Hour**	14:00	13:00			**13:30**
AM Pk Volume	622	512			**1134**	**PM Pk Volume**	584	552			**1113**
Pk Hr Factor	0.948	0.941			**0.995**	**Pk Hr Factor**	0.918	0.932			**0.966**
7 - 9 Volume	477	414	0	0	**891**	**4 - 6 Volume**	928	885	0	0	**1813**
7 - 9 Peak Hour	07:30	08:00			**08:00**	**4 - 6 Peak Hour**	17:00	16:30			**17:00**
7 - 9 Pk Volume	276	239	0	0	**487**	**4 - 6 Pk Volume**	484	448	0	0	**925**
Pk Hr Factor	0.852	0.711	0.000	0.000	**0.895**	**Pk Hr Factor**	0.877	0.918	0.000	0.000	**0.936**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Mission Gorge Pl & Fairmount Ave

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_004

DAILY TOTALS	NB	SB	EB	WB	Total
	7,509	6,837	0	0	14,346

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	46		36						82		12:00	152		131						283	
00:15	30		37						67		12:15	161		130						291	
00:30	34		33						67		12:30	125		141						266	
00:45	29	139	25	131					54	270	12:45	137	575	128	530					265	1105
01:00	27		23						50		13:00	122		132						254	
01:15	22		18						40		13:15	118		119						237	
01:30	19		24						43		13:30	127		145						272	
01:45	31	99	18	83					49	182	13:45	149	516	155	551					304	1067
02:00	14		20						34		14:00	153		141						294	
02:15	25		22						47		14:15	146		137						283	
02:30	20		32						52		14:30	141		119						260	
02:45	31	90	29	103					60	193	14:45	146	586	115	512					261	1098
03:00	17		18						35		15:00	101		127						228	
03:15	13		13						26		15:15	138		96						234	
03:30	6		11						17		15:30	123		141						264	
03:45	12	48	8	50					20	98	15:45	158	520	119	483					277	1003
04:00	6		11						17		16:00	119		115						234	
04:15	18		13						31		16:15	127		117						244	
04:30	8		7						15		16:30	109		120						229	
04:45	10	42	8	39					18	81	16:45	106	461	106	458					212	919
05:00	7		5						12		17:00	122		102						224	
05:15	17		8						25		17:15	115		111						226	
05:30	20		13						33		17:30	136		103						239	
05:45	25	69	9	35					34	104	17:45	104	477	109	425					213	902
06:00	25		26						51		18:00	99		99						198	
06:15	43		25						68		18:15	106		96						202	
06:30	67		31						98		18:30	136		120						256	
06:45	91	226	23	105					114	331	18:45	103	444	105	420					208	864
07:00	38		34						72		19:00	82		85						167	
07:15	47		49						96		19:15	79		86						165	
07:30	59		48						107		19:30	91		104						195	
07:45	81	225	53	184					134	409	19:45	82	334	97	372					179	706
08:00	75		39						114		20:00	84		90						174	
08:15	66		49						115		20:15	73		78						151	
08:30	65		76						141		20:30	66		71						137	
08:45	93	299	55	219					148	518	20:45	63	286	72	311					135	597
09:00	89		67						156		21:00	77		75						152	
09:15	97		102						199		21:15	75		72						147	
09:30	103		101						204		21:30	71		55						126	
09:45	115	404	89	359					204	763	21:45	53	276	48	250					101	526
10:00	119		101						220		22:00	33		45						78	
10:15	123		108						231		22:15	44		38						82	
10:30	133		110						243		22:30	56		35						91	
10:45	135	510	93	412					228	922	22:45	54	187	35	153					89	340
11:00	133		115						248		23:00	42		33						75	
11:15	123		106						229		23:15	35		32						67	
11:30	154		144						298		23:30	35		43						78	
11:45	152	562	145	510					297	1072	23:45	22	134	34	142					56	276
TOTALS		2713		2230						**4943**	**TOTALS**		4796		4607						**9403**
SPLIT %		54.9%		45.1%						**34.5%**	**SPLIT %**		51.0%		49.0%						**65.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	7,509	6,837	0	0	14,346

AM Peak Hour	11:30	11:30			**11:30**	**PM Peak Hour**	13:45	13:30			**13:30**
AM Pk Volume	619	550			**1169**	**PM Pk Volume**	589	578			**1153**
Pk Hr Factor	0.961	0.948			**0.981**	**Pk Hr Factor**	0.962	0.932			**0.948**
7 - 9 Volume	524	403	0	0	**927**	**4 - 6 Volume**	938	883	0	0	**1821**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:45	16:00			**16:00**
7 - 9 Pk Volume	299	219	0	0	**518**	**4 - 6 Pk Volume**	479	458	0	0	**919**
Pk Hr Factor	0.804	0.720	0.000	0.000	**0.875**	**Pk Hr Factor**	0.881	0.954	0.000	0.000	**0.942**

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. San Diego Mission Rd & Mission Gorge Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_005

DAILY TOTALS	NB	SB	EB	WB	Total
	1,502	2,090	0	0	3,592

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		5						8		12:00	44		60						104	
00:15	3		5						8		12:15	42		54						96	
00:30	3		3						6		12:30	33		46						79	
00:45	0	9	2	15					2	24	12:45	41	160	48	208					89	368
01:00	2		4						6		13:00	29		43						72	
01:15	6		5						11		13:15	28		65						93	
01:30	3		3						6		13:30	32		55						87	
01:45	2	13	5	17					7	30	13:45	35	124	58	221					93	345
02:00	2		10						12		14:00	31		49						80	
02:15	2		3						5		14:15	26		46						72	
02:30	4		1						5		14:30	31		33						64	
02:45	3	11	5	19					8	30	14:45	31	119	39	167					70	286
03:00	3		3						6		15:00	27		50						77	
03:15	0		2						2		15:15	34		25						59	
03:30	0		0						0		15:30	25		35						60	
03:45	1	4	3	8					4	12	15:45	29	115	39	149					68	264
04:00	1		0						1		16:00	37		37						74	
04:15	2		1						3		16:15	29		45						74	
04:30	1		3						4		16:30	26		38						64	
04:45	1	5	6	10					7	15	16:45	27	119	34	154					61	273
05:00	2		11						13		17:00	33		37						70	
05:15	2		4						6		17:15	31		28						59	
05:30	0		4						4		17:30	32		28						60	
05:45	5	9	3	22					8	31	17:45	24	120	33	126					57	246
06:00	2		3						5		18:00	26		24						50	
06:15	5		5						10		18:15	21		52						73	
06:30	6		8						14		18:30	13		35						48	
06:45	10	23	8	24					18	47	18:45	14	74	17	128					31	202
07:00	5		6						11		19:00	20		14						34	
07:15	10		7						17		19:15	21		17						38	
07:30	10		19						29		19:30	13		15						28	
07:45	21	46	34	66					55	112	19:45	12	66	17	63					29	129
08:00	16		14						30		20:00	16		16						32	
08:15	12		18						30		20:15	7		16						23	
08:30	22		27						49		20:30	6		11						17	
08:45	24	74	41	100					65	174	20:45	3	32	4	47					7	79
09:00	24		18						42		21:00	5		4						9	
09:15	16		24						40		21:15	5		12						17	
09:30	27		27						54		21:30	6		3						9	
09:45	24	91	33	102					57	193	21:45	7	23	8	27					15	50
10:00	21		58						79		22:00	5		6						11	
10:15	17		44						61		22:15	0		2						2	
10:30	23		35						58		22:30	5		2						7	
10:45	26	87	52	189					78	276	22:45	1	11	0	10					1	21
11:00	23		54						77		23:00	1		7						8	
11:15	27		48						75		23:15	2		1						3	
11:30	51		37						88		23:30	3		1						4	
11:45	60	161	66	205					126	366	23:45	0	6	4	13					4	19
TOTALS		533		777						**1310**	**TOTALS**		969		1313						**2282**
SPLIT %		40.7%		59.3%						**36.5%**	**SPLIT %**		42.5%		57.5%						**63.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,502	2,090	0	0	3,592

AM Peak Hour	11:30	11:45			**11:30**	**PM Peak Hour**	12:00	13:15			**12:00**
AM Pk Volume	197	226			**414**	**PM Pk Volume**	160	227			**368**
Pk Hr Factor	0.821	0.856			**0.821**	**Pk Hr Factor**	0.909	0.873			**0.885**
7 - 9 Volume	120	166	0	0	**286**	**4 - 6 Volume**	239	280	0	0	**519**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:45	16:00			**16:00**
7 - 9 Pk Volume	74	100	0	0	**174**	**4 - 6 Pk Volume**	123	154	0	0	**273**
Pk Hr Factor	0.771	0.610	0.000	0.000	**0.669**	**Pk Hr Factor**	0.932	0.856	0.000	0.000	**0.922**

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Mission Gorge Rd & Alvarado Canyon Rd

Day: Sunday
Date: 7/26/2015

City: San Diego
Project #: CA15_4209_006

DAILY TOTALS	NB	SB	EB	WB	Total
	11,093	10,425	0	0	21,518

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	48		47						95		12:00	224		235						459	
00:15	56		53						109		12:15	262		210						472	
00:30	41		33						74		12:30	222		195						417	
00:45	36	181	37	170					73	351	12:45	201	909	234	874					435	1783
01:00	35		33						68		13:00	208		207						415	
01:15	28		35						63		13:15	214		189						403	
01:30	25		36						61		13:30	209		185						394	
01:45	31	119	33	137					64	256	13:45	237	868	196	777					433	1645
02:00	23		39						62		14:00	200		220						420	
02:15	21		28						49		14:15	198		204						402	
02:30	27		23						50		14:30	188		220						408	
02:45	21	92	31	121					52	213	14:45	200	786	222	866					422	1652
03:00	19		27						46		15:00	170		189						359	
03:15	16		25						41		15:15	211		169						380	
03:30	9		14						23		15:30	175		198						373	
03:45	14	58	24	90					38	148	15:45	170	726	167	723					337	1449
04:00	12		15						27		16:00	180		194						374	
04:15	14		15						29		16:15	180		181						361	
04:30	20		14						34		16:30	182		188						370	
04:45	14	60	8	52					22	112	16:45	170	712	161	724					331	1436
05:00	17		15						32		17:00	172		181						353	
05:15	30		8						38		17:15	184		149						333	
05:30	27		22						49		17:30	180		150						330	
05:45	28	102	25	70					53	172	17:45	146	682	160	640					306	1322
06:00	42		31						73		18:00	135		133						268	
06:15	71		33						104		18:15	139		159						298	
06:30	103		35						138		18:30	166		162						328	
06:45	92	308	34	133					126	441	18:45	127	567	124	578					251	1145
07:00	72		50						122		19:00	125		147						272	
07:15	90		68						158		19:15	146		130						276	
07:30	111		84						195		19:30	130		148						278	
07:45	121	394	94	296					215	690	19:45	93	494	148	573					241	1067
08:00	103		72						175		20:00	90		136						226	
08:15	117		91						208		20:15	109		122						231	
08:30	165		121						286		20:30	95		92						187	
08:45	178	563	113	397					291	960	20:45	68	362	114	464					182	826
09:00	147		106						253		21:00	72		92						164	
09:15	171		136						307		21:15	78		64						142	
09:30	221		131						352		21:30	64		51						115	
09:45	239	778	166	539					405	1317	21:45	59	273	60	267					119	540
10:00	200		173						373		22:00	54		58						112	
10:15	215		195						410		22:15	69		58						127	
10:30	202		175						377		22:30	56		46						102	
10:45	225	842	207	750					432	1592	22:45	39	218	41	203					80	421
11:00	207		205						412		23:00	26		37						63	
11:15	213		195						408		23:15	42		36						78	
11:30	217		215						432		23:30	43		43						86	
11:45	221	858	215	830					436	1688	23:45	30	141	35	151					65	292
TOTALS		4355		3585						7940	TOTALS		6738		6840						13578
SPLIT %		54.8%		45.2%						36.9%	SPLIT %		49.6%		50.4%						63.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,093	10,425	0	0	21,518

AM Peak Hour	11:45	11:30			11:30	PM Peak Hour	12:00	12:00			12:00
AM Pk Volume	929	875			1799	PM Pk Volume	909	874			1783
Pk Hr Factor	0.886	0.931			0.953	Pk Hr Factor	0.867	0.930			0.944
7 - 9 Volume	957	693	0	0	1650	4 - 6 Volume	1394	1364	0	0	2758
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	563	397	0	0	960	4 - 6 Pk Volume	712	724	0	0	1436
Pk Hr Factor	0.791	0.820	0.000	0.000	0.825	Pk Hr Factor	0.978	0.933	0.000	0.000	0.960

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Alvarado Canyon Rd & I-8 WB Ramps

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_007

DAILY TOTALS	NB	SB	EB	WB	Total
	9,040	18,171	0	0	27,211

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	41		124						165		12:00	179		386						565	
00:15	28		104						132		12:15	167		331						498	
00:30	32		87						119		12:30	147		338						485	
00:45	28	129	63	378					91	507	12:45	142	635	322	1377					464	2012
01:00	28		76						104		13:00	149		342						491	
01:15	24		60						84		13:15	150		338						488	
01:30	17		59						76		13:30	151		361						512	
01:45	28	97	52	247					80	344	13:45	152	602	349	1390					501	1992
02:00	18		68						86		14:00	151		351						502	
02:15	19		43						62		14:15	165		380						545	
02:30	17		52						69		14:30	167		334						501	
02:45	20	74	51	214					71	288	14:45	154	637	354	1419					508	2056
03:00	17		38						55		15:00	128		320						448	
03:15	16		39						55		15:15	150		277						427	
03:30	4		27						31		15:30	146		316						462	
03:45	9	46	36	140					45	186	15:45	169	593	296	1209					465	1802
04:00	6		17						23		16:00	195		308						503	
04:15	16		30						46		16:15	210		306						516	
04:30	8		24						32		16:30	179		334						513	
04:45	12	42	23	94					35	136	16:45	157	741	310	1258					467	1999
05:00	5		36						41		17:00	193		318						511	
05:15	14		34						48		17:15	191		324						515	
05:30	18		29						47		17:30	188		301						489	
05:45	35	72	39	138					74	210	17:45	161	733	296	1239					457	1972
06:00	28		63						91		18:00	110		278						388	
06:15	37		54						91		18:15	123		290						413	
06:30	69		56						125		18:30	122		312						434	
06:45	82	216	65	238					147	454	18:45	93	448	247	1127					340	1575
07:00	61		71						132		19:00	84		238						322	
07:15	65		104						169		19:15	72		232						304	
07:30	119		148						267		19:30	104		228						332	
07:45	148	393	150	473					298	866	19:45	69	329	242	940					311	1269
08:00	124		140						264		20:00	82		245						327	
08:15	111		144						255		20:15	73		218						291	
08:30	137		178						315		20:30	83		204						287	
08:45	200	572	183	645					383	1217	20:45	54	292	167	834					221	1126
09:00	124		194						318		21:00	66		163						229	
09:15	123		227						350		21:15	66		172						238	
09:30	142		247						389		21:30	61		131						192	
09:45	166	555	207	875					373	1430	21:45	52	245	128	594					180	839
10:00	153		260						413		22:00	41		123						164	
10:15	145		294						439		22:15	44		141						185	
10:30	157		338						495		22:30	54		99						153	
10:45	180	635	316	1208					496	1843	22:45	48	187	103	466					151	653
11:00	154		342						496		23:00	38		96						134	
11:15	148		284						432		23:15	36		99						135	
11:30	173		324						497		23:30	31		84						115	
11:45	165	640	351	1301					516	1941	23:45	22	127	88	367					110	494
TOTALS		3471		5951						9422	TOTALS		5569		12220						17789
SPLIT %		36.8%		63.2%						34.6%	SPLIT %		31.3%		68.7%						65.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,040	18,171	0	0	27,211

AM Peak Hour	11:30	11:45			11:30	PM Peak Hour	15:45	13:30			13:30
AM Pk Volume	684	1406			2076	PM Pk Volume	753	1441			2060
Pk Hr Factor	0.955	0.911			0.919	Pk Hr Factor	0.896	0.948			0.945
7 - 9 Volume	965	1118	0	0	2083	4 - 6 Volume	1474	2497	0	0	3971
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	16:30			16:15
7 - 9 Pk Volume	572	645	0	0	1217	4 - 6 Pk Volume	741	1286	0	0	2007
Pk Hr Factor	0.715	0.881	0.000	0.000	0.794	Pk Hr Factor	0.882	0.963	0.000	0.000	0.972

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. I-8 WB Ramps & I-8 EB Ramps

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_008

DAILY TOTALS	NB	SB	EB	WB	Total
	10,896	11,542	0	0	22,438

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	58		88						146		12:00	208		240						448	
00:15	45		68						113		12:15	228		197						425	
00:30	54		55						109		12:30	232		225						457	
00:45	39	196	35	246					74	442	12:45	226	894	222	884					448	1778
01:00	25		57						82		13:00	212		234						446	
01:15	43		37						80		13:15	228		213						441	
01:30	39		45						84		13:30	195		213						408	
01:45	27	134	44	183					71	317	13:45	211	846	211	871					422	1717
02:00	33		49						82		14:00	188		222						410	
02:15	25		27						52		14:15	165		253						418	
02:30	24		35						59		14:30	165		217						382	
02:45	28	110	26	137					54	247	14:45	177	695	239	931					416	1626
03:00	12		34						46		15:00	177		214						391	
03:15	19		28						47		15:15	173		191						364	
03:30	16		18						34		15:30	155		194						349	
03:45	14	61	18	98					32	159	15:45	188	693	204	803					392	1496
04:00	9		12						21		16:00	206		205						411	
04:15	16		20						36		16:15	208		191						399	
04:30	16		12						28		16:30	185		197						382	
04:45	20	61	9	53					29	114	16:45	151	750	200	793					351	1543
05:00	24		22						46		17:00	200		199						399	
05:15	20		22						42		17:15	183		228						411	
05:30	38		17						55		17:30	191		187						378	
05:45	41	123	22	83					63	206	17:45	157	731	204	818					361	1549
06:00	38		29						67		18:00	128		191						319	
06:15	56		30						86		18:15	138		190						328	
06:30	101		24						125		18:30	132		197						329	
06:45	94	289	37	120					131	409	18:45	112	510	157	735					269	1245
07:00	72		29						101		19:00	106		156						262	
07:15	62		65						127		19:15	110		175						285	
07:30	134		63						197		19:30	117		165						282	
07:45	142	410	76	233					218	643	19:45	107	440	157	653					264	1093
08:00	134		79						213		20:00	100		160						260	
08:15	102		78						180		20:15	79		142						221	
08:30	142		102						244		20:30	95		136						231	
08:45	200	578	109	368					309	946	20:45	75	349	109	547					184	896
09:00	181		125						306		21:00	62		103						165	
09:15	159		126						285		21:15	78		127						205	
09:30	185		137						322		21:30	61		92						153	
09:45	217	742	125	513					342	1255	21:45	56	257	85	407					141	664
10:00	185		152						337		22:00	73		92						165	
10:15	208		171						379		22:15	61		97						158	
10:30	206		212						418		22:30	47		68						115	
10:45	223	822	185	720					408	1542	22:45	52	233	69	326					121	559
11:00	242		204						446		23:00	35		74						109	
11:15	190		172						362		23:15	34		52						86	
11:30	201		200						401		23:30	21		57						78	
11:45	236	869	209	785					445	1654	23:45	13	103	52	235					65	338
TOTALS		4395		3539						7934	TOTALS		6501		8003						14504
SPLIT %		55.4%		44.6%						35.4%	SPLIT %		44.8%		55.2%						64.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	10,896	11,542	0	0	22,438

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:15	14:00			12:30
AM Pk Volume	904	871			1775	PM Pk Volume	898	931			1792
Pk Hr Factor	0.958	0.907			0.971	Pk Hr Factor	0.968	0.920			0.980
7 - 9 Volume	988	601	0	0	1589	4 - 6 Volume	1481	1611	0	0	3092
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	16:30			17:00
7 - 9 Pk Volume	578	368	0	0	946	4 - 6 Pk Volume	750	824	0	0	1549
Pk Hr Factor	0.723	0.844	0.000	0.000	0.765	Pk Hr Factor	0.901	0.904	0.000	0.000	0.942

Prepared by NDS/ATD

VOLUME

San Diego Mission Rd Bet. Fairmount Ave & Rancho Mission Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,130	2,503	4,633

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		4		10		12:00			46		87		133	
00:15			10		11		21		12:15			48		54		102	
00:30			4		2		6		12:30			35		34		69	
00:45			3	23	9	26	12	49	12:45			43	172	39	214	82	386
01:00			5		8		13		13:00			40		52		92	
01:15			6		5		11		13:15			55		62		117	
01:30			3		2		5		13:30			46		60		106	
01:45			7	21	7	22	14	43	13:45			55	196	44	218	99	414
02:00			3		2		5		14:00			41		34		75	
02:15			5		1		6		14:15			29		46		75	
02:30			4		8		12		14:30			45		37		82	
02:45			4	16	4	15	8	31	14:45			36	151	39	156	75	307
03:00			5		6		11		15:00			40		28		68	
03:15			2		2		4		15:15			32		38		70	
03:30			0		3		3		15:30			32		36		68	
03:45			2	9	0	11	2	20	15:45			40	144	29	131	69	275
04:00			1		1		2		16:00			33		33		66	
04:15			2		4		6		16:15			35		32		67	
04:30			4		1		5		16:30			42		27		69	
04:45			2	9	3	9	5	18	16:45			47	157	34	126	81	283
05:00			4		5		9		17:00			43		44		87	
05:15			2		3		5		17:15			41		52		93	
05:30			3		2		5		17:30			31		46		77	
05:45			3	12	2	12	5	24	17:45			39	154	28	170	67	324
06:00			4		2		6		18:00			28		33		61	
06:15			5		7		12		18:15			49		52		101	
06:30			8		22		30		18:30			38		30		68	
06:45			7	24	21	52	28	76	18:45			25	140	23	138	48	278
07:00			8		10		18		19:00			26		20		46	
07:15			12		5		17		19:15			30		24		54	
07:30			12		26		38		19:30			20		30		50	
07:45			25	57	74	115	99	172	19:45			20	96	17	91	37	187
08:00			23		20		43		20:00			22		17		39	
08:15			20		19		39		20:15			30		22		52	
08:30			28		31		59		20:30			15		15		30	
08:45			39	110	79	149	118	259	20:45			15	82	11	65	26	147
09:00			23		32		55		21:00			8		5		13	
09:15			15		22		37		21:15			21		17		38	
09:30			21		37		58		21:30			11		17		28	
09:45			34	93	61	152	95	245	21:45			11	51	14	53	25	104
10:00			55		75		130		22:00			3		8		11	
10:15			40		36		76		22:15			6		4		10	
10:30			36		46		82		22:30			3		4		7	
10:45			54	185	90	247	144	432	22:45			4	16	4	20	8	36
11:00			52		67		119		23:00			9		8		17	
11:15			36		47		83		23:15			4		7		11	
11:30			37		66		103		23:30			6		7		13	
11:45			63	188	108	288	171	476	23:45			5	24	1	23	6	47
TOTALS				747		1098		1845	TOTALS				1383		1405		2788
SPLIT %				40.5%		59.5%		39.8%	SPLIT %				49.6%		50.4%		60.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,130	2,503	4,633

AM Peak Hour			11:30	11:30	11:30	PM Peak Hour			13:15	13:00	13:00
AM Pk Volume			194	315	509	PM Pk Volume			197	218	414
Pk Hr Factor			0.770	0.729	0.744	Pk Hr Factor			0.895	0.879	0.885
7 - 9 Volume	0	0	167	264	431	4 - 6 Volume	0	0	311	296	607
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:45	16:45
7 - 9 Pk Volume	0	0	110	149	259	4 - 6 Pk Volume	0	0	173	176	338
Pk Hr Factor	0.000	0.000	0.705	0.472	0.549	Pk Hr Factor	0.000	0.000	0.920	0.846	0.909

Prepared by NDS/ATD

VOLUME

San Diego Mission Rd W/O Rancho Mission Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,470	2,361	4,831

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		13		22		12:00			64		58		122	
00:15			14		16		30		12:15			45		55		100	
00:30			9		12		21		12:30			38		44		82	
00:45			9	41	17	58	26	99	12:45			40	187	43	200	83	387
01:00			5		15		20		13:00			38		46		84	
01:15			8		5		13		13:15			42		66		108	
01:30			3		5		8		13:30			39		44		83	
01:45			5	21	13	38	18	59	13:45			46	165	43	199	89	364
02:00			7		8		15		14:00			40		35		75	
02:15			5		3		8		14:15			39		51		90	
02:30			5		11		16		14:30			54		36		90	
02:45			6	23	7	29	13	52	14:45			40	173	35	157	75	330
03:00			5		6		11		15:00			49		37		86	
03:15			3		10		13		15:15			37		39		76	
03:30			3		9		12		15:30			43		37		80	
03:45			3	14	2	27	5	41	15:45			54	183	44	157	98	340
04:00			7		3		10		16:00			42		36		78	
04:15			3		7		10		16:15			43		41		84	
04:30			7		3		10		16:30			38		33		71	
04:45			7	24	8	21	15	45	16:45			57	180	26	136	83	316
05:00			3		6		9		17:00			51		36		87	
05:15			3		6		9		17:15			55		44		99	
05:30			2		3		5		17:30			52		44		96	
05:45			4	12	1	16	5	28	17:45			40	198	33	157	73	355
06:00			11		6		17		18:00			57		37		94	
06:15			10		8		18		18:15			42		44		86	
06:30			19		6		25		18:30			41		32		73	
06:45			24	64	11	31	35	95	18:45			31	171	24	137	55	308
07:00			14		11		25		19:00			28		21		49	
07:15			13		11		24		19:15			42		24		66	
07:30			18		11		29		19:30			24		25		49	
07:45			22	67	42	75	64	142	19:45			35	129	27	97	62	226
08:00			32		14		46		20:00			26		29		55	
08:15			19		16		35		20:15			40		25		65	
08:30			17		16		33		20:30			30		28		58	
08:45			24	92	36	82	60	174	20:45			21	117	23	105	44	222
09:00			16		25		41		21:00			21		23		44	
09:15			19		17		36		21:15			12		22		34	
09:30			34		33		67		21:30			22		22		44	
09:45			36	105	31	106	67	211	21:45			19	74	26	93	45	167
10:00			37		37		74		22:00			14		17		31	
10:15			36		38		74		22:15			10		18		28	
10:30			51		27		78		22:30			12		13		25	
10:45			56	180	44	146	100	326	22:45			4	40	13	61	17	101
11:00			47		53		100		23:00			7		6		13	
11:15			44		37		81		23:15			10		10		20	
11:30			38		46		84		23:30			9		11		20	
11:45			48	177	54	190	102	367	23:45			7	33	16	43	23	76
TOTALS				820		819		1639	TOTALS				1650		1542		3192
SPLIT %				50.0%		50.0%		33.9%	SPLIT %				51.7%		48.3%		66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,470	2,361	4,831

AM Peak Hour			10:30	11:30	11:30	PM Peak Hour			16:45	12:00	12:00
AM Pk Volume			198	213	408	PM Pk Volume			215	200	387
Pk Hr Factor			0.884	0.918	0.836	Pk Hr Factor			0.943	0.862	0.793
7 - 9 Volume	0	0	159	157	316	4 - 6 Volume	0	0	378	293	671
7 - 9 Peak Hour			08:00	07:45	07:45	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	92	88	178	4 - 6 Pk Volume	0	0	215	157	365
Pk Hr Factor	0.000	0.000	0.719	0.524	0.695	Pk Hr Factor	0.000	0.000	0.943	0.892	0.922

Prepared by NDS/ATD

VOLUME

Camino Del Rio N Bet. Fairmount Ave & Ward Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,294	2,945	6,239

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			17		12		29		12:00			77		55		132	
00:15			25		17		42		12:15			54		62		116	
00:30			22		15		37		12:30			60		61		121	
00:45			14	78	16	60	30	138	12:45			55	246	55	233	110	479
01:00			19		11		30		13:00			59		46		105	
01:15			13		4		17		13:15			69		58		127	
01:30			11		9		20		13:30			71		67		138	
01:45			9	52	10	34	19	86	13:45			52	251	61	232	113	483
02:00			11		9		20		14:00			72		59		131	
02:15			4		10		14		14:15			71		60		131	
02:30			8		12		20		14:30			73		52		125	
02:45			14	37	6	37	20	74	14:45			50	266	37	208	87	474
03:00			4		8		12		15:00			64		45		109	
03:15			8		8		16		15:15			52		58		110	
03:30			8		3		11		15:30			54		34		88	
03:45			3	23	8	27	11	50	15:45			58	228	56	193	114	421
04:00			3		2		5		16:00			56		45		101	
04:15			4		1		5		16:15			61		49		110	
04:30			7		2		9		16:30			56		56		112	
04:45			2	16	3	8	5	24	16:45			56	229	45	195	101	424
05:00			6		3		9		17:00			65		61		126	
05:15			6		7		13		17:15			54		44		98	
05:30			3		7		10		17:30			55		40		95	
05:45			12	27	8	25	20	52	17:45			43	217	49	194	92	411
06:00			9		7		16		18:00			54		33		87	
06:15			11		9		20		18:15			48		45		93	
06:30			13		13		26		18:30			48		40		88	
06:45			13	46	22	51	35	97	18:45			48	198	22	140	70	338
07:00			16		9		25		19:00			49		49		98	
07:15			10		11		21		19:15			49		33		82	
07:30			20		17		37		19:30			53		30		83	
07:45			39	85	41	78	80	163	19:45			32	183	34	146	66	329
08:00			30		21		51		20:00			36		36		72	
08:15			23		29		52		20:15			40		35		75	
08:30			24		25		49		20:30			39		35		74	
08:45			33	110	41	116	74	226	20:45			41	156	24	130	65	286
09:00			33		33		66		21:00			33		32		65	
09:15			45		37		82		21:15			25		28		53	
09:30			30		50		80		21:30			37		29		66	
09:45			32	140	39	159	71	299	21:45			20	115	34	123	54	238
10:00			48		38		86		22:00			22		21		43	
10:15			52		44		96		22:15			27		22		49	
10:30			55		51		106		22:30			20		21		41	
10:45			68	223	58	191	126	414	22:45			24	93	18	82	42	175
11:00			56		63		119		23:00			20		9		29	
11:15			55		46		101		23:15			12		5		17	
11:30			50		73		123		23:30			13		12		25	
11:45			58	219	62	244	120	463	23:45			11	56	13	39	24	95
TOTALS				1056		1030		**2086**	TOTALS				2238		1915		**4153**
SPLIT %				50.6%		49.4%		**33.4%**	SPLIT %				53.9%		46.1%		**66.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,294	2,945	6,239

AM Peak Hour			11:45	11:30	**11:30**	**PM Peak Hour**			13:45	13:30	**13:30**
AM Pk Volume			249	252	**491**	**PM Pk Volume**			268	247	**513**
Pk Hr Factor			0.808	0.863	**0.930**	**Pk Hr Factor**			0.918	0.922	**0.929**
7 - 9 Volume	0	0	195	194	**389**	**4 - 6 Volume**	0	0	446	389	**835**
7 - 9 Peak Hour			07:45	07:45	**07:45**	**4 - 6 Peak Hour**			16:15	16:15	**16:15**
7 - 9 Pk Volume	0	0	116	116	**232**	**4 - 6 Pk Volume**	0	0	238	211	**449**
Pk Hr Factor	0.000	0.000	0.744	0.707	**0.725**	**Pk Hr Factor**	0.000	0.000	0.915	0.865	**0.891**

Prepared by NDS/ATD

VOLUME

Camino Del Rio N Bet. Ward Rd & Mission City Pkwy

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,816	1,675	3,491

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			13		3		16		12:00			42		50		92	
00:15			12		8		20		12:15			36		45		81	
00:30			10		5		15		12:30			37		33		70	
00:45			9	44	5	21	14	65	12:45			46	161	39	167	85	328
01:00			9		4		13		13:00			37		32		69	
01:15			6		3		9		13:15			41		38		79	
01:30			5		3		8		13:30			40		42		82	
01:45			9	29	6	16	15	45	13:45			39	157	46	158	85	315
02:00			4		2		6		14:00			43		36		79	
02:15			2		2		4		14:15			33		47		80	
02:30			8		1		9		14:30			33		26		59	
02:45			3	17	3	8	6	25	14:45			30	139	31	140	61	279
03:00			2		0		2		15:00			49		40		89	
03:15			1		2		3		15:15			44		36		80	
03:30			1		1		2		15:30			37		30		67	
03:45			2	6	2	5	4	11	15:45			34	164	27	133	61	297
04:00			0		1		1		16:00			29		28		57	
04:15			2		1		3		16:15			39		34		73	
04:30			1		3		4		16:30			43		37		80	
04:45			0	3	3	8	3	11	16:45			36	147	24	123	60	270
05:00			2		0		2		17:00			40		38		78	
05:15			1		1		2		17:15			31		23		54	
05:30			1		4		5		17:30			26		20		46	
05:45			4	8	4	9	8	17	17:45			23	120	31	112	54	232
06:00			2		2		4		18:00			41		21		62	
06:15			5		3		8		18:15			28		26		54	
06:30			5		6		11		18:30			28		30		58	
06:45			2	14	9	20	11	34	18:45			33	130	14	91	47	221
07:00			7		7		14		19:00			34		24		58	
07:15			6		5		11		19:15			26		19		45	
07:30			4		6		10		19:30			46		11		57	
07:45			8	25	22	40	30	65	19:45			20	126	14	68	34	194
08:00			3		7		10		20:00			28		19		47	
08:15			9		15		24		20:15			24		14		38	
08:30			12		10		22		20:30			15		7		22	
08:45			15	39	30	62	45	101	20:45			26	93	7	47	33	140
09:00			7		18		25		21:00			13		15		28	
09:15			17		23		40		21:15			15		7		22	
09:30			22		25		47		21:30			11		7		18	
09:45			16	62	22	88	38	150	21:45			11	50	14	43	25	93
10:00			19		27		46		22:00			9		8		17	
10:15			21		39		60		22:15			17		7		24	
10:30			15		35		50		22:30			9		7		16	
10:45			27	82	34	135	61	217	22:45			11	46	8	30	19	76
11:00			35		41		76		23:00			5		4		9	
11:15			21		25		46		23:15			11		3		14	
11:30			29		30		59		23:30			7		4		11	
11:45			39	124	38	134	77	258	23:45			7	30	6	17	13	47
TOTALS				453		546		999	TOTALS				1363		1129		2492
SPLIT %				45.3%		54.7%		28.6%	SPLIT %				54.7%		45.3%		71.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,816	1,675	3,491

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			12:45	13:30	12:00
AM Pk Volume			154	166	320	PM Pk Volume			164	171	328
Pk Hr Factor			0.917	0.830	0.870	Pk Hr Factor			0.891	0.910	0.891
7 - 9 Volume	0	0	64	102	166	4 - 6 Volume	0	0	267	235	502
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	39	62	101	4 - 6 Pk Volume	0	0	158	133	291
Pk Hr Factor	0.000	0.000	0.650	0.517	0.561	Pk Hr Factor	0.000	0.000	0.919	0.875	0.909

Prepared by NDS/ATD

VOLUME

Rancho Mission Rd Bet. San Diego Mission Rd & Caminito Cascara

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_013

DAILY TOTALS	NB	SB	EB	WB	Total
	2,758	3,046	0	0	5,804

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	15		19						34		12:00	51		58						109	
00:15	14		25						39		12:15	50		66						116	
00:30	16		18						34		12:30	55		50						105	
00:45	17	62	17	79					34	141	12:45	46	202	72	246					118	448
01:00	11		17						28		13:00	43		50						93	
01:15	7		10						17		13:15	60		49						109	
01:30	5		16						21		13:30	43		38						81	
01:45	13	36	8	51					21	87	13:45	42	188	40	177					82	365
02:00	4		18						22		14:00	62		52						114	
02:15	9		10						19		14:15	49		42						91	
02:30	11		12						23		14:30	59		35						94	
02:45	5	29	11	51					16	80	14:45	51	221	44	173					95	394
03:00	7		8						15		15:00	44		36						80	
03:15	8		6						14		15:15	50		39						89	
03:30	2		3						5		15:30	50		35						85	
03:45	7	24	12	29					19	53	15:45	50	194	41	151					91	345
04:00	1		6						7		16:00	36		38						74	
04:15	2		5						7		16:15	40		43						83	
04:30	3		1						4		16:30	41		47						88	
04:45	6	12	6	18					12	30	16:45	43	160	51	179					94	339
05:00	2		4						6		17:00	46		39						85	
05:15	7		8						15		17:15	54		41						95	
05:30	5		5						10		17:30	53		44						97	
05:45	4	18	7	24					11	42	17:45	40	193	42	166					82	359
06:00	10		4						14		18:00	30		50						80	
06:15	6		10						16		18:15	48		44						92	
06:30	16		14						30		18:30	44		42						86	
06:45	16	48	15	43					31	91	18:45	28	150	47	183					75	333
07:00	11		16						27		19:00	44		49						93	
07:15	10		13						23		19:15	34		31						65	
07:30	15		23						38		19:30	41		34						75	
07:45	30	66	34	86					64	152	19:45	41	160	35	149					76	309
08:00	16		28						44		20:00	37		38						75	
08:15	15		29						44		20:15	35		44						79	
08:30	30		26						56		20:30	31		29						60	
08:45	32	93	41	124					73	217	20:45	32	135	25	136					57	271
09:00	34		44						78		21:00	32		33						65	
09:15	24		50						74		21:15	27		25						52	
09:30	42		57						99		21:30	27		31						58	
09:45	46	146	65	216					111	362	21:45	22	108	33	122					55	230
10:00	29		67						96		22:00	16		16						32	
10:15	36		69						105		22:15	21		19						40	
10:30	37		61						98		22:30	23		21						44	
10:45	56	158	72	269					128	427	22:45	23	83	16	72					39	155
11:00	56		66						122		23:00	13		22						35	
11:15	39		71						110		23:15	9		17						26	
11:30	72		49						121		23:30	13		11						24	
11:45	55	222	56	242					111	464	23:45	15	50	10	60					25	110
TOTALS		914		1232						2146	TOTALS		1844		1814						3658
SPLIT %		42.6%		57.4%						37.0%	SPLIT %		50.4%		49.6%						63.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,758	3,046	0	0	5,804

AM Peak Hour	11:30	10:30			10:45	PM Peak Hour	14:00	12:00			12:00
AM Pk Volume	228	270			481	PM Pk Volume	221	246			448
Pk Hr Factor	0.792	0.938			0.939	Pk Hr Factor	0.891	0.854			0.949
7 - 9 Volume	159	210	0	0	369	4 - 6 Volume	353	345	0	0	698
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:45	16:15			16:45
7 - 9 Pk Volume	93	124	0	0	217	4 - 6 Pk Volume	196	180	0	0	371
Pk Hr Factor	0.727	0.756	0.000	0.000	0.743	Pk Hr Factor	0.907	0.882	0.000	0.000	0.956

Prepared by NDS/ATD

VOLUME

Mission Village Dr Bet. Ronda Ave & Friars Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_014

DAILY TOTALS	NB	SB	EB	WB	Total
	5,372	5,066	0	0	10,438

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	30		21						51		12:00	101		106						207	
00:15	28		19						47		12:15	85		88						173	
00:30	31		16						47		12:30	103		81						184	
00:45	21	110	8	64					29	174	12:45	97	386	94	369					191	755
01:00	25		12						37		13:00	104		85						189	
01:15	25		9						34		13:15	92		105						197	
01:30	9		12						21		13:30	116		80						196	
01:45	15	74	4	37					19	111	13:45	97	409	103	373					200	782
02:00	17		14						31		14:00	106		80						186	
02:15	11		6						17		14:15	93		82						175	
02:30	8		8						16		14:30	81		92						173	
02:45	9	45	3	31					12	76	14:45	90	370	77	331					167	701
03:00	14		7						21		15:00	88		74						162	
03:15	4		5						9		15:15	83		70						153	
03:30	9		7						16		15:30	102		92						194	
03:45	11	38	6	25					17	63	15:45	115	388	86	322					201	710
04:00	6		4						10		16:00	89		86						175	
04:15	3		6						9		16:15	103		84						187	
04:30	8		9						17		16:30	121		73						194	
04:45	7	24	8	27					15	51	16:45	136	449	79	322					215	771
05:00	2		7						9		17:00	101		74						175	
05:15	7		13						20		17:15	96		88						184	
05:30	8		16						24		17:30	113		84						197	
05:45	10	27	15	51					25	78	17:45	95	405	77	323					172	728
06:00	10		16						26		18:00	107		83						190	
06:15	11		25						36		18:15	121		106						227	
06:30	13		29						42		18:30	84		77						161	
06:45	10	44	36	106					46	150	18:45	84	396	59	325					143	721
07:00	21		26						47		19:00	63		68						131	
07:15	20		32						52		19:15	75		56						131	
07:30	29		50						79		19:30	77		57						134	
07:45	49	119	51	159					100	278	19:45	90	305	48	229					138	534
08:00	33		52						85		20:00	86		56						142	
08:15	36		59						95		20:15	71		43						114	
08:30	39		80						119		20:30	69		53						122	
08:45	43	151	96	287					139	438	20:45	60	286	44	196					104	482
09:00	60		57						117		21:00	58		44						102	
09:15	66		94						160		21:15	77		26						103	
09:30	65		107						172		21:30	51		36						87	
09:45	62	253	110	368					172	621	21:45	63	249	35	141					98	390
10:00	56		115						171		22:00	50		30						80	
10:15	71		81						152		22:15	39		28						67	
10:30	65		115						180		22:30	36		22						58	
10:45	73	265	127	438					200	703	22:45	29	154	15	95					44	249
11:00	83		96						179		23:00	18		21						39	
11:15	97		105						202		23:15	24		9						33	
11:30	83		90						173		23:30	21		14						35	
11:45	84	347	96	387					180	734	23:45	15	78	16	60					31	138
TOTALS		1497		1980						3477	TOTALS		3875		3086						6961
SPLIT %		43.1%		56.9%						33.3%	SPLIT %		55.7%		44.3%						66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,372	5,066	0	0	10,438

AM Peak Hour	11:45	10:30			11:15	PM Peak Hour	16:15	13:00			17:30
AM Pk Volume	373	443			762	PM Pk Volume	461	373			786
Pk Hr Factor	0.905	0.872			0.920	Pk Hr Factor	0.847	0.888			0.866
7 - 9 Volume	270	446	0	0	716	4 - 6 Volume	854	645	0	0	1499
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	16:15	16:45			16:00
7 - 9 Pk Volume	157	287	0	0	438	4 - 6 Pk Volume	461	325	0	0	771
Pk Hr Factor	0.801	0.747	0.000	0.000	0.788	Pk Hr Factor	0.847	0.923	0.000	0.000	0.897

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Riverdale St & Santo Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_015

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,513	11,599	24,112

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			62		56		118		12:00			221		261		482	
00:15			56		29		85		12:15			235		240		475	
00:30			62		29		91		12:30			254		230		484	
00:45			40	220	37	151	77	371	12:45			239	949	247	978	486	1927
01:00			40		25		65		13:00			219		225		444	
01:15			25		37		62		13:15			258		198		456	
01:30			47		49		96		13:30			210		226		436	
01:45			39	151	31	142	70	293	13:45			232	919	205	854	437	1773
02:00			23		37		60		14:00			243		224		467	
02:15			27		24		51		14:15			230		214		444	
02:30			28		22		50		14:30			261		201		462	
02:45			22	100	35	118	57	218	14:45			259	993	192	831	451	1824
03:00			17		24		41		15:00			225		192		417	
03:15			8		17		25		15:15			217		233		450	
03:30			17		26		43		15:30			221		241		462	
03:45			16	58	19	86	35	144	15:45			222	885	195	861	417	1746
04:00			15		17		32		16:00			236		198		434	
04:15			15		23		38		16:15			217		190		407	
04:30			10		14		24		16:30			241		198		439	
04:45			21	61	16	70	37	131	16:45			233	927	205	791	438	1718
05:00			11		15		26		17:00			204		205		409	
05:15			17		21		38		17:15			250		176		426	
05:30			23		27		50		17:30			228		178		406	
05:45			37	88	27	90	64	178	17:45			226	908	176	735	402	1643
06:00			32		30		62		18:00			179		152		331	
06:15			53		41		94		18:15			221		136		357	
06:30			90		56		146		18:30			233		157		390	
06:45			99	274	63	190	162	464	18:45			219	852	157	602	376	1454
07:00			56		52		108		19:00			192		165		357	
07:15			82		77		159		19:15			148		123		271	
07:30			83		131		214		19:30			157		180		337	
07:45			151	372	130	390	281	762	19:45			154	651	132	600	286	1251
08:00			85		113		198		20:00			144		133		277	
08:15			107		109		216		20:15			130		116		246	
08:30			90		114		204		20:30			132		109		241	
08:45			144	426	147	483	291	909	20:45			136	542	124	482	260	1024
09:00			115		159		274		21:00			124		93		217	
09:15			147		152		299		21:15			99		81		180	
09:30			145		183		328		21:30			121		73		194	
09:45			189	596	195	689	384	1285	21:45			86	430	90	337	176	767
10:00			160		203		363		22:00			75		80		155	
10:15			200		179		379		22:15			70		46		116	
10:30			177		201		378		22:30			62		38		100	
10:45			177	714	212	795	389	1509	22:45			84	291	50	214	134	505
11:00			245		219		464		23:00			50		29		79	
11:15			234		235		469		23:15			65		34		99	
11:30			205		238		443		23:30			46		89		135	
11:45			230	914	234	926	464	1840	23:45			31	192	32	184	63	376
TOTALS				3974		4130		**8104**	TOTALS				8539		7469		**16008**
SPLIT %				49.0%		51.0%		**33.6%**	SPLIT %				53.3%		46.7%		**66.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,513	11,599	24,112

AM Peak Hour			11:45	11:30	**11:45**	**PM Peak Hour**			14:00	12:00	**12:00**
AM Pk Volume			940	973	**1905**	**PM Pk Volume**			993	978	**1927**
Pk Hr Factor			0.925	0.932	**0.984**	**Pk Hr Factor**			0.951	0.937	**0.991**
7 - 9 Volume	0	0	798	873	**1671**	**4 - 6 Volume**	0	0	1835	1526	**3361**
7 - 9 Peak Hour			07:45	07:30	**07:30**	**4 - 6 Peak Hour**			16:30	16:15	**16:00**
7 - 9 Pk Volume	0	0	433	483	**909**	**4 - 6 Pk Volume**	0	0	928	798	**1718**
Pk Hr Factor	0.000	0.000	0.717	0.922	**0.809**	**Pk Hr Factor**	0.000	0.000	0.928	0.973	**0.978**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Santo Rd & Rancho Mission Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_016

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,465	13,722	28,187

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			63		54		117		12:00			266		267		533	
00:15			81		32		113		12:15			275		270		545	
00:30			76		43		119		12:30			277		264		541	
00:45			46	266	48	177	94	443	12:45			262	1080	245	1046	507	2126
01:00			52		38		90		13:00			263		268		531	
01:15			29		47		76		13:15			274		257		531	
01:30			61		46		107		13:30			272		264		536	
01:45			49	191	53	184	102	375	13:45			251	1060	262	1051	513	2111
02:00			32		38		70		14:00			288		281		569	
02:15			33		38		71		14:15			228		234		462	
02:30			34		27		61		14:30			293		235		528	
02:45			25	124	43	146	68	270	14:45			256	1065	261	1011	517	2076
03:00			22		27		49		15:00			245		275		520	
03:15			21		23		44		15:15			224		259		483	
03:30			25		29		54		15:30			261		283		544	
03:45			21	89	27	106	48	195	15:45			240	970	241	1058	481	2028
04:00			14		22		36		16:00			290		252		542	
04:15			22		23		45		16:15			254		263		517	
04:30			20		25		45		16:30			279		209		488	
04:45			21	77	21	91	42	168	16:45			286	1109	288	1012	574	2121
05:00			21		25		46		17:00			259		269		528	
05:15			29		32		61		17:15			263		236		499	
05:30			51		37		88		17:30			269		232		501	
05:45			42	143	31	125	73	268	17:45			248	1039	239	976	487	2015
06:00			48		41		89		18:00			231		176		407	
06:15			90		51		141		18:15			248		193		441	
06:30			143		77		220		18:30			250		185		435	
06:45			102	383	62	231	164	614	18:45			207	936	183	737	390	1673
07:00			107		54		161		19:00			193		164		357	
07:15			111		94		205		19:15			170		158		328	
07:30			112		134		246		19:30			161		176		337	
07:45			150	480	131	413	281	893	19:45			178	702	139	637	317	1339
08:00			98		125		223		20:00			142		158		300	
08:15			118		140		258		20:15			156		130		286	
08:30			118		129		247		20:30			160		148		308	
08:45			151	485	161	555	312	1040	20:45			146	604	110	546	256	1150
09:00			130		180		310		21:00			137		112		249	
09:15			173		205		378		21:15			126		87		213	
09:30			170		218		388		21:30			140		101		241	
09:45			212	685	217	820	429	1505	21:45			94	497	99	399	193	896
10:00			196		217		413		22:00			92		88		180	
10:15			218		205		423		22:15			74		50		124	
10:30			231		240		471		22:30			81		52		133	
10:45			227	872	248	910	475	1782	22:45			85	332	48	238	133	570
11:00			273		244		517		23:00			70		36		106	
11:15			242		270		512		23:15			67		61		128	
11:30			239		262		501		23:30			58		80		138	
11:45			281	1035	261	1037	542	2072	23:45			46	241	39	216	85	457
TOTALS				4830		4795		9625	TOTALS				9635		8927		18562
SPLIT %				50.2%		49.8%		34.1%	SPLIT %				51.9%		48.1%		65.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,465	13,722	28,187

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:00	14:45	13:15
AM Pk Volume			1099	1062	2161	PM Pk Volume			1109	1078	2149
Pk Hr Factor			0.978	0.983	0.991	Pk Hr Factor			0.956	0.952	0.944
7 - 9 Volume	0	0	965	968	1933	4 - 6 Volume	0	0	2148	1988	4136
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	485	555	1040	4 - 6 Pk Volume	0	0	1109	1029	2121
Pk Hr Factor	0.000	0.000	0.803	0.862	0.833	Pk Hr Factor	0.000	0.000	0.956	0.893	0.924

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rancho Mission Rd & I-15 NB Ramps

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_017

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,097	17,139	35,236

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			91		70		161		12:00			336		359		695	
00:15			115		52		167		12:15			323		327		650	
00:30			89		53		142		12:30			312		314		626	
00:45			70	365	56	231	126	596	12:45			308	1279	311	1311	619	2590
01:00			77		54		131		13:00			319		366		685	
01:15			49		53		102		13:15			310		331		641	
01:30			81		62		143		13:30			336		327		663	
01:45			62	269	53	222	115	491	13:45			312	1277	308	1332	620	2609
02:00			46		51		97		14:00			348		336		684	
02:15			48		49		97		14:15			305		303		608	
02:30			51		41		92		14:30			343		297		640	
02:45			31	176	54	195	85	371	14:45			313	1309	300	1236	613	2545
03:00			37		32		69		15:00			283		315		598	
03:15			32		28		60		15:15			291		289		580	
03:30			31		37		68		15:30			305		341		646	
03:45			28	128	35	132	63	260	15:45			285	1164	274	1219	559	2383
04:00			20		27		47		16:00			378		341		719	
04:15			28		26		54		16:15			364		340		704	
04:30			23		39		62		16:30			355		309		664	
04:45			27	98	33	125	60	223	16:45			417	1514	368	1358	785	2872
05:00			30		30		60		17:00			358		344		702	
05:15			32		34		66		17:15			396		314		710	
05:30			63		52		115		17:30			386		297		683	
05:45			54	179	46	162	100	341	17:45			340	1480	261	1216	601	2696
06:00			59		53		112		18:00			282		222		504	
06:15			104		67		171		18:15			301		300		601	
06:30			180		88		268		18:30			286		221		507	
06:45			129	472	80	288	209	760	18:45			267	1136	220	963	487	2099
07:00			71		77		148		19:00			230		202		432	
07:15			82		124		206		19:15			217		175		392	
07:30			109		157		266		19:30			218		190		408	
07:45			125	387	172	530	297	917	19:45			225	890	181	748	406	1638
08:00			87		165		252		20:00			199		191		390	
08:15			118		177		295		20:15			197		157		354	
08:30			142		181		323		20:30			208		171		379	
08:45			170	517	213	736	383	1253	20:45			181	785	134	653	315	1438
09:00			146		202		348		21:00			183		120		303	
09:15			209		230		439		21:15			173		115		288	
09:30			229		266		495		21:30			164		112		276	
09:45			266	850	275	973	541	1823	21:45			129	649	114	461	243	1110
10:00			203		305		508		22:00			115		100		215	
10:15			249		245		494		22:15			102		65		167	
10:30			306		287		593		22:30			125		68		193	
10:45			325	1083	345	1182	670	2265	22:45			111	453	67	300	178	753
11:00			322		325		647		23:00			94		47		141	
11:15			291		325		616		23:15			95		71		166	
11:30			329		313		642		23:30			76		88		164	
11:45			370	1312	354	1317	724	2629	23:45			60	325	43	249	103	574
TOTALS				5836		6093		11929	TOTALS				12261		11046		23307
SPLIT %				48.9%		51.1%		33.9%	SPLIT %				52.6%		47.4%		66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,097	17,139	35,236

AM Peak Hour			11:30	11:45	11:30	PM Peak Hour			16:45	16:15	16:45
AM Pk Volume			1358	1354	2711	PM Pk Volume			1557	1361	2880
Pk Hr Factor			0.918	0.943	0.936	Pk Hr Factor			0.933	0.925	0.917
7 - 9 Volume	0	0	904	1266	2170	4 - 6 Volume	0	0	2994	2574	5568
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	16:15	16:45
7 - 9 Pk Volume	0	0	517	736	1253	4 - 6 Pk Volume	0	0	1557	1361	2880
Pk Hr Factor	0.000	0.000	0.760	0.864	0.818	Pk Hr Factor	0.000	0.000	0.933	0.925	0.917

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. I-15 SB Ramps & Mission Village Dr

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_018

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,613	17,468	37,081

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			78		47		125		12:00			362		404		766	
00:15			96		53		149		12:15			345		383		728	
00:30			83		41		124		12:30			368		366		734	
00:45			54	311	47	188	101	499	12:45			346	1421	386	1539	732	2960
01:00			67		40		107		13:00			412		394		806	
01:15			31		37		68		13:15			394		358		752	
01:30			46		31		77		13:30			420		377		797	
01:45			33	177	30	138	63	315	13:45			429	1655	365	1494	794	3149
02:00			34		26		60		14:00			479		392		871	
02:15			28		29		57		14:15			423		321		744	
02:30			31		26		57		14:30			448		309		757	
02:45			25	118	23	104	48	222	14:45			445	1795	352	1374	797	3169
03:00			34		24		58		15:00			382		315		697	
03:15			35		28		63		15:15			417		343		760	
03:30			23		21		44		15:30			450		319		769	
03:45			18	110	17	90	35	200	15:45			435	1684	303	1280	738	2964
04:00			24		12		36		16:00			459		340		799	
04:15			14		25		39		16:15			490		333		823	
04:30			14		31		45		16:30			466		284		750	
04:45			14	66	34	102	48	168	16:45			489	1904	330	1287	819	3191
05:00			14		17		31		17:00			466		317		783	
05:15			23		34		57		17:15			490		281		771	
05:30			32		39		71		17:30			499		258		757	
05:45			44	113	45	135	89	248	17:45			416	1871	254	1110	670	2981
06:00			30		44		74		18:00			482		211		693	
06:15			44		53		97		18:15			391		234		625	
06:30			65		95		160		18:30			366		213		579	
06:45			58	197	87	279	145	476	18:45			307	1546	168	826	475	2372
07:00			59		94		153		19:00			280		172		452	
07:15			60		120		180		19:15			262		144		406	
07:30			107		124		231		19:30			247		180		427	
07:45			125	351	167	505	292	856	19:45			214	1003	164	660	378	1663
08:00			107		190		297		20:00			153		152		305	
08:15			106		197		303		20:15			188		128		316	
08:30			152		227		379		20:30			169		124		293	
08:45			155	520	232	846	387	1366	20:45			156	666	130	534	286	1200
09:00			148		222		370		21:00			181		101		282	
09:15			168		255		423		21:15			123		121		244	
09:30			174		309		483		21:30			133		88		221	
09:45			174	664	336	1122	510	1786	21:45			85	522	94	404	179	926
10:00			206		353		559		22:00			107		70		177	
10:15			237		376		613		22:15			67		57		124	
10:30			292		385		677		22:30			75		59		134	
10:45			279	1014	388	1502	667	2516	22:45			58	307	48	234	106	541
11:00			338		378		716		23:00			55		36		91	
11:15			311		384		695		23:15			57		44		101	
11:30			370		386		756		23:30			40		36		76	
11:45			397	1416	419	1567	816	2983	23:45			30	182	32	148	62	330
TOTALS				5057		6578		11635	TOTALS				14556		10890		25446
SPLIT %				43.5%		56.5%		31.4%	SPLIT %				57.2%		42.8%		68.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,613	17,468	37,081

AM Peak Hour			11:30	11:15	11:30	PM Peak Hour			16:45	12:00	13:15
AM Pk Volume			1474	1593	3066	PM Pk Volume			1944	1539	3214
Pk Hr Factor			0.928	0.950	0.939	Pk Hr Factor			0.974	0.952	0.923
7 - 9 Volume	0	0	871	1351	2222	4 - 6 Volume	0	0	3775	2397	6172
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	16:00	16:00
7 - 9 Pk Volume	0	0	520	846	1366	4 - 6 Pk Volume	0	0	1944	1287	3191
Pk Hr Factor	0.000	0.000	0.839	0.912	0.882	Pk Hr Factor	0.000	0.000	0.974	0.946	0.969

Prepared by NDS/ATD

VOLUME

Friars Rd E/O Northside Dr

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_019

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,147	15,149	30,296

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			41		37		78		12:00			324		303		627	
00:15			46		41		87		12:15			226		309		535	
00:30			57		39		96		12:30			287		328		615	
00:45			46	190	23	140	69	330	12:45			257	1094	315	1255	572	2349
01:00			40		28		68		13:00			351		350		701	
01:15			29		26		55		13:15			268		310		578	
01:30			40		29		69		13:30			296		331		627	
01:45			30	139	23	106	53	245	13:45			356	1271	339	1330	695	2601
02:00			37		23		60		14:00			327		362		689	
02:15			39		26		65		14:15			281		315		596	
02:30			21		19		40		14:30			373		280		653	
02:45			27	124	20	88	47	212	14:45			230	1211	267	1224	497	2435
03:00			20		19		39		15:00			278		272		550	
03:15			22		8		30		15:15			254		294		548	
03:30			13		16		29		15:30			377		275		652	
03:45			13	68	17	60	30	128	15:45			262	1171	282	1123	544	2294
04:00			16		10		26		16:00			455		351		806	
04:15			8		15		23		16:15			451		377		828	
04:30			10		16		26		16:30			416		310		726	
04:45			6	40	37	78	43	118	16:45			406	1728	302	1340	708	3068
05:00			7		12		19		17:00			398		304		702	
05:15			11		21		32		17:15			413		320		733	
05:30			19		31		50		17:30			393		260		653	
05:45			27	64	57	121	84	185	17:45			354	1558	248	1132	602	2690
06:00			35		58		93		18:00			311		221		532	
06:15			48		66		114		18:15			255		207		462	
06:30			44		97		141		18:30			236		198		434	
06:45			36	163	105	326	141	489	18:45			216	1018	142	768	358	1786
07:00			74		64		138		19:00			167		156		323	
07:15			84		70		154		19:15			172		134		306	
07:30			87		105		192		19:30			182		137		319	
07:45			104	349	147	386	251	735	19:45			158	679	142	569	300	1248
08:00			117		130		247		20:00			161		136		297	
08:15			131		122		253		20:15			132		110		242	
08:30			157		149		306		20:30			128		103		231	
08:45			162	567	192	593	354	1160	20:45			133	554	95	444	228	998
09:00			140		178		318		21:00			143		80		223	
09:15			141		234		375		21:15			101		65		166	
09:30			133		250		383		21:30			123		59		182	
09:45			109	523	311	973	420	1496	21:45			88	455	63	267	151	722
10:00			171		317		488		22:00			69		36		105	
10:15			175		308		483		22:15			44		22		66	
10:30			197		327		524		22:30			36		35		71	
10:45			212	755	351	1303	563	2058	22:45			47	196	29	122	76	318
11:00			257		336		593		23:00			54		36		90	
11:15			231		334		565		23:15			40		18		58	
11:30			298		309		607		23:30			35		25		60	
11:45			282	1068	322	1301	604	2369	23:45			33	162	21	100	54	262
TOTALS				4050		5475		9525	TOTALS				11097		9674		20771
SPLIT %				42.5%		57.5%		31.4%	SPLIT %				53.4%		46.6%		68.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,147	15,149	30,296

AM Peak Hour			11:15	10:30	11:15	PM Peak Hour			16:00	13:30	16:00
AM Pk Volume			1135	1348	2403	PM Pk Volume			1728	1347	3068
Pk Hr Factor			0.876	0.960	0.958	Pk Hr Factor			0.949	0.930	0.926
7 - 9 Volume	0	0	916	979	1895	4 - 6 Volume	0	0	3286	2472	5758
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	567	593	1160	4 - 6 Pk Volume	0	0	1728	1340	3068
Pk Hr Factor	0.000	0.000	0.875	0.772	0.819	Pk Hr Factor	0.000	0.000	0.949	0.889	0.926

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Northside Dr & Fenton Pkwy

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,306	11,760	26,066

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			51		30		81		12:00			275		276		551	
00:15			54		38		92		12:15			273		284		557	
00:30			56		28		84		12:30			289		257		546	
00:45			42	203	29	125	71	328	12:45			289	1126	246	1063	535	2189
01:00			47		32		79		13:00			297		319		616	
01:15			29		25		54		13:15			309		269		578	
01:30			41		26		67		13:30			335		283		618	
01:45			36	153	23	106	59	259	13:45			320	1261	293	1164	613	2425
02:00			40		25		65		14:00			337		327		664	
02:15			33		19		52		14:15			336		283		619	
02:30			26		17		43		14:30			307		249		556	
02:45			33	132	9	70	42	202	14:45			309	1289	234	1093	543	2382
03:00			19		16		35		15:00			291		237		528	
03:15			23		8		31		15:15			314		265		579	
03:30			13		18		31		15:30			307		252		559	
03:45			16	71	12	54	28	125	15:45			289	1201	211	965	500	2166
04:00			12		7		19		16:00			342		259		601	
04:15			8		12		20		16:15			344		237		581	
04:30			9		13		22		16:30			319		214		533	
04:45			14	43	11	43	25	86	16:45			332	1337	215	925	547	2262
05:00			10		11		21		17:00			305		226		531	
05:15			14		18		32		17:15			293		197		490	
05:30			20		20		40		17:30			263		188		451	
05:45			25	69	26	75	51	144	17:45			265	1126	198	809	463	1935
06:00			29		23		52		18:00			267		213		480	
06:15			30		30		60		18:15			261		209		470	
06:30			38		46		84		18:30			237		164		401	
06:45			34	131	44	143	78	274	18:45			198	963	131	717	329	1680
07:00			50		34		84		19:00			184		140		324	
07:15			62		38		100		19:15			193		129		322	
07:30			65		79		144		19:30			198		116		314	
07:45			68	245	77	228	145	473	19:45			167	742	110	495	277	1237
08:00			79		79		158		20:00			122		103		225	
08:15			90		86		176		20:15			142		91		233	
08:30			117		112		229		20:30			130		85		215	
08:45			126	412	123	400	249	812	20:45			142	536	90	369	232	905
09:00			119		99		218		21:00			108		69		177	
09:15			128		136		264		21:15			96		61		157	
09:30			132		143		275		21:30			111		65		176	
09:45			175	554	160	538	335	1092	21:45			85	400	71	266	156	666
10:00			189		163		352		22:00			81		47		128	
10:15			196		179		375		22:15			70		44		114	
10:30			193		220		413		22:30			73		38		111	
10:45			214	792	259	821	473	1613	22:45			51	275	32	161	83	436
11:00			250		243		493		23:00			60		33		93	
11:15			250		231		481		23:15			51		25		76	
11:30			273		252		525		23:30			32		23		55	
11:45			300	1073	309	1035	609	2108	23:45			29	172	14	95	43	267
TOTALS				3878		3638		7516	TOTALS				10428		8122		18550
SPLIT %				51.6%		48.4%		28.8%	SPLIT %				56.2%		43.8%		71.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,306	11,760	26,066

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:00	13:30	13:30
AM Pk Volume			1137	1126	2263	PM Pk Volume			1337	1186	2514
Pk Hr Factor			0.948	0.911	0.929	Pk Hr Factor			0.972	0.907	0.947
7 - 9 Volume	0	0	657	628	1285	4 - 6 Volume	0	0	2463	1734	4197
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	412	400	812	4 - 6 Pk Volume	0	0	1337	925	2262
Pk Hr Factor	0.000	0.000	0.817	0.813	0.815	Pk Hr Factor	0.000	0.000	0.972	0.893	0.941

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fenton Pkwy & River Run Dr

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,556	12,485	27,041

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			55		34		89		12:00			306		275		581	
00:15			55		39		94		12:15			289		266		555	
00:30			59		25		84		12:30			320		253		573	
00:45			48	217	31	129	79	346	12:45			317	1232	281	1075	598	2307
01:00			50		26		76		13:00			299		263		562	
01:15			32		24		56		13:15			321		294		615	
01:30			46		30		76		13:30			335		286		621	
01:45			43	171	19	99	62	270	13:45			350	1305	294	1137	644	2442
02:00			46		32		78		14:00			350		279		629	
02:15			32		16		48		14:15			365		310		675	
02:30			29		17		46		14:30			328		271		599	
02:45			38	145	13	78	51	223	14:45			311	1354	271	1131	582	2485
03:00			19		12		31		15:00			312		259		571	
03:15			25		11		36		15:15			301		267		568	
03:30			10		12		22		15:30			298		266		564	
03:45			18	72	11	46	29	118	15:45			314	1225	253	1045	567	2270
04:00			14		6		20		16:00			349		295		644	
04:15			7		12		19		16:15			313		248		561	
04:30			10		12		22		16:30			297		253		550	
04:45			9	40	11	41	20	81	16:45			322	1281	274	1070	596	2351
05:00			7		12		19		17:00			317		255		572	
05:15			9		18		27		17:15			274		253		527	
05:30			15		22		37		17:30			250		246		496	
05:45			20	51	29	81	49	132	17:45			237	1078	202	956	439	2034
06:00			30		30		60		18:00			236		246		482	
06:15			23		32		55		18:15			220		243		463	
06:30			35		47		82		18:30			244		195		439	
06:45			32	120	43	152	75	272	18:45			214	914	148	832	362	1746
07:00			43		37		80		19:00			201		140		341	
07:15			62		58		120		19:15			193		155		348	
07:30			58		76		134		19:30			196		127		323	
07:45			61	224	79	250	140	474	19:45			179	769	121	543	300	1312
08:00			64		83		147		20:00			134		99		233	
08:15			79		107		186		20:15			152		93		245	
08:30			117		117		234		20:30			128		89		217	
08:45			115	375	121	428	236	803	20:45			149	563	98	379	247	942
09:00			110		100		210		21:00			100		70		170	
09:15			135		138		273		21:15			95		64		159	
09:30			163		137		300		21:30			109		73		182	
09:45			207	615	164	539	371	1154	21:45			81	385	69	276	150	661
10:00			231		150		381		22:00			80		61		141	
10:15			185		196		381		22:15			66		53		119	
10:30			252		243		495		22:30			68		42		110	
10:45			219	887	264	853	483	1740	22:45			60	274	38	194	98	468
11:00			245		271		516		23:00			63		29		92	
11:15			252		255		507		23:15			47		23		70	
11:30			269		250		519		23:30			36		26		62	
11:45			316	1082	280	1056	596	2138	23:45			31	177	17	95	48	272
TOTALS				3999		3752		7751	TOTALS				10557		8733		19290
SPLIT %				51.6%		48.4%		28.7%	SPLIT %				54.7%		45.3%		71.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,556	12,485	27,041

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:30	13:30	13:30
AM Pk Volume			1231	1074	2305	PM Pk Volume			1400	1169	2569
Pk Hr Factor			0.962	0.959	0.967	Pk Hr Factor			0.959	0.943	0.951
7 - 9 Volume	0	0	599	678	1277	4 - 6 Volume	0	0	2359	2026	4385
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	375	428	803	4 - 6 Pk Volume	0	0	1281	1070	2351
Pk Hr Factor	0.000	0.000	0.801	0.884	0.851	Pk Hr Factor	0.000	0.000	0.918	0.907	0.913

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. River Run Dr & Rio Bonito Way

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_022

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,917	12,435	27,352

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			60		31		91		12:00			304		272		576	
00:15			56		41		97		12:15			293		274		567	
00:30			57		23		80		12:30			342		257		599	
00:45			50	223	31	126	81	349	12:45			324	1263	285	1088	609	2351
01:00			54		22		76		13:00			322		273		595	
01:15			33		21		54		13:15			325		291		616	
01:30			51		30		81		13:30			339		269		608	
01:45			47	185	21	94	68	279	13:45			366	1352	297	1130	663	2482
02:00			52		32		84		14:00			358		292		650	
02:15			37		19		56		14:15			374		312		686	
02:30			23		16		39		14:30			328		266		594	
02:45			38	150	12	79	50	229	14:45			331	1391	265	1135	596	2526
03:00			19		11		30		15:00			321		269		590	
03:15			21		12		33		15:15			323		270		593	
03:30			10		11		21		15:30			295		251		546	
03:45			17	67	9	43	26	110	15:45			339	1278	260	1050	599	2328
04:00			14		8		22		16:00			314		279		593	
04:15			10		10		20		16:15			319		260		579	
04:30			10		14		24		16:30			293		217		510	
04:45			9	43	10	42	19	85	16:45			318	1244	245	1001	563	2245
05:00			7		13		20		17:00			295		248		543	
05:15			6		17		23		17:15			297		243		540	
05:30			12		26		38		17:30			253		236		489	
05:45			20	45	31	87	51	132	17:45			279	1124	234	961	513	2085
06:00			31		29		60		18:00			245		265		510	
06:15			25		34		59		18:15			235		236		471	
06:30			32		52		84		18:30			237		204		441	
06:45			32	120	43	158	75	278	18:45			215	932	152	857	367	1789
07:00			46		42		88		19:00			220		148		368	
07:15			43		48		91		19:15			205		155		360	
07:30			66		63		129		19:30			202		132		334	
07:45			59	214	79	232	138	446	19:45			196	823	118	553	314	1376
08:00			59		79		138		20:00			137		97		234	
08:15			67		93		160		20:15			168		91		259	
08:30			99		103		202		20:30			147		85		232	
08:45			104	329	126	401	230	730	20:45			154	606	99	372	253	978
09:00			109		109		218		21:00			115		78		193	
09:15			128		143		271		21:15			98		71		169	
09:30			174		136		310		21:30			121		73		194	
09:45			216	627	173	561	389	1188	21:45			94	428	69	291	163	719
10:00			233		154		387		22:00			80		63		143	
10:15			184		198		382		22:15			76		51		127	
10:30			256		240		496		22:30			75		42		117	
10:45			217	890	264	856	481	1746	22:45			60	291	35	191	95	482
11:00			246		251		497		23:00			66		30		96	
11:15			257		252		509		23:15			54		21		75	
11:30			264		246		510		23:30			34		27		61	
11:45			336	1103	286	1035	622	2138	23:45			35	189	14	92	49	281
TOTALS				3996		3714		7710	TOTALS				10921		8721		19642
SPLIT %				51.8%		48.2%		28.2%	SPLIT %				55.6%		44.4%		71.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,917	12,435	27,352

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:30	13:30	13:30
AM Pk Volume			1275	1089	2364	PM Pk Volume			1437	1170	2607
Pk Hr Factor			0.932	0.952	0.950	Pk Hr Factor			0.961	0.938	0.950
7 - 9 Volume	0	0	543	633	1176	4 - 6 Volume	0	0	2368	1962	4330
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	329	401	730	4 - 6 Pk Volume	0	0	1244	1001	2245
Pk Hr Factor	0.000	0.000	0.791	0.796	0.793	Pk Hr Factor	0.000	0.000	0.975	0.897	0.946

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rio Bonito Way & Qualcomm Way

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_023

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,102	12,524	26,626

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			58		33		91		12:00			286		269		555	
00:15			55		42		97		12:15			276		282		558	
00:30			55		22		77		12:30			321		264		585	
00:45			51	219	32	129	83	348	12:45			302	1185	284	1099	586	2284
01:00			54		20		74		13:00			316		281		597	
01:15			30		23		53		13:15			313		295		608	
01:30			48		30		78		13:30			314		266		580	
01:45			49	181	21	94	70	275	13:45			353	1296	306	1148	659	2444
02:00			50		30		80		14:00			348		300		648	
02:15			34		17		51		14:15			351		314		665	
02:30			25		16		41		14:30			324		273		597	
02:45			38	147	13	76	51	223	14:45			308	1331	264	1151	572	2482
03:00			17		10		27		15:00			313		264		577	
03:15			19		11		30		15:15			294		270		564	
03:30			9		12		21		15:30			279		259		538	
03:45			17	62	9	42	26	104	15:45			317	1203	268	1061	585	2264
04:00			15		8		23		16:00			306		286		592	
04:15			6		10		16		16:15			298		262		560	
04:30			9		13		22		16:30			273		231		504	
04:45			10	40	9	40	19	80	16:45			297	1174	252	1031	549	2205
05:00			7		13		20		17:00			272		256		528	
05:15			5		16		21		17:15			271		238		509	
05:30			16		20		36		17:30			249		235		484	
05:45			19	47	23	72	42	119	17:45			254	1046	233	962	487	2008
06:00			28		37		65		18:00			222		273		495	
06:15			26		34		60		18:15			218		233		451	
06:30			30		43		73		18:30			213		203		416	
06:45			29	113	44	158	73	271	18:45			196	849	151	860	347	1709
07:00			41		40		81		19:00			215		146		361	
07:15			39		50		89		19:15			195		155		350	
07:30			57		63		120		19:30			188		129		317	
07:45			52	189	79	232	131	421	19:45			191	789	119	549	310	1338
08:00			56		75		131		20:00			131		102		233	
08:15			59		97		156		20:15			160		86		246	
08:30			93		94		187		20:30			141		87		228	
08:45			103	311	129	395	232	706	20:45			138	570	98	373	236	943
09:00			101		108		209		21:00			117		77		194	
09:15			121		140		261		21:15			96		71		167	
09:30			173		143		316		21:30			119		70		189	
09:45			202	597	168	559	370	1156	21:45			93	425	60	278	153	703
10:00			216		150		366		22:00			78		75		153	
10:15			177		201		378		22:15			70		54		124	
10:30			232		239		471		22:30			75		41		116	
10:45			200	825	274	864	474	1689	22:45			55	278	37	207	92	485
11:00			239		252		491		23:00			66		31		97	
11:15			237		260		497		23:15			53		22		75	
11:30			245		236		481		23:30			34		26		60	
11:45			322	1043	304	1052	626	2095	23:45			29	182	13	92	42	274
TOTALS				3774		3713		7487	TOTALS				10328		8811		19139
SPLIT %				50.4%		49.6%		28.1%	SPLIT %				54.0%		46.0%		71.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,102	12,524	26,626

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:45	13:45	13:45
AM Pk Volume			1205	1119	2324	PM Pk Volume			1376	1193	2569
Pk Hr Factor			0.936	0.920	0.928	Pk Hr Factor			0.975	0.950	0.966
7 - 9 Volume	0	0	500	627	1127	4 - 6 Volume	0	0	2220	1993	4213
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	311	395	706	4 - 6 Pk Volume	0	0	1174	1031	2205
Pk Hr Factor	0.000	0.000	0.755	0.766	0.761	Pk Hr Factor	0.000	0.000	0.959	0.901	0.931

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Qualcomm Way & Gill Village Way

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,021	12,498	25,519

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			55		37		92		12:00			279		282		561	
00:15			50		43		93		12:15			261		271		532	
00:30			56		32		88		12:30			287		267		554	
00:45			53	214	39	151	92	365	12:45			275	1102	261	1081	536	2183
01:00			40		27		67		13:00			278		272		550	
01:15			28		28		56		13:15			287		258		545	
01:30			42		24		66		13:30			285		286		571	
01:45			51	161	21	100	72	261	13:45			320	1170	263	1079	583	2249
02:00			44		28		72		14:00			312		277		589	
02:15			33		20		53		14:15			317		311		628	
02:30			21		20		41		14:30			294		282		576	
02:45			37	135	18	86	55	221	14:45			276	1199	246	1116	522	2315
03:00			18		12		30		15:00			293		267		560	
03:15			18		16		34		15:15			274		269		543	
03:30			10		11		21		15:30			258		258		516	
03:45			19	65	12	51	31	116	15:45			262	1087	264	1058	526	2145
04:00			16		8		24		16:00			283		282		565	
04:15			8		12		20		16:15			275		261		536	
04:30			10		16		26		16:30			248		235		483	
04:45			13	47	16	52	29	99	16:45			254	1060	257	1035	511	2095
05:00			7		13		20		17:00			262		254		516	
05:15			6		17		23		17:15			257		243		500	
05:30			13		22		35		17:30			234		244		478	
05:45			15	41	24	76	39	117	17:45			237	990	225	966	462	1956
06:00			30		34		64		18:00			208		268		476	
06:15			23		42		65		18:15			212		246		458	
06:30			30		51		81		18:30			182		208		390	
06:45			28	111	38	165	66	276	18:45			182	784	181	903	363	1687
07:00			29		50		79		19:00			190		129		319	
07:15			37		50		87		19:15			195		161		356	
07:30			54		63		117		19:30			174		132		306	
07:45			51	171	81	244	132	415	19:45			192	751	116	538	308	1289
08:00			43		78		121		20:00			112		101		213	
08:15			61		87		148		20:15			146		105		251	
08:30			78		116		194		20:30			145		96		241	
08:45			98	280	130	411	228	691	20:45			116	519	103	405	219	924
09:00			108		117		225		21:00			115		79		194	
09:15			117		125		242		21:15			92		76		168	
09:30			154		128		282		21:30			102		81		183	
09:45			197	576	160	530	357	1106	21:45			78	387	72	308	150	695
10:00			204		147		351		22:00			74		68		142	
10:15			182		200		382		22:15			60		55		115	
10:30			209		238		447		22:30			68		48		116	
10:45			188	783	258	843	446	1626	22:45			56	258	32	203	88	461
11:00			230		255		485		23:00			56		35		91	
11:15			233		240		473		23:15			44		20		64	
11:30			224		238		462		23:30			30		31		61	
11:45			283	970	264	997	547	1967	23:45			30	160	14	100	44	260
TOTALS				3554		3706		7260	TOTALS				9467		8792		18259
SPLIT %				49.0%		51.0%		28.4%	SPLIT %				51.8%		48.2%		71.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,021	12,498	25,519

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:45	13:30	13:45
AM Pk Volume			1110	1084	2194	PM Pk Volume			1243	1137	2376
Pk Hr Factor			0.967	0.961	0.978	Pk Hr Factor			0.971	0.914	0.946
7 - 9 Volume	0	0	451	655	1106	4 - 6 Volume	0	0	2050	2001	4051
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	280	411	691	4 - 6 Pk Volume	0	0	1060	1035	2095
Pk Hr Factor	0.000	0.000	0.714	0.790	0.758	Pk Hr Factor	0.000	0.000	0.936	0.918	0.927

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Gill Village Way & Mission Center Dr

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_025

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,327	12,320	27,647

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			73		40		113		12:00			324		269		593	
00:15			71		38		109		12:15			308		268		576	
00:30			72		33		105		12:30			343		267		610	
00:45			61	277	36	147	97	424	12:45			319	1294	264	1068	583	2362
01:00			58		28		86		13:00			314		267		581	
01:15			37		27		64		13:15			312		268		580	
01:30			53		25		78		13:30			323		281		604	
01:45			71	219	20	100	91	319	13:45			332	1281	264	1080	596	2361
02:00			57		29		86		14:00			374		268		642	
02:15			47		20		67		14:15			362		297		659	
02:30			41		18		59		14:30			333		282		615	
02:45			46	191	16	83	62	274	14:45			316	1385	245	1092	561	2477
03:00			32		11		43		15:00			327		264		591	
03:15			25		17		42		15:15			314		260		574	
03:30			17		9		26		15:30			313		251		564	
03:45			24	98	13	50	37	148	15:45			307	1261	270	1045	577	2306
04:00			12		9		21		16:00			343		276		619	
04:15			12		11		23		16:15			339		255		594	
04:30			11		16		27		16:30			299		232		531	
04:45			11	46	18	54	29	100	16:45			297	1278	242	1005	539	2283
05:00			12		13		25		17:00			288		256		544	
05:15			11		15		26		17:15			319		229		548	
05:30			17		23		40		17:30			280		239		519	
05:45			23	63	24	75	47	138	17:45			264	1151	225	949	489	2100
06:00			29		34		63		18:00			256		261		517	
06:15			22		39		61		18:15			247		256		503	
06:30			28		47		75		18:30			250		201		451	
06:45			34	113	36	156	70	269	18:45			217	970	181	899	398	1869
07:00			34		52		86		19:00			227		127		354	
07:15			39		47		86		19:15			232		163		395	
07:30			57		60		117		19:30			223		130		353	
07:45			59	189	80	239	139	428	19:45			207	889	114	534	321	1423
08:00			47		79		126		20:00			150		93		243	
08:15			62		87		149		20:15			176		102		278	
08:30			85		114		199		20:30			182		93		275	
08:45			98	292	136	416	234	708	20:45			136	644	102	390	238	1034
09:00			113		116		229		21:00			147		79		226	
09:15			134		120		254		21:15			135		78		213	
09:30			162		126		288		21:30			136		77		213	
09:45			216	625	153	515	369	1140	21:45			97	515	71	305	168	820
10:00			218		142		360		22:00			85		72		157	
10:15			195		203		398		22:15			94		56		150	
10:30			230		237		467		22:30			94		49		143	
10:45			213	856	244	826	457	1682	22:45			71	344	33	210	104	554
11:00			271		255		526		23:00			70		35		105	
11:15			258		239		497		23:15			62		19		81	
11:30			263		231		494		23:30			46		28		74	
11:45			334	1126	261	986	595	2112	23:45			42	220	14	96	56	316
TOTALS				4095		3647		7742	TOTALS				11232		8673		19905
SPLIT %				52.9%		47.1%		28.0%	SPLIT %				56.4%		43.6%		72.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,327	12,320	27,647

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:45	13:45	13:45
AM Pk Volume			1309	1065	2374	PM Pk Volume			1401	1111	2512
Pk Hr Factor			0.954	0.990	0.973	Pk Hr Factor			0.936	0.935	0.953
7 - 9 Volume	0	0	481	655	1136	4 - 6 Volume	0	0	2429	1954	4383
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	292	416	708	4 - 6 Pk Volume	0	0	1278	1005	2283
Pk Hr Factor	0.000	0.000	0.745	0.765	0.756	Pk Hr Factor	0.000	0.000	0.931	0.910	0.922

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Mission Center Dr & Frazee Rd

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_026

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,953	13,725	28,678

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			88		58		146		12:00			310		276		586	
00:15			82		67		149		12:15			289		291		580	
00:30			76		43		119		12:30			324		305		629	
00:45			52	298	48	216	100	514	12:45			306	1229	276	1148	582	2377
01:00			62		43		105		13:00			280		298		578	
01:15			41		39		80		13:15			275		297		572	
01:30			57		46		103		13:30			334		286		620	
01:45			76	236	37	165	113	401	13:45			301	1190	291	1172	592	2362
02:00			76		45		121		14:00			336		282		618	
02:15			55		21		76		14:15			292		319		611	
02:30			43		19		62		14:30			305		296		601	
02:45			50	224	18	103	68	327	14:45			283	1216	268	1165	551	2381
03:00			32		10		42		15:00			281		289		570	
03:15			28		20		48		15:15			297		278		575	
03:30			23		16		39		15:30			306		269		575	
03:45			23	106	16	62	39	168	15:45			313	1197	265	1101	578	2298
04:00			12		6		18		16:00			343		287		630	
04:15			22		16		38		16:15			335		280		615	
04:30			12		19		31		16:30			327		265		592	
04:45			17	63	18	59	35	122	16:45			311	1316	251	1083	562	2399
05:00			10		15		25		17:00			323		261		584	
05:15			12		24		36		17:15			344		283		627	
05:30			15		28		43		17:30			278		267		545	
05:45			19	56	24	91	43	147	17:45			301	1246	252	1063	553	2309
06:00			29		40		69		18:00			260		272		532	
06:15			27		47		74		18:15			208		264		472	
06:30			29		63		92		18:30			229		224		453	
06:45			34	119	49	199	83	318	18:45			197	894	193	953	390	1847
07:00			41		51		92		19:00			209		171		380	
07:15			35		53		88		19:15			206		186		392	
07:30			62		73		135		19:30			200		156		356	
07:45			65	203	74	251	139	454	19:45			197	812	138	651	335	1463
08:00			55		100		155		20:00			151		114		265	
08:15			77		104		181		20:15			183		129		312	
08:30			71		117		188		20:30			175		122		297	
08:45			103	306	147	468	250	774	20:45			142	651	122	487	264	1138
09:00			114		127		241		21:00			137		102		239	
09:15			126		150		276		21:15			157		89		246	
09:30			150		157		307		21:30			136		98		234	
09:45			208	598	161	595	369	1193	21:45			106	536	77	366	183	902
10:00			180		167		347		22:00			92		76		168	
10:15			210		215		425		22:15			106		62		168	
10:30			216		233		449		22:30			84		59		143	
10:45			222	828	262	877	484	1705	22:45			81	363	47	244	128	607
11:00			236		291		527		23:00			75		42		117	
11:15			227		246		473		23:15			69		34		103	
11:30			256		273		529		23:30			56		28		84	
11:45			305	1024	275	1085	580	2109	23:45			42	242	17	121	59	363
TOTALS				4061		4171		8232	TOTALS				10892		9554		20446
SPLIT %				49.3%		50.7%		28.7%	SPLIT %				53.3%		46.7%		71.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,953	13,725	28,678

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			15:45	13:45	13:30
AM Pk Volume			1228	1147	2375	PM Pk Volume			1318	1188	2441
Pk Hr Factor			0.948	0.940	0.944	Pk Hr Factor			0.961	0.931	0.984
7 - 9 Volume	0	0	509	719	1228	4 - 6 Volume	0	0	2562	2146	4708
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	306	468	774	4 - 6 Pk Volume	0	0	1316	1083	2399
Pk Hr Factor	0.000	0.000	0.743	0.796	0.774	Pk Hr Factor	0.000	0.000	0.959	0.943	0.952

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Frazee Rd & SR-163 NB Ramps

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_027

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,286	18,909	41,195

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			108		88		196		12:00			437		322		759	
00:15			95		93		188		12:15			475		365		840	
00:30			90		74		164		12:30			467		383		850	
00:45			74	367	80	335	154	702	12:45			459	1838	355	1425	814	3263
01:00			77		63		140		13:00			410		356		766	
01:15			51		63		114		13:15			446		389		835	
01:30			74		54		128		13:30			452		397		849	
01:45			77	279	58	238	135	517	13:45			459	1767	389	1531	848	3298
02:00			91		56		147		14:00			489		380		869	
02:15			68		33		101		14:15			431		374		805	
02:30			60		40		100		14:30			416		400		816	
02:45			58	277	30	159	88	436	14:45			393	1729	357	1511	750	3240
03:00			37		20		57		15:00			426		368		794	
03:15			35		28		63		15:15			415		350		765	
03:30			32		25		57		15:30			428		384		812	
03:45			26	130	25	98	51	228	15:45			434	1703	348	1450	782	3153
04:00			21		11		32		16:00			488		429		917	
04:15			26		15		41		16:15			447		436		883	
04:30			18		22		40		16:30			451		390		841	
04:45			23	88	23	71	46	159	16:45			459	1845	402	1657	861	3502
05:00			17		19		36		17:00			469		427		896	
05:15			19		30		49		17:15			443		411		854	
05:30			26		39		65		17:30			416		412		828	
05:45			42	104	32	120	74	224	17:45			448	1776	364	1614	812	3390
06:00			41		39		80		18:00			343		363		706	
06:15			52		54		106		18:15			313		351		664	
06:30			63		74		137		18:30			319		290		609	
06:45			72	228	59	226	131	454	18:45			287	1262	272	1276	559	2538
07:00			71		73		144		19:00			317		258		575	
07:15			79		70		149		19:15			304		282		586	
07:30			128		83		211		19:30			277		256		533	
07:45			136	414	114	340	250	754	19:45			265	1163	238	1034	503	2197
08:00			125		122		247		20:00			229		192		421	
08:15			168		133		301		20:15			264		205		469	
08:30			198		148		346		20:30			250		187		437	
08:45			225	716	182	585	407	1301	20:45			209	952	181	765	390	1717
09:00			223		162		385		21:00			178		178		356	
09:15			229		189		418		21:15			204		160		364	
09:30			298		185		483		21:30			175		152		327	
09:45			353	1103	211	747	564	1850	21:45			155	712	150	640	305	1352
10:00			348		204		552		22:00			132		130		262	
10:15			341		269		610		22:15			144		108		252	
10:30			380		302		682		22:30			120		93		213	
10:45			368	1437	314	1089	682	2526	22:45			114	510	75	406	189	916
11:00			375		331		706		23:00			98		78		176	
11:15			354		328		682		23:15			74		69		143	
11:30			406		314		720		23:30			73		51		124	
11:45			448	1583	385	1358	833	2941	23:45			58	303	36	234	94	537
TOTALS				6726		5366		12092	TOTALS				15560		13543		29103
SPLIT %				55.6%		44.4%		29.4%	SPLIT %				53.5%		46.5%		70.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,286	18,909	41,195

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:15	16:00	16:00
AM Pk Volume			1827	1455	3282	PM Pk Volume			1846	1657	3502
Pk Hr Factor			0.962	0.945	0.965	Pk Hr Factor			0.944	0.950	0.955
7 - 9 Volume	0	0	1130	925	2055	4 - 6 Volume	0	0	3621	3271	6892
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	716	585	1301	4 - 6 Pk Volume	0	0	1845	1657	3502
Pk Hr Factor	0.000	0.000	0.796	0.804	0.799	Pk Hr Factor	0.000	0.000	0.945	0.950	0.955

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. SR-163 NB Ramps & SR-163 SB Ramps

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_028

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,231	24,580	45,811

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			86		104		190		12:00			404		458		862	
00:15			82		80		162		12:15			410		504		914	
00:30			77		71		148		12:30			409		529		938	
00:45			40	285	87	342	127	627	12:45			418	1641	498	1989	916	3630
01:00			64		74		138		13:00			386		455		841	
01:15			38		67		105		13:15			409		505		914	
01:30			34		73		107		13:30			403		563		966	
01:45			35	171	66	280	101	451	13:45			448	1646	520	2043	968	3689
02:00			21		57		78		14:00			438		492		930	
02:15			26		69		95		14:15			431		511		942	
02:30			23		43		66		14:30			420		494		914	
02:45			23	93	45	214	68	307	14:45			427	1716	475	1972	902	3688
03:00			20		43		63		15:00			486		474		960	
03:15			14		29		43		15:15			459		458		917	
03:30			19		36		55		15:30			461		481		942	
03:45			16	69	25	133	41	202	15:45			445	1851	477	1890	922	3741
04:00			14		28		42		16:00			467		480		947	
04:15			13		29		42		16:15			466		513		979	
04:30			14		26		40		16:30			493		434		927	
04:45			14	55	31	114	45	169	16:45			493	1919	478	1905	971	3824
05:00			15		24		39		17:00			487		490		977	
05:15			21		37		58		17:15			478		459		937	
05:30			25		51		76		17:30			438		425		863	
05:45			25	86	42	154	67	240	17:45			459	1862	416	1790	875	3652
06:00			35		40		75		18:00			415		436		851	
06:15			43		66		109		18:15			395		391		786	
06:30			48		93		141		18:30			394		392		786	
06:45			52	178	73	272	125	450	18:45			390	1594	326	1545	716	3139
07:00			59		86		145		19:00			414		317		731	
07:15			68		94		162		19:15			409		322		731	
07:30			98		118		216		19:30			333		311		644	
07:45			110	335	160	458	270	793	19:45			271	1427	286	1236	557	2663
08:00			123		149		272		20:00			246		270		516	
08:15			135		160		295		20:15			258		272		530	
08:30			156		209		365		20:30			209		257		466	
08:45			183	597	244	762	427	1359	20:45			192	905	251	1050	443	1955
09:00			175		213		388		21:00			181		230		411	
09:15			192		242		434		21:15			188		198		386	
09:30			254		293		547		21:30			158		191		349	
09:45			280	901	330	1078	610	1979	21:45			138	665	201	820	339	1485
10:00			275		298		573		22:00			117		156		273	
10:15			290		431		721		22:15			124		141		265	
10:30			304		472		776		22:30			95		137		232	
10:45			313	1182	475	1676	788	2858	22:45			91	427	106	540	197	967
11:00			315		476		791		23:00			77		110		187	
11:15			290		480		770		23:15			67		81		148	
11:30			383		480		863		23:30			65		80		145	
11:45			376	1364	539	1975	915	3339	23:45			53	262	71	342	124	604
TOTALS				5316		7458		12774	TOTALS				15915		17122		33037
SPLIT %				41.6%		58.4%		27.9%	SPLIT %				48.2%		51.8%		72.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,231	24,580	45,811

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:30	13:30	16:15
AM Pk Volume			1599	2030	3629	PM Pk Volume			1951	2086	3854
Pk Hr Factor			0.975	0.942	0.967	Pk Hr Factor			0.989	0.926	0.984
7 - 9 Volume	0	0	932	1220	2152	4 - 6 Volume	0	0	3781	3695	7476
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	597	762	1359	4 - 6 Pk Volume	0	0	1951	1915	3854
Pk Hr Factor	0.000	0.000	0.816	0.781	0.796	Pk Hr Factor	0.000	0.000	0.989	0.933	0.984

Prepared by NDS/ATD

VOLUME

Qualcomm Way Bet. Friars Rd & Rio San Diego Dr

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_029

DAILY TOTALS	NB	SB	EB	WB	Total
	5,310	3,847	0	0	9,157

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	19		17						36		12:00	105		93						198	
00:15	21		16						37		12:15	99		95						194	
00:30	25		7						32		12:30	126		93						219	
00:45	25	90	15	55					40	145	12:45	125	455	83	364					208	819
01:00	24		7						31		13:00	123		94						217	
01:15	11		7						18		13:15	106		89						195	
01:30	14		11						25		13:30	119		79						198	
01:45	11	60	10	35					21	95	13:45	126	474	109	371					235	845
02:00	14		9						23		14:00	130		115						245	
02:15	13		8						21		14:15	115		80						195	
02:30	7		4						11		14:30	114		79						193	
02:45	14	48	5	26					19	74	14:45	101	460	95	369					196	829
03:00	11		6						17		15:00	103		80						183	
03:15	5		3						8		15:15	98		89						187	
03:30	2		3						5		15:30	112		82						194	
03:45	6	24	2	14					8	38	15:45	131	444	76	327					207	771
04:00	6		3						9		16:00	115		86						201	
04:15	4		2						6		16:15	101		85						186	
04:30	5		1						6		16:30	105		68						173	
04:45	4	19	3	9					7	28	16:45	131	452	64	303					195	755
05:00	5		5						10		17:00	98		77						175	
05:15	6		5						11		17:15	101		80						181	
05:30	10		3						13		17:30	97		63						160	
05:45	12	33	5	18					17	51	17:45	87	383	77	297					164	680
06:00	6		10						16		18:00	97		57						154	
06:15	19		4						23		18:15	94		72						166	
06:30	14		4						18		18:30	101		63						164	
06:45	6	45	7	25					13	70	18:45	86	378	43	235					129	613
07:00	24		7						31		19:00	81		58						139	
07:15	19		15						34		19:15	70		55						125	
07:30	18		10						28		19:30	56		51						107	
07:45	32	93	12	44					44	137	19:45	59	266	41	205					100	471
08:00	31		17						48		20:00	61		45						106	
08:15	27		24						51		20:15	59		31						90	
08:30	47		21						68		20:30	45		22						67	
08:45	55	160	28	90					83	250	20:45	58	223	33	131					91	354
09:00	44		29						73		21:00	44		32						76	
09:15	43		44						87		21:15	42		30						72	
09:30	55		52						107		21:30	38		21						59	
09:45	62	204	54	179					116	383	21:45	43	167	19	102					62	269
10:00	59		45						104		22:00	20		13						33	
10:15	72		51						123		22:15	25		14						39	
10:30	82		68						150		22:30	23		11						34	
10:45	79	292	73	237					152	529	22:45	14	82	15	53					29	135
11:00	95		81						176		23:00	23		9						32	
11:15	81		84						165		23:15	17		8						25	
11:30	101		75						176		23:30	13		7						20	
11:45	119	396	90	330					209	726	23:45	9	62	4	28					13	90
TOTALS		1464		1062						**2526**	**TOTALS**		3846		2785						**6631**
SPLIT %		58.0%		42.0%						**27.6%**	**SPLIT %**		58.0%		42.0%						**72.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	5,310	3,847	0	0	9,157

AM Peak Hour	11:45	11:45			**11:45**	**PM Peak Hour**	13:30	13:15			**13:15**
AM Pk Volume	449	371			**820**	**PM Pk Volume**	490	392			**873**
Pk Hr Factor	0.891	0.976			**0.936**	**Pk Hr Factor**	0.942	0.852			**0.891**
7 - 9 Volume	253	134	0	0	**387**	**4 - 6 Volume**	835	600	0	0	**1435**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:00			**16:00**
7 - 9 Pk Volume	160	90	0	0	**250**	**4 - 6 Pk Volume**	452	303	0	0	**755**
Pk Hr Factor	0.727	0.804	0.000	0.000	**0.753**	**Pk Hr Factor**	0.863	0.881	0.000	0.000	**0.939**

Prepared by NDS/ATD

VOLUME

Qualcomm Way N/O Camino Del Rio N

Day: Sunday
Date: 7/12/2015

City: San Diego
Project #: CA15_4209_030

DAILY TOTALS	NB	SB	EB	WB	Total
	6,645	8,308	0	0	14,953

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	16		34						50		**12:00**	171		171						342	
00:15	24		31						55		**12:15**	172		183						355	
00:30	28		29						57		**12:30**	152		176						328	
00:45	10	78	24	118					34	196	**12:45**	135	630	175	705					310	1335
01:00	14		23						37		**13:00**	130		177						307	
01:15	13		16						29		**13:15**	128		175						303	
01:30	16		27						43		**13:30**	135		165						300	
01:45	14	57	27	93					41	150	**13:45**	164	557	200	717					364	1274
02:00	20		26						46		**14:00**	153		192						345	
02:15	11		19						30		**14:15**	136		180						316	
02:30	11		23						34		**14:30**	140		199						339	
02:45	18	60	12	80					30	140	**14:45**	133	562	196	767					329	1329
03:00	6		19						25		**15:00**	147		173						320	
03:15	8		7						15		**15:15**	137		151						288	
03:30	3		8						11		**15:30**	120		199						319	
03:45	11	28	9	43					20	71	**15:45**	132	536	179	702					311	1238
04:00	2		11						13		**16:00**	206		177						383	
04:15	4		4						8		**16:15**	173		170						343	
04:30	4		10						14		**16:30**	190		146						336	
04:45	6	16	10	35					16	51	**16:45**	177	746	155	648					332	1394
05:00	6		11						17		**17:00**	174		178						352	
05:15	7		9						16		**17:15**	144		161						305	
05:30	4		13						17		**17:30**	168		167						335	
05:45	13	30	14	47					27	77	**17:45**	127	613	148	654					275	1267
06:00	8		26						34		**18:00**	62		163						225	
06:15	15		17						32		**18:15**	75		156						231	
06:30	25		18						43		**18:30**	82		133						215	
06:45	15	63	29	90					44	153	**18:45**	84	303	108	560					192	863
07:00	38		17						55		**19:00**	85		115						200	
07:15	31		45						76		**19:15**	62		125						187	
07:30	35		33						68		**19:30**	53		108						161	
07:45	31	135	35	130					66	265	**19:45**	55	255	82	430					137	685
08:00	59		31						90		**20:00**	42		92						134	
08:15	48		57						105		**20:15**	52		66						118	
08:30	77		65						142		**20:30**	42		79						121	
08:45	67	251	63	216					130	467	**20:45**	33	169	67	304					100	473
09:00	37		56						93		**21:00**	36		63						99	
09:15	66		78						144		**21:15**	33		58						91	
09:30	112		95						207		**21:30**	31		61						92	
09:45	120	335	91	320					211	655	**21:45**	29	129	47	229					76	358
10:00	97		92						189		**22:00**	14		46						60	
10:15	91		132						223		**22:15**	21		29						50	
10:30	117		159						276		**22:30**	14		32						46	
10:45	150	455	150	533					300	988	**22:45**	16	65	36	143					52	208
11:00	98		165						263		**23:00**	11		32						43	
11:15	87		166						253		**23:15**	17		34						51	
11:30	163		134						297		**23:30**	11		21						32	
11:45	173	521	162	627					335	1148	**23:45**	12	51	30	117					42	168
TOTALS		2029		2332						**4361**	**TOTALS**		4616		5976						**10592**
SPLIT %		46.5%		53.5%						**29.2%**	**SPLIT %**		43.6%		56.4%						**70.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	6,645	8,308	0	0	14,953

AM Peak Hour	11:30	11:45			**11:45**	**PM Peak Hour**	16:00	13:45			**16:00**
AM Pk Volume	679	692			**1360**	**PM Pk Volume**	746	771			**1394**
Pk Hr Factor	0.981	0.945			**0.958**	**Pk Hr Factor**	0.905	0.964			**0.910**
7 - 9 Volume	386	346	0	0	**732**	**4 - 6 Volume**	1359	1302	0	0	**2661**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:45			**16:00**
7 - 9 Pk Volume	251	216	0	0	**467**	**4 - 6 Pk Volume**	746	661	0	0	**1394**
Pk Hr Factor	0.815	0.831	0.000	0.000	**0.822**	**Pk Hr Factor**	0.905	0.928	0.000	0.000	**0.910**

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APPENDIX B

EXISTING INTERSECTION ANALYSIS WORKSHEETS

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	478	181	278	1976	196	129
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	514	0	299	2125	211	139
Adj No. of Lanes	3	1	2	3	1	2
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	1996	622	446	3188	290	817
Arrive On Green	0.39	0.00	0.13	0.63	0.16	0.16
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	514	0	299	2125	211	139
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	2.6	0.0	3.2	10.2	4.3	1.4
Cycle Q Clear(g_c), s	2.6	0.0	3.2	10.2	4.3	1.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1996	622	446	3188	290	817
V/C Ratio(X)	0.26	0.00	0.67	0.67	0.73	0.17
Avail Cap(c_a), veh/h	2130	663	451	3329	325	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	15.8	4.6	15.2	10.0
Incr Delay (d2), s/veh	0.1	0.0	3.8	0.5	7.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.7	4.7	2.7	0.6
LnGrp Delay(d),s/veh	7.9	0.0	19.6	5.1	22.2	10.1
LnGrp LOS	A		B	A	C	B
Approach Vol, veh/h	514			2424	350	
Approach Delay, s/veh	7.9			6.9	17.4	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.3	8.9	19.0				27.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		7.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		6.3	5.2	4.6				12.2
Green Ext Time (p_c), s		0.1	0.0	10.4				11.5

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	23	87	136	162	10	102	802	89	12	465	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	31	26	97	151	180	11	113	891	99	13	517	62
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	47	176	192	376	23	144	1334	148	23	1106	132
Arrive On Green	0.03	0.14	0.14	0.11	0.22	0.22	0.08	0.42	0.42	0.01	0.35	0.35
Sat Flow, veh/h	1774	346	1290	1774	1738	106	1774	3212	357	1774	3185	381
Grp Volume(v), veh/h	31	0	123	151	0	191	113	491	499	13	287	292
Grp Sat Flow(s),veh/h/ln	1774	0	1635	1774	0	1844	1774	1770	1800	1774	1770	1796
Q Serve(g_s), s	0.8	0.0	3.4	4.1	0.0	4.4	3.1	11.0	11.0	0.4	6.2	6.2
Cycle Q Clear(g_c), s	0.8	0.0	3.4	4.1	0.0	4.4	3.1	11.0	11.0	0.4	6.2	6.2
Prop In Lane	1.00		0.79	1.00		0.06	1.00		0.20	1.00		0.21
Lane Grp Cap(c), veh/h	50	0	223	192	0	399	144	735	747	23	615	624
V/C Ratio(X)	0.62	0.00	0.55	0.79	0.00	0.48	0.79	0.67	0.67	0.55	0.47	0.47
Avail Cap(c_a), veh/h	181	0	535	217	0	641	181	735	747	145	615	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	23.5	0.0	19.7	21.3	0.0	16.8	22.1	11.6	11.6	24.0	12.4	12.5
Incr Delay (d2), s/veh	12.0	0.0	2.1	15.7	0.0	0.9	16.1	4.8	4.7	18.8	2.5	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	0.6	0.0	1.7	2.8	0.0	2.3	2.1	6.3	6.4	0.3	3.4	3.5
LnGrp Delay(d),s/veh	35.5	0.0	21.8	36.9	0.0	17.6	38.1	16.4	16.3	42.8	15.0	15.0
LnGrp LOS	D		C	D		B	D	B	B	D	B	B
Approach Vol, veh/h		154			342			1103			592	
Approach Delay, s/veh		24.6			26.2			18.5			15.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	24.3	9.3	10.7	8.0	21.0	5.4	14.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	2.4	13.0	6.1	5.4	5.1	8.2	2.8	6.4
Green Ext Time (p_c), s	0.0	3.7	0.0	1.3	0.0	5.9	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	54	58	68	48	217	22	108	195	39	6	94	169
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	68	72	85	60	271	28	135	244	49	8	118	211
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	193	526	176	587	62	172	709	142	15	229	410
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.47	0.47	0.01	0.38	0.38
Sat Flow, veh/h	411	821	1583	266	2501	266	1774	1507	303	1774	600	1073
Grp Volume(v), veh/h	140	0	85	185	0	174	135	0	293	8	0	329
Grp Sat Flow(s),veh/h/ln	1232	0	1583	1384	0	1648	1774	0	1809	1774	0	1673
Q Serve(g_s), s	1.0	0.0	0.0	0.9	0.0	3.8	3.1	0.0	4.3	0.2	0.0	6.3
Cycle Q Clear(g_c), s	4.8	0.0	0.0	5.7	0.0	3.8	3.1	0.0	4.3	0.2	0.0	6.3
Prop In Lane	0.49		1.00	0.32		0.16	1.00		0.17	1.00		0.64
Lane Grp Cap(c), veh/h	417	0	526	439	0	387	172	0	851	15	0	639
V/C Ratio(X)	0.34	0.00	0.16	0.42	0.00	0.45	0.78	0.00	0.34	0.53	0.00	0.52
Avail Cap(c_a), veh/h	619	0	758	673	0	629	254	0	851	169	0	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	9.9	13.9	0.0	13.7	18.5	0.0	7.0	20.7	0.0	10.0
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.6	0.0	0.8	9.1	0.0	1.1	26.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.7	2.0	0.0	1.8	1.9	0.0	2.4	0.2	0.0	3.4
LnGrp Delay(d),s/veh	14.1	0.0	10.0	14.6	0.0	14.5	27.6	0.0	8.1	46.8	0.0	12.9
LnGrp LOS	B		B	B		B	C		A	D		B
Approach Vol, veh/h		225			359			428			337	
Approach Delay, s/veh		12.6			14.6			14.3			13.7	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	23.7		13.8	8.1	20.0		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	6.3		6.8	5.1	8.3		7.7
Green Ext Time (p_c), s	0.0	1.7		2.3	0.1	1.2		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	3	372	8	3	3	574	1145	28	7	584	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	404	9	3	3	611	1218	30	7	621	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	282	480	15	5	5	1408	1368	34	438	801	14
Arrive On Green	0.00	0.00	0.15	0.01	0.01	0.01	0.82	0.77	0.77	0.25	0.22	0.22
Sat Flow, veh/h	0	1863	3167	1049	350	350	3442	3530	87	1774	3558	63
Grp Volume(v), veh/h	0	0	404	15	0	0	611	610	638	7	309	323
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1749	0	0	1721	1770	1847	1774	1770	1852
Q Serve(g_s), s	0.0	0.0	9.9	0.7	0.0	0.0	4.0	20.0	20.1	0.2	13.1	13.1
Cycle Q Clear(g_c), s	0.0	0.0	9.9	0.7	0.0	0.0	4.0	20.0	20.1	0.2	13.1	13.1
Prop In Lane	0.00		1.00	0.60		0.20	1.00		0.05	1.00		0.03
Lane Grp Cap(c), veh/h	0	282	480	25	0	0	1408	686	716	438	398	417
V/C Ratio(X)	0.00	0.00	0.84	0.61	0.00	0.00	0.43	0.89	0.89	0.02	0.78	0.78
Avail Cap(c_a), veh/h	0	303	515	350	0	0	1408	686	716	438	398	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.34	0.34	0.34	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	33.0	39.2	0.0	0.0	4.7	7.8	7.8	22.8	29.1	29.1
Incr Delay (d2), s/veh	0.0	0.0	11.4	21.5	0.0	0.0	0.1	6.4	6.2	0.0	13.7	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.1	0.5	0.0	0.0	1.7	10.0	10.4	0.1	7.9	8.2
LnGrp Delay(d),s/veh	0.0	0.0	44.4	60.7	0.0	0.0	4.7	14.2	14.0	22.8	42.8	42.3
LnGrp LOS			D	E			A	B	B	C	D	D
Approach Vol, veh/h		404			15			1859			639	
Approach Delay, s/veh		44.4			60.7			11.0			42.4	
Approach LOS		D			E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.7	35.0		16.1	36.7	22.0		5.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	31.0		13.0	17.0	18.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	22.1		11.9	6.0	15.1		2.7
Green Ext Time (p_c), s	0.5	5.3		0.2	1.9	1.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	221	17	272	417	423	304	399	1264	170	18	888	229
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	246	0	286	293	810	213	420	1331	179	19	935	241
Adj No. of Lanes	2	0	1	1	2	1	1	2	0	2	2	1
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	310	0	515	355	745	344	421	1555	208	59	973	435
Arrive On Green	0.09	0.00	0.09	0.20	0.20	0.20	0.24	0.50	0.50	0.02	0.37	0.37
Sat Flow, veh/h	3548	0	1583	1774	3725	1583	1774	3139	419	3442	3539	1583
Grp Volume(v), veh/h	246	0	286	293	810	213	420	746	764	19	935	241
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1774	1863	1583	1774	1770	1789	1721	1770	1583
Q Serve(g_s), s	5.4	0.0	7.0	12.7	16.0	9.7	18.9	29.5	30.1	0.4	20.7	9.7
Cycle Q Clear(g_c), s	5.4	0.0	7.0	12.7	16.0	9.7	18.9	29.5	30.1	0.4	20.7	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	310	0	515	355	745	344	421	876	886	59	973	435
V/C Ratio(X)	0.79	0.00	0.56	0.83	1.09	0.62	1.00	0.85	0.86	0.32	0.96	0.55
Avail Cap(c_a), veh/h	310	0	515	355	745	344	421	876	886	215	973	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	35.8	0.0	22.2	30.7	32.0	28.3	30.5	17.6	17.8	38.6	24.9	21.5
Incr Delay (d2), s/veh	13.1	0.0	1.3	14.7	59.2	3.4	43.0	10.2	10.8	2.6	18.8	4.3
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	3.2	0.0	5.4	7.6	14.3	4.6	14.2	16.8	17.3	0.2	12.6	4.7
LnGrp Delay(d),s/veh	48.9	0.0	23.6	45.4	91.2	31.7	73.4	27.8	28.6	41.2	43.7	25.8
LnGrp LOS	D		C	D	F	C	E	C	C	D	D	C
Approach Vol, veh/h		532			1316			1930			1195	
Approach Delay, s/veh		35.3			71.3			38.1			40.0	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	43.6		11.0	23.0	26.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	36.0		7.0	19.0	22.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	32.1		9.0	20.9	22.7		18.0
Green Ext Time (p_c), s	0.0	3.7		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	963	937	118	0	761	632	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1024	997		0	810	672	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1250	1311		0	1546	2222	0
Arrive On Green	0.36	0.36		0.00	0.44	0.44	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1024	997		0	810	672	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	10.8	9.7		0.0	6.7	3.4	0.0
Cycle Q Clear(g_c), s	10.8	9.7		0.0	6.7	3.4	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1250	1311		0	1546	2222	0
V/C Ratio(X)	0.82	0.76		0.00	0.52	0.30	0.00
Avail Cap(c_a), veh/h	1291	1354		0	1546	2222	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.5	11.2		0.0	8.2	7.3	0.0
Incr Delay (d2), s/veh	4.2	2.5		0.0	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	6.3		0.0	3.5	1.6	0.0
LnGrp Delay(d),s/veh	15.7	13.7		0.0	9.5	7.7	0.0
LnGrp LOS	B	B			A	A	
Approach Vol, veh/h	2021				810	672	
Approach Delay, s/veh	14.7				9.5	7.7	
Approach LOS	B				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		21.5		18.5		21.5		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		17.0		15.0		8.0		
Max Q Clear Time (g_c+I1), s		8.7		12.8		5.4		
Green Ext Time (p_c), s		3.5		1.7		1.1		

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1033	222	63	1972	446	44
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1087	234	66	2076	469	46
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1576	1125	247	3198	1422	635
Arrive On Green	0.31	0.31	0.14	0.50	0.40	0.40
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1087	234	66	2076	469	46
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	15.0	4.0	2.7	19.2	7.3	1.4
Cycle Q Clear(g_c), s	15.0	4.0	2.7	19.2	7.3	1.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1576	1125	247	3198	1422	635
V/C Ratio(X)	0.69	0.21	0.27	0.65	0.33	0.07
Avail Cap(c_a), veh/h	2098	1288	247	3765	1422	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	3.9	30.8	14.8	16.5	14.8
Incr Delay (d2), s/veh	0.6	0.1	0.6	0.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	4.2	1.3	8.4	3.7	0.7
LnGrp Delay(d),s/veh	24.8	4.0	31.3	15.2	17.2	15.0
LnGrp LOS	C	A	C	B	B	B
Approach Vol, veh/h	1321			2142	515	
Approach Delay, s/veh	21.1			15.6	17.0	
Approach LOS	C			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		36.1	15.1	28.8				43.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	10.0	33.0				47.0
Max Q Clear Time (g_c+I1), s		9.3	4.7	17.0				21.2
Green Ext Time (p_c), s		1.7	4.8	7.8				18.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	60	59	138	253	143	168	149	47	83	191	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	37	72	71	166	305	172	202	180	57	100	230	69
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	263	231	172	468	257	206	696	592	128	614	522
Arrive On Green	0.03	0.15	0.15	0.10	0.21	0.21	0.12	0.37	0.37	0.07	0.33	0.33
Sat Flow, veh/h	1774	1784	1571	1774	2205	1214	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	37	71	72	166	243	234	202	180	57	100	230	69
Grp Sat Flow(s),veh/h/ln	1774	1770	1586	1774	1770	1649	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.1	1.8	2.1	4.8	6.5	6.7	5.9	3.5	1.2	2.9	4.9	1.6
Cycle Q Clear(g_c), s	1.1	1.8	2.1	4.8	6.5	6.7	5.9	3.5	1.2	2.9	4.9	1.6
Prop In Lane	1.00		0.99	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	260	233	172	375	350	206	696	592	128	614	522
V/C Ratio(X)	0.65	0.27	0.31	0.97	0.65	0.67	0.98	0.26	0.10	0.78	0.37	0.13
Avail Cap(c_a), veh/h	172	549	492	172	549	511	206	696	592	206	614	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	19.6	19.7	23.2	18.6	18.7	22.7	11.2	10.5	23.5	13.2	12.1
Incr Delay (d2), s/veh	12.0	0.6	0.7	58.3	1.9	2.2	56.4	0.9	0.3	9.9	1.7	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	0.7	0.9	1.0	5.1	3.4	3.3	6.0	1.9	0.6	1.7	2.8	0.8
LnGrp Delay(d),s/veh	36.7	20.1	20.4	81.5	20.5	20.9	79.2	12.1	10.8	33.5	15.0	12.6
LnGrp LOS	D	C	C	F	C	C	E	B	B	C	B	B
Approach Vol, veh/h		180			643			439			399	
Approach Delay, s/veh		23.6			36.4			42.8			19.2	
Approach LOS		C			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	23.3	9.0	11.6	10.0	21.0	5.6	14.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	17.0	5.0	16.0	6.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	4.9	5.5	6.8	4.1	7.9	6.9	3.1	8.7
Green Ext Time (p_c), s	0.0	2.2	0.0	3.0	0.0	2.1	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	24	59	14	282	323	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	63	15	300	344	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	530	178	356	0	-	0
Stage 1	350	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	479	834	1199	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	472	834	1199	-	-	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1199	-	472	834	-	-
HCM Lane V/C Ratio	0.012	-	0.054	0.075	-	-
HCM Control Delay (s)	8	0.1	13.1	9.7	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.2	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	35	41	370	259	206	179
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	38	45	407	285	226	197
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	61	752	956	428	705	684
Arrive On Green	0.03	0.40	0.27	0.27	0.40	0.40
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	38	45	407	285	226	197
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.9	0.6	3.8	6.5	3.5	3.3
Cycle Q Clear(g_c), s	0.9	0.6	3.8	6.5	3.5	3.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	61	752	956	428	705	684
V/C Ratio(X)	0.62	0.06	0.43	0.67	0.32	0.29
Avail Cap(c_a), veh/h	264	1203	1407	629	705	684
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	7.3	12.1	13.1	8.4	7.4
Incr Delay (d2), s/veh	9.9	0.0	0.3	1.8	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	1.9	3.0	1.9	3.6
LnGrp Delay(d),s/veh	29.1	7.4	12.4	14.9	9.6	8.5
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		83	692		423	
Approach Delay, s/veh		17.3	13.4		9.1	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				20.3		20.0	5.4	14.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				2.6		5.5	2.9	8.5
Green Ext Time (p_c), s				4.1		1.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	364	1337	1800	873	0	461
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	387	1422	2242	711		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	503	4242	2799	793		
Arrive On Green	0.28	0.83	1.00	1.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	387	1422	2242	711		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	16.0	5.1	0.0	0.0		
Cycle Q Clear(g_c), s	16.0	5.1	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	503	4242	2799	793		
V/C Ratio(X)	0.77	0.34	0.80	0.90		
Avail Cap(c_a), veh/h	532	4831	3353	950		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.69	0.69	0.82	0.82		
Uniform Delay (d), s/veh	26.3	1.5	0.0	0.0		
Incr Delay (d2), s/veh	4.5	0.0	1.0	8.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.5	2.4	0.3	1.8		
LnGrp Delay(d),s/veh	30.8	1.6	1.0	8.3		
LnGrp LOS	C	A	A	A		
Approach Vol, veh/h		1809	2953			
Approach Delay, s/veh		7.8	2.8			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				69.6			26.7	42.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			24.0	48.0
Max Q Clear Time (g_c+I1), s				7.1			18.0	2.0
Green Ext Time (p_c), s				19.7			4.7	35.8

Intersection Summary	
HCM 2010 Ctrl Delay	4.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	217	556	260	324	1522	415	0	0	0	764	0	560
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	236	604	283	352	1654	0				830	0	609
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	281	1046	326	551	1822	567				1109	0	990
Arrive On Green	0.16	0.21	0.21	0.31	0.36	0.00				0.31	0.00	0.31
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	236	604	283	352	1654	0				830	0	609
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	10.3	8.6	13.8	13.6	24.7	0.0				16.8	0.0	13.1
Cycle Q Clear(g_c), s	10.3	8.6	13.8	13.6	24.7	0.0				16.8	0.0	13.1
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	281	1046	326	551	1822	567				1109	0	990
V/C Ratio(X)	0.84	0.58	0.87	0.64	0.91	0.00				0.75	0.00	0.62
Avail Cap(c_a), veh/h	310	1081	336	577	1843	574				1109	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.60	0.60	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	32.7	28.6	30.7	23.7	24.4	0.0				24.7	0.0	23.4
Incr Delay (d2), s/veh	15.2	0.6	18.3	1.3	4.4	0.0				4.6	0.0	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
%ile BackOfQ(50%),veh/ln	6.2	4.1	7.7	6.9	12.2	0.0				8.9	0.0	6.1
LnGrp Delay(d),s/veh	47.9	29.3	49.0	25.0	28.9	0.0				29.3	0.0	26.3
LnGrp LOS	D	C	D	C	C					C		C
Approach Vol, veh/h		1123			2006						1439	
Approach Delay, s/veh		38.1			28.2						28.0	
Approach LOS		D			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			28.9	20.5		29.0	16.7	32.7
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			26.0	17.0		25.0	14.0	29.0
Max Q Clear Time (g_c+I1), s			15.6	15.8		18.8	12.3	26.7
Green Ext Time (p_c), s			1.4	0.6		3.2	0.4	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	64	0	301	122	295	0	0	297	177
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				70	0	0	134	324	0	0	326	195
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				109	0	97	170	2215	0	0	1321	591
Arrive On Green				0.06	0.00	0.00	0.10	0.63	0.00	0.00	0.37	0.37
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				70	0	0	134	324	0	0	326	195
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				1.0	0.0	0.0	1.9	1.0	0.0	0.0	1.6	2.3
Cycle Q Clear(g_c), s				1.0	0.0	0.0	1.9	1.0	0.0	0.0	1.6	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				109	0	97	170	2215	0	0	1321	591
V/C Ratio(X)				0.64	0.00	0.00	0.79	0.15	0.00	0.00	0.25	0.33
Avail Cap(c_a), veh/h				1110	0	991	347	2215	0	0	1321	591
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.7	0.0	0.0	11.3	2.0	0.0	0.0	5.5	5.7
Incr Delay (d2), s/veh				6.2	0.0	0.0	7.8	0.1	0.0	0.0	0.4	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				0.7	0.0	0.0	1.3	0.5	0.0	0.0	0.9	1.2
LnGrp Delay(d),s/veh				18.0	0.0	0.0	19.1	2.1	0.0	0.0	6.0	7.2
LnGrp LOS				B			B	A			A	A
Approach Vol, veh/h					70			458			521	
Approach Delay, s/veh					18.0			7.1			6.4	
Approach LOS					B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			6.5	13.5		5.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		16.0			5.0	7.0		16.0
Max Q Clear Time (g_c+I1), s		3.0			3.9	4.3		3.0
Green Ext Time (p_c), s		4.1			0.0	1.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/24/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	108	45	24	16	0	297	64	13	3	8	237	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.95			0.86	0.85		0.93				1.00
Flt Protected	0.95	1.00			1.00	1.00		1.00				0.95
Satd. Flow (prot)	1770	1765			1521	1504		3303				1610
Flt Permitted	0.95	1.00			1.00	1.00		1.00				0.95
Satd. Flow (perm)	1770	1765			1521	1504		3303				1610
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	126	52	28	19	0	345	70	15	3	9	276	103
RTOR Reduction (vph)	0	0	0	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	126	80	0	0	219	215	0	20	0	0	0	286
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	8.6	8.6			11.1	11.1		16.2				16.2
Effective Green, g (s)	8.6	8.6			11.1	11.1		16.2				16.2
Actuated g/C Ratio	0.13	0.13			0.16	0.16		0.24				0.24
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	223	222			247	245		785				382
v/s Ratio Prot	c0.07	0.05			c0.14	0.14		c0.01				c0.18
v/s Ratio Perm												
v/c Ratio	0.57	0.36			0.89	0.88		0.03				0.75
Uniform Delay, d1	28.0	27.2			27.9	27.8		19.9				24.1
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	3.3	1.0			29.3	27.7		0.1				12.6
Delay (s)	31.2	28.2			57.1	55.6		20.0				36.7
Level of Service	C	C			E	E		B				D
Approach Delay (s)		30.1			56.4			20.0				
Approach LOS		C			E			B				

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	49
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.97
Satd. Flow (prot)	3288
Flt Permitted	0.97
Satd. Flow (perm)	3288
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	57
RTOR Reduction (vph)	0
Lane Group Flow (vph)	150
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	16.2
Effective Green, g (s)	16.2
Actuated g/C Ratio	0.24
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	782
v/s Ratio Prot	0.05
v/s Ratio Perm	
v/c Ratio	0.19
Uniform Delay, d1	20.7
Progression Factor	1.00
Incremental Delay, d2	0.5
Delay (s)	21.3
Level of Service	C
Approach Delay (s)	31.4
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	549	191	424	1079	37	73	11	165	160	32	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	25	590	205	456	1160	40	78	12	177	172	34	123
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	1043	325	497	1661	632	249	538	686	249	538	458
Arrive On Green	0.02	0.21	0.21	0.14	0.33	0.33	0.07	0.29	0.29	0.07	0.29	0.29
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	25	590	205	456	1160	40	78	12	177	172	34	123
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.4	5.8	6.5	7.2	11.0	0.1	1.2	0.3	0.0	2.7	0.7	2.5
Cycle Q Clear(g_c), s	0.4	5.8	6.5	7.2	11.0	0.1	1.2	0.3	0.0	2.7	0.7	2.5
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	79	1043	325	497	1661	632	249	538	686	249	538	458
V/C Ratio(X)	0.31	0.57	0.63	0.92	0.70	0.06	0.31	0.02	0.26	0.69	0.06	0.27
Avail Cap(c_a), veh/h	249	1470	458	497	1837	686	249	538	686	249	538	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(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	19.8	20.1	23.3	16.3	4.0	24.4	14.1	10.0	25.1	14.3	8.9
Incr Delay (d2), s/veh	2.2	0.5	2.0	21.9	1.1	0.0	0.7	0.1	0.9	7.9	0.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	3.0	4.9	5.3	0.2	0.6	0.1	1.9	1.6	0.4	1.5
LnGrp Delay(d),s/veh	28.8	20.3	22.1	45.2	17.3	4.0	25.1	14.2	10.9	33.0	14.5	10.3
LnGrp LOS	C	C	C	D	B	A	C	B	B	C	B	B
Approach Vol, veh/h		820			1656			267			329	
Approach Delay, s/veh		21.0			24.7			15.2			22.6	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	12.0	15.4	8.0	20.0	5.3	22.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	4.7	2.3	9.2	8.5	3.2	4.5	2.4	13.0
Green Ext Time (p_c), s	0.0	0.5	0.0	2.8	0.1	0.4	0.0	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	578	63	165	1083	15	82	8	130	54	17	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	649	71	185	1217	17	92	9	146	61	0	169
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	1285	488	291	1609	589	190	583	495	196	0	1057
Arrive On Green	0.02	0.25	0.25	0.08	0.32	0.32	0.06	0.31	0.31	0.06	0.00	0.31
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	22	649	71	185	1217	17	92	9	146	61	0	169
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	0.7	5.9	1.8	2.8	11.7	0.0	1.4	0.2	2.5	0.9	0.0	0.5
Cycle Q Clear(g_c), s	0.7	5.9	1.8	2.8	11.7	0.0	1.4	0.2	2.5	0.9	0.0	0.5
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	37	1285	488	291	1609	589	190	583	495	196	0	1057
V/C Ratio(X)	0.60	0.51	0.15	0.64	0.76	0.03	0.48	0.02	0.29	0.31	0.00	0.16
Avail Cap(c_a), veh/h	131	1591	583	380	1779	641	253	583	495	261	0	1057
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	17.4	13.6	24.1	16.7	10.8	24.9	12.9	6.2	24.7	0.0	5.0
Incr Delay (d2), s/veh	14.4	0.3	0.1	2.3	1.7	0.0	1.9	0.0	1.5	0.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.8	0.8	1.4	5.7	0.2	0.7	0.1	1.7	0.5	0.0	0.6
LnGrp Delay(d),s/veh	40.8	17.7	13.8	26.4	18.4	10.9	26.8	12.9	7.7	25.6	0.0	5.3
LnGrp LOS	D	B	B	C	B	B	C	B	A	C		A
Approach Vol, veh/h		742			1419			247			230	
Approach Delay, s/veh		18.0			19.4			15.0			10.7	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	21.0	8.6	17.7	7.0	21.0	5.1	21.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	6.0	17.0	4.0	17.0	4.0	19.0
Max Q Clear Time (g_c+I1), s	2.9	4.5	4.8	7.9	3.4	2.5	2.7	13.7
Green Ext Time (p_c), s	0.1	0.4	0.1	3.2	0.0	0.7	0.6	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	154	1	4	375	23	0	0	36	4
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				184	0	0	436	27	0	0	42	5
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				283	149	0	1211	1528	0	0	279	33
Arrive On Green				0.08	0.00	0.00	0.68	0.82	0.00	0.00	0.09	0.09
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	3286	373
Grp Volume(v), veh/h				184	0	0	436	27	0	0	23	24
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1797
Q Serve(g_s), s				4.0	0.0	0.0	8.3	0.2	0.0	0.0	1.0	1.0
Cycle Q Clear(g_c), s				4.0	0.0	0.0	8.3	0.2	0.0	0.0	1.0	1.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.21
Lane Grp Cap(c), veh/h				283	149	0	1211	1528	0	0	155	157
V/C Ratio(X)				0.65	0.00	0.00	0.36	0.02	0.00	0.00	0.15	0.15
Avail Cap(c_a), veh/h				843	442	0	1211	1528	0	0	155	157
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.7	0.0	0.0	5.3	1.3	0.0	0.0	33.7	33.8
Incr Delay (d2), s/veh				2.5	0.0	0.0	0.2	0.0	0.0	0.0	2.0	2.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.1	0.0	0.0	4.1	0.1	0.0	0.0	0.6	0.6
LnGrp Delay(d),s/veh				38.2	0.0	0.0	5.5	1.3	0.0	0.0	35.8	35.8
LnGrp LOS				D			A	A			D	D
Approach Vol, veh/h					184			463			47	
Approach Delay, s/veh					38.2			5.3			35.8	
Approach LOS					D			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		69.6			58.6	11.0		10.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		53.0			42.0	7.0		19.0
Max Q Clear Time (g_c+I1), s		2.2			10.3	3.0		6.0
Green Ext Time (p_c), s		1.6			1.6	0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	2	103	0	0	0	0	333	170	16	171	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	70	2	113				0	366	187	18	188	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	174	5	159				0	1460	653	598	2829	0
Arrive On Green	0.10	0.10	0.10				0.00	0.55	0.55	0.11	0.26	0.00
Sat Flow, veh/h	1727	49	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	72	0	113				0	366	187	18	188	0
Grp Sat Flow(s),veh/h/ln	1776	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	3.0	0.0	5.5				0.0	4.3	5.1	0.7	3.2	0.0
Cycle Q Clear(g_c), s	3.0	0.0	5.5				0.0	4.3	5.1	0.7	3.2	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	179	0	159				0	1460	653	598	2829	0
V/C Ratio(X)	0.40	0.00	0.71				0.00	0.25	0.29	0.03	0.07	0.00
Avail Cap(c_a), veh/h	577	0	515				0	1460	653	598	2829	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.92	0.92	0.99	0.99	0.00
Uniform Delay (d), s/veh	33.7	0.0	34.8				0.0	11.6	11.7	23.9	7.1	0.0
Incr Delay (d2), s/veh	1.5	0.0	5.7				0.0	0.4	1.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.7				0.0	2.2	2.3	0.4	1.6	0.0
LnGrp Delay(d),s/veh	35.2	0.0	40.5				0.0	12.0	12.8	23.9	7.1	0.0
LnGrp LOS	D		D					B	B	C	A	
Approach Vol, veh/h		185						553			206	
Approach Delay, s/veh		38.5						12.2			8.6	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	30.9	37.0		12.1		67.9		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	9.0	33.0		26.0		46.0		
Max Q Clear Time (g_c+I1), s	2.7	7.1		7.5		5.2		
Green Ext Time (p_c), s	0.5	3.1		0.7		1.3		

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	76	96	108	106	104	80	750	315	74	361	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	47	82	103	116	114	112	86	806	339	80	388	46
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	140	1111	212	362	162	949	1365	570	949	1971	614
Arrive On Green	0.03	0.08	0.08	0.06	0.10	0.10	0.55	0.77	0.77	0.55	0.77	0.77
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	3521	1472	3442	5085	1583
Grp Volume(v), veh/h	47	82	103	116	114	112	86	776	369	80	388	46
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1603	1721	1695	1583
Q Serve(g_s), s	2.1	3.4	0.0	2.6	2.4	5.5	0.9	7.6	7.7	0.9	1.6	0.6
Cycle Q Clear(g_c), s	2.1	3.4	0.0	2.6	2.4	5.5	0.9	7.6	7.7	0.9	1.6	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	61	140	1111	212	362	162	949	1314	621	949	1971	614
V/C Ratio(X)	0.77	0.59	0.09	0.55	0.32	0.69	0.09	0.59	0.59	0.08	0.20	0.07
Avail Cap(c_a), veh/h	177	419	1586	344	796	356	949	1314	621	949	1971	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.99	0.99	0.99
Uniform Delay (d), s/veh	38.3	35.8	17.4	36.4	33.3	34.7	13.2	6.4	6.4	13.2	5.7	5.6
Incr Delay (d2), s/veh	17.9	3.9	0.0	2.2	0.5	5.2	0.0	1.8	3.8	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.9	0.7	1.3	1.2	2.6	0.4	3.6	3.7	0.4	0.8	0.3
LnGrp Delay(d),s/veh	56.2	39.7	17.5	38.6	33.8	39.9	13.2	8.2	10.2	13.2	5.9	5.8
LnGrp LOS	E	D	B	D	C	D	B	A	B	B	A	A
Approach Vol, veh/h		232			342			1231			514	
Approach Delay, s/veh		33.2			37.4			9.1			7.0	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.1	35.0	8.9	10.0	26.1	35.0	6.8	12.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	31.0	8.0	18.0	7.0	31.0	8.0	18.0
Max Q Clear Time (g_c+I1), s	2.9	9.7	4.6	5.4	2.9	3.6	4.1	7.5
Green Ext Time (p_c), s	0.2	8.4	0.1	0.6	0.2	2.9	0.2	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	34	0	96	21	91	369	92	701	0	0	326	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	35	0	98	21	93	377	94	715	0	0	333	279
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	91	402	423	502	3218	0	0	1062	475
Arrive On Green	0.00	0.00	0.00	0.27	0.27	0.27	0.28	0.63	0.00	0.00	0.60	0.60
Sat Flow, veh/h		0		340	1506	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		114	0	377	94	715	0	0	333	279
Grp Sat Flow(s),veh/h/ln				1846	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				3.9	0.0	18.3	3.2	4.8	0.0	0.0	3.7	8.7
Cycle Q Clear(g_c), s				3.9	0.0	18.3	3.2	4.8	0.0	0.0	3.7	8.7
Prop In Lane				0.18		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				493	0	423	502	3218	0	0	1062	475
V/C Ratio(X)				0.23	0.00	0.89	0.19	0.22	0.00	0.00	0.31	0.59
Avail Cap(c_a), veh/h				600	0	515	502	3218	0	0	1062	475
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh				22.9	0.0	28.2	21.7	6.3	0.0	0.0	11.9	12.9
Incr Delay (d2), s/veh				0.2	0.0	15.4	0.2	0.2	0.0	0.0	0.8	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
%ile BackOfQ(50%),veh/ln				2.0	0.0	9.8	1.6	2.3	0.0	0.0	1.9	4.4
LnGrp Delay(d),s/veh				23.1	0.0	43.6	21.9	6.4	0.0	0.0	12.7	18.1
LnGrp LOS				C		D	C	A			B	B
Approach Vol, veh/h					491			809			612	
Approach Delay, s/veh					38.8			8.2			15.2	
Approach LOS					D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		54.6			26.6	28.0		25.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		37.0			9.0	24.0		26.0
Max Q Clear Time (g_c+I1), s		6.8			5.2	10.7		20.3
Green Ext Time (p_c), s		5.9			1.8	2.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	707	882	423	40	1114	146	112	79	37	22	28	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	777	969	465	44	1224	160	123	87	41	24	0	241
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	862	2467	768	55	1352	421	331	627	279	73	0	594
Arrive On Green	0.25	0.49	0.49	0.03	0.27	0.27	0.10	0.26	0.26	0.02	0.00	0.19
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	2385	1061	3548	0	3167
Grp Volume(v), veh/h	777	969	465	44	1224	160	123	63	65	24	0	241
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1676	1774	0	1583
Q Serve(g_s), s	17.5	9.7	10.6	2.0	18.6	6.6	2.7	2.2	2.4	0.5	0.0	3.0
Cycle Q Clear(g_c), s	17.5	9.7	10.6	2.0	18.6	6.6	2.7	2.2	2.4	0.5	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	862	2467	768	55	1352	421	331	465	441	73	0	594
V/C Ratio(X)	0.90	0.39	0.61	0.80	0.91	0.38	0.37	0.14	0.15	0.33	0.00	0.41
Avail Cap(c_a), veh/h	903	2467	768	133	1398	435	331	465	441	177	0	594
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)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	13.1	5.8	38.5	28.4	24.0	33.9	22.5	22.6	38.6	0.0	9.2
Incr Delay (d2), s/veh	11.5	0.1	1.3	22.0	8.5	0.6	0.7	0.6	0.7	2.6	0.0	2.1
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	9.7	4.5	4.9	1.3	9.8	2.9	1.3	1.1	1.2	0.3	0.0	1.5
LnGrp Delay(d),s/veh	40.5	13.2	7.1	60.5	36.9	24.5	34.6	23.1	23.3	41.2	0.0	11.3
LnGrp LOS	D	B	A	E	D	C	C	C	C	D		B
Approach Vol, veh/h		2211			1428			251			265	
Approach Delay, s/veh		21.5			36.3			28.8			14.0	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	25.0	6.5	42.8	11.7	19.0	24.0	25.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	6.0	37.0	6.0	15.0	21.0	22.0
Max Q Clear Time (g_c+I1), s	2.5	4.4	4.0	12.6	4.7	5.0	19.5	20.6
Green Ext Time (p_c), s	0.0	0.9	0.0	19.6	0.1	0.6	0.6	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	387	1199	910	556	0	634
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	412	1276	968	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	546	3626	1256	562		
Arrive On Green	0.62	1.00	0.35	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	412	1276	968	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	13.3	0.0	19.4	0.0		
Cycle Q Clear(g_c), s	13.3	0.0	19.4	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	546	3626	1256	562		
V/C Ratio(X)	0.75	0.35	0.77	0.00		
Avail Cap(c_a), veh/h	687	4831	1814	811		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.60	0.60	0.53	0.00		
Uniform Delay (d), s/veh	13.2	0.0	22.9	0.0		
Incr Delay (d2), s/veh	2.2	0.0	0.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.5	0.0	9.5	0.0		
LnGrp Delay(d),s/veh	15.4	0.0	23.6	0.0		
LnGrp LOS	B	A	C			
Approach Vol, veh/h		1688	968			
Approach Delay, s/veh		3.8	23.6			
Approach LOS		A	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				61.0			28.6	32.4
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			31.0	41.0
Max Q Clear Time (g_c+I1), s				2.0			15.3	21.4
Green Ext Time (p_c), s				16.9			9.3	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/24/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	421	0	453	359
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	448	0	482	382
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1603	224			448	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1603	224			448	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			57	
cM capacity (veh/h)	54	779			1109	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	299	149	482	191	191
Volume Left	0	0	482	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1109	1700	1700
Volume to Capacity	0.18	0.09	0.43	0.11	0.11
Queue Length 95th (ft)	0	0	56	0	0
Control Delay (s)	0.0	0.0	10.7	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.0		
Approach LOS					

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	524	294	0	747	363	326	24	764	280	6	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	546	0	0	778	378	358	0	0	296	0	74
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	45	2253	702	0	1869	582	1034	0	461	410	0	183
Arrive On Green	0.03	0.44	0.00	0.00	0.37	0.37	0.29	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	32	546	0	0	778	378	358	0	0	296	0	74
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	1.4	5.4	0.0	0.0	9.1	15.9	6.4	0.0	0.0	6.4	0.0	3.5
Cycle Q Clear(g_c), s	1.4	5.4	0.0	0.0	9.1	15.9	6.4	0.0	0.0	6.4	0.0	3.5
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	2253	702	0	1869	582	1034	0	461	410	0	183
V/C Ratio(X)	0.71	0.24	0.00	0.00	0.42	0.65	0.35	0.00	0.00	0.72	0.00	0.40
Avail Cap(c_a), veh/h	89	3051	950	0	2543	792	1034	0	461	710	0	317
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	0.00	0.00	0.89	0.89	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	13.9	0.0	0.0	18.9	21.0	22.3	0.0	0.0	34.1	0.0	32.8
Incr Delay (d2), s/veh	18.4	0.1	0.0	0.0	0.1	1.1	0.9	0.0	0.0	2.4	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.5	0.0	0.0	4.3	7.1	3.2	0.0	0.0	3.3	0.0	3.2
LnGrp Delay(d),s/veh	57.1	14.0	0.0	0.0	19.0	22.1	23.3	0.0	0.0	36.6	0.0	34.3
LnGrp LOS	E	B			B	C	C			D		C
Approach Vol, veh/h		578			1156			358			370	
Approach Delay, s/veh		16.3			20.0			23.3			36.1	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		27.3		39.4		13.2	6.0	33.4
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		4.0		48.0		16.0	4.0	40.0
Max Q Clear Time (g_c+I1), s		8.4		7.4		8.4	3.4	17.9
Green Ext Time (p_c), s		0.0		15.1		0.8	0.0	11.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1891	219	231	741	308	485
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1949	0	238	764	318	500
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2287	712	351	3190	393	902
Arrive On Green	0.45	0.00	0.10	0.63	0.22	0.22
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	1949	0	238	764	318	500
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	18.1	0.0	3.5	3.5	9.0	7.8
Cycle Q Clear(g_c), s	18.1	0.0	3.5	3.5	9.0	7.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2287	712	351	3190	393	902
V/C Ratio(X)	0.85	0.00	0.68	0.24	0.81	0.55
Avail Cap(c_a), veh/h	2303	717	390	3263	435	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	22.9	4.3	19.5	14.8
Incr Delay (d2), s/veh	3.3	0.0	4.1	0.0	10.0	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	9.0	0.0	1.9	1.6	5.5	3.0
LnGrp Delay(d),s/veh	16.3	0.0	27.0	4.4	29.5	15.4
LnGrp LOS	B		C	A	C	B
Approach Vol, veh/h	1949			1002	818	
Approach Delay, s/veh	16.3			9.8	20.9	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		15.8	9.4	27.8				37.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		13.0	6.0	24.0				34.0
Max Q Clear Time (g_c+I1), s		11.0	5.5	20.1				5.5
Green Ext Time (p_c), s		0.7	0.0	3.7				23.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	126	141	101	44	32	74	817	128	21	702	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	99	135	152	109	47	34	80	878	138	23	755	44
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	174	196	139	226	163	101	1159	182	39	1166	68
Arrive On Green	0.07	0.22	0.22	0.08	0.22	0.22	0.06	0.38	0.38	0.02	0.34	0.34
Sat Flow, veh/h	1774	801	902	1774	1006	728	1774	3066	482	1774	3399	198
Grp Volume(v), veh/h	99	0	287	109	0	81	80	507	509	23	393	406
Grp Sat Flow(s),veh/h/ln	1774	0	1704	1774	0	1734	1774	1770	1778	1774	1770	1828
Q Serve(g_s), s	2.9	0.0	8.3	3.2	0.0	2.0	2.3	13.1	13.1	0.7	9.8	9.9
Cycle Q Clear(g_c), s	2.9	0.0	8.3	3.2	0.0	2.0	2.3	13.1	13.1	0.7	9.8	9.9
Prop In Lane	1.00		0.53	1.00		0.42	1.00		0.27	1.00		0.11
Lane Grp Cap(c), veh/h	126	0	370	139	0	389	101	669	672	39	607	627
V/C Ratio(X)	0.79	0.00	0.78	0.78	0.00	0.21	0.79	0.76	0.76	0.60	0.65	0.65
Avail Cap(c_a), veh/h	169	0	519	169	0	529	169	669	672	135	607	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	24.0	0.0	19.4	23.8	0.0	16.6	24.4	14.2	14.2	25.5	14.6	14.6
Incr Delay (d2), s/veh	15.7	0.0	4.8	17.7	0.0	0.3	12.8	7.8	7.8	13.9	5.3	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	4.4	2.2	0.0	1.0	1.5	7.8	7.8	0.5	5.7	5.9
LnGrp Delay(d),s/veh	39.7	0.0	24.2	41.4	0.0	16.8	37.2	22.1	22.0	39.4	19.8	19.7
LnGrp LOS	D		C	D		B	D	C	C	D	B	B
Approach Vol, veh/h		386			190			1096			822	
Approach Delay, s/veh		28.2			30.9			23.1			20.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	23.9	8.1	15.4	7.0	22.0	7.7	15.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	5.0	18.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	15.1	5.2	10.3	4.3	11.9	4.9	4.0
Green Ext Time (p_c), s	0.0	3.2	0.0	1.1	0.0	4.8	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	200	101	50	114	18	112	100	89	39	151	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	100	211	106	53	120	19	118	105	94	41	159	108
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	336	564	215	474	81	151	378	339	64	381	259
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.08	0.42	0.42	0.04	0.37	0.37
Sat Flow, veh/h	416	1240	1583	302	1749	300	1774	907	812	1774	1035	703
Grp Volume(v), veh/h	311	0	106	88	0	104	118	0	199	41	0	267
Grp Sat Flow(s),veh/h/ln	1656	0	1583	709	0	1642	1774	0	1719	1774	0	1739
Q Serve(g_s), s	4.9	0.0	2.0	0.8	0.0	2.1	2.8	0.0	3.3	1.0	0.0	5.0
Cycle Q Clear(g_c), s	7.2	0.0	2.0	8.0	0.0	2.1	2.8	0.0	3.3	1.0	0.0	5.0
Prop In Lane	0.32		1.00	0.60		0.18	1.00		0.47	1.00		0.40
Lane Grp Cap(c), veh/h	558	0	564	325	0	445	151	0	717	64	0	640
V/C Ratio(X)	0.56	0.00	0.19	0.27	0.00	0.23	0.78	0.00	0.28	0.64	0.00	0.42
Avail Cap(c_a), veh/h	714	0	717	449	0	604	245	0	717	204	0	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	9.7	13.3	0.0	12.3	19.5	0.0	8.4	20.7	0.0	10.3
Incr Delay (d2), s/veh	0.9	0.0	0.2	0.4	0.0	0.3	8.6	0.0	1.0	10.3	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.9	1.0	0.0	1.0	1.7	0.0	1.7	0.7	0.0	2.7
LnGrp Delay(d),s/veh	14.9	0.0	9.8	13.8	0.0	12.6	28.0	0.0	9.3	31.0	0.0	12.3
LnGrp LOS	B		A	B		B	C		A	C		B
Approach Vol, veh/h		417			192			317			308	
Approach Delay, s/veh		13.6			13.1			16.3			14.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	22.1		15.8	7.7	20.0		15.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	17.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	3.0	5.3		9.2	4.8	7.0		10.0
Green Ext Time (p_c), s	0.0	2.2		2.0	0.0	1.9		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	4	323	26	5	11	237	942	28	12	892	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	342	27	5	11	242	961	29	12	910	7
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	250	425	34	6	14	1022	1359	41	438	1215	9
Arrive On Green	0.00	0.00	0.13	0.03	0.03	0.03	0.59	0.77	0.77	0.25	0.34	0.34
Sat Flow, veh/h	0	1863	3167	1086	201	443	3442	3508	106	1774	3600	28
Grp Volume(v), veh/h	0	0	342	43	0	0	242	485	505	12	447	470
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1730	0	0	1721	1770	1844	1774	1770	1858
Q Serve(g_s), s	0.0	0.0	8.4	2.0	0.0	0.0	2.7	10.9	10.9	0.4	17.9	17.9
Cycle Q Clear(g_c), s	0.0	0.0	8.4	2.0	0.0	0.0	2.7	10.9	10.9	0.4	17.9	17.9
Prop In Lane	0.00		1.00	0.63		0.26	1.00		0.06	1.00		0.01
Lane Grp Cap(c), veh/h	0	250	425	54	0	0	1022	686	715	438	597	627
V/C Ratio(X)	0.00	0.00	0.80	0.79	0.00	0.00	0.24	0.71	0.71	0.03	0.75	0.75
Avail Cap(c_a), veh/h	0	303	515	346	0	0	1022	686	715	438	597	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	33.6	38.5	0.0	0.0	12.0	6.7	6.7	22.8	23.5	23.5
Incr Delay (d2), s/veh	0.0	0.0	7.6	22.3	0.0	0.0	0.1	4.1	4.0	0.0	8.4	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.1	1.3	0.0	0.0	1.2	5.6	5.8	0.2	10.1	10.5
LnGrp Delay(d),s/veh	0.0	0.0	41.2	60.8	0.0	0.0	12.0	10.9	10.7	22.9	31.9	31.5
LnGrp LOS			D	E			B	B	B	C	C	C
Approach Vol, veh/h		342			43			1232			929	
Approach Delay, s/veh		41.2			60.8			11.0			31.6	
Approach LOS		D			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.7	35.0		14.7	27.7	31.0		6.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	31.0		13.0	8.0	27.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	12.9		10.4	4.7	19.9		4.0
Green Ext Time (p_c), s	0.1	6.3		0.4	0.3	3.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	106	581	663	139	223	264	847	177	9	1288	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	117	121	593	677	256	152	269	864	181	9	1314	49
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	279	435	710	373	331	222	1285	269	31	1150	515
Arrive On Green	0.15	0.15	0.15	0.20	0.20	0.20	0.13	0.44	0.44	0.01	0.32	0.32
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	2914	610	3442	3539	1583
Grp Volume(v), veh/h	117	121	593	677	256	152	269	525	520	9	1314	49
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1755	1721	1770	1583
Q Serve(g_s), s	4.8	4.7	12.0	15.1	10.2	6.7	10.0	18.8	18.9	0.2	26.0	1.7
Cycle Q Clear(g_c), s	4.8	4.7	12.0	15.1	10.2	6.7	10.0	18.8	18.9	0.2	26.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	266	279	435	710	373	331	222	780	774	31	1150	515
V/C Ratio(X)	0.44	0.43	1.36	0.95	0.69	0.46	1.21	0.67	0.67	0.29	1.14	0.10
Avail Cap(c_a), veh/h	266	279	435	710	373	331	222	780	774	215	1150	515
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	0.82	0.82	0.82
Uniform Delay (d), s/veh	30.9	30.9	29.0	31.6	29.7	27.7	35.0	17.8	17.8	39.4	27.0	18.8
Incr Delay (d2), s/veh	1.1	1.1	177.2	23.1	5.2	1.0	130.0	4.6	4.6	4.1	73.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.5	31.0	9.6	5.8	3.0	12.9	10.2	10.1	0.1	24.3	0.8
LnGrp Delay(d),s/veh	32.1	32.0	206.2	54.7	34.9	28.7	165.0	22.4	22.4	43.5	100.1	19.1
LnGrp LOS	C	C	F	D	C	C	F	C	C	D	F	B
Approach Vol, veh/h		831			1085			1314			1372	
Approach Delay, s/veh		156.3			46.4			51.6			96.8	
Approach LOS		F			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	39.3		16.0	14.0	30.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	31.0		12.0	10.0	26.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	20.9		14.0	12.0	28.0		17.1
Green Ext Time (p_c), s	0.0	8.8		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	747	2313	30	0	478	1130	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	770	2385		0	493	1165	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.97	0.97		0.94	0.97	0.97	0.97
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2237	2346		0	1036	1489	0
Arrive On Green	0.65	0.65		0.00	0.29	0.29	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	770	2385		0	493	1165	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	14.1	91.0		0.0	16.0	29.4	0.0
Cycle Q Clear(g_c), s	14.1	91.0		0.0	16.0	29.4	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2237	2347		0	1036	1489	0
V/C Ratio(X)	0.34	1.02		0.00	0.48	0.78	0.00
Avail Cap(c_a), veh/h	2237	2346		0	1036	1489	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.0	24.5		0.0	40.7	45.4	0.0
Incr Delay (d2), s/veh	0.1	22.8		0.0	1.6	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	45.8		0.0	8.0	14.4	0.0
LnGrp Delay(d),s/veh	11.1	47.3		0.0	42.2	49.6	0.0
LnGrp LOS	B	F			D	D	
Approach Vol, veh/h	3155				493	1165	
Approach Delay, s/veh	38.5				42.2	49.6	
Approach LOS	D				D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		45.0		95.0		45.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		41.0		91.0		33.0		
Max Q Clear Time (g_c+I1), s		18.0		93.0		31.4		
Green Ext Time (p_c), s		12.9		0.0		1.3		

Intersection Summary	
HCM 2010 Ctrl Delay	41.5
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2306	466	84	1402	338	146
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2377	480	87	1445	348	151
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2703	1231	129	4192	872	389
Arrive On Green	0.53	0.53	0.07	0.65	0.25	0.25
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2377	480	87	1445	348	151
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	32.9	7.7	3.8	8.1	6.6	6.4
Cycle Q Clear(g_c), s	32.9	7.7	3.8	8.1	6.6	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2703	1231	129	4192	872	389
V/C Ratio(X)	0.88	0.39	0.68	0.34	0.40	0.39
Avail Cap(c_a), veh/h	2733	1240	155	4325	872	389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	2.8	36.2	6.2	25.2	25.1
Incr Delay (d2), s/veh	2.6	0.1	8.5	0.0	1.4	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	15.8	7.1	2.2	3.5	3.4	3.1
LnGrp Delay(d),s/veh	19.1	3.0	44.7	6.2	26.6	28.0
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	2857			1532	499	
Approach Delay, s/veh	16.4			8.4	27.0	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.7	9.8	46.5				56.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		18.0	7.0	43.0				54.0
Max Q Clear Time (g_c+I1), s		8.6	5.8	34.9				10.1
Green Ext Time (p_c), s		1.3	1.0	7.6				15.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	325	273	107	93	141	78	203	124	121	174	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	136	374	314	123	107	162	90	233	143	139	200	102
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	471	391	157	437	391	115	518	440	176	583	495
Arrive On Green	0.10	0.26	0.26	0.09	0.25	0.25	0.06	0.28	0.28	0.10	0.31	0.31
Sat Flow, veh/h	1774	1838	1525	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	136	360	328	123	107	162	90	233	143	139	200	102
Grp Sat Flow(s),veh/h/ln	1774	1770	1594	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.3	10.9	11.1	3.9	2.8	4.9	2.9	5.9	4.1	4.4	4.8	2.7
Cycle Q Clear(g_c), s	4.3	10.9	11.1	3.9	2.8	4.9	2.9	5.9	4.1	4.4	4.8	2.7
Prop In Lane	1.00		0.96	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	172	453	408	157	437	391	115	518	440	176	583	495
V/C Ratio(X)	0.79	0.79	0.80	0.78	0.24	0.41	0.78	0.45	0.32	0.79	0.34	0.21
Avail Cap(c_a), veh/h	185	492	443	185	492	440	154	518	440	185	583	495
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	25.4	20.0	20.0	25.7	17.3	18.2	26.5	17.1	16.5	25.3	15.2	14.5
Incr Delay (d2), s/veh	19.0	8.1	9.7	16.9	0.3	0.7	16.9	2.8	2.0	19.4	1.6	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	3.0	6.3	5.9	2.6	1.4	2.2	1.9	3.4	2.0	3.1	2.7	1.3
LnGrp Delay(d),s/veh	44.3	28.1	29.7	42.6	17.6	18.9	43.4	19.9	18.4	44.7	16.8	15.5
LnGrp LOS	D	C	C	D	B	B	D	B	B	D	B	B
Approach Vol, veh/h		824			392			466			441	
Approach Delay, s/veh		31.4			26.0			24.0			25.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	20.0	9.1	18.7	7.7	22.0	9.6	18.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	6.4	7.9	5.9	13.1	4.9	6.8	6.3	6.9
Green Ext Time (p_c), s	0.0	2.2	0.0	1.6	0.0	2.5	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	23	25	37	376	485	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	27	41	413	533	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	847	293	586	0	-	0
Stage 1	559	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	301	703	985	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	285	703	985	-	-	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	985	-	285	703	-	-
HCM Lane V/C Ratio	0.041	-	0.089	0.039	-	-
HCM Control Delay (s)	8.8	0.2	18.9	10.3	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	252	401	133	185	381	122
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	274	436	145	201	414	133
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	335	884	737	330	656	884
Arrive On Green	0.19	0.47	0.21	0.21	0.37	0.37
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	274	436	145	201	414	133
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	7.6	8.3	1.7	5.9	9.9	2.1
Cycle Q Clear(g_c), s	7.6	8.3	1.7	5.9	9.9	2.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	335	884	737	330	656	884
V/C Ratio(X)	0.82	0.49	0.20	0.61	0.63	0.15
Avail Cap(c_a), veh/h	449	1196	1102	493	656	884
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	9.3	16.8	18.5	13.3	5.5
Incr Delay (d2), s/veh	8.6	0.4	0.1	1.8	4.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	4.2	0.9	2.7	5.5	2.8
LnGrp Delay(d),s/veh	28.6	9.7	16.9	20.3	17.9	5.8
LnGrp LOS	C	A	B	C	B	A
Approach Vol, veh/h		710	346		547	
Approach Delay, s/veh		17.0	18.9		15.0	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				28.4		23.0	13.7	14.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				33.0		19.0	13.0	16.0
Max Q Clear Time (g_c+I1), s				10.3		11.9	9.6	7.9
Green Ext Time (p_c), s				4.5		1.1	0.3	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	564	3150	932	783	0	600
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	588	3281	971	816		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	640	4638	1867	1587		
Arrive On Green	0.36	0.91	1.00	1.00		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	588	3281	971	816		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	25.3	12.8	0.0	0.0		
Cycle Q Clear(g_c), s	25.3	12.8	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	640	4638	1867	1587		
V/C Ratio(X)	0.92	0.71	0.52	0.51		
Avail Cap(c_a), veh/h	820	4831	1867	1587		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.21	0.21	0.94	0.94		
Uniform Delay (d), s/veh	24.4	0.9	0.0	0.0		
Incr Delay (d2), s/veh	3.4	0.1	0.2	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	13.0	5.5	0.1	0.1		
LnGrp Delay(d),s/veh	27.8	1.0	0.2	0.3		
LnGrp LOS	C	A	A	A		
Approach Vol, veh/h		3869	1787			
Approach Delay, s/veh		5.1	0.3			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				77.0			32.9	44.1
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			37.0	35.0
Max Q Clear Time (g_c+I1), s				14.8			27.3	2.0
Green Ext Time (p_c), s				58.1			1.5	32.8

Intersection Summary	
HCM 2010 Ctrl Delay	3.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	331	1688	676	288	1118	320	0	0	0	942	0	414
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	338	1722	690	294	1141	0				961	0	422
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	453	1780	554	310	1371	427				1153	0	1029
Arrive On Green	0.26	0.35	0.35	0.17	0.27	0.00				0.32	0.00	0.32
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	338	1722	690	294	1141	0				961	0	422
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	14.0	26.6	28.0	13.1	16.9	0.0				20.1	0.0	8.3
Cycle Q Clear(g_c), s	14.0	26.6	28.0	13.1	16.9	0.0				20.1	0.0	8.3
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	453	1780	554	310	1371	427				1153	0	1029
V/C Ratio(X)	0.75	0.97	1.25	0.95	0.83	0.00				0.83	0.00	0.41
Avail Cap(c_a), veh/h	453	1780	554	310	1462	455				1153	0	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.78	0.78	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	27.4	25.6	26.0	32.6	27.5	0.0				25.0	0.0	21.0
Incr Delay (d2), s/veh	0.6	2.2	111.8	31.7	3.2	0.0				7.1	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	6.9	12.8	29.4	9.1	8.3	0.0				10.9	0.0	3.8
LnGrp Delay(d),s/veh	28.0	27.8	137.8	64.3	30.7	0.0				32.1	0.0	22.2
LnGrp LOS	C	C	F	E	C					C		C
Approach Vol, veh/h		2750			1435						1383	
Approach Delay, s/veh		55.4			37.6						29.1	
Approach LOS		E			D						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			18.0	32.0		30.0	24.4	25.6
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			14.0	28.0		26.0	19.0	23.0
Max Q Clear Time (g_c+I1), s			15.1	30.0		22.1	16.0	18.9
Green Ext Time (p_c), s			0.0	0.0		2.2	2.8	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	203	0	288	153	314	0	0	775	387
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				226	0	0	170	349	0	0	861	430
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				278	0	248	207	2631	0	0	2042	914
Arrive On Green				0.16	0.00	0.00	0.23	1.00	0.00	0.00	0.58	0.58
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				226	0	0	170	349	0	0	861	430
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				9.9	0.0	0.0	7.3	0.0	0.0	0.0	10.9	12.6
Cycle Q Clear(g_c), s				9.9	0.0	0.0	7.3	0.0	0.0	0.0	10.9	12.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				278	0	248	207	2631	0	0	2042	914
V/C Ratio(X)				0.81	0.00	0.00	0.82	0.13	0.00	0.00	0.42	0.47
Avail Cap(c_a), veh/h				444	0	396	377	2631	0	0	2042	914
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.70	0.70	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.6	0.0	0.0	29.9	0.0	0.0	0.0	9.5	9.8
Incr Delay (d2), s/veh				6.1	0.0	0.0	5.7	0.1	0.0	0.0	0.6	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.3	0.0	0.0	3.8	0.0	0.0	0.0	5.4	5.9
LnGrp Delay(d),s/veh				38.7	0.0	0.0	35.6	0.1	0.0	0.0	10.1	11.6
LnGrp LOS				D			D	A			B	B
Approach Vol, veh/h					226			519			1291	
Approach Delay, s/veh					38.7			11.7			10.6	
Approach LOS					D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.5			13.3	50.2		16.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		52.0			17.0	31.0		20.0
Max Q Clear Time (g_c+I1), s		2.0			9.3	14.6		11.9
Green Ext Time (p_c), s		14.7			0.3	9.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/24/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	245	187	76	17	0	115	80	105	73	38	378	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.96			0.87	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (prot)	1770	1782			1535	1504		3266				1610
Flt Permitted	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (perm)	1770	1782			1535	1504		3266				1610
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	285	217	88	20	0	134	87	122	85	44	440	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	285	305	0	0	122	119	0	229	0	0	0	490
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	15.6	15.6			7.4	7.4		16.0				25.0
Effective Green, g (s)	15.6	15.6			7.4	7.4		16.0				25.0
Actuated g/C Ratio	0.19	0.19			0.09	0.09		0.20				0.31
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	345	347			141	139		653				503
v/s Ratio Prot	0.16	c0.17			c0.08	0.08		c0.07				c0.30
v/s Ratio Perm												
v/c Ratio	0.83	0.88			0.87	0.86		0.35				0.97
Uniform Delay, d1	30.9	31.3			35.8	35.8		27.5				27.2
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.74
Incremental Delay, d2	14.8	21.4			38.8	37.2		1.5				32.1
Delay (s)	45.7	52.7			74.6	73.0		29.0				52.1
Level of Service	D	D			E	E		C				D
Approach Delay (s)		49.3			73.8			29.0				
Approach LOS		D			E			C				

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	SBT
Lane Configurations	
Volume (vph)	175
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.97
Satd. Flow (prot)	3277
Flt Permitted	0.97
Satd. Flow (perm)	3277
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	203
RTOR Reduction (vph)	0
Lane Group Flow (vph)	653
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	25.0
Effective Green, g (s)	25.0
Actuated g/C Ratio	0.31
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	1024
v/s Ratio Prot	0.20
v/s Ratio Perm	
v/c Ratio	0.86dl
Uniform Delay, d1	23.6
Progression Factor	0.69
Incremental Delay, d2	2.7
Delay (s)	19.1
Level of Service	B
Approach Delay (s)	33.3
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	122	1914	240	533	905	118	231	38	721	76	23	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	1994	250	555	943	123	241	40	751	79	24	68
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	199	1843	574	632	2482	838	328	396	627	142	296	251
Arrive On Green	0.06	0.36	0.36	0.18	0.49	0.49	0.10	0.21	0.21	0.04	0.16	0.16
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	127	1994	250	555	943	123	241	40	751	79	24	68
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.9	29.0	6.6	12.6	9.3	3.2	5.5	1.4	11.8	1.8	0.9	3.0
Cycle Q Clear(g_c), s	2.9	29.0	6.6	12.6	9.3	3.2	5.5	1.4	11.8	1.8	0.9	3.0
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	199	1843	574	632	2482	838	328	396	627	142	296	251
V/C Ratio(X)	0.64	1.08	0.44	0.88	0.38	0.15	0.74	0.10	1.20	0.55	0.08	0.27
Avail Cap(c_a), veh/h	258	1843	574	645	2482	838	430	396	627	172	296	251
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)	0.40	0.40	0.40	0.68	0.68	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	25.5	9.3	31.8	12.9	9.6	35.2	25.3	13.4	37.6	28.7	29.6
Incr Delay (d2), s/veh	1.4	41.4	0.2	9.4	0.1	0.1	4.6	0.5	103.7	3.4	0.5	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	1.4	20.6	2.9	6.8	4.4	1.4	2.8	0.8	23.1	0.9	0.5	1.5
LnGrp Delay(d),s/veh	38.2	66.9	9.5	41.2	12.9	9.7	39.8	25.9	117.1	41.0	29.2	32.2
LnGrp LOS	D	F	A	D	B	A	D	C	F	D	C	C
Approach Vol, veh/h		2371			1621			1032			171	
Approach Delay, s/veh		59.3			22.3			95.5			35.8	
Approach LOS		E			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	21.0	18.7	33.0	11.6	16.7	8.6	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	15.0	29.0	10.0	10.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	3.8	13.8	14.6	31.0	7.5	5.0	4.9	11.3
Green Ext Time (p_c), s	0.0	1.0	0.1	0.0	0.2	1.8	0.0	10.9

Intersection Summary	
HCM 2010 Ctrl Delay	54.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	1858	369	185	961	61	294	17	395	17	6	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	123	1896	377	189	981	62	300	17	403	17	0	72
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	2082	831	215	1952	633	398	582	494	56	0	952
Arrive On Green	0.09	0.41	0.41	0.02	0.13	0.13	0.12	0.31	0.31	0.02	0.00	0.21
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	123	1896	377	189	981	62	300	17	403	17	0	72
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	5.4	28.1	2.6	4.4	14.4	2.7	6.8	0.5	14.3	0.4	0.0	0.8
Cycle Q Clear(g_c), s	5.4	28.1	2.6	4.4	14.4	2.7	6.8	0.5	14.3	0.4	0.0	0.8
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	156	2082	831	215	1952	633	398	582	494	56	0	952
V/C Ratio(X)	0.79	0.91	0.45	0.88	0.50	0.10	0.75	0.03	0.81	0.30	0.00	0.08
Avail Cap(c_a), veh/h	266	2098	836	215	1952	633	398	582	494	177	0	952
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	22.2	11.8	38.9	27.8	21.6	34.3	19.1	14.8	38.9	0.0	8.8
Incr Delay (d2), s/veh	8.4	6.4	0.4	29.4	0.2	0.1	8.0	0.1	13.8	3.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	14.2	1.2	3.0	6.8	1.2	3.6	0.3	8.2	0.2	0.0	0.4
LnGrp Delay(d),s/veh	44.2	28.7	12.2	68.2	28.0	21.7	42.3	19.2	28.6	42.0	0.0	9.0
LnGrp LOS	D	C	B	E	C	C	D	B	C	D		A
Approach Vol, veh/h		2396			1232			720			89	
Approach Delay, s/veh		26.9			33.9			34.0			15.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	29.0	9.0	36.8	13.2	21.0	11.1	34.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	5.0	33.0	9.0	17.0	12.0	26.0
Max Q Clear Time (g_c+I1), s	2.4	16.3	6.4	30.1	8.8	2.8	7.4	16.4
Green Ext Time (p_c), s	0.0	1.5	0.0	2.7	0.0	0.2	0.1	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	400	5	3	448	12	0	1	6	7
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	1900	1863	1900
Adj Flow Rate, veh/h				432	0	0	477	13	0	1	6	7
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				557	292	0	1097	1384	0	59	130	108
Arrive On Green				0.16	0.00	0.00	0.62	0.74	0.00	0.08	0.08	0.08
Sat Flow, veh/h				3548	1863	0	1774	1863	0	99	1731	1441
Grp Volume(v), veh/h				432	0	0	477	13	0	7	0	7
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	1830	0	1441
Q Serve(g_s), s				9.4	0.0	0.0	11.2	0.1	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s				9.4	0.0	0.0	11.2	0.1	0.0	0.3	0.0	0.4
Prop In Lane				1.00		0.00	1.00		0.00	0.14		1.00
Lane Grp Cap(c), veh/h				557	292	0	1097	1384	0	189	0	108
V/C Ratio(X)				0.78	0.00	0.00	0.43	0.01	0.00	0.04	0.00	0.06
Avail Cap(c_a), veh/h				976	512	0	1097	1384	0	189	0	108
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.99	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				32.4	0.0	0.0	8.0	2.7	0.0	34.4	0.0	34.4
Incr Delay (d2), s/veh				2.4	0.0	0.0	0.3	0.0	0.0	0.4	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				4.7	0.0	0.0	5.5	0.1	0.0	0.2	0.0	0.2
LnGrp Delay(d),s/veh				34.7	0.0	0.0	8.2	2.7	0.0	34.7	0.0	35.5
LnGrp LOS				C			A	A		C		D
Approach Vol, veh/h					432			490			14	
Approach Delay, s/veh					34.7			8.1			35.1	
Approach LOS					C			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.4			53.4	10.0		16.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		50.0			40.0	6.0		22.0
Max Q Clear Time (g_c+I1), s		2.1			13.2	2.4		11.4
Green Ext Time (p_c), s		1.7			1.6	0.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	5	265	0	0	0	2	416	332	15	392	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				1900	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	46	5	279				2	438	349	16	413	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	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	0
Cap, veh/h	330	36	325				46	1604	732	323	2458	0
Arrive On Green	0.21	0.21	0.21				0.31	0.31	0.31	0.06	0.23	0.00
Sat Flow, veh/h	1608	175	1583				2	3469	1583	1774	3632	0
Grp Volume(v), veh/h	51	0	279				236	204	349	16	413	0
Grp Sat Flow(s),veh/h/ln	1782	0	1583				1861	1610	1583	1774	1770	0
Q Serve(g_s), s	1.9	0.0	13.6				0.0	7.6	14.3	0.7	7.5	0.0
Cycle Q Clear(g_c), s	1.9	0.0	13.6				7.6	7.6	14.3	0.7	7.5	0.0
Prop In Lane	0.90		1.00				0.01		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	366	0	325				906	745	732	323	2458	0
V/C Ratio(X)	0.14	0.00	0.86				0.26	0.27	0.48	0.05	0.17	0.00
Avail Cap(c_a), veh/h	557	0	495				906	745	732	323	2458	0
HCM Platoon Ratio	1.00	1.00	1.00				0.67	0.67	0.67	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.89	0.89	0.89	0.90	0.90	0.00
Uniform Delay (d), s/veh	26.0	0.0	30.6				17.5	17.5	19.8	31.1	12.3	0.0
Incr Delay (d2), s/veh	0.2	0.0	9.2				0.6	0.8	2.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	6.7				4.1	3.6	6.7	0.3	3.7	0.0
LnGrp Delay(d),s/veh	26.2	0.0	39.8				18.1	18.3	21.7	31.1	12.4	0.0
LnGrp LOS	C		D				B	B	C	C	B	
Approach Vol, veh/h		330						789			429	
Approach Delay, s/veh		37.7						19.8			13.1	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.6	41.0		20.4		59.6		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	6.0	37.0		25.0		47.0		
Max Q Clear Time (g_c+I1), s	2.7	16.3		15.6		9.5		
Green Ext Time (p_c), s	0.8	3.9		0.9		3.1		

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	163	341	347	325	175	110	184	627	176	162	997	134
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	297	394	335	180	113	190	646	181	167	1028	138
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	207	355	850	443	718	321	267	1618	446	250	2048	638
Arrive On Green	0.12	0.19	0.19	0.13	0.20	0.20	0.16	0.82	0.82	0.02	0.13	0.13
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	3967	1093	3442	5085	1583
Grp Volume(v), veh/h	168	297	394	335	180	113	190	550	277	167	1028	138
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1670	1721	1695	1583
Q Serve(g_s), s	7.4	12.3	5.1	7.5	3.4	4.9	4.2	3.5	3.7	3.9	15.0	6.2
Cycle Q Clear(g_c), s	7.4	12.3	5.1	7.5	3.4	4.9	4.2	3.5	3.7	3.9	15.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	207	355	850	443	718	321	267	1383	681	250	2048	638
V/C Ratio(X)	0.81	0.84	0.46	0.76	0.25	0.35	0.71	0.40	0.41	0.67	0.50	0.22
Avail Cap(c_a), veh/h	310	396	919	559	718	321	344	1383	681	344	2048	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.94	0.94	0.94
Uniform Delay (d), s/veh	34.5	31.2	10.8	33.6	26.8	27.4	32.9	4.7	4.7	38.1	27.2	23.4
Incr Delay (d2), s/veh	9.4	13.3	0.4	4.5	0.2	0.7	4.5	0.8	1.7	2.9	0.8	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	4.1	7.6	2.3	3.9	1.7	2.2	2.1	1.7	1.9	1.9	7.2	2.9
LnGrp Delay(d),s/veh	43.9	44.5	11.2	38.1	27.0	28.0	37.4	5.5	6.4	41.0	28.1	24.1
LnGrp LOS	D	D	B	D	C	C	D	A	A	D	C	C
Approach Vol, veh/h		859			628			1017			1333	
Approach Delay, s/veh		29.1			33.1			11.7			29.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	36.6	14.3	19.3	10.2	36.2	13.3	20.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	26.0	13.0	17.0	8.0	26.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	5.9	5.7	9.5	14.3	6.2	17.0	9.4	6.9
Green Ext Time (p_c), s	0.1	13.5	0.8	1.0	0.1	7.1	0.2	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	71	0	428	31	142	311	168	617	0	0	1074	593
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	74	0	446	32	148	324	175	643	0	0	1119	618
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	45	209	218	215	3878	0	0	2093	936
Arrive On Green	0.00	0.00	0.00	0.14	0.14	0.14	0.12	0.76	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		328	1518	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		180	0	324	175	643	0	0	1119	618
Grp Sat Flow(s),veh/h/ln				1846	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				7.5	0.0	11.0	7.7	2.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				7.5	0.0	11.0	7.7	2.8	0.0	0.0	0.0	0.0
Prop In Lane				0.18		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				254	0	218	215	3878	0	0	2093	936
V/C Ratio(X)				0.71	0.00	1.49	0.81	0.17	0.00	0.00	0.53	0.66
Avail Cap(c_a), veh/h				254	0	218	333	3878	0	0	2093	936
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				33.0	0.0	34.5	34.3	2.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				8.8	0.0	242.5	8.5	0.1	0.0	0.0	0.8	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
%ile BackOfQ(50%),veh/ln				4.4	0.0	19.4	4.3	1.3	0.0	0.0	0.2	0.8
LnGrp Delay(d),s/veh				41.8	0.0	277.0	42.8	2.7	0.0	0.0	0.8	2.9
LnGrp LOS				D		F	D	A			A	A
Approach Vol, veh/h					504			818			1737	
Approach Delay, s/veh					193.0			11.3			1.6	
Approach LOS					F			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		65.0			13.7	51.3		15.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		51.0			15.0	32.0		11.0
Max Q Clear Time (g_c+I1), s		4.8			9.7	2.0		13.0
Green Ext Time (p_c), s		25.8			0.2	19.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	439	1979	566	120	1181	109	345	67	124	120	69	611
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	443	1999	572	121	1193	110	348	68	125	121	0	664
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	659	2093	652	133	1501	467	391	442	396	225	0	633
Arrive On Green	0.19	0.41	0.41	0.08	0.30	0.30	0.11	0.25	0.25	0.06	0.00	0.20
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	443	1999	572	121	1193	110	348	68	125	121	0	664
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	9.6	30.5	17.0	5.4	17.3	4.2	8.0	2.4	5.1	2.6	0.0	16.0
Cycle Q Clear(g_c), s	9.6	30.5	17.0	5.4	17.3	4.2	8.0	2.4	5.1	2.6	0.0	16.0
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	659	2093	652	133	1501	467	391	442	396	225	0	633
V/C Ratio(X)	0.67	0.96	0.88	0.91	0.79	0.24	0.89	0.15	0.32	0.54	0.00	1.05
Avail Cap(c_a), veh/h	659	2098	653	133	1653	515	391	442	396	225	0	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	22.8	8.8	36.7	26.0	21.4	35.0	23.4	24.4	36.3	0.0	32.0
Incr Delay (d2), s/veh	2.4	10.0	11.7	51.5	2.6	0.3	21.6	0.7	2.1	2.5	0.0	49.1
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	4.8	16.0	9.4	4.6	8.4	1.9	4.9	1.3	2.5	1.4	0.0	11.3
LnGrp Delay(d),s/veh	32.4	32.9	20.5	88.2	28.5	21.6	56.6	24.1	26.5	38.8	0.0	81.1
LnGrp LOS	C	C	C	F	C	C	E	C	C	D		F
Approach Vol, veh/h		3014			1424			541			785	
Approach Delay, s/veh		30.4			33.1			45.6			74.6	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	24.0	10.0	36.9	13.1	20.0	19.3	27.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	20.0	6.0	33.0	9.0	16.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	4.6	7.1	7.4	32.5	10.0	18.0	11.6	19.3
Green Ext Time (p_c), s	0.1	0.8	0.0	0.4	0.0	0.0	1.4	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	719	2312	1403	897	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	734	2359	1432	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.98	0.98	0.98	0.98		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	687	4816	1804	807		
Arrive On Green	0.39	0.95	0.51	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	734	2359	1432	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	31.0	3.7	26.7	0.0		
Cycle Q Clear(g_c), s	31.0	3.7	26.7	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	687	4816	1804	807		
V/C Ratio(X)	1.07	0.49	0.79	0.00		
Avail Cap(c_a), veh/h	687	4831	1814	811		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.59	0.00		
Uniform Delay (d), s/veh	24.5	0.2	16.2	0.0		
Incr Delay (d2), s/veh	33.8	0.0	1.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	21.5	1.5	13.3	0.0		
LnGrp Delay(d),s/veh	58.3	0.2	17.6	0.0		
LnGrp LOS	F	A	B			
Approach Vol, veh/h		3093	1432			
Approach Delay, s/veh		14.0	17.6			
Approach LOS		B	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				79.8			35.0	44.8
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			31.0	41.0
Max Q Clear Time (g_c+I1), s				5.7			33.0	28.7
Green Ext Time (p_c), s				64.3			0.0	12.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/24/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	828	0	338	585
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	0	836	0	341	591
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1815	418			836	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1815	418			836	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			57	
cM capacity (veh/h)	40	584			793	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	558	279	341	295	295
Volume Left	0	0	341	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	793	1700	1700
Volume to Capacity	0.33	0.16	0.43	0.17	0.17
Queue Length 95th (ft)	0	0	55	0	0
Control Delay (s)	0.0	0.0	12.9	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM 2010 Signalized Intersection Summary
25: Ulric St & Friars Rd

7/24/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	1661	675	0	1154	657	401	47	912	419	6	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	119	1712	0	0	1190	677	447	0	0	436	0	171
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	155	2641	822	0	1934	602	549	0	245	608	0	271
Arrive On Green	0.09	0.52	0.00	0.00	0.38	0.38	0.15	0.00	0.00	0.17	0.00	0.17
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	119	1712	0	0	1190	677	447	0	0	436	0	171
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	5.1	18.9	0.0	0.0	14.7	29.5	9.5	0.0	0.0	9.0	0.0	7.8
Cycle Q Clear(g_c), s	5.1	18.9	0.0	0.0	14.7	29.5	9.5	0.0	0.0	9.0	0.0	7.8
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	2641	822	0	1934	602	549	0	245	608	0	271
V/C Ratio(X)	0.77	0.65	0.00	0.00	0.62	1.12	0.81	0.00	0.00	0.72	0.00	0.63
Avail Cap(c_a), veh/h	526	3278	1021	0	1934	602	549	0	245	2562	0	1143
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	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	13.5	0.0	0.0	19.4	24.0	31.7	0.0	0.0	30.4	0.0	29.9
Incr Delay (d2), s/veh	7.8	0.3	0.0	0.0	0.6	75.8	12.5	0.0	0.0	1.6	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	8.8	0.0	0.0	6.9	25.4	5.5	0.0	0.0	4.6	0.0	6.9
LnGrp Delay(d),s/veh	42.4	13.8	0.0	0.0	20.0	99.8	44.2	0.0	0.0	32.0	0.0	32.3
LnGrp LOS	D	B			C	F	D			C		C
Approach Vol, veh/h		1831			1867			447			607	
Approach Delay, s/veh		15.7			48.9			44.2			32.1	
Approach LOS		B			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		16.0		44.3		17.3	10.8	33.5
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		12.0		50.0		56.0	23.0	23.0
Max Q Clear Time (g_c+I1), s		11.5		20.9		11.0	7.1	31.5
Green Ext Time (p_c), s		0.1		19.4		2.3	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1896	224	231	871	503	485
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1955	0	238	898	519	500
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2035	634	287	2798	561	1114
Arrive On Green	0.40	0.00	0.08	0.55	0.32	0.32
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	1955	0	238	898	519	500
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	22.5	0.0	4.1	5.8	17.0	7.9
Cycle Q Clear(g_c), s	22.5	0.0	4.1	5.8	17.0	7.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2035	634	287	2798	561	1114
V/C Ratio(X)	0.96	0.00	0.83	0.32	0.92	0.45
Avail Cap(c_a), veh/h	2035	634	287	2798	562	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	27.1	7.4	19.8	13.2
Incr Delay (d2), s/veh	12.1	0.0	18.1	0.1	21.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	0.0	2.7	2.7	11.5	3.0
LnGrp Delay(d),s/veh	29.6	0.0	45.2	7.4	41.1	13.5
LnGrp LOS	C		D	A	D	B
Approach Vol, veh/h	1955			1136	1019	
Approach Delay, s/veh	29.6			15.3	27.5	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.0	9.0	28.0				37.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	5.0	24.0				33.0
Max Q Clear Time (g_c+I1), s		19.0	6.1	24.5				7.8
Green Ext Time (p_c), s		0.0	0.0	0.0				21.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	126	151	101	44	32	74	1012	128	21	707	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	99	135	162	109	47	34	80	1088	138	23	760	44
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	166	200	139	224	162	102	1302	165	38	1277	74
Arrive On Green	0.07	0.22	0.22	0.08	0.22	0.22	0.06	0.41	0.41	0.02	0.38	0.38
Sat Flow, veh/h	1774	772	927	1774	1006	728	1774	3161	400	1774	3401	197
Grp Volume(v), veh/h	99	0	297	109	0	81	80	608	618	23	395	409
Grp Sat Flow(s),veh/h/ln	1774	0	1699	1774	0	1734	1774	1770	1792	1774	1770	1828
Q Serve(g_s), s	3.2	0.0	9.7	3.5	0.0	2.2	2.6	18.1	18.1	0.8	10.5	10.5
Cycle Q Clear(g_c), s	3.2	0.0	9.7	3.5	0.0	2.2	2.6	18.1	18.1	0.8	10.5	10.5
Prop In Lane	1.00		0.55	1.00		0.42	1.00		0.22	1.00		0.11
Lane Grp Cap(c), veh/h	126	0	366	139	0	386	102	729	738	38	665	686
V/C Ratio(X)	0.78	0.00	0.81	0.78	0.00	0.21	0.78	0.83	0.84	0.61	0.59	0.60
Avail Cap(c_a), veh/h	151	0	464	151	0	474	182	729	738	121	665	686
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	26.8	0.0	21.8	26.5	0.0	18.6	27.2	15.4	15.5	28.4	14.7	14.7
Incr Delay (d2), s/veh	19.6	0.0	8.4	21.5	0.0	0.3	12.3	10.9	10.9	14.7	3.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	5.4	2.6	0.0	1.1	1.6	11.0	11.2	0.5	5.8	5.9
LnGrp Delay(d),s/veh	46.3	0.0	30.2	48.0	0.0	18.8	39.6	26.3	26.4	43.2	18.6	18.5
LnGrp LOS	D		C	D		B	D	C	C	D	B	B
Approach Vol, veh/h		396			190			1306			827	
Approach Delay, s/veh		34.3			35.6			27.2			19.2	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	28.1	8.6	16.6	7.4	26.0	8.2	17.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	24.0	5.0	16.0	6.0	22.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	20.1	5.5	11.7	4.6	12.5	5.2	4.2
Green Ext Time (p_c), s	0.0	3.3	0.0	0.9	0.0	7.5	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	210	121	50	114	18	1297	100	89	39	151	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	101	223	129	53	121	19	1380	106	95	41	161	110
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	133	1235	45	268	44	1053	638	572	53	145	99
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.59	0.70	0.70	0.03	0.14	0.14
Sat Flow, veh/h	311	711	1583	0	1435	236	1774	907	813	1774	1033	706
Grp Volume(v), veh/h	324	0	129	60	0	133	1380	0	201	41	0	271
Grp Sat Flow(s),veh/h/ln	1022	0	1583	17	0	1653	1774	0	1719	1774	0	1738
Q Serve(g_s), s	17.3	0.0	0.0	0.0	0.0	10.7	89.0	0.0	5.9	3.4	0.0	21.0
Cycle Q Clear(g_c), s	28.0	0.0	0.0	28.0	0.0	10.7	89.0	0.0	5.9	3.4	0.0	21.0
Prop In Lane	0.31		1.00	0.89		0.14	1.00		0.47	1.00		0.41
Lane Grp Cap(c), veh/h	222	0	1235	48	0	309	1053	0	1210	53	0	243
V/C Ratio(X)	1.46	0.00	0.10	1.24	0.00	0.43	1.31	0.00	0.17	0.78	0.00	1.11
Avail Cap(c_a), veh/h	222	0	1235	48	0	309	1053	0	1210	106	0	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.2	0.0	4.0	73.1	0.0	54.0	30.5	0.0	7.5	72.3	0.0	64.5
Incr Delay (d2), s/veh	229.4	0.0	0.0	206.2	0.0	1.0	146.8	0.0	0.3	21.1	0.0	91.6
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	23.4	0.0	1.3	4.8	0.0	5.0	86.2	0.0	2.9	2.0	0.0	16.3
LnGrp Delay(d),s/veh	296.6	0.0	4.0	279.3	0.0	54.9	177.3	0.0	7.8	93.3	0.0	156.1
LnGrp LOS	F		A	F		D	F		A	F		F
Approach Vol, veh/h		453			193			1581			312	
Approach Delay, s/veh		213.2			124.5			155.8			147.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	109.5		32.0	93.0	25.0		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	9.0	101.0		28.0	89.0	21.0		28.0
Max Q Clear Time (g_c+I1), s	5.4	7.9		30.0	91.0	23.0		30.0
Green Ext Time (p_c), s	0.0	14.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	162.7
HCM 2010 LOS	F

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												
Volume (veh/h)	9	4	343	26	5	11	1422	1137	28	12	907	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	362	27	5	11	1451	1160	29	12	926	7
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	224	380	35	6	14	1656	2235	56	191	936	7
Arrive On Green	0.00	0.00	0.12	0.03	0.03	0.03	0.80	1.00	1.00	0.11	0.26	0.26
Sat Flow, veh/h	0	1863	3167	1086	201	443	3442	3529	88	1774	3600	27
Grp Volume(v), veh/h	0	0	362	43	0	0	1451	582	607	12	455	478
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1730	0	0	1721	1770	1847	1774	1770	1858
Q Serve(g_s), s	0.0	0.0	17.0	3.7	0.0	0.0	42.0	0.0	0.0	0.9	38.4	38.4
Cycle Q Clear(g_c), s	0.0	0.0	17.0	3.7	0.0	0.0	42.0	0.0	0.0	0.9	38.4	38.4
Prop In Lane	0.00		1.00	0.63		0.26	1.00		0.05	1.00		0.01
Lane Grp Cap(c), veh/h	0	224	380	56	0	0	1656	1121	1170	191	460	483
V/C Ratio(X)	0.00	0.00	0.95	0.77	0.00	0.00	0.88	0.52	0.52	0.06	0.99	0.99
Avail Cap(c_a), veh/h	0	224	380	185	0	0	1656	1121	1170	191	460	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	65.6	72.0	0.0	0.0	11.8	0.0	0.0	60.1	55.3	55.3
Incr Delay (d2), s/veh	0.0	0.0	34.0	20.0	0.0	0.0	0.6	0.2	0.1	0.1	39.4	38.4
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	0.0	0.0	9.2	2.1	0.0	0.0	19.2	0.0	0.0	0.5	23.9	24.9
LnGrp Delay(d),s/veh	0.0	0.0	99.6	92.0	0.0	0.0	12.3	0.2	0.1	60.2	94.7	93.7
LnGrp LOS			F	F			B	A	A	E	F	F
Approach Vol, veh/h		362			43			2640			945	
Approach Delay, s/veh		99.6			92.0			6.8			93.7	
Approach LOS		F			F			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.2	99.0		22.0	76.2	43.0		8.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	95.0		18.0	61.0	39.0		16.0
Max Q Clear Time (g_c+I1), s	2.9	2.0		19.0	44.0	40.4		5.7
Green Ext Time (p_c), s	1.4	11.3		0.0	6.3	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	106	586	663	204	1078	394	1372	177	9	1323	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	117	121	598	451	490	1122	402	1400	181	9	1350	49
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	236	475	449	472	829	308	1594	204	29	1203	538
Arrive On Green	0.13	0.13	0.13	0.25	0.25	0.25	0.17	0.50	0.50	0.02	0.68	0.68
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	3156	405	3442	3539	1583
Grp Volume(v), veh/h	117	121	598	451	490	1122	402	780	801	9	1350	49
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1791	1721	1770	1583
Q Serve(g_s), s	9.2	9.1	19.0	38.0	38.0	38.0	26.0	58.5	60.1	0.4	51.0	1.6
Cycle Q Clear(g_c), s	9.2	9.1	19.0	38.0	38.0	38.0	26.0	58.5	60.1	0.4	51.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	225	236	475	449	472	829	308	894	905	29	1203	538
V/C Ratio(X)	0.52	0.51	1.26	1.00	1.04	1.35	1.31	0.87	0.89	0.31	1.12	0.09
Avail Cap(c_a), veh/h	225	236	475	449	472	829	308	894	905	321	1203	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.41	0.41	0.41
Uniform Delay (d), s/veh	61.2	61.2	52.5	56.0	56.0	55.4	62.0	32.9	33.3	73.3	24.0	16.1
Incr Delay (d2), s/veh	2.1	1.9	132.7	43.3	51.7	167.2	159.8	11.5	12.4	2.5	60.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.8	25.7	24.0	26.3	36.4	26.4	31.4	32.7	0.2	34.1	0.7
LnGrp Delay(d),s/veh	63.4	63.1	185.2	99.3	107.7	222.6	221.8	44.3	45.7	75.9	84.0	16.2
LnGrp LOS	E	E	F	F	F	F	F	D	D	E	F	B
Approach Vol, veh/h		836			2063			1983			1408	
Approach Delay, s/veh		150.5			168.4			80.9			81.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	79.7		23.0	30.0	55.0		42.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	14.0	63.0		19.0	26.0	51.0		38.0
Max Q Clear Time (g_c+I1), s	2.4	62.1		21.0	28.0	53.0		40.0
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1272	2313	30	0	608	1135	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1311	2385		0	627	1170	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.97	0.97		0.94	0.97	0.97	0.97
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2271	2383		0	1015	1458	0
Arrive On Green	0.66	0.66		0.00	0.29	0.29	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1311	2385		0	627	1170	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	31.4	99.0		0.0	23.0	32.0	0.0
Cycle Q Clear(g_c), s	31.4	99.0		0.0	23.0	32.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2271	2383		0	1015	1458	0
V/C Ratio(X)	0.58	1.00		0.00	0.62	0.80	0.00
Avail Cap(c_a), veh/h	2271	2383		0	1015	1458	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.0	25.5		0.0	46.4	49.6	0.0
Incr Delay (d2), s/veh	0.4	18.7		0.0	2.8	4.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	48.2		0.0	11.6	15.6	0.0
LnGrp Delay(d),s/veh	14.4	44.2		0.0	49.2	54.3	0.0
LnGrp LOS	B	F			D	D	
Approach Vol, veh/h	3696				627	1170	
Approach Delay, s/veh	33.6				49.2	54.3	
Approach LOS	C				D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		47.0		103.0		47.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		43.0		99.0		35.0		
Max Q Clear Time (g_c+I1), s		25.0		101.0		34.0		
Green Ext Time (p_c), s		4.1		0.0		0.7		

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2316	661	84	1732	343	146
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2388	681	87	1786	354	151
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2632	1231	111	4061	921	411
Arrive On Green	0.52	0.52	0.06	0.63	0.26	0.26
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2388	681	87	1786	354	151
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	32.0	12.6	3.6	10.6	6.2	5.9
Cycle Q Clear(g_c), s	32.0	12.6	3.6	10.6	6.2	5.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2632	1231	111	4061	921	411
V/C Ratio(X)	0.91	0.55	0.78	0.44	0.38	0.37
Avail Cap(c_a), veh/h	2644	1234	118	4101	921	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	3.3	34.6	7.0	22.8	22.7
Incr Delay (d2), s/veh	3.6	0.4	26.6	0.1	1.2	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	15.7	11.9	2.6	4.6	3.2	2.8
LnGrp Delay(d),s/veh	20.0	3.6	61.3	7.0	24.1	25.2
LnGrp LOS	C	A	E	A	C	C
Approach Vol, veh/h	3069			1873	505	
Approach Delay, s/veh	16.4			9.6	24.4	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.5	8.7	42.8				51.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	5.0	39.0				48.0
Max Q Clear Time (g_c+I1), s		8.2	5.6	34.0				12.6
Green Ext Time (p_c), s		1.4	0.0	4.8				19.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	355	273	107	1278	141	78	208	124	121	304	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	136	408	314	123	1469	162	90	239	143	139	349	177
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	875	668	154	1466	160	99	352	299	158	414	352
Arrive On Green	0.09	0.46	0.46	0.09	0.46	0.46	0.06	0.19	0.19	0.09	0.22	0.22
Sat Flow, veh/h	1774	1914	1461	1774	3218	352	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	136	377	345	123	802	829	90	239	143	139	349	177
Grp Sat Flow(s),veh/h/ln	1774	1770	1605	1774	1770	1801	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.8	13.2	13.4	6.1	40.6	41.0	4.5	10.7	7.2	7.0	16.1	8.8
Cycle Q Clear(g_c), s	6.8	13.2	13.4	6.1	40.6	41.0	4.5	10.7	7.2	7.0	16.1	8.8
Prop In Lane	1.00		0.91	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	809	734	154	806	820	99	352	299	158	414	352
V/C Ratio(X)	0.86	0.47	0.47	0.80	1.00	1.01	0.91	0.68	0.48	0.88	0.84	0.50
Avail Cap(c_a), veh/h	158	809	734	237	806	820	99	352	299	158	414	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	16.8	16.9	40.3	24.4	24.5	42.3	34.0	32.5	40.5	33.5	30.6
Incr Delay (d2), s/veh	35.6	0.4	0.5	10.2	30.4	34.0	63.3	10.1	5.4	39.6	18.5	5.1
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	4.9	6.5	6.0	3.4	26.4	28.0	4.0	6.5	3.6	5.1	10.4	4.3
LnGrp Delay(d),s/veh	76.1	17.3	17.3	50.5	54.8	58.5	105.6	44.1	37.9	80.2	52.0	35.7
LnGrp LOS	E	B	B	D	D	F	F	D	D	F	D	D
Approach Vol, veh/h		858			1754			472			665	
Approach Delay, s/veh		26.6			56.3			54.0			53.6	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	21.0	11.8	45.2	9.0	24.0	12.0	45.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	17.0	12.0	37.0	5.0	20.0	8.0	41.0
Max Q Clear Time (g_c+I1), s	9.0	12.7	8.1	15.4	6.5	18.1	8.8	43.0
Green Ext Time (p_c), s	0.0	1.9	0.1	16.9	0.0	0.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	28	30	232	376	485	178
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	33	255	413	533	196

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1347	364	729	0	-	0
Stage 1	631	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	142	633	871	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	88	633	871	-	-	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	276	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.8	4.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	871	-	88	633	-	-
HCM Lane V/C Ratio	0.293	-	0.35	0.052	-	-
HCM Control Delay (s)	10.8	0.9	66.5	11	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	1.4	0.2	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	252	401	133	380	386	122
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	274	436	145	413	420	133
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	328	990	982	439	585	814
Arrive On Green	0.18	0.53	0.28	0.28	0.33	0.33
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	274	436	145	413	420	133
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	8.6	8.3	1.8	14.7	12.0	2.6
Cycle Q Clear(g_c), s	8.6	8.3	1.8	14.7	12.0	2.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	328	990	982	439	585	814
V/C Ratio(X)	0.84	0.44	0.15	0.94	0.72	0.16
Avail Cap(c_a), veh/h	400	1066	982	439	585	814
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	8.3	15.7	20.4	17.0	7.4
Incr Delay (d2), s/veh	12.1	0.3	0.1	28.3	7.4	0.4
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	4.2	0.9	9.9	7.0	3.2
LnGrp Delay(d),s/veh	34.8	8.6	15.8	48.7	24.4	7.9
LnGrp LOS	C	A	B	D	C	A
Approach Vol, veh/h		710	558		553	
Approach Delay, s/veh		18.7	40.1		20.4	
Approach LOS		B	D		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				34.7		23.0	14.7	20.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				33.0		19.0	13.0	16.0
Max Q Clear Time (g_c+I1), s				10.3		14.0	10.6	16.7
Green Ext Time (p_c), s				5.5		0.9	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	604	3290	1262	788	0	1390
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	629	3427	1164	922		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	660	4768	2008	1707		
Arrive On Green	0.37	0.94	1.00	1.00		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	629	3427	1164	922		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	51.8	19.4	0.0	0.0		
Cycle Q Clear(g_c), s	51.8	19.4	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	660	4768	2008	1707		
V/C Ratio(X)	0.95	0.72	0.58	0.54		
Avail Cap(c_a), veh/h	816	4950	2008	1707		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.11	0.11	0.90	0.90		
Uniform Delay (d), s/veh	45.9	0.9	0.0	0.0		
Incr Delay (d2), s/veh	3.5	0.1	0.4	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	26.0	8.3	0.1	0.1		
LnGrp Delay(d),s/veh	49.4	1.0	0.4	0.3		
LnGrp LOS	D	A	A	A		
Approach Vol, veh/h		4056	2086			
Approach Delay, s/veh		8.5	0.3			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				144.6			59.8	84.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			69.0	73.0
Max Q Clear Time (g_c+I1), s				21.4			53.8	2.0
Green Ext Time (p_c), s				119.3			2.0	70.5

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	331	1738	696	288	2173	320	0	0	0	1072	0	2059
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	338	1773	710	294	2217	0				1094	0	2101
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	260	1661	517	272	1695	528				1561	0	1393
Arrive On Green	0.15	0.33	0.33	0.15	0.33	0.00				0.44	0.00	0.44
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	338	1773	710	294	2217	0				1094	0	2101
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	22.0	49.0	49.0	23.0	50.0	0.0				37.4	0.0	66.0
Cycle Q Clear(g_c), s	22.0	49.0	49.0	23.0	50.0	0.0				37.4	0.0	66.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	260	1661	517	272	1695	528				1561	0	1393
V/C Ratio(X)	1.30	1.07	1.37	1.08	1.31	0.00				0.70	0.00	1.51
Avail Cap(c_a), veh/h	260	1661	517	272	1695	528				1561	0	1393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.72	0.72	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	64.0	50.5	50.5	63.5	50.0	0.0				34.0	0.0	42.0
Incr Delay (d2), s/veh	137.2	31.8	168.9	69.5	141.7	0.0				2.6	0.0	232.3
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	20.7	27.8	45.7	16.5	45.6	0.0				19.0	0.0	73.8
LnGrp Delay(d),s/veh	201.2	82.3	219.4	133.0	191.7	0.0				36.7	0.0	274.3
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		2821			2511						3195	
Approach Delay, s/veh		131.0			184.8						192.9	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			27.0	53.0		70.0	26.0	54.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			23.0	49.0		66.0	22.0	50.0
Max Q Clear Time (g_c+I1), s			25.0	51.0		68.0	24.0	52.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	170.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	863	0	353	173	314	0	0	775	387
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				959	0	0	192	349	0	0	861	430
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				976	0	871	207	1404	0	0	897	401
Arrive On Green				0.55	0.00	0.00	0.23	0.79	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				959	0	0	192	349	0	0	861	430
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				79.4	0.0	0.0	15.9	3.8	0.0	0.0	36.0	38.0
Cycle Q Clear(g_c), s				79.4	0.0	0.0	15.9	3.8	0.0	0.0	36.0	38.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				976	0	871	207	1404	0	0	897	401
V/C Ratio(X)				0.98	0.00	0.00	0.93	0.25	0.00	0.00	0.96	1.07
Avail Cap(c_a), veh/h				982	0	876	207	1404	0	0	897	401
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.71	0.71	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.1	0.0	0.0	56.9	9.7	0.0	0.0	55.3	56.0
Incr Delay (d2), s/veh				24.5	0.0	0.0	34.2	0.3	0.0	0.0	21.8	65.5
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				45.3	0.0	0.0	9.8	1.9	0.0	0.0	20.3	23.9
LnGrp Delay(d),s/veh				57.6	0.0	0.0	91.0	10.0	0.0	0.0	77.1	121.5
LnGrp LOS				E			F	B			E	F
Approach Vol, veh/h					959			541			1291	
Approach Delay, s/veh					57.6			38.8			91.9	
Approach LOS					E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.5			21.5	42.0		86.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		59.0			17.0	38.0		83.0
Max Q Clear Time (g_c+I1), s		5.8			17.9	40.0		81.4
Green Ext Time (p_c), s		3.1			0.0	0.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	69.8
HCM 2010 LOS	E

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/24/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	245	289	829	542	0	114	81	126	87	53	378	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1656			1682	1504		3260				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1656			1682	1504		3260				1610
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	285	336	964	630	0	133	88	147	101	62	440	381
RTOR Reduction (vph)	0	0	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	285	1300	0	0	643	208	0	295	0	0	0	619
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	58.0	58.0			26.0	26.0		18.0				32.0
Effective Green, g (s)	58.0	58.0			26.0	26.0		18.0				32.0
Actuated g/C Ratio	0.39	0.39			0.17	0.17		0.12				0.21
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	684	640			291	260		391				343
v/s Ratio Prot	0.16	c0.79			c0.38	0.14		c0.09				c0.38
v/s Ratio Perm												
v/c Ratio	0.42	2.03			2.21	0.80		0.75				1.80
Uniform Delay, d1	33.6	46.0			62.0	59.5		63.9				59.0
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.68
Incremental Delay, d2	0.4	469.5			555.4	16.0		12.7				366.4
Delay (s)	34.0	515.5			617.4	75.5		76.6				406.4
Level of Service	C	F			F	E		E				F
Approach Delay (s)		429.0			485.0			76.6				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	405.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	152.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	937
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3364
Flt Permitted	0.99
Satd. Flow (perm)	3364
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	1090
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1292
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	32.0
Effective Green, g (s)	32.0
Actuated g/C Ratio	0.21
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	717
v/s Ratio Prot	0.38
v/s Ratio Perm	
v/c Ratio	1.80
Uniform Delay, d1	59.0
Progression Factor	0.68
Incremental Delay, d2	363.0
Delay (s)	403.0
Level of Service	F
Approach Delay (s)	404.1
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	122	4219	240	533	960	118	231	38	721	76	23	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	4395	250	555	1000	123	241	40	751	79	24	68
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	172	2983	929	551	3543	1145	298	224	443	92	112	95
Arrive On Green	0.05	0.59	0.59	0.16	0.70	0.70	0.09	0.12	0.12	0.03	0.06	0.06
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	127	4395	250	555	1000	123	241	40	751	79	24	68
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.5	88.0	11.6	24.0	11.1	3.5	10.3	2.9	14.9	3.4	1.8	5.6
Cycle Q Clear(g_c), s	5.5	88.0	11.6	24.0	11.1	3.5	10.3	2.9	14.9	3.4	1.8	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	172	2983	929	551	3543	1145	298	224	443	92	112	95
V/C Ratio(X)	0.74	1.47	0.27	1.01	0.28	0.11	0.81	0.18	1.69	0.86	0.21	0.72
Avail Cap(c_a), veh/h	229	2983	929	551	3543	1145	298	224	443	92	112	95
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	31.0	15.2	63.0	8.6	6.2	67.3	59.4	41.7	72.7	67.1	54.9
Incr Delay (d2), s/veh	0.8	213.1	0.0	13.5	0.0	0.0	15.1	1.7	321.9	51.9	4.4	37.0
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	99.7	5.1	12.4	5.2	1.5	5.5	1.6	46.1	2.3	1.1	3.4
LnGrp Delay(d),s/veh	71.1	244.1	15.2	76.5	8.6	6.2	82.4	61.1	363.6	124.6	71.5	91.9
LnGrp LOS	E	F	B	F	A	A	F	E	F	F	E	F
Approach Vol, veh/h		4772			1678			1032			171	
Approach Delay, s/veh		227.5			30.9			286.2			104.1	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	28.0	92.0	17.0	13.0	11.5	108.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	24.0	88.0	13.0	9.0	10.0	102.0
Max Q Clear Time (g_c+I1), s	5.4	16.9	26.0	90.0	12.3	7.6	7.5	13.1
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.4	0.0	0.1	14.6

Intersection Summary	
HCM 2010 Ctrl Delay	189.5
HCM 2010 LOS	F

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												
Volume (veh/h)	121	4163	369	185	1016	61	294	17	395	17	6	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	125	4292	380	191	1047	63	303	18	407	18	0	73
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	148	3288	1151	138	3069	978	275	359	305	50	0	665
Arrive On Green	0.08	0.65	0.65	0.08	1.00	1.00	0.08	0.19	0.19	0.01	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	125	4292	380	191	1047	63	303	18	407	18	0	73
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	10.4	97.0	0.9	6.0	0.0	0.0	12.0	1.2	25.5	0.8	0.0	2.2
Cycle Q Clear(g_c), s	10.4	97.0	0.9	6.0	0.0	0.0	12.0	1.2	25.5	0.8	0.0	2.2
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	148	3288	1151	138	3069	978	275	359	305	50	0	665
V/C Ratio(X)	0.85	1.31	0.33	1.39	0.34	0.06	1.10	0.05	1.33	0.36	0.00	0.11
Avail Cap(c_a), veh/h	213	3288	1151	138	3069	978	275	359	305	95	0	665
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.8	26.5	7.4	69.0	0.0	0.0	69.0	49.4	47.4	73.3	0.0	31.4
Incr Delay (d2), s/veh	18.7	139.6	0.2	210.3	0.1	0.0	83.8	0.3	171.3	4.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	87.6	0.4	6.9	0.0	0.0	8.9	0.6	25.7	0.4	0.0	1.0
LnGrp Delay(d),s/veh	86.5	166.1	7.5	279.3	0.1	0.0	152.8	49.6	218.7	77.6	0.0	31.7
LnGrp LOS	F	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		4797			1301			728			91	
Approach Delay, s/veh		151.5			41.1			187.1			40.8	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	32.9	10.0	101.0	16.0	23.0	16.5	94.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	6.0	97.0	12.0	19.0	18.0	85.0
Max Q Clear Time (g_c+I1), s	2.8	27.5	8.0	99.0	14.0	4.2	12.4	2.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.2	0.1	11.7

Intersection Summary	
HCM 2010 Ctrl Delay	133.0
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	425	5	3	448	12	0	0	6	7
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				458	0	0	477	13	0	0	6	7
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				534	280	0	1271	1483	0	0	94	84
Arrive On Green				0.15	0.00	0.00	0.72	0.80	0.00	0.00	0.05	0.05
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1863	1583
Grp Volume(v), veh/h				458	0	0	477	13	0	0	6	7
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1583
Q Serve(g_s), s				18.9	0.0	0.0	15.7	0.2	0.0	0.0	0.5	0.6
Cycle Q Clear(g_c), s				18.9	0.0	0.0	15.7	0.2	0.0	0.0	0.5	0.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				534	280	0	1271	1483	0	0	94	84
V/C Ratio(X)				0.86	0.00	0.00	0.38	0.01	0.00	0.00	0.06	0.08
Avail Cap(c_a), veh/h				1135	596	0	1271	1483	0	0	94	84
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.99	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				62.1	0.0	0.0	8.3	3.1	0.0	0.0	67.4	67.5
Incr Delay (d2), s/veh				4.1	0.0	0.0	0.2	0.0	0.0	0.0	1.3	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.6	0.0	0.0	7.6	0.1	0.0	0.0	0.3	0.3
LnGrp Delay(d),s/veh				66.3	0.0	0.0	8.4	3.1	0.0	0.0	68.7	69.4
LnGrp LOS				E			A	A			E	E
Approach Vol, veh/h					458			490			13	
Approach Delay, s/veh					66.3			8.3			69.1	
Approach LOS					E			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		123.4			111.4	12.0		26.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		94.0			82.0	8.0		48.0
Max Q Clear Time (g_c+I1), s		2.2			17.7	2.6		20.9
Green Ext Time (p_c), s		1.7			1.7	0.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	5	265	0	0	0	0	416	1452	15	417	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	46	5	279				0	438	1528	16	439	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	171	19	169				0	2784	1246	47	2973	0
Arrive On Green	0.11	0.11	0.11				0.00	0.26	0.26	0.01	0.28	0.00
Sat Flow, veh/h	1608	175	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	51	0	279				0	438	1528	16	439	0
Grp Sat Flow(s),veh/h/ln	1782	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	3.9	0.0	16.0				0.0	14.3	118.0	1.3	14.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	16.0				0.0	14.3	118.0	1.3	14.0	0.0
Prop In Lane	0.90		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	190	0	169				0	2784	1246	47	2973	0
V/C Ratio(X)	0.27	0.00	1.65				0.00	0.16	1.23	0.34	0.15	0.00
Avail Cap(c_a), veh/h	190	0	169				0	2784	1246	47	2973	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.60	0.60	0.92	0.92	0.00
Uniform Delay (d), s/veh	61.6	0.0	67.0				0.0	17.2	55.5	73.0	13.7	0.0
Incr Delay (d2), s/veh	0.7	0.0	318.3				0.0	0.1	106.5	3.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	21.9				0.0	7.1	88.6	0.7	6.9	0.0
LnGrp Delay(d),s/veh	62.4	0.0	385.3				0.0	17.2	162.0	76.8	13.8	0.0
LnGrp LOS	E		F					B	F	E	B	
Approach Vol, veh/h		330						1966			455	
Approach Delay, s/veh		335.4						129.8			16.1	
Approach LOS		F						F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	8.0	122.0		20.0		130.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	4.0	118.0		16.0		126.0		
Max Q Clear Time (g_c+I1), s	3.3	120.0		18.0		16.0		
Green Ext Time (p_c), s	0.2	0.0		0.0		3.4		

Intersection Summary	
HCM 2010 Ctrl Delay	135.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	163	341	347	325	175	110	184	1747	176	162	1022	134
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	170	300	398	339	182	115	192	1820	183	169	1065	140
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	358	336	1074	393	329	147	546	2193	220	454	2238	697
Arrive On Green	0.20	0.18	0.18	0.11	0.09	0.09	0.32	0.93	0.93	0.04	0.15	0.15
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4699	470	3442	5085	1583
Grp Volume(v), veh/h	170	300	398	339	182	115	192	1311	692	169	1065	140
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1780	1721	1695	1583
Q Serve(g_s), s	12.7	23.6	0.0	14.5	7.4	10.7	6.4	17.0	17.5	7.2	28.8	11.7
Cycle Q Clear(g_c), s	12.7	23.6	0.0	14.5	7.4	10.7	6.4	17.0	17.5	7.2	28.8	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	358	336	1074	393	329	147	546	1582	831	454	2238	697
V/C Ratio(X)	0.47	0.89	0.37	0.86	0.55	0.78	0.35	0.83	0.83	0.37	0.48	0.20
Avail Cap(c_a), veh/h	358	373	1136	505	661	296	546	1582	831	454	2238	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.93	0.93	0.93
Uniform Delay (d), s/veh	52.9	60.0	37.5	65.3	65.1	66.5	45.3	3.2	3.3	65.7	48.2	40.9
Incr Delay (d2), s/veh	1.0	21.4	0.2	11.7	1.5	8.7	0.3	4.0	7.6	0.5	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	14.2	6.2	7.6	3.7	5.0	3.1	7.4	9.1	3.4	13.7	5.2
LnGrp Delay(d),s/veh	53.8	81.4	37.7	77.0	66.5	75.2	45.6	7.3	10.9	66.2	48.9	41.5
LnGrp LOS	D	F	D	E	E	E	D	A	B	E	D	D
Approach Vol, veh/h		868			636			2195			1374	
Approach Delay, s/veh		56.0			73.7			11.8			50.3	
Approach LOS		E			E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.8	74.0	21.1	31.1	27.8	70.0	34.3	17.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	70.0	22.0	30.0	16.0	66.0	24.0	28.0
Max Q Clear Time (g_c+I1), s	9.2	19.5	16.5	25.6	8.4	30.8	14.7	12.7
Green Ext Time (p_c), s	0.4	25.8	0.6	1.5	0.8	10.1	1.3	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	71	0	428	31	142	311	168	1737	0	0	1074	618
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	74	0	446	32	148	324	175	1809	0	0	1119	644
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	72	334	348	200	3696	0	0	2079	930
Arrive On Green	0.00	0.00	0.00	0.22	0.22	0.22	0.11	0.73	0.00	0.00	0.78	0.78
Sat Flow, veh/h		0		328	1518	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		180	0	324	175	1809	0	0	1119	644
Grp Sat Flow(s),veh/h/ln				1846	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				12.6	0.0	30.1	14.6	22.6	0.0	0.0	17.9	29.1
Cycle Q Clear(g_c), s				12.6	0.0	30.1	14.6	22.6	0.0	0.0	17.9	29.1
Prop In Lane				0.18		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				406	0	348	200	3696	0	0	2079	930
V/C Ratio(X)				0.44	0.00	0.93	0.87	0.49	0.00	0.00	0.54	0.69
Avail Cap(c_a), veh/h				443	0	380	343	3696	0	0	2079	930
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.85	0.85
Uniform Delay (d), s/veh				50.6	0.0	57.4	65.5	8.7	0.0	0.0	8.7	9.9
Incr Delay (d2), s/veh				0.8	0.0	28.2	12.0	0.5	0.0	0.0	0.9	3.6
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				6.5	0.0	15.9	7.8	10.7	0.0	0.0	8.9	13.3
LnGrp Delay(d),s/veh				51.3	0.0	85.6	77.5	9.1	0.0	0.0	9.6	13.6
LnGrp LOS				D		F	E	A			A	B
Approach Vol, veh/h					504			1984			1763	
Approach Delay, s/veh					73.3			15.2			11.0	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		113.0			20.9	92.1		37.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		92.0			29.0	59.0		36.0
Max Q Clear Time (g_c+I1), s		24.6			16.6	31.1		32.1
Green Ext Time (p_c), s		55.7			0.4	25.7		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	439	3164	566	120	1211	109	345	67	124	120	69	611
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	443	3196	572	121	1223	110	348	68	125	121	0	664
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1177	2983	929	118	1584	493	321	307	274	237	0	464
Arrive On Green	0.34	0.59	0.59	0.07	0.31	0.31	0.09	0.17	0.17	0.07	0.00	0.15
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	443	3196	572	121	1223	110	348	68	125	121	0	664
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	14.6	88.0	22.6	10.0	32.7	7.7	14.0	5.0	10.6	4.9	0.0	22.0
Cycle Q Clear(g_c), s	14.6	88.0	22.6	10.0	32.7	7.7	14.0	5.0	10.6	4.9	0.0	22.0
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	1177	2983	929	118	1584	493	321	307	274	237	0	464
V/C Ratio(X)	0.38	1.07	0.62	1.02	0.77	0.22	1.08	0.22	0.46	0.51	0.00	1.43
Avail Cap(c_a), veh/h	1177	2983	929	118	2407	749	321	307	274	237	0	464
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)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.3	31.0	8.3	70.0	46.8	38.2	68.0	53.3	55.6	67.6	0.0	64.0
Incr Delay (d2), s/veh	0.2	38.3	1.0	89.1	0.9	0.2	74.3	1.7	5.4	1.9	0.0	205.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	51.5	10.1	7.8	15.4	3.4	10.0	2.6	5.1	2.5	0.0	22.9
LnGrp Delay(d),s/veh	37.5	69.3	9.4	159.3	47.7	38.4	142.3	55.0	61.0	69.5	0.0	269.5
LnGrp LOS	D	F	A	F	D	D	F	D	E	E		F
Approach Vol, veh/h		4211			1454			541			785	
Approach Delay, s/veh		57.8			56.3			112.5			238.7	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	30.0	14.0	92.0	18.0	26.0	55.3	50.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	26.0	10.0	88.0	14.0	22.0	27.0	71.0
Max Q Clear Time (g_c+I1), s	6.9	12.6	12.0	90.0	16.0	24.0	16.6	34.7
Green Ext Time (p_c), s	0.6	0.9	0.0	0.0	0.0	0.0	10.3	12.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	719	2707	1423	902	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	734	2762	1452	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.98	0.98	0.98	0.98		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	721	4930	1897	849		
Arrive On Green	0.81	1.00	0.54	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	734	2762	1452	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	61.0	0.0	48.4	0.0		
Cycle Q Clear(g_c), s	61.0	0.0	48.4	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	721	4930	1897	849		
V/C Ratio(X)	1.02	0.56	0.77	0.00		
Avail Cap(c_a), veh/h	721	4950	1911	855		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.52	0.00		
Uniform Delay (d), s/veh	14.0	0.0	27.4	0.0		
Incr Delay (d2), s/veh	14.8	0.0	1.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	31.0	0.0	23.9	0.0		
LnGrp Delay(d),s/veh	28.8	0.0	28.4	0.0		
LnGrp LOS	F	A	C			
Approach Vol, veh/h		3496	1452			
Approach Delay, s/veh		6.1	28.4			
Approach LOS		A	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				149.4			65.0	84.4
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			61.0	81.0
Max Q Clear Time (g_c+I1), s				2.0			63.0	50.4
Green Ext Time (p_c), s				132.4			0.0	30.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/24/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	828	0	338	585
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	0	836	0	341	591
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1815	418			836	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1815	418			836	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			57	
cM capacity (veh/h)	40	584			793	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	558	279	341	295	295
Volume Left	0	0	341	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	793	1700	1700
Volume to Capacity	0.33	0.16	0.43	0.17	0.17
Queue Length 95th (ft)	0	0	55	0	0
Control Delay (s)	0.0	0.0	12.9	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	1791	675	0	1159	657	401	47	1177	419	6	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	119	1846	0	0	1195	677	447	0	0	436	0	171
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	140	3170	987	0	2632	820	534	0	238	518	0	231
Arrive On Green	0.08	0.62	0.00	0.00	0.52	0.52	0.15	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	119	1846	0	0	1195	677	447	0	0	436	0	171
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	9.9	32.2	0.0	0.0	22.2	54.0	18.4	0.0	0.0	17.9	0.0	15.5
Cycle Q Clear(g_c), s	9.9	32.2	0.0	0.0	22.2	54.0	18.4	0.0	0.0	17.9	0.0	15.5
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	3170	987	0	2632	820	534	0	238	518	0	231
V/C Ratio(X)	0.85	0.58	0.00	0.00	0.45	0.83	0.84	0.00	0.00	0.84	0.00	0.74
Avail Cap(c_a), veh/h	142	3221	1003	0	2678	834	534	0	238	828	0	369
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	0.00	0.00	0.56	0.56	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	68.2	16.7	0.0	0.0	22.8	30.5	61.9	0.0	0.0	62.3	0.0	61.3
Incr Delay (d2), s/veh	35.4	0.3	0.0	0.0	0.1	3.9	14.4	0.0	0.0	4.5	0.0	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	6.3	15.1	0.0	0.0	10.4	24.4	10.1	0.0	0.0	9.1	0.0	13.5
LnGrp Delay(d),s/veh	103.6	17.0	0.0	0.0	22.9	34.4	76.3	0.0	0.0	66.8	0.0	65.9
LnGrp LOS	F	B			C	C	E			E		E
Approach Vol, veh/h		1965			1872			447			607	
Approach Delay, s/veh		22.2			27.1			76.3			66.5	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		26.6		97.5		25.9	15.9	81.6
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		8.0		95.0		35.0	12.0	79.0
Max Q Clear Time (g_c+I1), s		20.4		34.2		19.9	11.9	56.0
Green Ext Time (p_c), s		0.0		52.5		2.0	0.0	21.6

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	805	168	215	643	196	261
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	947	0	253	756	231	307
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1911	595	377	3025	330	823
Arrive On Green	0.38	0.00	0.11	0.59	0.19	0.19
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	947	0	253	756	231	307
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.2	0.0	2.6	2.6	4.4	3.2
Cycle Q Clear(g_c), s	5.2	0.0	2.6	2.6	4.4	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1911	595	377	3025	330	823
V/C Ratio(X)	0.50	0.00	0.67	0.25	0.70	0.37
Avail Cap(c_a), veh/h	2228	694	377	3343	389	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.7	0.0	15.6	3.5	13.9	10.2
Incr Delay (d2), s/veh	0.2	0.0	4.6	0.0	4.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.5	1.2	2.6	1.3
LnGrp Delay(d),s/veh	8.9	0.0	20.2	3.6	18.4	10.5
LnGrp LOS	A		C	A	B	B
Approach Vol, veh/h	947			1009	538	
Approach Delay, s/veh	8.9			7.7	13.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.8	8.0	17.7				25.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		8.0	4.0	16.0				24.0
Max Q Clear Time (g_c+I1), s		6.4	4.6	7.2				4.6
Green Ext Time (p_c), s		0.4	0.0	6.5				11.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	57	52	58	43	25	37	457	70	15	439	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	59	67	61	68	51	29	44	538	82	18	516	39
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	117	107	92	151	86	68	1305	198	32	1345	101
Arrive On Green	0.05	0.13	0.13	0.05	0.14	0.14	0.04	0.42	0.42	0.02	0.40	0.40
Sat Flow, veh/h	1774	899	819	1774	1116	635	1774	3082	468	1774	3336	252
Grp Volume(v), veh/h	59	0	128	68	0	80	44	308	312	18	273	282
Grp Sat Flow(s),veh/h/ln	1774	0	1718	1774	0	1751	1774	1770	1780	1774	1770	1818
Q Serve(g_s), s	1.4	0.0	3.0	1.6	0.0	1.8	1.0	5.2	5.2	0.4	4.6	4.7
Cycle Q Clear(g_c), s	1.4	0.0	3.0	1.6	0.0	1.8	1.0	5.2	5.2	0.4	4.6	4.7
Prop In Lane	1.00		0.48	1.00		0.36	1.00		0.26	1.00		0.14
Lane Grp Cap(c), veh/h	84	0	224	92	0	236	68	749	754	32	714	733
V/C Ratio(X)	0.70	0.00	0.57	0.74	0.00	0.34	0.65	0.41	0.41	0.56	0.38	0.38
Avail Cap(c_a), veh/h	250	0	647	250	0	659	209	749	754	167	714	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	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	20.0	0.0	17.4	19.9	0.0	16.7	20.2	8.6	8.6	20.7	9.0	9.0
Incr Delay (d2), s/veh	10.3	0.0	2.3	10.9	0.0	0.8	10.1	1.7	1.7	14.6	1.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.5	1.1	0.0	0.9	0.7	2.8	2.9	0.3	2.5	2.6
LnGrp Delay(d),s/veh	30.2	0.0	19.7	30.8	0.0	17.5	30.2	10.2	10.2	35.3	10.5	10.5
LnGrp LOS	C		B	C		B	C	B	B	D	B	B
Approach Vol, veh/h		187			148			664			573	
Approach Delay, s/veh		23.0			23.6			11.6			11.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	22.0	6.2	9.5	5.6	21.1	6.0	9.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.4	7.2	3.6	5.0	3.0	6.7	3.4	3.8
Green Ext Time (p_c), s	0.0	5.3	0.0	0.8	0.0	5.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	75	59	34	66	9	73	59	51	3	65	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	27	87	69	40	77	10	85	69	59	3	76	35
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	210	324	228	310	42	109	476	407	6	549	253
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.06	0.51	0.51	0.00	0.45	0.45
Sat Flow, veh/h	275	1470	1583	483	2175	297	1774	929	794	1774	1208	556
Grp Volume(v), veh/h	114	0	69	72	0	55	85	0	128	3	0	111
Grp Sat Flow(s),veh/h/ln	1745	0	1583	1312	0	1643	1774	0	1723	1774	0	1765
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	1.1	1.7	0.0	1.4	0.1	0.0	1.3
Cycle Q Clear(g_c), s	2.0	0.0	0.0	2.1	0.0	1.1	1.7	0.0	1.4	0.1	0.0	1.3
Prop In Lane	0.24		1.00	0.56		0.18	1.00		0.46	1.00		0.32
Lane Grp Cap(c), veh/h	376	0	324	347	0	234	109	0	884	6	0	802
V/C Ratio(X)	0.30	0.00	0.21	0.21	0.00	0.24	0.78	0.00	0.14	0.51	0.00	0.14
Avail Cap(c_a), veh/h	903	0	818	797	0	747	302	0	884	202	0	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	11.6	13.5	0.0	13.4	16.3	0.0	4.5	17.5	0.0	5.6
Incr Delay (d2), s/veh	0.5	0.0	0.3	0.3	0.0	0.5	11.1	0.0	0.3	56.3	0.0	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	0.0	0.6	0.6	0.0	0.5	1.1	0.0	0.7	0.1	0.0	0.7
LnGrp Delay(d),s/veh	14.2	0.0	12.0	13.8	0.0	13.9	27.4	0.0	4.9	73.8	0.0	5.9
LnGrp LOS	B		B	B		B	C		A	E		A
Approach Vol, veh/h		183			127			213			114	
Approach Delay, s/veh		13.4			13.8			13.8			7.7	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	22.1		9.0	6.2	20.0		9.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	3.4		4.0	3.7	3.3		4.1
Green Ext Time (p_c), s	0.0	0.8		1.2	0.1	0.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	3	321	14	0	4	302	547	23	11	533	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	390	16	0	4	339	615	26	12	599	27
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	283	481	26	0	6	1233	1088	46	509	838	38
Arrive On Green	0.00	0.00	0.15	0.02	0.00	0.02	0.72	0.63	0.63	0.29	0.24	0.24
Sat Flow, veh/h	0	1863	3167	1386	0	346	3442	3460	146	1774	3450	155
Grp Volume(v), veh/h	0	0	390	20	0	0	339	314	327	12	307	319
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1732	0	0	1721	1770	1837	1774	1770	1835
Q Serve(g_s), s	0.0	0.0	8.3	0.8	0.0	0.0	2.4	7.2	7.2	0.3	11.1	11.1
Cycle Q Clear(g_c), s	0.0	0.0	8.3	0.8	0.0	0.0	2.4	7.2	7.2	0.3	11.1	11.1
Prop In Lane	0.00		1.00	0.80		0.20	1.00		0.08	1.00		0.08
Lane Grp Cap(c), veh/h	0	283	481	32	0	0	1233	556	577	509	430	446
V/C Ratio(X)	0.00	0.00	0.81	0.63	0.00	0.00	0.27	0.57	0.57	0.02	0.71	0.72
Avail Cap(c_a), veh/h	0	319	543	396	0	0	1233	556	577	509	430	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	28.7	34.1	0.0	0.0	6.7	10.2	10.2	17.9	24.3	24.3
Incr Delay (d2), s/veh	0.0	0.0	8.2	18.5	0.0	0.0	0.1	3.6	3.5	0.0	9.7	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.2	0.5	0.0	0.0	1.1	3.9	4.0	0.2	6.5	6.8
LnGrp Delay(d),s/veh	0.0	0.0	36.9	52.6	0.0	0.0	6.8	13.8	13.7	17.9	34.0	33.8
LnGrp LOS			D	D			A	B	B	B	C	C
Approach Vol, veh/h		390			20			980			638	
Approach Delay, s/veh		36.9			52.6			11.4			33.6	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.1	26.0		14.6	29.1	21.0		5.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	22.0		12.0	9.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	9.2		10.3	4.4	13.1		2.8
Green Ext Time (p_c), s	0.2	3.2		0.3	0.5	1.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	19	370	330	104	232	186	580	48	14	804	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	44	52	407	391	202	170	204	637	53	15	884	86
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	266	430	568	298	276	228	1502	125	50	1203	538
Arrive On Green	0.14	0.14	0.14	0.16	0.16	0.16	0.13	0.45	0.45	0.01	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3309	275	3442	3539	1583
Grp Volume(v), veh/h	44	52	407	391	202	170	204	340	350	15	884	86
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1814	1721	1770	1583
Q Serve(g_s), s	1.5	1.7	10.0	7.3	7.2	7.0	7.9	9.1	9.1	0.3	15.4	2.7
Cycle Q Clear(g_c), s	1.5	1.7	10.0	7.3	7.2	7.0	7.9	9.1	9.1	0.3	15.4	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	253	266	430	568	298	276	228	803	824	50	1203	538
V/C Ratio(X)	0.17	0.20	0.95	0.69	0.68	0.62	0.89	0.42	0.42	0.30	0.73	0.16
Avail Cap(c_a), veh/h	253	266	430	811	426	385	228	803	824	295	1203	538
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	0.89	0.89	0.89
Uniform Delay (d), s/veh	26.4	26.5	25.0	27.7	27.7	26.7	30.0	12.9	12.9	34.1	20.3	16.1
Incr Delay (d2), s/veh	0.3	0.4	30.3	1.5	2.7	2.2	32.9	1.6	1.6	3.0	3.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	11.3	3.6	3.9	3.2	5.9	4.8	4.9	0.2	8.1	1.2
LnGrp Delay(d),s/veh	26.7	26.8	55.3	29.2	30.4	28.9	63.0	14.6	14.5	37.1	23.9	16.7
LnGrp LOS	C	C	E	C	C	C	E	B	B	D	C	B
Approach Vol, veh/h		503			763			894			985	
Approach Delay, s/veh		49.8			29.5			25.6			23.5	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	35.8		14.0	13.0	27.8		15.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	22.0		10.0	9.0	19.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	11.1		12.0	9.9	17.4		9.3
Green Ext Time (p_c), s	0.0	7.3		0.0	0.0	1.3		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	519	1488	19	0	307	662	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	625	1793		0	370	798	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.83	0.83		0.94	0.83	0.83	0.83
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1893	1986		0	1188	1707	0
Arrive On Green	0.55	0.55		0.00	0.34	0.34	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	625	1793		0	370	798	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	7.0	31.1		0.0	5.4	8.7	0.0
Cycle Q Clear(g_c), s	7.0	31.1		0.0	5.4	8.7	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1893	1986		0	1188	1707	0
V/C Ratio(X)	0.33	0.90		0.00	0.31	0.47	0.00
Avail Cap(c_a), veh/h	1967	2063		0	1188	1707	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.7	14.1		0.0	17.3	18.3	0.0
Incr Delay (d2), s/veh	0.1	5.9		0.0	0.7	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	17.8		0.0	2.7	4.2	0.0
LnGrp Delay(d),s/veh	8.8	20.0		0.0	17.9	19.2	0.0
LnGrp LOS	A	B			B	B	
Approach Vol, veh/h	2418				370	798	
Approach Delay, s/veh	17.1				17.9	19.2	
Approach LOS	B				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		27.5		42.5		27.5		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		22.0		40.0		14.0		
Max Q Clear Time (g_c+I1), s		7.4		33.1		10.7		
Green Ext Time (p_c), s		2.0		5.4		1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1129	348	82	1102	247	63
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1298	400	94	1267	284	72
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1946	1203	122	3257	1339	598
Arrive On Green	0.38	0.38	0.07	0.51	0.38	0.38
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1298	400	94	1267	284	72
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	14.8	5.7	3.6	8.5	3.8	2.1
Cycle Q Clear(g_c), s	14.8	5.7	3.6	8.5	3.8	2.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1946	1203	122	3257	1339	598
V/C Ratio(X)	0.67	0.33	0.77	0.39	0.21	0.12
Avail Cap(c_a), veh/h	1961	1208	253	3753	1339	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	2.7	32.1	10.5	14.7	14.2
Incr Delay (d2), s/veh	0.8	0.2	9.9	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	6.4	2.1	3.7	1.9	1.0
LnGrp Delay(d),s/veh	18.7	2.8	42.0	10.6	15.1	14.6
LnGrp LOS	B	A	D	B	B	B
Approach Vol, veh/h	1698			1361	356	
Approach Delay, s/veh	15.0			12.8	15.0	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		30.4	8.8	30.8				39.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	10.0	27.0				41.0
Max Q Clear Time (g_c+I1), s		5.8	5.6	16.8				10.5
Green Ext Time (p_c), s		1.1	0.1	9.4				25.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	77	77	33	64	86	55	120	51	97	117	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	59	88	88	38	73	98	62	136	58	110	133	70
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	262	234	60	239	214	85	709	603	141	767	652
Arrive On Green	0.05	0.15	0.15	0.03	0.14	0.14	0.05	0.38	0.38	0.08	0.41	0.41
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	59	88	88	38	73	98	62	136	58	110	133	70
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.5	2.0	2.2	0.9	1.7	2.5	1.5	2.2	1.1	2.7	2.0	1.2
Cycle Q Clear(g_c), s	1.5	2.0	2.2	0.9	1.7	2.5	1.5	2.2	1.1	2.7	2.0	1.2
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	82	262	234	60	239	214	85	709	603	141	767	652
V/C Ratio(X)	0.72	0.34	0.38	0.64	0.30	0.46	0.73	0.19	0.10	0.78	0.17	0.11
Avail Cap(c_a), veh/h	159	634	567	159	634	567	238	709	603	278	767	652
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	17.1	17.2	21.3	17.4	17.8	21.0	9.2	8.9	20.2	8.3	8.1
Incr Delay (d2), s/veh	10.9	0.7	1.0	10.7	0.7	1.5	11.1	0.6	0.3	9.0	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.0	1.0	0.6	0.9	1.2	1.0	1.2	0.5	1.7	1.1	0.6
LnGrp Delay(d),s/veh	31.9	17.8	18.2	32.0	18.1	19.3	32.1	9.8	9.2	29.2	8.8	8.4
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		235			209			256			313	
Approach Delay, s/veh		21.5			21.2			15.1			15.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	21.0	5.5	10.6	6.1	22.4	6.1	10.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.7	4.2	2.9	4.2	3.5	4.0	3.5	4.5
Green Ext Time (p_c), s	0.0	1.6	0.0	1.6	0.0	1.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	27	23	28	176	206	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	28	35	217	254	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	451	146	291	0	-	0
Stage 1	273	-	-	-	-	-
Stage 2	178	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	537	875	1268	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	520	875	1268	-	-	-
Mov Cap-2 Maneuver	520	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	809	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1268	-	520	875	-	-
HCM Lane V/C Ratio	0.027	-	0.064	0.032	-	-
HCM Control Delay (s)	7.9	0.1	12.4	9.3	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	56	97	91	143	133	61
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	66	114	107	168	156	72
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	95	646	654	292	772	774
Arrive On Green	0.05	0.35	0.18	0.18	0.44	0.44
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	66	114	107	168	156	72
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.3	1.6	0.9	3.6	2.0	0.9
Cycle Q Clear(g_c), s	1.3	1.6	0.9	3.6	2.0	0.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	95	646	654	292	772	774
V/C Ratio(X)	0.70	0.18	0.16	0.57	0.20	0.09
Avail Cap(c_a), veh/h	290	1318	1541	689	772	774
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	17.1	8.3	12.6	13.7	6.4	5.0
Incr Delay (d2), s/veh	8.9	0.1	0.1	1.8	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	0.5	1.7	1.1	1.1
LnGrp Delay(d),s/veh	26.0	8.5	12.7	15.4	7.0	5.3
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		180	275		228	
Approach Delay, s/veh		14.9	14.4		6.5	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				16.7		20.0	6.0	10.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				3.6		4.0	3.3	5.6
Green Ext Time (p_c), s				1.8		0.5	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	659	1474	848	456	0	589
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	757	1694	1199	375		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.87	0.87	0.87	0.87		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	812	4374	1931	547		
Arrive On Green	0.46	0.86	0.69	0.69		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	757	1694	1199	375		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	28.3	4.9	8.1	9.7		
Cycle Q Clear(g_c), s	28.3	4.9	8.1	9.7		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	812	4374	1931	547		
V/C Ratio(X)	0.93	0.39	0.62	0.69		
Avail Cap(c_a), veh/h	938	4795	1996	565		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.71	0.71	0.94	0.94		
Uniform Delay (d), s/veh	18.0	1.0	8.3	8.6		
Incr Delay (d2), s/veh	11.2	0.0	0.5	3.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	16.2	2.2	4.1	4.4		
LnGrp Delay(d),s/veh	29.2	1.1	8.9	11.7		
LnGrp LOS	C	A	A	B		
Approach Vol, veh/h		2451	1574			
Approach Delay, s/veh		9.7	9.5			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				64.2			36.0	28.2
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				66.0			37.0	25.0
Max Q Clear Time (g_c+I1), s				6.9			30.3	11.7
Green Ext Time (p_c), s				46.9			1.8	12.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	374	1146	483	198	944	296	0	0	0	469	1	524
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	440	1348	568	233	1111	0				553	0	616
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	490	2061	642	277	1451	452				862	0	769
Arrive On Green	0.28	0.41	0.41	0.16	0.29	0.00				0.24	0.00	0.24
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	440	1348	568	233	1111	0				553	0	616
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	16.7	15.0	23.3	8.9	14.0	0.0				9.8	0.0	12.8
Cycle Q Clear(g_c), s	16.7	15.0	23.3	8.9	14.0	0.0				9.8	0.0	12.8
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	490	2061	642	277	1451	452				862	0	769
V/C Ratio(X)	0.90	0.65	0.89	0.84	0.77	0.00				0.64	0.00	0.80
Avail Cap(c_a), veh/h	583	2107	656	304	1451	452				862	0	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.20	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	16.8	19.3	28.7	22.9	0.0				23.8	0.0	24.9
Incr Delay (d2), s/veh	3.7	0.1	3.2	13.6	1.9	0.0				3.7	0.0	8.6
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	8.7	7.0	10.7	5.4	6.7	0.0				5.2	0.0	6.5
LnGrp Delay(d),s/veh	28.1	17.0	22.5	42.3	24.8	0.0				27.4	0.0	33.5
LnGrp LOS	C	B	C	D	C					C		C
Approach Vol, veh/h		2356			1344						1169	
Approach Delay, s/veh		20.4			27.8						30.6	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			14.9	32.4		21.0	23.3	24.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			12.0	29.0		17.0	23.0	18.0
Max Q Clear Time (g_c+I1), s			10.9	25.3		14.8	18.7	16.0
Green Ext Time (p_c), s			0.1	3.1		1.2	0.6	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	83	0	213	145	212	0	0	253	125
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				89	0	0	156	228	0	0	272	134
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				121	0	108	893	2894	0	0	910	407
Arrive On Green				0.07	0.00	0.00	1.00	1.00	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				89	0	0	156	228	0	0	272	134
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.8
Cycle Q Clear(g_c), s				3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				121	0	108	893	2894	0	0	910	407
V/C Ratio(X)				0.74	0.00	0.00	0.17	0.08	0.00	0.00	0.30	0.33
Avail Cap(c_a), veh/h				558	0	498	893	2894	0	0	910	407
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.87	0.87	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	0.0	0.0	0.0	0.0	0.0	20.9	21.1
Incr Delay (d2), s/veh				8.5	0.0	0.0	0.1	0.0	0.0	0.0	0.8	2.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.3
LnGrp Delay(d),s/veh				40.5	0.0	0.0	0.1	0.0	0.0	0.0	21.8	23.3
LnGrp LOS				D			A	A			C	C
Approach Vol, veh/h					89			384			406	
Approach Delay, s/veh					40.5			0.1			22.3	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.2			39.2	22.0		8.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		40.0			18.0	18.0		22.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	6.8		5.4
Green Ext Time (p_c), s		2.0			1.7	1.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	173	2	65	45	12	0	46	74	138	216	24	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.94			0.88	0.85		0.90			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1749			1548	1504		3202			
Flt Permitted	0.95		0.57			0.99	1.00		1.00			
Satd. Flow (perm)	1770		996			1548	1504		3202			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	182	2	68	47	13	0	48	80	145	227	25	205
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	6	0	0	0
Lane Group Flow (vph)	182	0	117	0	0	56	85	0	391	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	12.3		12.3			6.2	6.2		19.5			
Effective Green, g (s)	12.3		12.3			6.2	6.2		19.5			
Actuated g/C Ratio	0.18		0.18			0.09	0.09		0.28			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	311		175			137	133		891			
v/s Ratio Prot	0.10					0.04	c0.06		c0.12			
v/s Ratio Perm			c0.12									
v/c Ratio	0.59		0.67			0.41	0.64		0.44			
Uniform Delay, d1	26.5		26.9			30.2	30.8		20.7			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	2.8		9.3			2.0	9.7		1.6			
Delay (s)	29.3		36.2			32.2	40.5		22.3			
Level of Service	C		D			C	D		C			
Approach Delay (s)			32.0			37.2			22.3			
Approach LOS			C			D			C			

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	73	48
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3295
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3295
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	77	51
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	213	120
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	368	753
v/s Ratio Prot	c0.13	0.04
v/s Ratio Perm		
v/c Ratio	0.58	0.16
Uniform Delay, d1	24.0	21.6
Progression Factor	0.52	0.51
Incremental Delay, d2	6.5	0.4
Delay (s)	18.9	11.5
Level of Service	B	B
Approach Delay (s)		16.2
Approach LOS		B

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	88	1044	254	682	738	101	207	29	710	65	25	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	100	1186	289	775	839	115	235	33	807	74	28	101
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	740	1162	362	836	1304	496	442	452	769	197	319	271
Arrive On Green	0.22	0.23	0.23	0.24	0.26	0.26	0.13	0.24	0.24	0.06	0.17	0.17
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	100	1186	289	775	839	115	235	33	807	74	28	101
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	1.6	16.0	8.3	15.4	10.3	0.0	4.5	1.0	17.0	1.5	0.9	4.0
Cycle Q Clear(g_c), s	1.6	16.0	8.3	15.4	10.3	0.0	4.5	1.0	17.0	1.5	0.9	4.0
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	740	1162	362	836	1304	496	442	452	769	197	319	271
V/C Ratio(X)	0.14	1.02	0.80	0.93	0.64	0.23	0.53	0.07	1.05	0.38	0.09	0.37
Avail Cap(c_a), veh/h	740	1162	362	836	2034	724	442	452	769	197	319	271
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)	0.59	0.59	0.59	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	27.0	12.0	25.9	23.2	17.8	28.5	20.4	6.9	31.8	24.4	25.7
Incr Delay (d2), s/veh	0.0	25.5	7.3	11.6	0.3	0.2	1.2	0.3	46.2	1.2	0.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	10.2	4.3	8.7	4.9	1.7	2.2	0.5	21.2	0.7	0.5	2.0
LnGrp Delay(d),s/veh	22.3	52.5	19.3	37.5	23.5	17.9	29.7	20.7	53.0	33.0	24.9	29.5
LnGrp LOS	C	F	B	D	C	B	C	C	F	C	C	C
Approach Vol, veh/h		1575			1729			1075			203	
Approach Delay, s/veh		44.5			29.4			47.0			30.2	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	21.0	20.0	13.0	16.0	19.1	21.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	17.0	16.0	9.0	12.0	5.0	28.0
Max Q Clear Time (g_c+I1), s	3.5	19.0	17.4	18.0	6.5	6.0	3.6	12.3
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.3	0.2	1.1	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	992	346	235	739	39	306	30	386	41	19	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	98	1115	389	264	830	44	344	34	434	46	0	105
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1284	602	344	1050	425	440	665	565	219	0	1384
Arrive On Green	0.15	0.25	0.25	0.20	0.41	0.41	0.13	0.36	0.36	0.06	0.00	0.29
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	98	1115	389	264	830	44	344	34	434	46	0	105
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	3.5	14.7	14.1	5.1	10.0	0.0	6.8	0.8	11.3	0.9	0.0	0.4
Cycle Q Clear(g_c), s	3.5	14.7	14.1	5.1	10.0	0.0	6.8	0.8	11.3	0.9	0.0	0.4
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	259	1284	602	344	1050	425	440	665	565	219	0	1384
V/C Ratio(X)	0.38	0.87	0.65	0.77	0.79	0.10	0.78	0.05	0.77	0.21	0.00	0.08
Avail Cap(c_a), veh/h	259	1308	609	344	1235	482	492	665	565	219	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	25.0	17.8	27.2	19.2	14.2	29.6	14.7	8.9	31.2	0.0	3.8
Incr Delay (d2), s/veh	0.9	6.4	2.3	8.9	2.7	0.1	7.3	0.1	9.6	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.6	6.5	2.8	4.9	0.5	3.6	0.5	6.3	0.4	0.0	0.3
LnGrp Delay(d),s/veh	27.9	31.5	20.2	36.1	21.9	14.2	36.9	14.9	18.5	31.7	0.0	3.9
LnGrp LOS	C	C	C	D	C	B	D	B	B	C		A
Approach Vol, veh/h		1602			1138			812			151	
Approach Delay, s/veh		28.5			24.9			26.1			12.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	29.0	11.0	21.7	12.9	24.4	14.2	18.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	25.0	7.0	18.0	10.0	19.0	8.0	17.0
Max Q Clear Time (g_c+I1), s	2.9	13.3	7.1	16.7	8.8	2.4	5.5	12.0
Green Ext Time (p_c), s	0.1	1.4	0.0	1.0	0.2	0.4	1.9	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	262	4	0	234	1	0	0	0	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				332	0	0	292	1	0	0	0	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				470	247	0	1337	1403	0	0	5	0
Arrive On Green				0.13	0.00	0.00	0.75	0.75	0.00	0.00	0.00	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	-72647	0
Grp Volume(v), veh/h				332	0	0	292	1	0	0	0	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				6.3	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				6.3	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				470	247	0	1337	1403	0	0	5	0
V/C Ratio(X)				0.71	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h				1166	612	0	1337	1403	0	0	253	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh				29.1	0.0	0.0	2.5	2.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				2.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				31.0	0.0	0.0	2.6	2.1	0.0	0.0	0.0	0.0
LnGrp LOS				C			A	A				
Approach Vol, veh/h					332			293			0	
Approach Delay, s/veh					31.0			2.6			0.0	
Approach LOS					C			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		56.7			56.7	0.0		13.3
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		39.0			30.0	5.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			5.4	0.0		8.3
Green Ext Time (p_c), s		0.9			0.9	0.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	7	114	0	0	0	0	194	277	2	253	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	40	8	127				0	216	308	2	281	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	163	33	173				0	2537	1135	4	2747	0
Arrive On Green	0.11	0.11	0.11				0.00	1.00	1.00	0.00	1.00	0.00
Sat Flow, veh/h	1490	298	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	48	0	127				0	216	308	2	281	0
Grp Sat Flow(s),veh/h/ln	1788	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.7	0.0	5.4				0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	5.4				0.0	0.0	0.0	0.1	0.0	0.0
Prop In Lane	0.83		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	196	0	173				0	2537	1135	4	2747	0
V/C Ratio(X)	0.25	0.00	0.73				0.00	0.09	0.27	0.52	0.10	0.00
Avail Cap(c_a), veh/h	536	0	475				0	2537	1135	152	2747	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.91	0.91	0.96	0.96	0.00
Uniform Delay (d), s/veh	28.5	0.0	30.2				0.0	0.0	0.0	34.8	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	5.8				0.0	0.1	0.5	76.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.6				0.0	0.0	0.2	0.1	0.0	0.0
LnGrp Delay(d),s/veh	29.2	0.0	36.0				0.0	0.1	0.5	111.5	0.1	0.0
LnGrp LOS	C		D					A	A	F	A	
Approach Vol, veh/h		175						524			283	
Approach Delay, s/veh		34.1						0.3			0.9	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	4.2	54.2		11.7		58.3		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	6.0	31.0		21.0		41.0		
Max Q Clear Time (g_c+I1), s	2.1	2.0		7.4		2.0		
Green Ext Time (p_c), s	0.0	4.7		0.5		4.9		

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	159	383	98	77	31	178	515	125	41	580	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	249	201	485	124	97	39	225	652	158	52	734	209
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	295	388	1489	201	356	159	901	1172	280	754	1235	385
Arrive On Green	0.17	0.21	0.21	0.06	0.10	0.10	0.35	0.38	0.38	0.44	0.49	0.49
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4101	979	3442	5085	1583
Grp Volume(v), veh/h	249	201	485	124	97	39	225	537	273	52	734	209
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1690	1721	1695	1583
Q Serve(g_s), s	9.5	6.7	1.5	2.5	1.8	1.0	3.3	8.7	8.9	0.6	7.3	4.1
Cycle Q Clear(g_c), s	9.5	6.7	1.5	2.5	1.8	1.0	3.3	8.7	8.9	0.6	7.3	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	295	388	1489	201	356	159	901	969	483	754	1235	385
V/C Ratio(X)	0.85	0.52	0.33	0.62	0.27	0.24	0.25	0.55	0.56	0.07	0.59	0.54
Avail Cap(c_a), veh/h	355	665	1960	246	809	362	901	969	483	754	1235	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	0.99	0.99	0.99
Uniform Delay (d), s/veh	28.3	24.6	4.3	32.2	29.1	11.5	17.9	18.2	18.3	15.5	15.5	6.1
Incr Delay (d2), s/veh	14.7	1.1	0.1	3.2	0.4	0.8	0.1	2.2	4.5	0.0	2.1	5.4
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	5.8	3.6	1.6	1.3	0.9	0.5	1.5	4.3	4.7	0.3	3.5	2.2
LnGrp Delay(d),s/veh	43.0	25.7	4.4	35.4	29.5	12.3	18.0	20.4	22.7	15.6	17.6	11.4
LnGrp LOS	D	C	A	D	C	B	B	C	C	B	B	B
Approach Vol, veh/h		935			260			1035			995	
Approach Delay, s/veh		19.3			29.7			20.5			16.2	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	24.0	8.1	18.6	22.3	21.0	15.6	11.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	5.0	25.0	7.0	17.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	10.9	4.5	8.7	5.3	9.3	11.5	3.8
Green Ext Time (p_c), s	0.1	3.6	0.0	3.7	0.2	3.4	0.2	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	0	391	16	132	249	189	509	0	0	685	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	87	0	471	19	159	300	228	613	0	0	825	453
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	28	236	226	659	3778	0	0	1112	498
Arrive On Green	0.00	0.00	0.00	0.14	0.14	0.14	0.37	0.74	0.00	0.00	0.63	0.63
Sat Flow, veh/h		0		198	1655	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		178	0	300	228	613	0	0	825	453
Grp Sat Flow(s),veh/h/ln				1853	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				6.4	0.0	10.0	6.5	2.5	0.0	0.0	11.4	17.4
Cycle Q Clear(g_c), s				6.4	0.0	10.0	6.5	2.5	0.0	0.0	11.4	17.4
Prop In Lane				0.11		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				265	0	226	659	3778	0	0	1112	498
V/C Ratio(X)				0.67	0.00	1.33	0.35	0.16	0.00	0.00	0.74	0.91
Avail Cap(c_a), veh/h				265	0	226	659	3778	0	0	1112	498
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.93	0.93
Uniform Delay (d), s/veh				28.4	0.0	30.0	15.9	2.6	0.0	0.0	11.0	12.1
Incr Delay (d2), s/veh				6.5	0.0	174.1	0.3	0.1	0.0	0.0	4.2	22.0
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				3.7	0.0	15.3	3.2	1.2	0.0	0.0	5.9	10.3
LnGrp Delay(d),s/veh				35.0	0.0	204.1	16.2	2.7	0.0	0.0	15.2	34.1
LnGrp LOS				C		F	B	A			B	C
Approach Vol, veh/h					478			841			1278	
Approach Delay, s/veh					141.1			6.4			21.9	
Approach LOS					F			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		56.0			30.0	26.0		14.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		41.0			15.0	22.0		10.0
Max Q Clear Time (g_c+I1), s		4.5			8.5	19.4		12.0
Green Ext Time (p_c), s		5.6			2.6	1.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	318	957	679	128	951	55	432	63	139	43	49	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	388	1167	828	156	1160	67	527	77	170	52	0	317
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	490	1631	508	194	1464	456	732	455	407	298	0	407
Arrive On Green	0.14	0.32	0.32	0.11	0.29	0.29	0.21	0.26	0.26	0.08	0.00	0.13
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	388	1167	828	156	1160	67	527	77	170	52	0	317
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	7.6	14.2	11.6	6.0	14.7	2.2	10.0	2.4	6.3	1.0	0.0	6.8
Cycle Q Clear(g_c), s	7.6	14.2	11.6	6.0	14.7	2.2	10.0	2.4	6.3	1.0	0.0	6.8
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	490	1631	508	194	1464	456	732	455	407	298	0	407
V/C Ratio(X)	0.79	0.72	1.63	0.80	0.79	0.15	0.72	0.17	0.42	0.17	0.00	0.78
Avail Cap(c_a), veh/h	492	1671	520	228	1598	498	732	455	407	298	0	407
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)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	21.0	6.4	30.4	23.0	18.5	25.6	20.2	21.6	29.8	0.0	29.5
Incr Delay (d2), s/veh	8.2	1.4	292.1	16.2	2.6	0.1	3.5	0.8	3.1	0.3	0.0	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	6.8	46.2	3.8	7.2	1.0	5.0	1.3	3.1	0.5	0.0	3.7
LnGrp Delay(d),s/veh	37.2	22.3	298.5	46.6	25.6	18.7	29.1	21.0	24.8	30.1	0.0	43.2
LnGrp LOS	D	C	F	D	C	B	C	C	C	C		D
Approach Vol, veh/h		2383			1383			774			369	
Approach Delay, s/veh		120.7			27.6			27.3			41.4	
Approach LOS		F			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	22.0	11.7	26.5	18.9	13.0	14.0	24.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	9.0	23.0	13.0	9.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	3.0	8.3	8.0	16.2	12.0	8.8	9.6	16.7
Green Ext Time (p_c), s	0.3	1.0	0.0	5.7	0.3	0.0	0.3	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	73.8
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	775	1325	1084	610	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	945	1616	1322	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	862	4782	1407	629		
Arrive On Green	0.97	1.00	0.40	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	945	1616	1322	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	34.0	0.0	25.1	0.0		
Cycle Q Clear(g_c), s	34.0	0.0	25.1	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	862	4782	1407	629		
V/C Ratio(X)	1.10	0.34	0.94	0.00		
Avail Cap(c_a), veh/h	862	4795	1416	633		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.25	0.25	0.59	0.00		
Uniform Delay (d), s/veh	1.0	0.0	20.3	0.0		
Incr Delay (d2), s/veh	48.8	0.0	8.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	12.2	0.0	13.7	0.0		
LnGrp Delay(d),s/veh	49.8	0.0	28.4	0.0		
LnGrp LOS	F	A	C			
Approach Vol, veh/h		2561	1322			
Approach Delay, s/veh		18.4	28.4			
Approach LOS		B	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				69.8			38.0	31.8
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				66.0			34.0	28.0
Max Q Clear Time (g_c+I1), s				2.0			36.0	27.1
Green Ext Time (p_c), s				32.9			0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	666	1	318	295
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	0	0	843	1	403	373
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1835	422			844	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1835	422			844	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			49	
cM capacity (veh/h)	33	580			788	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	562	282	403	187	187
Volume Left	0	0	403	0	0
Volume Right	0	1	0	0	0
cSH	1700	1700	788	1700	1700
Volume to Capacity	0.33	0.17	0.51	0.11	0.11
Queue Length 95th (ft)	0	0	74	0	0
Control Delay (s)	0.0	0.0	14.2	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		7.4		
Approach LOS					

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	1331	844	0	1116	522	510	39	556	213	5	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	115	1643	0	0	1378	644	664	0	0	267	0	120
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	101	1671	520	0	1090	339	1368	0	611	406	0	181
Arrive On Green	0.06	0.33	0.00	0.00	0.21	0.21	0.39	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	115	1643	0	0	1378	644	664	0	0	267	0	120
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	4.0	22.4	0.0	0.0	15.0	15.0	9.9	0.0	0.0	5.0	0.0	5.1
Cycle Q Clear(g_c), s	4.0	22.4	0.0	0.0	15.0	15.0	9.9	0.0	0.0	5.0	0.0	5.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	1671	520	0	1090	339	1368	0	611	406	0	181
V/C Ratio(X)	1.13	0.98	0.00	0.00	1.26	1.90	0.49	0.00	0.00	0.66	0.00	0.66
Avail Cap(c_a), veh/h	101	1671	520	0	1090	339	1368	0	611	811	0	362
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	0.00	0.00	0.24	0.24	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	23.3	0.0	0.0	27.5	27.5	16.3	0.0	0.0	29.7	0.0	29.7
Incr Delay (d2), s/veh	130.1	18.1	0.0	0.0	120.9	406.8	1.2	0.0	0.0	1.8	0.0	4.1
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	5.6	13.1	0.0	0.0	19.2	44.8	5.0	0.0	0.0	2.6	0.0	4.6
LnGrp Delay(d),s/veh	163.1	41.4	0.0	0.0	148.4	434.3	17.5	0.0	0.0	31.5	0.0	33.8
LnGrp LOS	F	D			F	F	B			C		C
Approach Vol, veh/h		1758			2022			664			387	
Approach Delay, s/veh		49.4			239.5			17.5			32.2	
Approach LOS		D			F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		31.0		27.0		12.0	8.0	19.0
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0		23.0		16.0	4.0	15.0
Max Q Clear Time (g_c+I1), s		11.9		24.4		7.1	6.0	17.0
Green Ext Time (p_c), s		1.6		0.0		0.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	123.2
HCM 2010 LOS	F

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	805	168	215	643	196	261
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	839	0	224	670	204	272
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1904	593	380	3011	343	846
Arrive On Green	0.37	0.00	0.11	0.59	0.19	0.19
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	839	0	224	670	204	272
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	4.6	0.0	2.3	2.3	3.9	2.8
Cycle Q Clear(g_c), s	4.6	0.0	2.3	2.3	3.9	2.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1904	593	380	3011	343	846
V/C Ratio(X)	0.44	0.00	0.59	0.22	0.60	0.32
Avail Cap(c_a), veh/h	2457	765	739	4096	810	1579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.7	0.0	15.8	3.6	13.7	10.0
Incr Delay (d2), s/veh	0.2	0.0	1.5	0.0	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.2	1.1	2.0	1.1
LnGrp Delay(d),s/veh	8.9	0.0	17.2	3.6	15.4	10.2
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	839			894	476	
Approach Delay, s/veh	8.9			7.0	12.4	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.2	8.1	17.9				26.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	8.0	18.0				30.0
Max Q Clear Time (g_c+I1), s		5.9	4.3	6.6				4.3
Green Ext Time (p_c), s		1.3	0.3	7.3				12.3

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	57	52	58	43	25	37	457	70	15	439	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	62	57	63	47	27	40	497	76	16	477	36
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	110	102	88	143	82	63	1322	201	29	1368	103
Arrive On Green	0.04	0.12	0.12	0.05	0.13	0.13	0.04	0.43	0.43	0.02	0.41	0.41
Sat Flow, veh/h	1774	895	823	1774	1112	639	1774	3081	469	1774	3337	251
Grp Volume(v), veh/h	54	0	119	63	0	74	40	285	288	16	252	261
Grp Sat Flow(s),veh/h/ln	1774	0	1718	1774	0	1750	1774	1770	1780	1774	1770	1818
Q Serve(g_s), s	1.3	0.0	2.7	1.5	0.0	1.6	0.9	4.6	4.6	0.4	4.1	4.1
Cycle Q Clear(g_c), s	1.3	0.0	2.7	1.5	0.0	1.6	0.9	4.6	4.6	0.4	4.1	4.1
Prop In Lane	1.00		0.48	1.00		0.36	1.00		0.26	1.00		0.14
Lane Grp Cap(c), veh/h	79	0	212	88	0	225	63	760	764	29	725	745
V/C Ratio(X)	0.68	0.00	0.56	0.72	0.00	0.33	0.63	0.37	0.38	0.56	0.35	0.35
Avail Cap(c_a), veh/h	254	0	655	254	0	668	212	760	764	169	725	745
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	19.7	0.0	17.3	19.6	0.0	16.6	20.0	8.1	8.2	20.5	8.5	8.5
Incr Delay (d2), s/veh	9.9	0.0	2.3	10.3	0.0	0.8	10.1	1.4	1.4	15.7	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.4	1.0	0.0	0.8	0.6	2.5	2.5	0.3	2.2	2.3
LnGrp Delay(d),s/veh	29.7	0.0	19.6	30.0	0.0	17.5	30.1	9.6	9.6	36.2	9.8	9.8
LnGrp LOS	C		B	C		B	C	A	A	D	A	A
Approach Vol, veh/h		173			137			613			529	
Approach Delay, s/veh		22.8			23.2			10.9			10.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	22.0	6.1	9.2	5.5	21.2	5.9	9.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.4	6.6	3.5	4.7	2.9	6.1	3.3	3.6
Green Ext Time (p_c), s	0.0	5.1	0.0	0.7	0.0	4.9	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	75	59	34	66	9	73	59	51	3	65	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	26	85	67	39	75	10	83	67	58	3	74	34
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	207	322	227	304	43	112	475	412	6	550	253
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.06	0.52	0.52	0.00	0.46	0.46
Sat Flow, veh/h	273	1474	1583	486	2166	305	1774	923	799	1774	1209	556
Grp Volume(v), veh/h	111	0	67	70	0	54	83	0	125	3	0	108
Grp Sat Flow(s),veh/h/ln	1747	0	1583	1315	0	1641	1774	0	1722	1774	0	1765
Q Serve(g_s), s	0.4	0.0	1.2	0.1	0.0	1.0	1.6	0.0	1.3	0.1	0.0	1.2
Cycle Q Clear(g_c), s	2.0	0.0	1.2	2.0	0.0	1.0	1.6	0.0	1.3	0.1	0.0	1.2
Prop In Lane	0.23		1.00	0.56		0.19	1.00		0.46	1.00		0.31
Lane Grp Cap(c), veh/h	371	0	322	344	0	230	112	0	887	6	0	803
V/C Ratio(X)	0.30	0.00	0.21	0.20	0.00	0.23	0.74	0.00	0.14	0.51	0.00	0.13
Avail Cap(c_a), veh/h	905	0	821	800	0	747	303	0	887	202	0	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	11.6	13.5	0.0	13.4	16.2	0.0	4.5	17.5	0.0	5.6
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.3	0.0	0.5	9.2	0.0	0.3	56.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.6	0.7	0.0	0.5	1.1	0.0	0.7	0.1	0.0	0.7
LnGrp Delay(d),s/veh	14.3	0.0	12.0	13.8	0.0	13.9	25.3	0.0	4.8	73.8	0.0	5.9
LnGrp LOS	B		B	B		B	C		A	E		A
Approach Vol, veh/h		178			124			208			111	
Approach Delay, s/veh		13.4			13.9			13.0			7.7	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	22.1		8.9	6.2	20.0		8.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	3.3		4.0	3.6	3.2		4.0
Green Ext Time (p_c), s	0.0	1.1		1.2	0.0	1.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	3	321	14	0	4	302	547	23	11	533	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	394	16	0	5	343	622	26	12	606	27
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	217	369	26	0	8	287	981	41	556	1773	79
Arrive On Green	0.00	0.00	0.12	0.02	0.00	0.02	0.03	0.09	0.09	0.31	0.51	0.51
Sat Flow, veh/h	0	1863	3167	1314	0	411	3442	3462	145	1774	3452	154
Grp Volume(v), veh/h	0	0	394	21	0	0	343	318	330	12	310	323
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1725	0	0	1721	1770	1837	1774	1770	1836
Q Serve(g_s), s	0.0	0.0	7.0	0.7	0.0	0.0	5.0	10.4	10.4	0.3	6.2	6.2
Cycle Q Clear(g_c), s	0.0	0.0	7.0	0.7	0.0	0.0	5.0	10.4	10.4	0.3	6.2	6.2
Prop In Lane	0.00		1.00	0.76		0.24	1.00		0.08	1.00		0.08
Lane Grp Cap(c), veh/h	0	217	369	34	0	0	287	501	521	556	909	943
V/C Ratio(X)	0.00	0.00	1.07	0.62	0.00	0.00	1.20	0.63	0.63	0.02	0.34	0.34
Avail Cap(c_a), veh/h	0	217	369	460	0	0	287	501	521	556	909	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	26.5	29.2	0.0	0.0	29.2	24.2	24.2	14.2	8.6	8.6
Incr Delay (d2), s/veh	0.0	0.0	65.6	16.9	0.0	0.0	114.4	5.3	5.2	0.0	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.4	0.5	0.0	0.0	6.9	5.8	6.0	0.1	3.3	3.4
LnGrp Delay(d),s/veh	0.0	0.0	92.1	46.1	0.0	0.0	143.5	29.5	29.4	14.2	9.6	9.6
LnGrp LOS			F	D			F	C	C	B	A	A
Approach Vol, veh/h		394			21			991			645	
Approach Delay, s/veh		92.1			46.1			68.9			9.7	
Approach LOS		F			D			E			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.8	21.0		11.0	9.0	34.8		5.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	17.0		7.0	5.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	12.4		9.0	7.0	8.2		2.7
Green Ext Time (p_c), s	0.7	1.7		0.0	0.0	2.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	19	370	330	104	232	186	580	48	14	804	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	43	52	402	387	200	168	202	630	52	15	874	85
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	186	290	603	317	293	148	1485	122	51	1345	602
Arrive On Green	0.10	0.10	0.10	0.17	0.17	0.17	0.08	0.45	0.45	0.00	0.13	0.13
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3311	273	3442	3539	1583
Grp Volume(v), veh/h	43	52	402	387	200	168	202	336	346	15	874	85
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1815	1721	1770	1583
Q Serve(g_s), s	1.3	1.6	6.0	6.1	6.0	5.8	5.0	7.8	7.8	0.3	14.1	2.9
Cycle Q Clear(g_c), s	1.3	1.6	6.0	6.1	6.0	5.8	5.0	7.8	7.8	0.3	14.1	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	177	186	290	603	317	293	148	794	814	51	1345	602
V/C Ratio(X)	0.24	0.28	1.38	0.64	0.63	0.57	1.37	0.42	0.42	0.30	0.65	0.14
Avail Cap(c_a), veh/h	177	186	290	946	497	446	148	794	814	229	1345	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	24.9	25.0	24.5	23.2	23.2	22.3	27.5	11.3	11.3	29.5	22.4	17.5
Incr Delay (d2), s/veh	0.7	0.8	193.2	1.1	2.1	1.8	201.9	1.7	1.6	2.5	1.9	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	0.7	0.8	20.3	3.1	3.2	2.7	10.7	4.1	4.2	0.1	7.3	1.3
LnGrp Delay(d),s/veh	25.6	25.8	217.7	24.3	25.2	24.1	229.4	12.9	12.9	32.0	24.4	17.9
LnGrp LOS	C	C	F	C	C	C	F	B	B	C	C	B
Approach Vol, veh/h		497			755			884			974	
Approach Delay, s/veh		181.0			24.5			62.4			23.9	
Approach LOS		F			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	30.9		10.0	9.0	26.8		14.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		6.0	5.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	9.8		8.0	7.0	16.1		8.1
Green Ext Time (p_c), s	0.0	5.8		0.0	0.0	0.7		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	60.1
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	519	1488	19	0	307	662	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	535	1534		0	316	682	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.97	0.97		0.94	0.97	0.97	0.97
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1702	1785		0	1317	1892	0
Arrive On Green	0.49	0.49		0.00	0.37	0.37	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	535	1534		0	316	682	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	5.6	22.4		0.0	3.7	5.8	0.0
Cycle Q Clear(g_c), s	5.6	22.4		0.0	3.7	5.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1702	1785		0	1317	1892	0
V/C Ratio(X)	0.31	0.86		0.00	0.24	0.36	0.00
Avail Cap(c_a), veh/h	1836	1925		0	1317	1892	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.1	13.3		0.0	13.0	13.7	0.0
Incr Delay (d2), s/veh	0.1	3.9		0.0	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	13.3		0.0	1.9	2.8	0.0
LnGrp Delay(d),s/veh	9.2	17.3		0.0	13.4	14.2	0.0
LnGrp LOS	A	B			B	B	
Approach Vol, veh/h	2069				316	682	
Approach Delay, s/veh	15.2				13.4	14.2	
Approach LOS	B				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		26.3		33.7		26.3		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		20.0		32.0		12.0		
Max Q Clear Time (g_c+I1), s		5.7		24.4		7.8		
Green Ext Time (p_c), s		1.7		5.3		1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1129	348	82	1102	247	63
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1152	355	84	1124	252	64
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1590	1141	141	2940	1447	646
Arrive On Green	0.31	0.31	0.08	0.46	0.41	0.41
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1152	355	84	1124	252	64
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	12.1	4.8	2.7	6.9	2.7	1.5
Cycle Q Clear(g_c), s	12.1	4.8	2.7	6.9	2.7	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1590	1141	141	2940	1447	646
V/C Ratio(X)	0.72	0.31	0.60	0.38	0.17	0.10
Avail Cap(c_a), veh/h	1780	1200	207	3418	1447	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	3.0	26.7	10.7	11.3	11.0
Incr Delay (d2), s/veh	1.3	0.1	4.0	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	5.2	1.5	3.1	1.4	0.7
LnGrp Delay(d),s/veh	19.6	3.2	30.7	10.7	11.6	11.3
LnGrp LOS	B	A	C	B	B	B
Approach Vol, veh/h	1507			1208	316	
Approach Delay, s/veh	15.7			12.1	11.5	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		28.5	8.8	22.8				31.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		20.0	7.0	21.0				32.0
Max Q Clear Time (g_c+I1), s		4.7	4.7	14.1				8.9
Green Ext Time (p_c), s		0.9	1.6	4.7				9.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	77	77	33	64	86	55	120	51	97	117	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	55	81	81	35	67	91	58	126	54	102	123	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	79	252	225	56	229	205	82	722	614	130	773	657
Arrive On Green	0.04	0.14	0.14	0.03	0.13	0.13	0.05	0.39	0.39	0.07	0.41	0.41
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	55	81	81	35	67	91	58	126	54	102	123	65
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.3	1.8	2.0	0.9	1.5	2.3	1.4	1.9	0.9	2.5	1.8	1.1
Cycle Q Clear(g_c), s	1.3	1.8	2.0	0.9	1.5	2.3	1.4	1.9	0.9	2.5	1.8	1.1
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	79	252	225	56	229	205	82	722	614	130	773	657
V/C Ratio(X)	0.70	0.32	0.36	0.62	0.29	0.44	0.71	0.17	0.09	0.78	0.16	0.10
Avail Cap(c_a), veh/h	162	646	578	162	646	578	243	722	614	283	773	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	16.9	17.0	21.0	17.3	17.6	20.6	8.8	8.5	20.0	8.0	7.8
Incr Delay (d2), s/veh	10.5	0.7	1.0	10.8	0.7	1.5	10.6	0.5	0.3	9.8	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.9	0.9	0.6	0.8	1.1	0.9	1.1	0.5	1.5	1.0	0.5
LnGrp Delay(d),s/veh	31.1	17.6	18.0	31.7	18.0	19.1	31.2	9.3	8.8	29.8	8.5	8.1
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		217			193			238			290	
Approach Delay, s/veh		21.2			21.0			14.5			15.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	21.0	5.4	10.2	6.0	22.2	6.0	9.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.5	3.9	2.9	4.0	3.4	3.8	3.3	4.3
Green Ext Time (p_c), s	0.0	1.4	0.0	1.4	0.0	1.5	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	27	23	28	176	206	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	25	31	193	226	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	401	130	259	0	-	0
Stage 1	243	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	577	896	1303	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	896	1303	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	831	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1303	-	561	896	-	-
HCM Lane V/C Ratio	0.024	-	0.053	0.028	-	-
HCM Control Delay (s)	7.8	0.1	11.8	9.1	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	56	97	91	143	133	61
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	64	110	103	162	151	69
Adj No. of Lanes	1	1	2	1	1	1
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	89	591	614	275	877	862
Arrive On Green	0.05	0.32	0.17	0.17	0.49	0.49
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	64	110	103	162	151	69
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.5	1.8	1.1	4.0	2.0	0.9
Cycle Q Clear(g_c), s	1.5	1.8	1.1	4.0	2.0	0.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	591	614	275	877	862
V/C Ratio(X)	0.72	0.19	0.17	0.59	0.17	0.08
Avail Cap(c_a), veh/h	334	1359	1583	708	877	862
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	10.5	14.9	16.2	5.9	4.6
Incr Delay (d2), s/veh	10.6	0.2	0.1	2.0	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.9	0.5	1.9	1.1	1.2
LnGrp Delay(d),s/veh	30.5	10.7	15.1	18.2	6.4	4.8
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		174	265		220	
Approach Delay, s/veh		17.9	17.0		5.9	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.5		25.0	6.1	11.4
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				31.0		21.0	8.0	19.0
Max Q Clear Time (g_c+I1), s				3.8		4.0	3.5	6.0
Green Ext Time (p_c), s				1.8		0.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	659	1474	848	456	0	589
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	666	1489	1054	330		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.99	0.99	0.99	0.99		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	851	4217	1582	448		
Arrive On Green	0.48	0.83	0.57	0.57		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	666	1489	1054	330		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	18.8	4.2	7.9	9.3		
Cycle Q Clear(g_c), s	18.8	4.2	7.9	9.3		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	851	4217	1582	448		
V/C Ratio(X)	0.78	0.35	0.67	0.74		
Avail Cap(c_a), veh/h	917	4746	1956	554		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.71	0.71	0.95	0.95		
Uniform Delay (d), s/veh	13.0	1.2	11.0	11.3		
Incr Delay (d2), s/veh	3.0	0.0	0.6	3.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9.8	1.9	4.0	4.3		
LnGrp Delay(d),s/veh	16.0	1.3	11.6	15.1		
LnGrp LOS	B	A	B	B		
Approach Vol, veh/h		2155	1384			
Approach Delay, s/veh		5.8	12.5			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				53.8			32.8	21.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			31.0	21.0
Max Q Clear Time (g_c+I1), s				6.2			20.8	11.3
Green Ext Time (p_c), s				22.5			8.0	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	374	1146	483	198	944	296	0	0	0	469	1	524
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	378	1158	488	200	954	0				475	0	529
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	435	1693	527	266	1210	377				946	0	844
Arrive On Green	0.24	0.33	0.33	0.15	0.24	0.00				0.27	0.00	0.27
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	378	1158	488	200	954	0				475	0	529
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	12.3	11.8	17.8	6.5	10.6	0.0				6.8	0.0	8.8
Cycle Q Clear(g_c), s	12.3	11.8	17.8	6.5	10.6	0.0				6.8	0.0	8.8
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	435	1693	527	266	1210	377				946	0	844
V/C Ratio(X)	0.87	0.68	0.93	0.75	0.79	0.00				0.50	0.00	0.63
Avail Cap(c_a), veh/h	532	1695	528	355	1210	377				946	0	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.51	0.84	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	17.3	19.3	24.4	21.4	0.0				18.6	0.0	19.4
Incr Delay (d2), s/veh	6.9	0.6	13.6	5.2	3.0	0.0				1.9	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	6.8	5.6	9.7	3.6	5.3	0.0				3.5	0.0	4.2
LnGrp Delay(d),s/veh	28.6	17.9	32.9	29.6	24.5	0.0				20.5	0.0	22.9
LnGrp LOS	C	B	C	C	C					C		C
Approach Vol, veh/h		2024			1154						1004	
Approach Delay, s/veh		23.5			25.4						21.8	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			13.0	24.0		20.0	18.7	18.3
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			12.0	20.0		16.0	18.0	14.0
Max Q Clear Time (g_c+I1), s			8.5	19.8		10.8	14.3	12.6
Green Ext Time (p_c), s			0.9	0.1		2.0	0.5	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	83	0	213	145	212	0	0	253	125
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				86	0	0	149	219	0	0	261	129
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				114	0	102	196	2595	0	0	1846	826
Arrive On Green				0.06	0.00	0.00	0.11	0.73	0.00	0.00	0.52	0.52
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				86	0	0	149	219	0	0	261	129
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				1.9	0.0	0.0	3.2	0.7	0.0	0.0	1.5	1.7
Cycle Q Clear(g_c), s				1.9	0.0	0.0	3.2	0.7	0.0	0.0	1.5	1.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				114	0	102	196	2595	0	0	1846	826
V/C Ratio(X)				0.75	0.00	0.00	0.76	0.08	0.00	0.00	0.14	0.16
Avail Cap(c_a), veh/h				807	0	721	538	2595	0	0	1846	826
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.2	0.0	0.0	17.1	1.5	0.0	0.0	4.9	4.9
Incr Delay (d2), s/veh				9.5	0.0	0.0	6.0	0.1	0.0	0.0	0.2	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
%ile BackOfQ(50%),veh/ln				1.2	0.0	0.0	1.9	0.4	0.0	0.0	0.8	0.8
LnGrp Delay(d),s/veh				27.7	0.0	0.0	23.1	1.6	0.0	0.0	5.0	5.3
LnGrp LOS				C			C	A			A	A
Approach Vol, veh/h					86			368			390	
Approach Delay, s/veh					27.7			10.3			5.1	
Approach LOS					C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		33.0			8.4	24.6		6.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		29.0			12.0	13.0		18.0
Max Q Clear Time (g_c+I1), s		2.7			5.2	3.7		3.9
Green Ext Time (p_c), s		3.7			0.2	2.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	173	2	65	45	12	0	46	74	138	216	24	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.94			0.88	0.85		0.90			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1749			1547	1504		3202			
Flt Permitted	0.95		0.60			0.99	1.00		1.00			
Satd. Flow (perm)	1770		1044			1547	1504		3202			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.92	0.75	0.75	0.75	0.75
Adj. Flow (vph)	231	3	87	60	16	0	61	80	184	288	32	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	231	0	150	0	0	71	86	0	499	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	15.7		15.7			6.8	6.8		22.3			
Effective Green, g (s)	15.7		15.7			6.8	6.8		22.3			
Actuated g/C Ratio	0.19		0.19			0.08	0.08		0.27			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	330		194			125	121		849			
v/s Ratio Prot	0.13					0.05	c0.06		c0.16			
v/s Ratio Perm			c0.14									
v/c Ratio	0.70		0.77			0.57	0.71		0.59			
Uniform Delay, d1	32.0		32.5			37.2	37.7		26.9			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	6.4		17.3			5.8	17.8		3.0			
Delay (s)	38.4		49.8			43.0	55.5		29.9			
Level of Service	D		D			D	E		C			
Approach Delay (s)			42.9			49.9			29.9			
Approach LOS			D			D			C			

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	84.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	73	48
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3295
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3295
Peak-hour factor, PHF	0.75	0.75
Adj. Flow (vph)	97	64
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	270	151
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	23.3	23.3
Effective Green, g (s)	23.3	23.3
Actuated g/C Ratio	0.28	0.28
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	446	912
v/s Ratio Prot	c0.17	0.05
v/s Ratio Perm		
v/c Ratio	0.61	0.17
Uniform Delay, d1	26.4	23.0
Progression Factor	1.00	1.00
Incremental Delay, d2	6.0	0.4
Delay (s)	32.4	23.4
Level of Service	C	C
Approach Delay (s)		29.2
Approach LOS		C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	88	1044	254	682	738	101	207	29	710	65	25	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	91	1076	262	703	761	104	213	30	732	67	26	92
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	150	1396	435	1063	2745	912	292	375	808	125	284	242
Arrive On Green	0.04	0.27	0.27	0.31	0.54	0.54	0.08	0.20	0.20	0.04	0.15	0.15
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	91	1076	262	703	761	104	213	30	732	67	26	92
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.3	17.4	9.8	15.9	7.2	2.7	5.4	1.2	6.2	1.7	1.1	4.7
Cycle Q Clear(g_c), s	2.3	17.4	9.8	15.9	7.2	2.7	5.4	1.2	6.2	1.7	1.1	4.7
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	150	1396	435	1063	2745	912	292	375	808	125	284	242
V/C Ratio(X)	0.61	0.77	0.60	0.66	0.28	0.11	0.73	0.08	0.91	0.54	0.09	0.38
Avail Cap(c_a), veh/h	231	1592	496	1694	3754	1226	423	375	808	154	284	242
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	42.0	29.8	16.3	26.8	11.1	8.6	39.9	29.0	9.0	42.3	32.6	34.1
Incr Delay (d2), s/veh	3.9	2.1	1.6	0.7	0.1	0.1	3.6	0.4	15.7	3.6	0.6	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.4	4.8	7.6	3.4	1.2	2.7	0.6	14.1	0.9	0.6	2.3
LnGrp Delay(d),s/veh	45.9	31.9	17.9	27.5	11.2	8.7	43.5	29.4	24.7	45.9	33.2	38.6
LnGrp LOS	D	C	B	C	B	A	D	C	C	D	C	D
Approach Vol, veh/h		1429			1568			975			185	
Approach Delay, s/veh		30.2			18.3			28.9			40.5	
Approach LOS		C			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	22.0	31.6	28.5	11.6	17.7	7.9	52.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	44.0	28.0	11.0	11.0	6.0	66.0
Max Q Clear Time (g_c+I1), s	3.7	8.2	17.9	19.4	7.4	6.7	4.3	9.2
Green Ext Time (p_c), s	0.0	2.8	9.8	5.1	0.2	1.6	0.0	11.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	992	346	235	739	39	306	30	386	41	19	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	90	1023	357	242	762	40	315	31	398	42	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	116	1356	644	347	1535	530	483	659	560	116	458	493
Arrive On Green	0.07	0.27	0.27	0.10	0.30	0.30	0.14	0.35	0.35	0.03	0.25	0.25
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	90	1023	357	242	762	40	315	31	398	42	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.2	12.0	2.1	4.4	8.0	1.1	5.6	0.7	9.2	0.8	1.9	0.8
Cycle Q Clear(g_c), s	3.2	12.0	2.1	4.4	8.0	1.1	5.6	0.7	9.2	0.8	1.9	0.8
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	116	1356	644	347	1535	530	483	659	560	116	458	493
V/C Ratio(X)	0.77	0.75	0.55	0.70	0.50	0.08	0.65	0.05	0.71	0.36	0.15	0.11
Avail Cap(c_a), veh/h	246	1486	685	424	1535	530	582	659	560	218	458	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	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	29.9	21.9	14.8	28.3	18.6	14.8	26.4	13.8	7.7	30.8	19.2	5.8
Incr Delay (d2), s/veh	10.4	2.0	0.9	3.8	0.2	0.1	1.9	0.1	7.5	1.9	0.7	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	1.9	5.8	1.0	2.3	3.8	0.5	2.8	0.4	5.1	0.4	1.0	0.4
LnGrp Delay(d),s/veh	40.3	23.9	15.6	32.1	18.9	14.8	28.4	13.9	15.2	32.7	19.9	6.2
LnGrp LOS	D	C	B	C	B	B	C	B	B	C	B	A
Approach Vol, veh/h		1470			1044			744			162	
Approach Delay, s/veh		22.9			21.8			20.7			18.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	27.0	10.6	21.3	13.1	20.0	8.3	23.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	8.0	19.0	11.0	16.0	9.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	11.2	6.4	14.0	7.6	3.9	5.2	10.0
Green Ext Time (p_c), s	0.0	2.3	0.2	3.3	1.0	0.3	0.1	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	262	4	0	234	1	0	0	0	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				279	0	0	246	1	0	0	0	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				429	225	0	1323	1389	0	0	6	0
Arrive On Green				0.12	0.00	0.00	0.75	0.75	0.00	0.00	0.00	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	-72647	0
Grp Volume(v), veh/h				279	0	0	246	1	0	0	0	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				4.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				4.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				429	225	0	1323	1389	0	0	6	0
V/C Ratio(X)				0.65	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h				1242	652	0	1323	1389	0	0	295	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh				25.2	0.0	0.0	2.2	1.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				26.8	0.0	0.0	2.3	1.9	0.0	0.0	0.0	0.0
LnGrp LOS				C			A	A				
Approach Vol, veh/h					279			247			0	
Approach Delay, s/veh					26.8			2.3			0.0	
Approach LOS					C			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		48.8			48.8	0.0		11.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		31.0			22.0	5.0		21.0
Max Q Clear Time (g_c+I1), s		2.0			4.5	0.0		6.5
Green Ext Time (p_c), s		0.7			0.6	0.0		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	7	114	0	0	0	0	194	277	2	253	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	38	7	119				0	202	289	2	264	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	160	29	168				0	2449	1095	4	2692	0
Arrive On Green	0.11	0.11	0.11				0.00	1.00	1.00	0.00	1.00	0.00
Sat Flow, veh/h	1509	278	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	45	0	119				0	202	289	2	264	0
Grp Sat Flow(s),veh/h/ln	1787	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.4	0.0	4.4				0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	4.4				0.0	0.0	0.0	0.1	0.0	0.0
Prop In Lane	0.84		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	189	0	168				0	2449	1095	4	2692	0
V/C Ratio(X)	0.24	0.00	0.71				0.00	0.08	0.26	0.52	0.10	0.00
Avail Cap(c_a), veh/h	566	0	501				0	2449	1095	148	2692	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.95	0.95	0.97	0.97	0.00
Uniform Delay (d), s/veh	24.6	0.0	25.9				0.0	0.0	0.0	29.8	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	5.4				0.0	0.1	0.6	76.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	2.1				0.0	0.0	0.2	0.1	0.0	0.0
LnGrp Delay(d),s/veh	25.2	0.0	31.4				0.0	0.1	0.6	106.5	0.1	0.0
LnGrp LOS	C		C					A	A	F	A	
Approach Vol, veh/h		164						491			266	
Approach Delay, s/veh		29.7						0.4			0.9	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	4.1	45.5		10.4		49.6		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	5.0	24.0		19.0		33.0		
Max Q Clear Time (g_c+I1), s	2.1	2.0		6.4		2.0		
Green Ext Time (p_c), s	0.0	4.1		0.4		4.4		

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	159	383	98	77	31	178	515	125	41	580	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	205	166	399	102	80	32	185	536	130	43	604	172
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	287	324	762	188	236	106	229	1095	260	819	2228	694
Arrive On Green	0.16	0.17	0.17	0.05	0.07	0.07	0.13	0.53	0.53	0.24	0.44	0.44
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4107	974	3442	5085	1583
Grp Volume(v), veh/h	205	166	399	102	80	32	185	440	226	43	604	172
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1691	1721	1695	1583
Q Serve(g_s), s	6.6	4.8	6.6	1.7	1.3	1.2	3.1	4.9	5.1	0.6	4.5	1.9
Cycle Q Clear(g_c), s	6.6	4.8	6.6	1.7	1.3	1.2	3.1	4.9	5.1	0.6	4.5	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	287	324	762	188	236	106	229	904	451	819	2228	694
V/C Ratio(X)	0.71	0.51	0.52	0.54	0.34	0.30	0.81	0.49	0.50	0.05	0.27	0.25
Avail Cap(c_a), veh/h	287	590	1214	287	944	422	229	904	451	819	2228	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	0.99	0.99	0.99
Uniform Delay (d), s/veh	23.8	22.5	19.8	27.6	26.7	26.7	25.6	11.4	11.5	17.6	10.7	2.4
Incr Delay (d2), s/veh	8.1	1.3	0.6	2.4	0.8	1.6	18.0	1.8	3.8	0.0	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	3.8	2.6	2.9	0.9	0.7	0.6	2.1	2.4	2.7	0.3	2.2	1.0
LnGrp Delay(d),s/veh	31.9	23.7	20.3	30.1	27.6	28.3	43.6	13.2	15.2	17.7	11.0	3.2
LnGrp LOS	C	C	C	C	C	C	D	B	B	B	B	A
Approach Vol, veh/h		770			214			851			819	
Approach Delay, s/veh		24.2			28.9			20.4			9.8	
Approach LOS		C			C			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	20.0	7.3	14.4	8.0	30.3	13.7	8.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	5.0	19.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	7.1	3.7	8.6	5.1	6.5	8.6	3.3
Green Ext Time (p_c), s	0.7	2.9	0.0	1.9	0.0	3.4	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	0	391	16	132	249	189	509	0	0	685	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	73	0	399	16	135	254	193	519	0	0	699	384
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	29	248	237	240	3644	0	0	1821	815
Arrive On Green	0.00	0.00	0.00	0.15	0.15	0.15	0.14	0.72	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		196	1657	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		151	0	254	193	519	0	0	699	384
Grp Sat Flow(s),veh/h/ln				1853	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				4.5	0.0	9.0	6.3	1.9	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				4.5	0.0	9.0	6.3	1.9	0.0	0.0	0.0	0.0
Prop In Lane				0.11		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				278	0	237	240	3644	0	0	1821	815
V/C Ratio(X)				0.54	0.00	1.07	0.80	0.14	0.00	0.00	0.38	0.47
Avail Cap(c_a), veh/h				278	0	237	325	3644	0	0	1821	815
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				23.6	0.0	25.5	25.2	2.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				2.2	0.0	78.0	10.0	0.1	0.0	0.0	0.6	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	9.0	3.8	0.9	0.0	0.0	0.1	0.4
LnGrp Delay(d),s/veh				25.8	0.0	103.5	35.1	2.8	0.0	0.0	0.6	1.9
LnGrp LOS				C		F	D	A			A	A
Approach Vol, veh/h					405			712			1083	
Approach Delay, s/veh					74.5			11.5			1.0	
Approach LOS					E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		47.0			12.1	34.9		13.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		35.0			11.0	20.0		9.0
Max Q Clear Time (g_c+I1), s		3.9			8.3	2.0		11.0
Green Ext Time (p_c), s		12.5			0.1	9.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	318	957	679	128	951	55	432	63	139	43	49	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	321	967	686	129	961	56	436	64	140	43	0	262
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	452	1435	447	164	1239	386	660	472	422	326	0	528
Arrive On Green	0.13	0.28	0.28	0.09	0.24	0.24	0.19	0.27	0.27	0.09	0.00	0.17
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	321	967	686	129	961	56	436	64	140	43	0	262
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	5.4	10.1	9.3	4.3	10.6	1.7	7.0	1.7	4.3	0.7	0.0	4.5
Cycle Q Clear(g_c), s	5.4	10.1	9.3	4.3	10.6	1.7	7.0	1.7	4.3	0.7	0.0	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	452	1435	447	164	1239	386	660	472	422	326	0	528
V/C Ratio(X)	0.71	0.67	1.53	0.78	0.78	0.15	0.66	0.14	0.33	0.13	0.00	0.50
Avail Cap(c_a), veh/h	459	1441	449	207	1356	422	660	472	422	326	0	528
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)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	19.1	6.4	26.6	21.2	17.8	22.4	16.7	17.7	25.1	0.0	22.7
Incr Delay (d2), s/veh	4.9	1.2	251.5	14.3	2.7	0.2	2.4	0.6	2.1	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.8	35.1	2.7	5.2	0.7	3.6	0.9	2.1	0.3	0.0	2.2
LnGrp Delay(d),s/veh	29.8	20.3	257.9	40.9	23.8	18.0	24.9	17.3	19.8	25.2	0.0	26.0
LnGrp LOS	C	C	F	D	C	B	C	B	B	C		C
Approach Vol, veh/h		1974			1146			640			305	
Approach Delay, s/veh		104.4			25.5			23.0			25.9	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	20.0	9.6	20.9	15.5	14.0	11.9	18.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	7.0	17.0	10.0	10.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	6.3	6.3	12.1	9.0	6.5	7.4	12.6
Green Ext Time (p_c), s	0.3	0.8	0.0	3.8	0.2	0.3	0.6	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.5
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	775	1325	1084	610	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	791	1352	1106	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.98	0.98	0.98	0.98		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	816	4521	1283	574		
Arrive On Green	0.92	1.00	0.36	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	791	1352	1106	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	19.8	0.0	17.4	0.0		
Cycle Q Clear(g_c), s	19.8	0.0	17.4	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	816	4521	1283	574		
V/C Ratio(X)	0.97	0.30	0.86	0.00		
Avail Cap(c_a), veh/h	857	4746	1357	607		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.57	0.57	0.66	0.00		
Uniform Delay (d), s/veh	2.1	0.0	17.7	0.0		
Incr Delay (d2), s/veh	16.1	0.0	3.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9.4	0.0	9.1	0.0		
LnGrp Delay(d),s/veh	18.1	0.0	21.6	0.0		
LnGrp LOS	B	A	C			
Approach Vol, veh/h		2143	1106			
Approach Delay, s/veh		6.7	21.6			
Approach LOS		A	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				57.3			31.6	25.7
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			29.0	23.0
Max Q Clear Time (g_c+I1), s				2.0			21.8	19.4
Green Ext Time (p_c), s				22.1			5.9	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	666	1	318	295
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	709	1	338	314
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1543	355			710	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1543	355			710	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			62	
cM capacity (veh/h)	65	642			885	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	472	237	338	157	157
Volume Left	0	0	338	0	0
Volume Right	0	1	0	0	0
cSH	1700	1700	885	1700	1700
Volume to Capacity	0.28	0.14	0.38	0.09	0.09
Queue Length 95th (ft)	0	0	45	0	0
Control Delay (s)	0.0	0.0	11.6	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.0		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM 2010 Signalized Intersection Summary
25: Ulric St & Friars Rd

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	1331	844	0	1116	522	510	39	556	213	5	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	98	1401	0	0	1175	549	566	0	0	228	0	102
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	118	2795	870	0	2230	694	795	0	355	329	0	147
Arrive On Green	0.07	0.55	0.00	0.00	0.44	0.44	0.22	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	98	1401	0	0	1175	549	566	0	0	228	0	102
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	4.9	15.4	0.0	0.0	15.2	26.8	13.3	0.0	0.0	5.6	0.0	5.6
Cycle Q Clear(g_c), s	4.9	15.4	0.0	0.0	15.2	26.8	13.3	0.0	0.0	5.6	0.0	5.6
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	2795	870	0	2230	694	795	0	355	329	0	147
V/C Ratio(X)	0.83	0.50	0.00	0.00	0.53	0.79	0.71	0.00	0.00	0.69	0.00	0.69
Avail Cap(c_a), veh/h	118	3277	1020	0	2712	844	795	0	355	631	0	281
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	0.00	0.00	0.51	0.51	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	12.6	0.0	0.0	18.4	21.7	32.2	0.0	0.0	39.6	0.0	39.6
Incr Delay (d2), s/veh	36.5	0.1	0.0	0.0	0.1	2.2	5.4	0.0	0.0	2.6	0.0	5.8
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	3.6	7.2	0.0	0.0	7.1	12.0	7.0	0.0	0.0	2.9	0.0	5.1
LnGrp Delay(d),s/veh	78.0	12.7	0.0	0.0	18.5	23.9	37.6	0.0	0.0	42.2	0.0	45.3
LnGrp LOS	E	B			B	C	D			D		D
Approach Vol, veh/h		1499			1724			566			330	
Approach Delay, s/veh		17.0			20.2			37.6			43.2	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		24.2		53.5		12.4	10.0	43.5
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		4.0		58.0		16.0	6.0	48.0
Max Q Clear Time (g_c+I1), s		15.3		17.4		7.6	6.9	28.8
Green Ext Time (p_c), s		0.0		14.8		0.7	0.0	10.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	810	173	215	748	356	261
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	844	0	224	779	371	272
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1651	514	367	2676	504	1090
Arrive On Green	0.32	0.00	0.11	0.53	0.28	0.28
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	844	0	224	779	371	272
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.7	0.0	2.6	3.6	8.0	2.8
Cycle Q Clear(g_c), s	5.7	0.0	2.6	3.6	8.0	2.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1651	514	367	2676	504	1090
V/C Ratio(X)	0.51	0.00	0.61	0.29	0.74	0.25
Avail Cap(c_a), veh/h	1928	600	652	3373	1009	1882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	18.0	5.6	13.7	8.7
Incr Delay (d2), s/veh	0.2	0.0	1.6	0.1	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	1.3	1.7	4.2	1.1
LnGrp Delay(d),s/veh	11.8	0.0	19.6	5.7	15.8	8.8
LnGrp LOS	B		B	A	B	A
Approach Vol, veh/h	844			1003	643	
Approach Delay, s/veh	11.8			8.8	12.8	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		16.0	8.5	17.7				26.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	8.0	16.0				28.0
Max Q Clear Time (g_c+I1), s		10.0	4.6	7.7				5.6
Green Ext Time (p_c), s		2.0	0.2	6.0				12.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	57	62	58	43	25	37	617	70	15	444	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	62	67	63	47	27	40	671	76	16	483	36
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	103	111	84	144	83	61	1534	174	28	1537	114
Arrive On Green	0.04	0.13	0.13	0.05	0.13	0.13	0.03	0.48	0.48	0.02	0.46	0.46
Sat Flow, veh/h	1774	820	886	1774	1112	639	1774	3206	363	1774	3340	248
Grp Volume(v), veh/h	54	0	129	63	0	74	40	370	377	16	255	264
Grp Sat Flow(s),veh/h/ln	1774	0	1706	1774	0	1750	1774	1770	1799	1774	1770	1819
Q Serve(g_s), s	1.4	0.0	3.4	1.7	0.0	1.8	1.1	6.6	6.6	0.4	4.4	4.4
Cycle Q Clear(g_c), s	1.4	0.0	3.4	1.7	0.0	1.8	1.1	6.6	6.6	0.4	4.4	4.4
Prop In Lane	1.00		0.52	1.00		0.36	1.00		0.20	1.00		0.14
Lane Grp Cap(c), veh/h	76	0	213	84	0	227	61	847	861	28	814	837
V/C Ratio(X)	0.71	0.00	0.60	0.75	0.00	0.33	0.65	0.44	0.44	0.56	0.31	0.32
Avail Cap(c_a), veh/h	222	0	568	222	0	583	185	847	861	148	814	837
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	22.7	0.0	19.9	22.6	0.0	19.0	22.9	8.3	8.3	23.5	8.2	8.2
Incr Delay (d2), s/veh	11.6	0.0	2.7	12.5	0.0	0.8	11.3	1.6	1.6	16.3	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.8	1.1	0.0	0.9	0.7	3.6	3.6	0.3	2.4	2.4
LnGrp Delay(d),s/veh	34.3	0.0	22.6	35.1	0.0	19.8	34.2	9.9	9.9	39.8	9.2	9.2
LnGrp LOS	C		C	D		B	C	A	A	D	A	A
Approach Vol, veh/h		183			137			787			535	
Approach Delay, s/veh		26.1			26.9			11.1			10.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	27.0	6.3	10.0	5.7	26.1	6.1	10.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	6.0	16.0	5.0	22.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.4	8.6	3.7	5.4	3.1	6.4	3.4	3.8
Green Ext Time (p_c), s	0.0	6.8	0.0	0.8	0.0	7.1	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	85	79	34	66	9	1038	59	51	3	65	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	26	97	90	39	75	10	1180	67	58	3	74	34
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	171	1242	94	195	28	1183	726	629	6	149	68
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.67	0.79	0.79	0.00	0.12	0.12
Sat Flow, veh/h	241	1459	1583	393	1663	237	1774	923	799	1774	1209	556
Grp Volume(v), veh/h	123	0	90	54	0	70	1180	0	125	3	0	108
Grp Sat Flow(s),veh/h/ln	1700	0	1583	640	0	1653	1774	0	1722	1774	0	1765
Q Serve(g_s), s	3.9	0.0	0.0	4.1	0.0	5.1	86.0	0.0	2.2	0.2	0.0	7.4
Cycle Q Clear(g_c), s	9.0	0.0	0.0	13.1	0.0	5.1	86.0	0.0	2.2	0.2	0.0	7.4
Prop In Lane	0.21		1.00	0.72		0.14	1.00		0.46	1.00		0.31
Lane Grp Cap(c), veh/h	233	0	1242	123	0	194	1183	0	1355	6	0	217
V/C Ratio(X)	0.53	0.00	0.07	0.44	0.00	0.36	1.00	0.00	0.09	0.54	0.00	0.50
Avail Cap(c_a), veh/h	243	0	1251	130	0	203	1183	0	1355	55	0	217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	3.2	58.6	0.0	52.9	21.5	0.0	3.2	64.7	0.0	53.2
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.5	0.0	1.1	25.4	0.0	0.1	61.7	0.0	7.9
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	4.3	0.0	0.7	2.0	0.0	2.4	50.0	0.0	1.1	0.2	0.0	4.1
LnGrp Delay(d),s/veh	56.4	0.0	3.2	61.1	0.0	54.0	46.9	0.0	3.3	126.4	0.0	61.2
LnGrp LOS	E		A	E		D	D		A	F		E
Approach Vol, veh/h		213			124			1305			111	
Approach Delay, s/veh		33.9			57.1			42.7			62.9	
Approach LOS		C			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	106.3		19.3	90.7	20.0		19.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	98.0		16.0	86.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	4.2		11.0	88.0	9.4		15.1
Green Ext Time (p_c), s	0.0	8.3		0.7	0.0	0.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

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												
Volume (veh/h)	22	3	341	14	0	4	1267	707	23	11	548	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	417	16	0	5	1440	803	26	12	623	27
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	258	438	21	0	7	1823	2489	81	19	665	29
Arrive On Green	0.00	0.00	0.14	0.02	0.00	0.02	0.35	0.48	0.48	0.01	0.19	0.19
Sat Flow, veh/h	0	1863	3167	1314	0	411	3442	3499	113	1774	3456	150
Grp Volume(v), veh/h	0	0	417	21	0	0	1440	406	423	12	319	331
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1725	0	0	1721	1770	1843	1774	1770	1836
Q Serve(g_s), s	0.0	0.0	17.0	1.6	0.0	0.0	48.8	18.5	18.5	0.9	23.1	23.1
Cycle Q Clear(g_c), s	0.0	0.0	17.0	1.6	0.0	0.0	48.8	18.5	18.5	0.9	23.1	23.1
Prop In Lane	0.00		1.00	0.76		0.24	1.00		0.06	1.00		0.08
Lane Grp Cap(c), veh/h	0	258	438	28	0	0	1823	1259	1311	19	340	353
V/C Ratio(X)	0.00	0.00	0.95	0.74	0.00	0.00	0.79	0.32	0.32	0.63	0.94	0.94
Avail Cap(c_a), veh/h	0	258	438	212	0	0	1823	1259	1311	55	340	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.56	0.56	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	55.6	63.7	0.0	0.0	35.4	14.7	14.7	64.0	51.7	51.7
Incr Delay (d2), s/veh	0.0	0.0	30.7	31.5	0.0	0.0	1.4	0.4	0.4	28.9	35.1	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	9.3	1.0	0.0	0.0	23.5	9.1	9.5	0.6	14.6	15.1
LnGrp Delay(d),s/veh	0.0	0.0	86.3	95.2	0.0	0.0	36.8	15.0	15.0	92.9	86.8	86.2
LnGrp LOS			F	F			D	B	B	F	F	F
Approach Vol, veh/h		417			21			2269			662	
Approach Delay, s/veh		86.3			95.2			28.9			86.6	
Approach LOS		F			F			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	96.5		22.0	72.9	29.0		6.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	76.0		18.0	55.0	25.0		16.0
Max Q Clear Time (g_c+I1), s	2.9	20.5		19.0	50.8	25.1		3.6
Green Ext Time (p_c), s	0.0	19.5		0.0	2.9	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	19	375	330	159	932	291	1010	48	14	834	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	43	52	408	239	363	1013	316	1098	52	15	907	85
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	244	511	409	430	772	341	1729	82	44	1144	512
Arrive On Green	0.13	0.13	0.13	0.23	0.23	0.23	0.19	0.50	0.50	0.01	0.22	0.22
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	3441	163	3442	3539	1583
Grp Volume(v), veh/h	43	52	408	239	363	1013	316	565	585	15	907	85
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1834	1721	1770	1583
Q Serve(g_s), s	2.8	3.2	17.0	15.6	24.2	30.0	22.8	30.3	30.3	0.6	31.5	5.7
Cycle Q Clear(g_c), s	2.8	3.2	17.0	15.6	24.2	30.0	22.8	30.3	30.3	0.6	31.5	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	232	244	511	409	430	772	341	889	922	44	1144	512
V/C Ratio(X)	0.19	0.21	0.80	0.58	0.84	1.31	0.93	0.63	0.64	0.34	0.79	0.17
Avail Cap(c_a), veh/h	232	244	511	409	430	772	368	889	922	529	1144	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	50.3	50.5	40.1	44.4	47.8	49.2	51.6	23.6	23.6	63.9	46.8	36.7
Incr Delay (d2), s/veh	0.4	0.4	8.7	2.1	14.3	150.0	28.0	3.4	3.3	2.9	3.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	14.6	7.9	14.1	29.9	13.8	15.6	16.1	0.3	16.0	2.5
LnGrp Delay(d),s/veh	50.7	51.0	48.8	46.6	62.0	199.2	79.6	27.1	27.0	66.8	50.6	37.1
LnGrp LOS	D	D	D	D	E	F	E	C	C	E	D	D
Approach Vol, veh/h		503			1615			1466			1007	
Approach Delay, s/veh		49.2			145.8			38.3			49.7	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	69.3		21.0	29.0	46.0		34.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	47.0		17.0	27.0	40.0		30.0
Max Q Clear Time (g_c+I1), s	2.6	32.3		19.0	24.8	33.5		32.0
Green Ext Time (p_c), s	0.0	11.2		0.0	0.2	5.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.8
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	949	1488	19	0	412	667	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	978	1534		0	425	688	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.97	0.97		0.94	0.97	0.97	0.97
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1734	1819		0	1539	2211	0
Arrive On Green	0.50	0.50		0.00	0.43	0.43	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	978	1534		0	425	688	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	25.6	47.7		0.0	10.0	11.5	0.0
Cycle Q Clear(g_c), s	25.6	47.7		0.0	10.0	11.5	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1734	1819		0	1539	2211	0
V/C Ratio(X)	0.56	0.84		0.00	0.28	0.31	0.00
Avail Cap(c_a), veh/h	2144	2249		0	1539	2211	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.4	27.8		0.0	23.6	24.0	0.0
Incr Delay (d2), s/veh	0.3	2.6		0.0	0.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	27.9		0.0	5.0	5.4	0.0
LnGrp Delay(d),s/veh	22.7	30.4		0.0	24.1	24.4	0.0
LnGrp LOS	C	C			C	C	
Approach Vol, veh/h	2512				425	688	
Approach Delay, s/veh	27.4				24.1	24.4	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		60.5		69.5		60.5		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		41.0		81.0		31.0		
Max Q Clear Time (g_c+I1), s		12.0		49.7		13.5		
Green Ext Time (p_c), s		9.0		15.8		7.3		

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1139	508	82	1372	252	63
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1162	518	84	1400	257	64
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1924	1194	108	3211	1334	595
Arrive On Green	0.38	0.38	0.06	0.50	0.38	0.38
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1162	518	84	1400	257	64
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	12.0	7.8	3.0	9.1	3.2	1.7
Cycle Q Clear(g_c), s	12.0	7.8	3.0	9.1	3.2	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1924	1194	108	3211	1334	595
V/C Ratio(X)	0.60	0.43	0.78	0.44	0.19	0.11
Avail Cap(c_a), veh/h	1924	1194	246	3648	1334	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	2.9	30.1	10.4	13.6	13.2
Incr Delay (d2), s/veh	0.5	0.2	11.1	0.1	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	8.6	1.8	4.0	1.6	0.8
LnGrp Delay(d),s/veh	16.8	3.2	41.2	10.4	14.0	13.6
LnGrp LOS	B	A	D	B	B	B
Approach Vol, veh/h	1680			1484	321	
Approach Delay, s/veh	12.6			12.2	13.9	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		28.4	8.0	28.6				36.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		20.0	9.0	24.0				37.0
Max Q Clear Time (g_c+I1), s		5.2	5.0	14.0				11.1
Green Ext Time (p_c), s		1.0	0.1	9.3				21.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	102	77	33	1029	86	55	125	51	97	222	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	55	107	81	35	1083	91	58	132	54	102	234	123
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	70	862	603	49	1391	117	74	466	396	132	527	448
Arrive On Green	0.04	0.43	0.43	0.03	0.42	0.42	0.04	0.25	0.25	0.07	0.28	0.28
Sat Flow, veh/h	1774	1993	1394	1774	3306	278	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	55	94	94	35	579	595	58	132	54	102	234	123
Grp Sat Flow(s),veh/h/ln	1774	1770	1617	1774	1770	1814	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.3	2.4	2.6	1.5	20.9	21.0	2.4	4.2	2.0	4.2	7.7	4.5
Cycle Q Clear(g_c), s	2.3	2.4	2.6	1.5	20.9	21.0	2.4	4.2	2.0	4.2	7.7	4.5
Prop In Lane	1.00		0.86	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	765	699	49	745	763	74	466	396	132	527	448
V/C Ratio(X)	0.79	0.12	0.13	0.71	0.78	0.78	0.79	0.28	0.14	0.77	0.44	0.27
Avail Cap(c_a), veh/h	167	953	871	143	929	953	167	466	396	263	527	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	12.6	12.7	35.8	18.5	18.5	35.3	22.5	21.6	33.8	21.8	20.7
Incr Delay (d2), s/veh	17.6	0.1	0.1	17.3	3.4	3.3	16.6	1.5	0.7	9.3	2.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.2	1.2	0.9	10.8	11.1	1.5	2.4	0.9	2.4	4.3	2.1
LnGrp Delay(d),s/veh	53.0	12.7	12.8	53.1	21.9	21.8	51.8	24.0	22.3	43.1	24.5	22.2
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		243			1209			244			459	
Approach Delay, s/veh		21.8			22.8			30.2			28.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	22.6	6.1	36.1	7.1	25.0	6.9	35.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	17.0	6.0	40.0	7.0	21.0	7.0	39.0
Max Q Clear Time (g_c+I1), s	6.2	6.2	3.5	4.6	4.4	9.7	4.3	23.0
Green Ext Time (p_c), s	0.1	2.1	0.0	11.9	0.0	2.1	0.0	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	32	28	188	176	206	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	31	207	193	226	148

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	811	187	375	0	-	0
Stage 1	301	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	317	823	1180	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	255	823	1180	-	-	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	456	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	4.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1180	-	255	823	-	-
HCM Lane V/C Ratio	0.175	-	0.138	0.037	-	-
HCM Control Delay (s)	8.7	0.3	21.4	9.5	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	56	97	91	303	138	61
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	64	110	103	344	157	69
Adj No. of Lanes	1	1	2	1	1	1
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	85	764	984	440	747	743
Arrive On Green	0.05	0.41	0.28	0.28	0.42	0.42
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	64	110	103	344	157	69
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.7	1.8	1.0	9.5	2.7	1.1
Cycle Q Clear(g_c), s	1.7	1.8	1.0	9.5	2.7	1.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	85	764	984	440	747	743
V/C Ratio(X)	0.75	0.14	0.10	0.78	0.21	0.09
Avail Cap(c_a), veh/h	299	1255	1491	667	747	743
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	22.3	8.8	12.7	15.8	8.7	7.0
Incr Delay (d2), s/veh	12.4	0.1	0.0	3.4	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.9	0.5	4.5	1.4	1.4
LnGrp Delay(d),s/veh	34.7	8.9	12.8	19.2	9.4	7.2
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		174	447		226	
Approach Delay, s/veh		18.4	17.7		8.7	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				23.5		24.0	6.3	17.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				32.0		20.0	8.0	20.0
Max Q Clear Time (g_c+I1), s				3.8		4.7	3.7	11.5
Green Ext Time (p_c), s				2.6		0.6	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	699	1589	1118	461	0	1234
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	706	1605	1230	399		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.99	0.99	0.99	0.99		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	860	4394	1776	503		
Arrive On Green	0.48	0.86	0.64	0.64		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	706	1605	1230	399		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	22.1	4.1	9.3	12.0		
Cycle Q Clear(g_c), s	22.1	4.1	9.3	12.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	860	4394	1776	503		
V/C Ratio(X)	0.82	0.37	0.69	0.79		
Avail Cap(c_a), veh/h	901	4772	2063	585		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.71	0.71	0.92	0.92		
Uniform Delay (d), s/veh	14.3	0.9	9.8	10.3		
Incr Delay (d2), s/veh	4.3	0.0	0.8	6.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	11.6	1.8	4.6	5.8		
LnGrp Delay(d),s/veh	18.6	0.9	10.6	16.3		
LnGrp LOS	B	A	B	B		
Approach Vol, veh/h		2311	1629			
Approach Delay, s/veh		6.3	11.9			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				60.2			35.5	24.7
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				61.0			33.0	24.0
Max Q Clear Time (g_c+I1), s				6.1			24.1	14.0
Green Ext Time (p_c), s				26.5			7.4	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	8.6
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	374	1191	503	198	1804	296	0	0	0	574	1	1869
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	378	1203	508	200	1822	0				581	0	1888
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	328	1740	542	253	1526	475				1501	0	1340
Arrive On Green	0.18	0.34	0.34	0.14	0.30	0.00				0.42	0.00	0.42
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	378	1203	508	200	1822	0				581	0	1888
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	24.0	26.5	40.4	14.2	39.0	0.0				14.7	0.0	55.0
Cycle Q Clear(g_c), s	24.0	26.5	40.4	14.2	39.0	0.0				14.7	0.0	55.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	328	1740	542	253	1526	475				1501	0	1340
V/C Ratio(X)	1.15	0.69	0.94	0.79	1.19	0.00				0.39	0.00	1.41
Avail Cap(c_a), veh/h	328	1760	548	253	1526	475				1501	0	1340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.74	0.74	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	53.0	36.8	41.4	53.9	45.5	0.0				25.9	0.0	37.5
Incr Delay (d2), s/veh	72.9	0.1	3.5	11.9	92.5	0.0				0.8	0.0	188.7
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	18.4	12.4	18.2	7.8	31.3	0.0				7.3	0.0	59.1
LnGrp Delay(d),s/veh	125.9	36.9	44.9	65.8	138.0	0.0				26.6	0.0	226.2
LnGrp LOS	F	D	D	E	F					C		F
Approach Vol, veh/h		2089			2022						2469	
Approach Delay, s/veh		55.0			130.9						179.2	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			22.5	48.5		59.0	28.0	43.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			18.0	45.0		55.0	24.0	39.0
Max Q Clear Time (g_c+I1), s			16.2	42.4		57.0	26.0	41.0
Green Ext Time (p_c), s			0.4	2.1		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	124.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	618	0	268	165	212	0	0	253	125
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				637	0	0	170	219	0	0	261	129
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				698	0	623	653	1929	0	0	517	231
Arrive On Green				0.39	0.00	0.00	0.74	1.00	0.00	0.00	0.15	0.15
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				637	0	0	170	219	0	0	261	129
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				44.2	0.0	0.0	4.1	0.0	0.0	0.0	8.8	9.8
Cycle Q Clear(g_c), s				44.2	0.0	0.0	4.1	0.0	0.0	0.0	8.8	9.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				698	0	623	653	1929	0	0	517	231
V/C Ratio(X)				0.91	0.00	0.00	0.26	0.11	0.00	0.00	0.50	0.56
Avail Cap(c_a), veh/h				1010	0	901	653	1929	0	0	517	231
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.41	0.41	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.3	0.0	0.0	11.4	0.0	0.0	0.0	51.2	51.6
Incr Delay (d2), s/veh				9.2	0.0	0.0	0.1	0.0	0.0	0.0	3.5	9.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				23.4	0.0	0.0	2.0	0.0	0.0	0.0	4.6	4.9
LnGrp Delay(d),s/veh				46.5	0.0	0.0	11.5	0.0	0.0	0.0	54.7	61.0
LnGrp LOS				D			B	A			D	E
Approach Vol, veh/h					637			389			390	
Approach Delay, s/veh					46.5			5.0			56.7	
Approach LOS					D			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		74.9			51.9	23.0		55.1
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		48.0			25.0	19.0		74.0
Max Q Clear Time (g_c+I1), s		2.0			6.1	11.8		46.2
Green Ext Time (p_c), s		2.0			1.8	1.2		5.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	173	2	76	734	442	0	48	72	156	233	34	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.86			1.00	0.85		0.91			
Flt Protected	0.95		1.00			0.95	1.00		1.00			
Satd. Flow (prot)	1770		1610			1684	1504		3204			
Flt Permitted	0.95		0.73			0.95	1.00		1.00			
Satd. Flow (perm)	1770		1183			1684	1504		3204			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.92	0.75	0.75	0.75	0.75
Adj. Flow (vph)	231	3	101	979	589	0	64	78	208	311	45	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	231	0	1083	0	0	595	136	0	559	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	54.0		54.0			20.0	20.0		20.0			
Effective Green, g (s)	54.0		54.0			20.0	20.0		20.0			
Actuated g/C Ratio	0.42		0.42			0.15	0.15		0.15			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	735		491			259	231		492			
v/s Ratio Prot	0.13					c0.35	0.09		c0.17			
v/s Ratio Perm			c0.92									
v/c Ratio	0.31		2.21			2.30	0.59		1.41dr			
Uniform Delay, d1	25.6		38.0			55.0	51.2		55.0			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.2		549.2			595.8	3.8		83.6			
Delay (s)	25.8		587.2			650.8	55.0		138.6			
Level of Service	C		F			F	D		F			
Approach Delay (s)			488.5			540.0			138.6			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	381.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.91		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.1%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	62	594
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1610	3389
Flt Permitted	0.95	1.00
Satd. Flow (perm)	1610	3389
Peak-hour factor, PHF	0.75	0.75
Adj. Flow (vph)	83	792
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	335	800
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	20.0	20.0
Effective Green, g (s)	20.0	20.0
Actuated g/C Ratio	0.15	0.15
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	247	521
v/s Ratio Prot	0.21	c0.24
v/s Ratio Perm		
v/c Ratio	1.36	1.54
Uniform Delay, d1	55.0	55.0
Progression Factor	0.82	0.82
Incremental Delay, d2	182.8	249.8
Delay (s)	227.7	294.7
Level of Service	F	F
Approach Delay (s)		274.9
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	88	2924	254	682	793	101	207	29	710	65	25	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	91	3014	262	703	818	104	213	30	732	67	26	92
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	138	2543	792	741	3434	1118	265	244	548	106	158	134
Arrive On Green	0.04	0.50	0.50	0.22	0.68	0.68	0.08	0.13	0.13	0.03	0.08	0.08
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	91	3014	262	703	818	104	213	30	732	67	26	92
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.4	65.0	9.3	26.2	8.1	0.6	7.9	1.8	17.0	2.5	1.7	6.5
Cycle Q Clear(g_c), s	3.4	65.0	9.3	26.2	8.1	0.6	7.9	1.8	17.0	2.5	1.7	6.5
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	138	2543	792	741	3434	1118	265	244	548	106	158	134
V/C Ratio(X)	0.66	1.19	0.33	0.95	0.24	0.09	0.80	0.12	1.34	0.63	0.16	0.69
Avail Cap(c_a), veh/h	185	2543	792	741	3434	1118	265	244	548	106	158	134
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)	0.11	0.11	0.11	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	32.5	10.2	50.3	8.2	2.2	59.0	49.9	31.9	62.3	55.2	45.7
Incr Delay (d2), s/veh	0.6	83.9	0.0	3.2	0.0	0.0	16.4	1.0	163.1	11.6	2.2	25.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	49.9	4.1	12.7	3.8	0.6	4.4	1.0	42.6	1.4	1.0	3.8
LnGrp Delay(d),s/veh	62.1	116.4	10.2	53.5	8.2	2.2	75.4	51.0	195.0	73.9	57.5	70.7
LnGrp LOS	E	F	B	D	A	A	E	D	F	E	E	E
Approach Vol, veh/h		3367			1625			975			185	
Approach Delay, s/veh		106.7			27.4			164.4			70.0	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	32.0	69.0	14.0	15.0	9.2	91.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	28.0	65.0	10.0	11.0	7.0	86.0
Max Q Clear Time (g_c+I1), s	4.5	19.0	28.2	67.0	9.9	8.5	5.4	10.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.1	0.0	72.1

Intersection Summary	
HCM 2010 Ctrl Delay	93.8
HCM 2010 LOS	F

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												
Volume (veh/h)	87	2872	346	235	794	39	306	30	386	41	19	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	90	2961	357	242	819	40	315	31	398	42	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	112	2934	1072	238	2964	971	344	373	317	109	244	307
Arrive On Green	0.06	0.58	0.58	0.14	1.00	1.00	0.10	0.20	0.20	0.03	0.13	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	90	2961	357	242	819	40	315	31	398	42	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.5	75.0	0.0	9.0	0.0	0.0	11.8	1.8	26.0	1.5	4.3	2.7
Cycle Q Clear(g_c), s	6.5	75.0	0.0	9.0	0.0	0.0	11.8	1.8	26.0	1.5	4.3	2.7
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	112	2934	1072	238	2964	971	344	373	317	109	244	307
V/C Ratio(X)	0.80	1.01	0.33	1.02	0.28	0.04	0.92	0.08	1.26	0.38	0.28	0.17
Avail Cap(c_a), veh/h	177	2934	1072	238	2964	971	344	373	317	109	244	307
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	27.5	8.8	56.0	0.0	0.0	58.0	42.3	52.0	61.8	51.0	26.4
Incr Delay (d2), s/veh	12.8	18.9	0.2	60.7	0.0	0.0	28.2	0.4	138.7	2.2	2.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	39.9	5.3	6.2	0.0	0.0	6.9	0.9	23.6	0.8	2.4	1.3
LnGrp Delay(d),s/veh	72.8	46.4	8.9	116.8	0.0	0.0	86.1	42.7	190.7	64.0	53.8	27.6
LnGrp LOS	E	F	A	F	A	A	F	D	F	E	D	C
Approach Vol, veh/h		3408			1101			744			162	
Approach Delay, s/veh		43.2			25.7			140.3			48.1	
Approach LOS		D			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	30.0	13.0	79.0	17.0	21.0	12.2	79.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	9.0	75.0	13.0	17.0	13.0	71.0
Max Q Clear Time (g_c+I1), s	3.5	28.0	11.0	77.0	13.8	6.3	8.5	2.0
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.3	0.1	8.6

Intersection Summary	
HCM 2010 Ctrl Delay	53.1
HCM 2010 LOS	D

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												
Volume (veh/h)	0	0	0	287	4	0	234	1	0	0	0	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				305	0	0	246	1	0	0	0	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				383	201	0	1474	1547	0	0	3	0
Arrive On Green				0.11	0.00	0.00	0.83	0.83	0.00	0.00	0.00	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	-72647	0
Grp Volume(v), veh/h				305	0	0	246	1	0	0	0	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				10.9	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				10.9	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				383	201	0	1474	1547	0	0	3	0
V/C Ratio(X)				0.80	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h				1337	702	0	1474	1547	0	0	136	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh				56.6	0.0	0.0	2.2	1.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				3.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				60.4	0.0	0.0	2.2	1.9	0.0	0.0	0.0	0.0
LnGrp LOS				E			A	A				
Approach Vol, veh/h					305			247			0	
Approach Delay, s/veh					60.4			2.2			0.0	
Approach LOS					E			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.0			112.0	0.0		18.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		73.0			64.0	5.0		49.0
Max Q Clear Time (g_c+I1), s		2.0			5.5	0.0		12.9
Green Ext Time (p_c), s		0.8			0.8	0.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	7	114	0	0	0	0	194	1192	2	278	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	38	7	119				0	202	1242	2	290	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	137	25	144				0	2668	1194	112	3001	0
Arrive On Green	0.09	0.09	0.09				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	1509	278	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	45	0	119				0	202	1242	2	290	0
Grp Sat Flow(s),veh/h/ln	1787	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	3.1	0.0	9.6				0.0	0.0	98.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	9.6				0.0	0.0	98.0	0.1	0.0	0.0
Prop In Lane	0.84		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	162	0	144				0	2668	1194	112	3001	0
V/C Ratio(X)	0.28	0.00	0.83				0.00	0.08	1.04	0.02	0.10	0.00
Avail Cap(c_a), veh/h	220	0	195				0	2668	1194	112	3001	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.84	0.84	0.98	0.98	0.00
Uniform Delay (d), s/veh	55.1	0.0	58.1				0.0	0.0	0.0	53.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	19.0				0.0	0.0	35.1	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	5.0				0.0	0.0	11.6	0.1	0.0	0.0
LnGrp Delay(d),s/veh	56.1	0.0	77.1				0.0	0.0	35.1	53.3	0.1	0.0
LnGrp LOS	E		E					A	F	D	A	
Approach Vol, veh/h		164						1444			292	
Approach Delay, s/veh		71.4						30.2			0.4	
Approach LOS		E						C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.2	102.0		15.8		114.2		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	4.0	98.0		16.0		106.0		
Max Q Clear Time (g_c+I1), s	2.1	100.0		11.6		2.0		
Green Ext Time (p_c), s	0.3	0.0		0.2		2.1		

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	159	383	98	77	31	178	1430	125	41	605	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	205	166	399	102	80	32	185	1490	130	43	630	172
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	242	242	631	159	142	63	238	2382	208	690	3210	1000
Arrive On Green	0.14	0.13	0.13	0.05	0.04	0.04	0.14	1.00	1.00	0.07	0.21	0.21
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4764	416	3442	5085	1583
Grp Volume(v), veh/h	205	166	399	102	80	32	185	1060	560	43	630	172
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1789	1721	1695	1583
Q Serve(g_s), s	14.7	11.1	12.4	3.8	2.9	2.6	6.7	0.0	0.0	1.5	13.3	5.4
Cycle Q Clear(g_c), s	14.7	11.1	12.4	3.8	2.9	2.6	6.7	0.0	0.0	1.5	13.3	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	242	242	631	159	142	63	238	1695	895	690	3210	1000
V/C Ratio(X)	0.85	0.68	0.63	0.64	0.56	0.50	0.78	0.63	0.63	0.06	0.20	0.17
Avail Cap(c_a), veh/h	382	487	1047	265	436	195	371	1695	895	690	3210	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	0.98	0.98	0.98
Uniform Delay (d), s/veh	54.8	54.0	33.0	60.9	61.3	61.1	55.0	0.0	0.0	49.2	24.2	5.1
Incr Delay (d2), s/veh	9.9	3.4	1.1	4.2	3.5	6.1	4.8	1.5	2.9	0.0	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	5.9	5.5	1.9	1.5	1.2	3.3	0.4	0.7	0.7	6.3	2.5
LnGrp Delay(d),s/veh	64.7	57.4	34.1	65.2	64.8	67.2	59.8	1.5	2.9	49.3	24.4	5.4
LnGrp LOS	E	E	C	E	E	E	E	A	A	D	C	A
Approach Vol, veh/h		770			214			1805			845	
Approach Delay, s/veh		47.3			65.3			7.9			21.8	
Approach LOS		D			E			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.1	69.0	10.0	20.9	13.0	86.1	21.7	9.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	65.0	10.0	34.0	14.0	56.0	28.0	16.0
Max Q Clear Time (g_c+I1), s	3.5	2.0	5.8	14.4	8.7	15.3	16.7	4.9
Green Ext Time (p_c), s	0.0	19.0	0.4	2.5	0.3	5.9	0.7	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	0	391	16	132	249	189	1424	0	0	685	401
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	73	0	399	16	135	254	193	1453	0	0	699	409
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	35	300	286	222	3853	0	0	2130	953
Arrive On Green	0.00	0.00	0.00	0.18	0.18	0.18	0.13	0.76	0.00	0.00	0.20	0.20
Sat Flow, veh/h		0		196	1657	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		151	0	254	193	1453	0	0	699	409
Grp Sat Flow(s),veh/h/ln				1853	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				9.4	0.0	20.3	13.9	12.6	0.0	0.0	22.0	29.4
Cycle Q Clear(g_c), s				9.4	0.0	20.3	13.9	12.6	0.0	0.0	22.0	29.4
Prop In Lane				0.11		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				335	0	286	222	3853	0	0	2130	953
V/C Ratio(X)				0.45	0.00	0.89	0.87	0.38	0.00	0.00	0.33	0.43
Avail Cap(c_a), veh/h				442	0	378	382	3853	0	0	2130	953
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.97	0.97
Uniform Delay (d), s/veh				47.5	0.0	52.0	55.8	5.3	0.0	0.0	29.6	32.5
Incr Delay (d2), s/veh				0.9	0.0	17.8	10.3	0.3	0.0	0.0	0.4	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.9	0.0	10.3	7.4	5.9	0.0	0.0	10.9	13.3
LnGrp Delay(d),s/veh				48.4	0.0	69.8	66.1	5.6	0.0	0.0	30.0	33.9
LnGrp LOS				D		E	E	A			C	C
Approach Vol, veh/h					405			1646			1108	
Approach Delay, s/veh					61.8			12.7			31.4	
Approach LOS					E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		102.5			20.3	82.2		27.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		73.0			28.0	41.0		31.0
Max Q Clear Time (g_c+I1), s		14.6			15.9	31.4		22.3
Green Ext Time (p_c), s		33.9			0.4	8.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	318	1922	679	128	976	55	432	63	139	43	49	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	321	1941	686	129	986	56	436	64	140	43	0	262
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	911	2221	691	154	1317	410	792	463	414	325	0	390
Arrive On Green	0.26	0.44	0.44	0.09	0.26	0.26	0.23	0.26	0.26	0.09	0.00	0.12
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	321	1941	686	129	986	56	436	64	140	43	0	262
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	9.8	45.2	27.0	9.3	23.2	3.5	14.5	3.6	9.3	1.4	0.0	10.3
Cycle Q Clear(g_c), s	9.8	45.2	27.0	9.3	23.2	3.5	14.5	3.6	9.3	1.4	0.0	10.3
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	911	2221	691	154	1317	410	792	463	414	325	0	390
V/C Ratio(X)	0.35	0.87	0.99	0.84	0.75	0.14	0.55	0.14	0.34	0.13	0.00	0.67
Avail Cap(c_a), veh/h	911	2308	719	218	2191	682	792	463	414	325	0	390
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)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	33.4	8.5	58.4	44.3	37.0	44.1	36.8	38.9	54.3	0.0	54.5
Incr Delay (d2), s/veh	0.2	3.8	30.4	17.2	0.9	0.2	0.8	0.6	2.2	0.2	0.0	8.9
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	21.8	17.5	5.3	11.0	1.6	7.0	1.8	4.3	0.7	0.0	5.0
LnGrp Delay(d),s/veh	39.0	37.1	38.8	75.6	45.2	37.2	44.9	37.4	41.1	54.5	0.0	63.4
LnGrp LOS	D	D	D	E	D	D	D	D	D	D		E
Approach Vol, veh/h		2948			1171			640			305	
Approach Delay, s/veh		37.7			48.1			43.3			62.2	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	38.0	15.3	60.8	33.9	20.0	38.4	37.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	34.0	16.0	59.0	23.0	16.0	19.0	56.0
Max Q Clear Time (g_c+I1), s	3.4	11.3	11.3	47.2	16.5	12.3	11.8	25.2
Green Ext Time (p_c), s	0.3	1.2	0.1	9.6	1.0	0.3	6.7	8.5

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	775	1645	1104	615	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	791	1679	1127	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.98	0.98	0.98	0.98		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	884	4551	1295	579		
Arrive On Green	0.50	0.89	0.37	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	791	1679	1127	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	52.5	6.7	38.5	0.0		
Cycle Q Clear(g_c), s	52.5	6.7	38.5	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	884	4551	1295	579		
V/C Ratio(X)	0.89	0.37	0.87	0.00		
Avail Cap(c_a), veh/h	914	4929	1497	670		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.11	0.11	0.65	0.00		
Uniform Delay (d), s/veh	29.5	1.1	38.4	0.0		
Incr Delay (d2), s/veh	1.4	0.0	3.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	26.1	3.0	19.4	0.0		
LnGrp Delay(d),s/veh	30.9	1.1	41.9	0.0		
LnGrp LOS	C	A	D			
Approach Vol, veh/h		2470	1127			
Approach Delay, s/veh		10.6	41.9			
Approach LOS		B	D			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				120.3			68.8	51.5
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				126.0			67.0	55.0
Max Q Clear Time (g_c+I1), s				8.7			54.5	40.5
Green Ext Time (p_c), s				38.1			10.3	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	666	1	318	295
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	709	1	338	314
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1543	355			710	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1543	355			710	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			62	
cM capacity (veh/h)	65	642			885	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	472	237	338	157	157
Volume Left	0	0	338	0	0
Volume Right	0	1	0	0	0
cSH	1700	1700	885	1700	1700
Volume to Capacity	0.28	0.14	0.38	0.09	0.09
Queue Length 95th (ft)	0	0	45	0	0
Control Delay (s)	0.0	0.0	11.6	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.0		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	1436	844	0	1121	522	510	39	771	213	5	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	98	1512	0	0	1180	549	566	0	0	228	0	102
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	101	2572	801	0	2136	665	1158	0	517	292	0	130
Arrive On Green	0.06	0.51	0.00	0.00	0.42	0.42	0.33	0.00	0.00	0.08	0.00	0.08
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	98	1512	0	0	1180	549	566	0	0	228	0	102
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	7.7	29.3	0.0	0.0	24.5	43.1	17.9	0.0	0.0	8.8	0.0	8.8
Cycle Q Clear(g_c), s	7.7	29.3	0.0	0.0	24.5	43.1	17.9	0.0	0.0	8.8	0.0	8.8
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	2572	801	0	2136	665	1158	0	517	292	0	130
V/C Ratio(X)	0.97	0.59	0.00	0.00	0.55	0.83	0.49	0.00	0.00	0.78	0.00	0.78
Avail Cap(c_a), veh/h	101	3196	995	0	2761	860	1158	0	517	456	0	204
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	0.00	0.00	0.64	0.64	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.9	24.3	0.0	0.0	30.7	36.0	37.8	0.0	0.0	63.0	0.0	63.0
Incr Delay (d2), s/veh	78.4	0.2	0.0	0.0	0.1	3.4	1.5	0.0	0.0	4.5	0.0	9.9
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	6.0	13.8	0.0	0.0	11.5	19.4	9.0	0.0	0.0	4.5	0.0	7.9
LnGrp Delay(d),s/veh	144.3	24.6	0.0	0.0	30.8	39.5	39.3	0.0	0.0	67.6	0.0	72.9
LnGrp LOS	F	C			C	D	D			E		E
Approach Vol, veh/h		1610			1729			566			330	
Approach Delay, s/veh		31.8			33.6			39.3			69.2	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.7		74.8		15.5	12.0	62.8
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0		88.0		18.0	8.0	76.0
Max Q Clear Time (g_c+I1), s		19.9		31.3		10.8	9.7	45.1
Green Ext Time (p_c), s		0.5		18.3		0.7	0.0	13.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	726	157	168	582	156	206
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	968	0	224	776	208	275
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1957	609	363	3059	311	783
Arrive On Green	0.38	0.00	0.11	0.60	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	968	0	224	776	208	275
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.2	0.0	2.2	2.6	3.9	2.8
Cycle Q Clear(g_c), s	5.2	0.0	2.2	2.6	3.9	2.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1957	609	363	3059	311	783
V/C Ratio(X)	0.49	0.00	0.62	0.25	0.67	0.35
Avail Cap(c_a), veh/h	2267	706	384	3401	395	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	15.4	3.4	13.8	10.3
Incr Delay (d2), s/veh	0.2	0.0	2.7	0.0	2.9	0.3
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	0.0	1.2	1.2	2.2	1.1
LnGrp Delay(d),s/veh	8.6	0.0	18.1	3.4	16.8	10.6
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	968			1000	483	
Approach Delay, s/veh	8.6			6.7	13.2	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.3	7.8	17.8				25.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		8.0	4.0	16.0				24.0
Max Q Clear Time (g_c+I1), s		5.9	4.2	7.2				4.6
Green Ext Time (p_c), s		0.4	0.0	6.6				12.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	43	42	55	40	13	24	370	68	11	368	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	67	51	50	65	48	15	29	440	81	13	438	38
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	95	93	90	149	46	49	1326	243	24	1417	122
Arrive On Green	0.05	0.11	0.11	0.05	0.11	0.11	0.03	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	1774	865	848	1774	1362	426	1774	2989	547	1774	3297	285
Grp Volume(v), veh/h	67	0	101	65	0	63	29	259	262	13	234	242
Grp Sat Flow(s),veh/h/ln	1774	0	1713	1774	0	1788	1774	1770	1766	1774	1770	1812
Q Serve(g_s), s	1.6	0.0	2.3	1.5	0.0	1.4	0.7	4.0	4.1	0.3	3.6	3.7
Cycle Q Clear(g_c), s	1.6	0.0	2.3	1.5	0.0	1.4	0.7	4.0	4.1	0.3	3.6	3.7
Prop In Lane	1.00		0.50	1.00		0.24	1.00		0.31	1.00		0.16
Lane Grp Cap(c), veh/h	92	0	189	90	0	195	49	785	784	24	761	779
V/C Ratio(X)	0.73	0.00	0.54	0.72	0.00	0.32	0.60	0.33	0.33	0.55	0.31	0.31
Avail Cap(c_a), veh/h	254	0	654	254	0	683	169	785	784	169	761	779
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	19.6	0.0	17.6	19.6	0.0	17.2	20.1	7.6	7.6	20.5	7.8	7.9
Incr Delay (d2), s/veh	10.6	0.0	2.3	10.4	0.0	0.9	11.2	1.1	1.1	18.1	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.2	1.0	0.0	0.7	0.5	2.2	2.2	0.3	2.0	2.0
LnGrp Delay(d),s/veh	30.1	0.0	20.0	30.0	0.0	18.2	31.4	8.7	8.8	38.6	8.9	8.9
LnGrp LOS	C		B	C		B	C	A	A	D	A	A
Approach Vol, veh/h		168			128			550			489	
Approach Delay, s/veh		24.0			24.2			9.9			9.7	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	22.6	6.1	8.6	5.1	22.0	6.2	8.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	4.0	18.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	6.1	3.5	4.3	2.7	5.7	3.6	3.4
Green Ext Time (p_c), s	0.0	4.8	0.0	0.6	0.0	4.9	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	73	66	27	63	7	64	54	39	5	44	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	26	118	106	44	102	11	103	87	63	8	71	66
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	265	380	218	386	43	129	502	363	15	386	359
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.07	0.50	0.50	0.01	0.43	0.43
Sat Flow, veh/h	191	1584	1583	421	2307	255	1774	1006	728	1774	890	827
Grp Volume(v), veh/h	144	0	106	86	0	71	103	0	150	8	0	137
Grp Sat Flow(s),veh/h/ln	1775	0	1583	1332	0	1650	1774	0	1734	1774	0	1717
Q Serve(g_s), s	0.2	0.0	0.0	0.1	0.0	1.4	2.1	0.0	1.7	0.2	0.0	1.8
Cycle Q Clear(g_c), s	2.6	0.0	0.0	2.6	0.0	1.4	2.1	0.0	1.7	0.2	0.0	1.8
Prop In Lane	0.18		1.00	0.51		0.15	1.00		0.42	1.00		0.48
Lane Grp Cap(c), veh/h	412	0	380	371	0	276	129	0	865	15	0	745
V/C Ratio(X)	0.35	0.00	0.28	0.23	0.00	0.26	0.80	0.00	0.17	0.53	0.00	0.18
Avail Cap(c_a), veh/h	871	0	803	748	0	717	289	0	865	193	0	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	11.4	13.4	0.0	13.4	16.8	0.0	5.1	18.2	0.0	6.4
Incr Delay (d2), s/veh	0.5	0.0	0.4	0.3	0.0	0.5	10.5	0.0	0.4	25.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.9	0.8	0.0	0.7	1.4	0.0	0.9	0.2	0.0	0.9
LnGrp Delay(d),s/veh	14.4	0.0	11.8	13.7	0.0	13.8	27.3	0.0	5.5	43.9	0.0	7.0
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		250			157			253			145	
Approach Delay, s/veh		13.3			13.8			14.4			9.0	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	22.4		10.2	6.7	20.0		10.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	3.7		4.6	4.1	3.8		4.6
Green Ext Time (p_c), s	0.0	0.9		1.6	0.1	0.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1	260	11	1	2	236	464	12	2	452	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	349	14	1	3	303	595	15	3	579	15
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	217	369	23	2	5	1145	2103	53	6	940	24
Arrive On Green	0.00	0.00	0.12	0.02	0.02	0.02	0.44	0.79	0.79	0.00	0.27	0.27
Sat Flow, veh/h	0	1863	3167	1356	97	291	3442	3528	89	1774	3525	91
Grp Volume(v), veh/h	0	0	349	18	0	0	303	298	312	3	290	304
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1744	0	0	1721	1770	1847	1774	1770	1847
Q Serve(g_s), s	0.0	0.0	6.6	0.6	0.0	0.0	3.3	2.7	2.7	0.1	8.6	8.7
Cycle Q Clear(g_c), s	0.0	0.0	6.6	0.6	0.0	0.0	3.3	2.7	2.7	0.1	8.6	8.7
Prop In Lane	0.00		1.00	0.78		0.17	1.00		0.05	1.00		0.05
Lane Grp Cap(c), veh/h	0	217	369	30	0	0	1145	1055	1101	6	472	492
V/C Ratio(X)	0.00	0.00	0.94	0.60	0.00	0.00	0.26	0.28	0.28	0.52	0.62	0.62
Avail Cap(c_a), veh/h	0	217	369	465	0	0	1145	1055	1101	118	472	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	26.3	29.3	0.0	0.0	12.1	2.8	2.8	29.9	19.3	19.3
Incr Delay (d2), s/veh	0.0	0.0	32.8	17.5	0.0	0.0	0.1	0.6	0.6	57.7	5.9	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.5	0.4	0.0	0.0	1.6	1.4	1.5	0.1	5.0	5.2
LnGrp Delay(d),s/veh	0.0	0.0	59.1	46.7	0.0	0.0	12.2	3.4	3.4	87.5	25.2	25.0
LnGrp LOS			E	D			B	A	A	F	C	C
Approach Vol, veh/h		349			18			913			597	
Approach Delay, s/veh		59.1			46.7			6.3			25.4	
Approach LOS		E			D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	39.8		11.0	24.0	20.0		5.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	17.0		7.0	5.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	4.7		8.6	5.3	10.7		2.6
Green Ext Time (p_c), s	0.0	3.9		0.0	0.0	1.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	21	291	303	79	148	205	516	34	6	658	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	56	373	400	179	127	263	662	44	8	844	88
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	124	317	606	318	283	237	1643	109	29	1283	574
Arrive On Green	0.07	0.07	0.07	0.17	0.17	0.17	0.13	0.49	0.49	0.00	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3369	224	3442	3539	1583
Grp Volume(v), veh/h	48	56	373	400	179	127	263	347	359	8	844	88
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1823	1721	1770	1583
Q Serve(g_s), s	1.6	1.7	4.0	6.3	5.3	4.3	8.0	7.5	7.5	0.1	13.7	3.0
Cycle Q Clear(g_c), s	1.6	1.7	4.0	6.3	5.3	4.3	8.0	7.5	7.5	0.1	13.7	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	118	124	317	606	318	283	237	863	889	29	1283	574
V/C Ratio(X)	0.41	0.45	1.18	0.66	0.56	0.45	1.11	0.40	0.40	0.28	0.66	0.15
Avail Cap(c_a), veh/h	118	124	317	946	497	435	237	863	889	229	1283	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	26.9	26.9	24.0	23.3	22.8	22.0	26.0	9.8	9.8	29.7	22.9	18.1
Incr Delay (d2), s/veh	2.2	2.5	108.0	1.2	1.6	1.1	91.8	1.4	1.4	4.6	2.4	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	0.8	1.0	14.7	3.2	2.8	2.0	9.9	4.0	4.1	0.1	7.1	1.4
LnGrp Delay(d),s/veh	29.1	29.5	132.0	24.5	24.4	23.1	117.8	11.2	11.2	34.4	25.2	18.7
LnGrp LOS	C	C	F	C	C	C	F	B	B	C	C	B
Approach Vol, veh/h		477			706			969			940	
Approach Delay, s/veh		109.6			24.2			40.1			24.7	
Approach LOS		F			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.5	33.3		8.0	12.0	25.8		14.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	20.0		4.0	8.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	9.5		6.0	10.0	15.7		8.3
Green Ext Time (p_c), s	0.0	7.0		0.0	0.0	0.3		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	42.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	415	1417	14	0	313	625	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	546	1864		0	412	822	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.76	0.76		0.94	0.76	0.76	0.76
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1879	1971		0	1135	1631	0
Arrive On Green	0.55	0.55		0.00	0.32	0.32	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	546	1864		0	412	822	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	5.1	29.1		0.0	5.4	7.9	0.0
Cycle Q Clear(g_c), s	5.1	29.1		0.0	5.4	7.9	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1879	1971		0	1135	1631	0
V/C Ratio(X)	0.29	0.95		0.00	0.36	0.50	0.00
Avail Cap(c_a), veh/h	1893	1985		0	1135	1631	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.4	12.8		0.0	15.7	16.5	0.0
Incr Delay (d2), s/veh	0.1	10.2		0.0	0.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	16.7		0.0	2.8	3.8	0.0
LnGrp Delay(d),s/veh	7.4	23.0		0.0	16.6	17.6	0.0
LnGrp LOS	A	C			B	B	
Approach Vol, veh/h	2410				412	822	
Approach Delay, s/veh	19.4				16.6	17.6	
Approach LOS	B				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		23.2		36.8		23.2		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		19.0		33.0		11.0		
Max Q Clear Time (g_c+I1), s		7.4		31.1		9.9		
Green Ext Time (p_c), s		2.1		1.7		0.6		

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1018	336	56	974	230	68
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1357	448	75	1299	307	91
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1937	1181	95	3213	1296	578
Arrive On Green	0.38	0.38	0.05	0.50	0.37	0.37
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1357	448	75	1299	307	91
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	13.5	6.0	2.5	7.6	3.6	2.3
Cycle Q Clear(g_c), s	13.5	6.0	2.5	7.6	3.6	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1937	1181	95	3213	1296	578
V/C Ratio(X)	0.70	0.38	0.79	0.40	0.24	0.16
Avail Cap(c_a), veh/h	1949	1185	177	3524	1296	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	2.7	28.0	9.4	13.2	12.8
Incr Delay (d2), s/veh	1.1	0.2	13.2	0.1	0.4	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	6.5	6.4	1.6	3.4	1.8	1.1
LnGrp Delay(d),s/veh	16.8	2.9	41.2	9.4	13.7	13.4
LnGrp LOS	B	A	D	A	B	B
Approach Vol, veh/h	1805			1374	398	
Approach Delay, s/veh	13.3			11.2	13.6	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		25.9	7.2	26.9				34.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	6.0	23.0				33.0
Max Q Clear Time (g_c+I1), s		5.6	4.5	15.5				9.6
Green Ext Time (p_c), s		1.2	0.0	7.1				20.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	51	51	56	31	52	53	49	112	37	102	102	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	80	80	88	48	81	83	77	175	58	159	159	86
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	249	222	71	220	197	97	656	558	204	768	653
Arrive On Green	0.06	0.14	0.14	0.04	0.12	0.12	0.05	0.35	0.35	0.12	0.41	0.41
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	80	80	88	48	81	83	77	175	58	159	159	86
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.0	1.8	2.3	1.2	1.9	2.2	1.9	3.1	1.1	4.0	2.5	1.5
Cycle Q Clear(g_c), s	2.0	1.8	2.3	1.2	1.9	2.2	1.9	3.1	1.1	4.0	2.5	1.5
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	100	249	222	71	220	197	97	656	558	204	768	653
V/C Ratio(X)	0.80	0.32	0.40	0.68	0.37	0.42	0.79	0.27	0.10	0.78	0.21	0.13
Avail Cap(c_a), veh/h	156	623	558	156	623	558	234	656	558	312	768	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	17.6	17.8	21.5	18.3	18.4	21.2	10.5	9.9	19.5	8.6	8.3
Incr Delay (d2), s/veh	14.6	0.7	1.1	10.7	1.0	1.4	13.4	1.0	0.4	6.7	0.6	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	1.4	0.9	1.1	0.8	1.0	1.0	1.3	1.7	0.5	2.3	1.4	0.7
LnGrp Delay(d),s/veh	35.8	18.3	18.9	32.2	19.3	19.8	34.6	11.5	10.3	26.2	9.2	8.7
LnGrp LOS	D	B	B	C	B	B	C	B	B	C	A	A
Approach Vol, veh/h		248			212			310			404	
Approach Delay, s/veh		24.2			22.4			17.0			15.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	20.0	5.8	10.4	6.5	22.7	6.6	9.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	16.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	6.0	5.1	3.2	4.3	3.9	4.5	4.0	4.2
Green Ext Time (p_c), s	0.1	1.8	0.0	1.5	0.0	2.0	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	27	24	167	162	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	38	34	235	228	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	424	125	249	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	558	902	1314	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	541	902	1314	-	-	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	803	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1314	-	541	902	-	-
HCM Lane V/C Ratio	0.026	-	0.052	0.042	-	-
HCM Control Delay (s)	7.8	0.1	12	9.2	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	76	87	99	115	159	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	106	121	138	160	221	56
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	134	679	648	290	751	790
Arrive On Green	0.08	0.36	0.18	0.18	0.42	0.42
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	106	121	138	160	221	56
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.2	1.7	1.3	3.5	3.1	0.7
Cycle Q Clear(g_c), s	2.2	1.7	1.3	3.5	3.1	0.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	134	679	648	290	751	790
V/C Ratio(X)	0.79	0.18	0.21	0.55	0.29	0.07
Avail Cap(c_a), veh/h	282	1282	1499	671	751	790
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	17.2	8.2	13.1	14.0	7.2	4.9
Incr Delay (d2), s/veh	9.9	0.1	0.2	1.6	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.9	0.6	1.6	1.7	0.9
LnGrp Delay(d),s/veh	27.0	8.3	13.3	15.7	8.2	5.1
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		227	298		277	
Approach Delay, s/veh		17.0	14.6		7.5	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.8		20.0	6.9	10.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				3.7		5.1	4.2	5.5
Green Ext Time (p_c), s				2.1		0.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	678	1352	787	420	0	538
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	869	1733	1236	387		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.78	0.78	0.78	0.78		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	918	4562	1751	496		
Arrive On Green	0.52	0.90	0.63	0.63		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	869	1733	1236	387		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	27.8	3.2	8.9	10.7		
Cycle Q Clear(g_c), s	27.8	3.2	8.9	10.7		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	918	4562	1751	496		
V/C Ratio(X)	0.95	0.38	0.71	0.78		
Avail Cap(c_a), veh/h	976	4746	1770	501		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.72	0.72	0.93	0.93		
Uniform Delay (d), s/veh	13.7	0.5	9.4	9.7		
Incr Delay (d2), s/veh	13.4	0.0	1.2	7.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	16.7	1.3	4.5	5.5		
LnGrp Delay(d),s/veh	27.1	0.5	10.5	16.8		
LnGrp LOS	C	A	B	B		
Approach Vol, veh/h		2602	1623			
Approach Delay, s/veh		9.4	12.1			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				57.8			35.0	22.8
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			33.0	19.0
Max Q Clear Time (g_c+I1), s				5.2			29.8	12.7
Green Ext Time (p_c), s				42.4			1.2	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	354	1108	445	180	889	286	0	0	0	400	0	394
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	421	1319	530	214	1058	0				476	0	469
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84				0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	477	1980	616	262	1364	425				828	0	739
Arrive On Green	0.27	0.39	0.39	0.15	0.27	0.00				0.23	0.00	0.23
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	421	1319	530	214	1058	0				476	0	469
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	13.7	12.8	18.4	7.0	11.5	0.0				7.1	0.0	8.0
Cycle Q Clear(g_c), s	13.7	12.8	18.4	7.0	11.5	0.0				7.1	0.0	8.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	477	1980	616	262	1364	425				828	0	739
V/C Ratio(X)	0.88	0.67	0.86	0.82	0.78	0.00				0.57	0.00	0.63
Avail Cap(c_a), veh/h	562	2034	633	296	1364	425				828	0	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.21	0.21	0.21	0.56	0.56	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	15.1	16.8	24.8	20.3	0.0				20.4	0.0	20.7
Incr Delay (d2), s/veh	3.4	0.2	2.7	8.8	1.6	0.0				2.9	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	6.0	8.4	4.1	5.6	0.0				3.8	0.0	3.9
LnGrp Delay(d),s/veh	24.5	15.3	19.5	33.6	21.9	0.0				23.3	0.0	24.8
LnGrp LOS	C	B	B	C	C					C		C
Approach Vol, veh/h		2270			1272						945	
Approach Delay, s/veh		18.0			23.9						24.0	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			12.9	27.4		18.0	20.1	20.1
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			10.0	24.0		14.0	19.0	15.0
Max Q Clear Time (g_c+I1), s			9.0	20.4		10.0	15.7	13.5
Green Ext Time (p_c), s			0.1	2.9		1.6	0.5	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	36	0	206	130	243	0	0	207	118
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				43	0	0	155	289	0	0	246	140
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				73	0	65	425	2262	0	0	848	379
Arrive On Green				0.04	0.00	0.00	0.24	0.64	0.00	0.00	0.24	0.24
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				43	0	0	155	289	0	0	246	140
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				0.6	0.0	0.0	1.8	0.8	0.0	0.0	1.4	1.8
Cycle Q Clear(g_c), s				0.6	0.0	0.0	1.8	0.8	0.0	0.0	1.4	1.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				73	0	65	425	2262	0	0	848	379
V/C Ratio(X)				0.59	0.00	0.00	0.36	0.13	0.00	0.00	0.29	0.37
Avail Cap(c_a), veh/h				1134	0	1012	425	2262	0	0	848	379
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.8	0.0	0.0	7.9	1.8	0.0	0.0	7.8	7.9
Incr Delay (d2), s/veh				7.3	0.0	0.0	0.5	0.1	0.0	0.0	0.9	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
%ile BackOfQ(50%),veh/ln				0.4	0.0	0.0	0.9	0.4	0.0	0.0	0.8	1.1
LnGrp Delay(d),s/veh				19.0	0.0	0.0	8.5	1.9	0.0	0.0	8.6	10.7
LnGrp LOS				B			A	A			A	B
Approach Vol, veh/h					43			444			386	
Approach Delay, s/veh					19.0			4.2			9.4	
Approach LOS					B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			10.0	10.0		5.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		16.0			6.0	6.0		16.0
Max Q Clear Time (g_c+I1), s		2.8			3.8	3.8		2.6
Green Ext Time (p_c), s		1.9			0.5	0.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	7.2
HCM 2010 LOS	A

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	152	3	99	25	5	0	52	79	166	256	37	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.97			0.86	0.85		0.90			
Flt Protected	0.95		1.00			1.00	1.00		1.00			
Satd. Flow (prot)	1770		1806			1523	1504		3200			
Flt Permitted	0.95		0.56			1.00	1.00		1.00			
Satd. Flow (perm)	1770		1005			1523	1504		3200			
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.86
Adj. Flow (vph)	177	3	115	29	6	0	60	86	193	298	43	187
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	177	0	147	0	0	60	92	0	525	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	12.7		12.7			4.6	4.6		16.2			
Effective Green, g (s)	12.7		12.7			4.6	4.6		16.2			
Actuated g/C Ratio	0.19		0.19			0.07	0.07		0.25			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	342		194			106	105		789			
v/s Ratio Prot	0.10					0.04	c0.06		c0.16			
v/s Ratio Perm			c0.15									
v/c Ratio	0.52		0.76			0.57	0.88		0.67			
Uniform Delay, d1	23.8		25.0			29.6	30.3		22.3			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	1.3		15.5			6.8	50.4		4.4			
Delay (s)	25.1		40.5			36.3	80.7		26.7			
Level of Service	C		D			D	F		C			
Approach Delay (s)			32.1			63.2			26.7			
Approach LOS			C			E			C			

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	60	16
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.96
Satd. Flow (prot)	1610	3265
Flt Permitted	0.95	0.96
Satd. Flow (perm)	1610	3265
Peak-hour factor, PHF	0.86	0.86
Adj. Flow (vph)	70	19
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	194	82
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.2	16.2
Effective Green, g (s)	16.2	16.2
Actuated g/C Ratio	0.25	0.25
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	396	805
v/s Ratio Prot	c0.12	0.03
v/s Ratio Perm		
v/c Ratio	0.49	0.10
Uniform Delay, d1	21.2	19.1
Progression Factor	1.00	1.00
Incremental Delay, d2	4.3	0.3
Delay (s)	25.5	19.4
Level of Service	C	B
Approach Delay (s)		23.7
Approach LOS		C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	964	293	642	606	89	239	16	687	81	22	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	130	1205	366	802	758	111	299	20	859	101	28	104
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1049	1360	423	950	1214	454	549	392	770	165	184	157
Arrive On Green	0.30	0.27	0.27	0.28	0.24	0.24	0.16	0.21	0.21	0.05	0.10	0.10
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	130	1205	366	802	758	111	299	20	859	101	28	104
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.2	18.4	11.5	17.8	10.8	0.5	6.5	0.7	17.0	2.3	1.1	5.1
Cycle Q Clear(g_c), s	2.2	18.4	11.5	17.8	10.8	0.5	6.5	0.7	17.0	2.3	1.1	5.1
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	1049	1360	423	950	1214	454	549	392	770	165	184	157
V/C Ratio(X)	0.12	0.89	0.86	0.84	0.62	0.24	0.55	0.05	1.12	0.61	0.15	0.66
Avail Cap(c_a), veh/h	1049	1385	431	1320	2895	977	554	392	770	170	184	157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	28.4	11.8	27.6	27.5	22.1	31.3	25.5	10.1	37.7	33.3	35.1
Incr Delay (d2), s/veh	0.1	7.2	16.3	3.7	0.5	0.3	1.1	0.2	68.8	6.0	1.7	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.5	7.8	8.8	5.1	1.9	3.2	0.4	28.3	1.2	0.7	3.1
LnGrp Delay(d),s/veh	20.3	35.6	28.1	31.3	28.0	22.4	32.4	25.7	78.9	43.7	35.0	55.1
LnGrp LOS	C	D	C	C	C	C	C	C	F	D	D	E
Approach Vol, veh/h		1701			1671			1178			233	
Approach Delay, s/veh		32.8			29.2			66.2			47.8	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	21.0	26.3	25.6	16.9	12.0	28.6	23.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	31.0	22.0	13.0	8.0	7.0	46.0
Max Q Clear Time (g_c+I1), s	4.3	19.0	19.8	20.4	8.5	7.1	4.2	12.8
Green Ext Time (p_c), s	0.0	0.0	2.5	1.2	0.6	0.0	2.2	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	871	313	191	693	46	310	25	438	35	15	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	122	1049	377	230	835	55	373	30	528	42	0	94
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	1310	595	232	1159	468	407	629	534	239	0	1216
Arrive On Green	0.10	0.26	0.26	0.07	0.23	0.23	0.12	0.34	0.34	0.07	0.00	0.29
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	122	1049	377	230	835	55	373	30	528	42	0	94
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	4.0	11.4	11.6	4.0	9.0	0.0	6.4	0.6	13.6	0.7	0.0	0.3
Cycle Q Clear(g_c), s	4.0	11.4	11.6	4.0	9.0	0.0	6.4	0.6	13.6	0.7	0.0	0.3
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	172	1310	595	232	1159	468	407	629	534	239	0	1216
V/C Ratio(X)	0.71	0.80	0.63	0.99	0.72	0.12	0.92	0.05	0.99	0.18	0.00	0.08
Avail Cap(c_a), veh/h	172	1373	614	232	1373	534	407	629	534	239	0	1216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	20.6	15.2	27.6	21.1	15.2	25.8	13.2	9.4	26.1	0.0	3.7
Incr Delay (d2), s/veh	12.5	3.4	2.0	56.1	1.5	0.1	25.5	0.1	36.1	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.7	5.4	3.7	4.3	0.7	4.4	0.4	11.3	0.3	0.0	0.3
LnGrp Delay(d),s/veh	38.4	23.9	17.2	83.7	22.7	15.4	51.3	13.4	45.5	26.4	0.0	3.8
LnGrp LOS	D	C	B	F	C	B	D	B	D	C		A
Approach Vol, veh/h		1548			1120			931			136	
Approach Delay, s/veh		23.4			34.8			46.8			10.8	
Approach LOS		C			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	24.0	8.0	19.3	11.0	21.0	9.8	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	4.0	16.0	7.0	17.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	15.6	6.0	13.6	8.4	2.3	6.0	11.0
Green Ext Time (p_c), s	0.1	1.0	0.0	1.7	0.0	0.4	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	222	3	0	228	3	0	0	2	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				288	0	0	292	4	0	0	3	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				436	229	0	1024	1385	0	0	354	0
Arrive On Green				0.12	0.00	0.00	0.58	0.74	0.00	0.00	0.10	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	3725	0
Grp Volume(v), veh/h				288	0	0	292	4	0	0	3	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				4.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				4.6	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				436	229	0	1024	1385	0	0	354	0
V/C Ratio(X)				0.66	0.00	0.00	0.29	0.00	0.00	0.00	0.01	0.00
Avail Cap(c_a), veh/h				1124	590	0	1024	1385	0	0	354	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				25.1	0.0	0.0	6.4	2.0	0.0	0.0	24.3	0.0
Incr Delay (d2), s/veh				1.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				26.8	0.0	0.0	6.6	2.0	0.0	0.0	24.4	0.0
LnGrp LOS				C			A	A			C	
Approach Vol, veh/h					288			296			3	
Approach Delay, s/veh					26.8			6.5			24.4	
Approach LOS					C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		48.6			38.6	10.0		11.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		33.0			23.0	6.0		19.0
Max Q Clear Time (g_c+I1), s		2.0			7.0	2.0		6.6
Green Ext Time (p_c), s		0.9			0.8	0.0		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	3	77	0	0	0	0	195	256	3	223	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	45	4	96				0	244	320	4	279	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.80	0.80	0.80				0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	147	13	142				0	1475	660	521	2750	0
Arrive On Green	0.09	0.09	0.09				0.00	0.70	0.70	0.20	0.52	0.00
Sat Flow, veh/h	1636	145	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	49	0	96				0	244	320	4	279	0
Grp Sat Flow(s),veh/h/ln	1781	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.5	0.0	3.5				0.0	1.4	5.6	0.1	2.4	0.0
Cycle Q Clear(g_c), s	1.5	0.0	3.5				0.0	1.4	5.6	0.1	2.4	0.0
Prop In Lane	0.92		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	160	0	142				0	1475	660	521	2750	0
V/C Ratio(X)	0.31	0.00	0.68				0.00	0.17	0.49	0.01	0.10	0.00
Avail Cap(c_a), veh/h	534	0	475				0	1475	660	521	2750	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.93	0.93	0.96	0.96	0.00
Uniform Delay (d), s/veh	25.6	0.0	26.5				0.0	5.5	6.2	17.1	3.8	0.0
Incr Delay (d2), s/veh	1.1	0.0	5.5				0.0	0.2	2.4	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.8				0.0	0.7	2.8	0.1	1.2	0.0
LnGrp Delay(d),s/veh	26.6	0.0	32.0				0.0	5.8	8.5	17.1	3.9	0.0
LnGrp LOS	C		C					A	A	B	A	
Approach Vol, veh/h		145						564			283	
Approach Delay, s/veh		30.2						7.3			4.0	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.6	29.0		9.4		50.6		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	5.0	25.0		18.0		34.0		
Max Q Clear Time (g_c+I1), s	2.1	7.6		5.5		4.4		
Green Ext Time (p_c), s	0.5	2.5		0.4		1.9		

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	161	389	87	65	31	150	556	89	22	522	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	186	185	447	100	75	36	172	639	102	25	600	126
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	331	1307	186	363	162	809	1182	186	809	1356	422
Arrive On Green	0.13	0.18	0.18	0.05	0.10	0.10	0.47	0.53	0.53	0.08	0.09	0.09
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4431	699	3442	5085	1583
Grp Volume(v), veh/h	186	185	447	100	75	36	172	487	254	25	600	126
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1739	1721	1695	1583
Q Serve(g_s), s	6.1	5.4	1.2	1.7	1.2	0.7	1.8	5.6	5.8	0.4	6.7	2.9
Cycle Q Clear(g_c), s	6.1	5.4	1.2	1.7	1.2	0.7	1.8	5.6	5.8	0.4	6.7	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	229	331	1307	186	363	162	809	904	464	809	1356	422
V/C Ratio(X)	0.81	0.56	0.34	0.54	0.21	0.22	0.21	0.54	0.55	0.03	0.44	0.30
Avail Cap(c_a), veh/h	237	590	1747	287	944	422	809	904	464	809	1356	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	0.99	0.99	0.99
Uniform Delay (d), s/veh	25.4	22.5	4.4	27.6	24.7	8.6	12.6	11.6	11.6	21.4	23.1	9.1
Incr Delay (d2), s/veh	18.4	1.5	0.2	2.4	0.3	0.7	0.1	2.2	4.4	0.0	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.9	1.4	0.9	0.6	0.3	0.8	2.8	3.3	0.2	3.3	1.5
LnGrp Delay(d),s/veh	43.9	24.0	4.5	30.0	25.0	9.3	12.8	13.8	16.0	21.4	24.2	10.9
LnGrp LOS	D	C	A	C	C	A	B	B	B	C	C	B
Approach Vol, veh/h		818			211			913			751	
Approach Delay, s/veh		17.9			24.7			14.2			21.8	
Approach LOS		B			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	20.0	7.2	14.7	18.1	20.0	11.8	10.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	5.0	19.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.4	7.8	3.7	7.4	3.8	8.7	8.1	3.2
Green Ext Time (p_c), s	0.1	3.0	0.0	2.8	0.0	2.6	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	0	418	12	122	200	154	537	0	0	652	354
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	67	0	480	14	140	230	177	617	0	0	749	407
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	22	225	211	621	3729	0	0	1121	501
Arrive On Green	0.00	0.00	0.00	0.13	0.13	0.13	0.35	0.73	0.00	0.00	0.63	0.63
Sat Flow, veh/h		0		169	1686	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		154	0	230	177	617	0	0	749	407
Grp Sat Flow(s),veh/h/ln				1854	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				4.7	0.0	8.0	4.3	2.2	0.0	0.0	8.1	11.6
Cycle Q Clear(g_c), s				4.7	0.0	8.0	4.3	2.2	0.0	0.0	8.1	11.6
Prop In Lane				0.09		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				247	0	211	621	3729	0	0	1121	501
V/C Ratio(X)				0.62	0.00	1.09	0.29	0.17	0.00	0.00	0.67	0.81
Avail Cap(c_a), veh/h				247	0	211	621	3729	0	0	1121	501
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				24.6	0.0	26.0	14.1	2.4	0.0	0.0	9.0	9.7
Incr Delay (d2), s/veh				4.8	0.0	87.8	0.2	0.1	0.0	0.0	3.0	12.8
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				2.7	0.0	8.6	2.2	1.1	0.0	0.0	4.2	6.5
LnGrp Delay(d),s/veh				29.4	0.0	113.8	14.3	2.5	0.0	0.0	12.0	22.4
LnGrp LOS				C		F	B	A			B	C
Approach Vol, veh/h					384			794			1156	
Approach Delay, s/veh					80.0			5.2			15.7	
Approach LOS					E			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		48.0			25.0	23.0		12.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		36.0			13.0	19.0		8.0
Max Q Clear Time (g_c+I1), s		4.2			6.3	13.6		10.0
Green Ext Time (p_c), s		5.3			2.6	3.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	1138	528	82	950	55	443	45	126	37	25	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	235	1478	686	106	1234	71	575	58	164	48	0	320
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	1609	501	135	1501	467	688	538	481	130	0	446
Arrive On Green	0.10	0.32	0.32	0.08	0.30	0.30	0.20	0.30	0.30	0.04	0.00	0.14
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	235	1478	686	106	1234	71	575	58	164	48	0	320
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	4.0	16.8	9.7	3.5	13.5	2.0	9.6	1.4	4.8	0.8	0.0	5.8
Cycle Q Clear(g_c), s	4.0	16.8	9.7	3.5	13.5	2.0	9.6	1.4	4.8	0.8	0.0	5.8
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	336	1609	501	135	1501	467	688	538	481	130	0	446
V/C Ratio(X)	0.70	0.92	1.37	0.78	0.82	0.15	0.84	0.11	0.34	0.37	0.00	0.72
Avail Cap(c_a), veh/h	344	1610	501	148	1526	475	746	538	481	237	0	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	19.8	5.4	27.2	19.7	15.6	23.1	15.0	16.2	28.2	0.0	24.6
Incr Delay (d2), s/veh	5.8	8.6	178.1	21.8	3.7	0.1	7.7	0.4	1.9	1.7	0.0	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	9.1	29.0	2.5	6.8	0.9	5.3	0.8	2.4	0.4	0.0	3.1
LnGrp Delay(d),s/veh	32.0	28.3	183.5	49.0	23.4	15.8	30.8	15.4	18.1	30.0	0.0	34.2
LnGrp LOS	C	C	F	D	C	B	C	B	B	C		C
Approach Vol, veh/h		2399			1411			797			368	
Approach Delay, s/veh		73.1			24.9			27.1			33.7	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	22.2	8.6	23.0	16.0	12.4	9.9	21.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	5.0	19.0	13.0	7.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	6.8	5.5	18.8	11.6	7.8	6.0	15.5
Green Ext Time (p_c), s	0.0	1.9	0.0	0.2	0.4	0.0	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	49.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	697	1237	1060	602	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	871	1546	1325	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.80	0.80	0.80	0.80		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	848	4842	1522	681		
Arrive On Green	0.48	0.95	0.43	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	871	1546	1325	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	43.0	1.9	30.7	0.0		
Cycle Q Clear(g_c), s	43.0	1.9	30.7	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	848	4842	1522	681		
V/C Ratio(X)	1.03	0.32	0.87	0.00		
Avail Cap(c_a), veh/h	848	4859	1534	686		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.13	0.13	0.55	0.00		
Uniform Delay (d), s/veh	23.5	0.1	23.4	0.0		
Incr Delay (d2), s/veh	19.2	0.0	3.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	25.5	0.7	15.6	0.0		
LnGrp Delay(d),s/veh	42.7	0.2	26.7	0.0		
LnGrp LOS	F	A	C			
Approach Vol, veh/h		2417	1325			
Approach Delay, s/veh		15.5	26.7			
Approach LOS		B	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				89.7			47.0	42.7
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				86.0			43.0	39.0
Max Q Clear Time (g_c+I1), s				3.9			45.0	32.7
Green Ext Time (p_c), s				55.2			0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	665	0	297	299
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	764	0	341	344
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1619	382			764	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1619	382			764	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			60	
cM capacity (veh/h)	56	616			844	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	510	255	341	172	172
Volume Left	0	0	341	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	844	1700	1700
Volume to Capacity	0.30	0.15	0.40	0.10	0.10
Queue Length 95th (ft)	0	0	49	0	0
Control Delay (s)	0.0	0.0	12.1	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.0		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM 2010 Signalized Intersection Summary
25: Ulric St & Friars Rd

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1291	834	0	1063	501	375	31	438	211	4	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	148	1634	0	0	1346	634	503	0	0	271	0	94
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	177	3158	983	0	2446	762	559	0	249	360	0	161
Arrive On Green	0.10	0.62	0.00	0.00	0.48	0.48	0.16	0.00	0.00	0.10	0.00	0.10
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	148	1634	0	0	1346	634	503	0	0	271	0	94
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	8.2	17.9	0.0	0.0	18.7	34.7	13.9	0.0	0.0	7.4	0.0	5.7
Cycle Q Clear(g_c), s	8.2	17.9	0.0	0.0	18.7	34.7	13.9	0.0	0.0	7.4	0.0	5.7
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	3158	983	0	2446	762	559	0	249	360	0	161
V/C Ratio(X)	0.83	0.52	0.00	0.00	0.55	0.83	0.90	0.00	0.00	0.75	0.00	0.58
Avail Cap(c_a), veh/h	177	3458	1077	0	2746	855	559	0	249	568	0	253
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	0.00	0.00	0.38	0.38	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.2	10.6	0.0	0.0	18.3	22.5	41.4	0.0	0.0	43.7	0.0	42.9
Incr Delay (d2), s/veh	27.6	0.1	0.0	0.0	0.1	2.6	20.1	0.0	0.0	3.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	8.4	0.0	0.0	8.7	15.5	8.4	0.0	0.0	3.8	0.0	5.1
LnGrp Delay(d),s/veh	71.8	10.7	0.0	0.0	18.4	25.1	61.4	0.0	0.0	46.9	0.0	46.3
LnGrp LOS	E	B			B	C	E			D		D
Approach Vol, veh/h		1782			1980			503			365	
Approach Delay, s/veh		15.8			20.5			61.4			46.7	
Approach LOS		B			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		19.7		66.1		14.2	14.0	52.1
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		4.0		68.0		16.0	10.0	54.0
Max Q Clear Time (g_c+I1), s		15.9		19.9		9.4	10.2	36.7
Green Ext Time (p_c), s		0.0		20.2		0.7	0.0	11.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	726	157	168	582	156	206
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	772	0	179	619	166	219
Adj No. of Lanes	3	1	2	3	1	2
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	1894	590	340	3026	280	715
Arrive On Green	0.37	0.00	0.10	0.60	0.16	0.16
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	772	0	179	619	166	219
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	3.6	0.0	1.6	1.8	2.8	2.1
Cycle Q Clear(g_c), s	3.6	0.0	1.6	1.8	2.8	2.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1894	590	340	3026	280	715
V/C Ratio(X)	0.41	0.00	0.53	0.20	0.59	0.31
Avail Cap(c_a), veh/h	2515	783	426	3773	439	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	13.9	3.0	12.7	9.7
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.0	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.8	0.8	1.5	0.8
LnGrp Delay(d),s/veh	7.7	0.0	15.1	3.1	14.7	9.9
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	772			798	385	
Approach Delay, s/veh	7.7			5.8	12.0	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.1	7.2	16.0				23.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		8.0	4.0	16.0				24.0
Max Q Clear Time (g_c+I1), s		4.8	3.6	5.6				3.8
Green Ext Time (p_c), s		0.5	0.0	6.4				9.9

Intersection Summary	
HCM 2010 Ctrl Delay	7.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	43	42	55	40	13	24	370	68	11	368	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	48	47	61	44	14	27	411	76	12	409	36
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	91	89	86	141	45	46	1338	245	22	1431	125
Arrive On Green	0.05	0.10	0.10	0.05	0.10	0.10	0.03	0.45	0.45	0.01	0.43	0.43
Sat Flow, veh/h	1774	866	848	1774	1355	431	1774	2987	548	1774	3293	289
Grp Volume(v), veh/h	62	0	95	61	0	58	27	242	245	12	219	226
Grp Sat Flow(s),veh/h/ln	1774	0	1713	1774	0	1787	1774	1770	1766	1774	1770	1812
Q Serve(g_s), s	1.4	0.0	2.2	1.4	0.0	1.2	0.6	3.6	3.7	0.3	3.3	3.3
Cycle Q Clear(g_c), s	1.4	0.0	2.2	1.4	0.0	1.2	0.6	3.6	3.7	0.3	3.3	3.3
Prop In Lane	1.00		0.49	1.00		0.24	1.00		0.31	1.00		0.16
Lane Grp Cap(c), veh/h	87	0	180	86	0	186	46	792	791	22	769	787
V/C Ratio(X)	0.71	0.00	0.53	0.71	0.00	0.31	0.59	0.31	0.31	0.54	0.28	0.29
Avail Cap(c_a), veh/h	257	0	662	257	0	690	171	792	791	171	769	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	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	19.4	0.0	17.6	19.4	0.0	17.2	20.0	7.3	7.3	20.3	7.6	7.6
Incr Delay (d2), s/veh	10.1	0.0	2.4	10.0	0.0	0.9	11.5	1.0	1.0	19.1	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	0.9	0.0	1.1	0.9	0.0	0.7	0.4	2.0	2.0	0.3	1.8	1.8
LnGrp Delay(d),s/veh	29.5	0.0	20.0	29.5	0.0	18.1	31.5	8.3	8.4	39.5	8.5	8.5
LnGrp LOS	C		B	C		B	C	A	A	D	A	A
Approach Vol, veh/h		157			119			514			457	
Approach Delay, s/veh		23.7			23.9			9.5			9.3	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	22.6	6.0	8.3	5.1	22.0	6.0	8.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	4.0	18.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	5.7	3.4	4.2	2.6	5.3	3.4	3.2
Green Ext Time (p_c), s	0.0	4.6	0.0	0.6	0.0	4.6	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	73	66	27	63	7	64	54	39	5	44	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	78	70	29	67	7	68	57	41	5	47	44
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	196	286	213	288	32	98	526	379	10	418	391
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.06	0.52	0.52	0.01	0.47	0.47
Sat Flow, veh/h	210	1566	1583	458	2303	259	1774	1009	726	1774	886	830
Grp Volume(v), veh/h	95	0	70	58	0	45	68	0	98	5	0	91
Grp Sat Flow(s),veh/h/ln	1776	0	1583	1371	0	1649	1774	0	1735	1774	0	1716
Q Serve(g_s), s	0.2	0.0	1.3	0.0	0.0	0.8	1.3	0.0	1.0	0.1	0.0	1.0
Cycle Q Clear(g_c), s	1.6	0.0	1.3	1.7	0.0	0.8	1.3	0.0	1.0	0.1	0.0	1.0
Prop In Lane	0.18		1.00	0.50		0.16	1.00		0.42	1.00		0.48
Lane Grp Cap(c), veh/h	345	0	286	328	0	207	98	0	905	10	0	809
V/C Ratio(X)	0.28	0.00	0.24	0.18	0.00	0.22	0.69	0.00	0.11	0.52	0.00	0.11
Avail Cap(c_a), veh/h	933	0	822	831	0	765	308	0	905	206	0	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	12.1	13.6	0.0	13.6	16.0	0.0	4.2	17.1	0.0	5.1
Incr Delay (d2), s/veh	0.4	0.0	0.4	0.3	0.0	0.5	8.3	0.0	0.2	37.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.6	0.5	0.0	0.4	0.9	0.0	0.5	0.1	0.0	0.5
LnGrp Delay(d),s/veh	14.3	0.0	12.6	13.9	0.0	14.1	24.3	0.0	4.4	54.4	0.0	5.4
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		165			103			166			96	
Approach Delay, s/veh		13.6			14.0			12.6			7.9	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	22.0		8.3	5.9	20.3		8.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	3.0		3.6	3.3	3.0		3.7
Green Ext Time (p_c), s	0.0	0.9		1.0	0.0	0.8		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1	260	11	1	2	236	464	12	2	452	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	283	11	1	2	246	483	12	2	471	12
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	226	384	19	2	3	1355	1059	26	597	856	22
Arrive On Green	0.00	0.00	0.12	0.01	0.01	0.01	0.79	0.60	0.60	0.34	0.24	0.24
Sat Flow, veh/h	0	1863	3167	1375	125	250	3442	3529	88	1774	3527	90
Grp Volume(v), veh/h	0	0	283	14	0	0	246	242	253	2	236	247
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1750	0	0	1721	1770	1847	1774	1770	1847
Q Serve(g_s), s	0.0	0.0	6.0	0.6	0.0	0.0	1.2	5.3	5.3	0.1	8.2	8.2
Cycle Q Clear(g_c), s	0.0	0.0	6.0	0.6	0.0	0.0	1.2	5.3	5.3	0.1	8.2	8.2
Prop In Lane	0.00		1.00	0.79		0.14	1.00		0.05	1.00		0.05
Lane Grp Cap(c), veh/h	0	226	384	24	0	0	1355	531	554	597	430	449
V/C Ratio(X)	0.00	0.00	0.74	0.59	0.00	0.00	0.18	0.46	0.46	0.00	0.55	0.55
Avail Cap(c_a), veh/h	0	346	588	400	0	0	1355	531	554	597	430	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	29.7	34.3	0.0	0.0	4.6	10.9	10.9	15.4	23.2	23.2
Incr Delay (d2), s/veh	0.0	0.0	2.8	20.9	0.0	0.0	0.1	2.7	2.6	0.0	5.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.8	0.4	0.0	0.0	0.6	2.8	2.9	0.0	4.6	4.8
LnGrp Delay(d),s/veh	0.0	0.0	32.5	55.2	0.0	0.0	4.7	13.5	13.4	15.4	28.1	28.0
LnGrp LOS			C	E			A	B	B	B	C	C
Approach Vol, veh/h		283			14			741			485	
Approach Delay, s/veh		32.5			55.2			10.6			28.0	
Approach LOS		C			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.6	25.0		12.5	31.6	21.0		5.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	21.0		13.0	8.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	7.3		8.0	3.2	10.2		2.6
Green Ext Time (p_c), s	0.2	2.5		0.5	0.4	1.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	21	291	303	79	148	205	516	34	6	658	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	38	45	300	322	144	102	211	532	35	6	678	71
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	177	186	385	485	255	226	254	1782	117	22	1385	620
Arrive On Green	0.10	0.10	0.10	0.14	0.14	0.14	0.14	0.53	0.53	0.01	0.78	0.78
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3372	221	3442	3539	1583
Grp Volume(v), veh/h	38	45	300	322	144	102	211	279	288	6	678	71
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1824	1721	1770	1583
Q Serve(g_s), s	1.4	1.6	7.0	6.0	5.1	4.1	8.1	6.2	6.2	0.1	4.7	0.7
Cycle Q Clear(g_c), s	1.4	1.6	7.0	6.0	5.1	4.1	8.1	6.2	6.2	0.1	4.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	177	186	385	485	255	226	254	935	964	22	1385	620
V/C Ratio(X)	0.21	0.24	0.78	0.66	0.57	0.45	0.83	0.30	0.30	0.28	0.49	0.11
Avail Cap(c_a), veh/h	177	186	385	811	426	372	304	935	964	295	1385	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	29.0	29.1	24.7	28.7	28.3	27.5	29.1	9.2	9.2	34.4	5.1	4.7
Incr Delay (d2), s/veh	0.6	0.7	9.8	1.6	2.0	1.4	15.0	0.8	0.8	6.4	1.2	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	0.7	0.8	6.5	3.1	2.7	1.9	5.0	3.2	3.3	0.1	2.3	0.4
LnGrp Delay(d),s/veh	29.6	29.7	34.5	30.3	30.2	28.9	44.1	10.1	10.0	40.8	6.3	5.1
LnGrp LOS	C	C	C	C	C	C	D	B	B	D	A	A
Approach Vol, veh/h		383			568			778			755	
Approach Delay, s/veh		33.4			30.0			19.3			6.5	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	41.0		11.0	14.0	31.4		13.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	25.0		7.0	12.0	19.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	8.2		9.0	10.1	6.7		8.0
Green Ext Time (p_c), s	0.0	7.9		0.0	0.1	6.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	415	1417	14	0	313	625	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	423	1446		0	319	638	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.98	0.98		0.94	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1643	1724		0	1445	2076	0
Arrive On Green	0.48	0.48		0.00	0.41	0.41	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	423	1446		0	319	638	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	5.1	24.4		0.0	4.1	5.9	0.0
Cycle Q Clear(g_c), s	5.1	24.4		0.0	4.1	5.9	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1643	1724		0	1445	2076	0
V/C Ratio(X)	0.26	0.84		0.00	0.22	0.31	0.00
Avail Cap(c_a), veh/h	1917	2011		0	1445	2076	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.9	15.9		0.0	13.5	14.0	0.0
Incr Delay (d2), s/veh	0.1	2.9		0.0	0.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	14.6		0.0	2.1	2.9	0.0
LnGrp Delay(d),s/veh	11.0	18.9		0.0	13.8	14.4	0.0
LnGrp LOS	B	B			B	B	
Approach Vol, veh/h	1869				319	638	
Approach Delay, s/veh	17.1				13.8	14.4	
Approach LOS	B				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		32.6		37.4		32.6		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		23.0		39.0		15.0		
Max Q Clear Time (g_c+I1), s		6.1		26.4		7.9		
Green Ext Time (p_c), s		6.1		7.0		3.5		

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1018	336	56	974	230	68
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1060	350	58	1015	240	71
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1565	1212	112	2742	1624	725
Arrive On Green	0.31	0.31	0.06	0.43	0.46	0.46
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1060	350	58	1015	240	71
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	12.8	4.7	2.2	7.5	2.8	1.8
Cycle Q Clear(g_c), s	12.8	4.7	2.2	7.5	2.8	1.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1565	1212	112	2742	1624	725
V/C Ratio(X)	0.68	0.29	0.52	0.37	0.15	0.10
Avail Cap(c_a), veh/h	1961	1335	203	3570	1624	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	2.5	31.8	13.6	11.0	10.8
Incr Delay (d2), s/veh	0.7	0.1	3.7	0.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.0	1.2	3.3	1.4	0.8
LnGrp Delay(d),s/veh	21.8	2.6	35.4	13.7	11.2	11.0
LnGrp LOS	C	A	D	B	B	B
Approach Vol, veh/h	1410			1073	311	
Approach Delay, s/veh	17.1			14.9	11.2	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		36.0	8.4	25.5				34.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		23.0	8.0	27.0				39.0
Max Q Clear Time (g_c+I1), s		4.8	4.2	14.8				9.5
Green Ext Time (p_c), s		1.0	2.3	6.8				8.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	51	51	56	31	52	53	49	112	37	102	102	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	55	55	61	34	57	58	53	122	40	111	111	60
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	201	180	55	177	158	78	744	632	142	811	690
Arrive On Green	0.04	0.11	0.11	0.03	0.10	0.10	0.04	0.40	0.40	0.08	0.44	0.44
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	55	55	61	34	57	58	53	122	40	111	111	60
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.3	1.2	1.5	0.8	1.3	1.5	1.3	1.8	0.7	2.6	1.5	0.9
Cycle Q Clear(g_c), s	1.3	1.2	1.5	0.8	1.3	1.5	1.3	1.8	0.7	2.6	1.5	0.9
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	80	201	180	55	177	158	78	744	632	142	811	690
V/C Ratio(X)	0.69	0.27	0.34	0.62	0.32	0.37	0.68	0.16	0.06	0.78	0.14	0.09
Avail Cap(c_a), veh/h	167	665	595	167	665	595	250	744	632	292	811	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	17.3	17.4	20.4	17.8	17.9	20.1	8.2	7.9	19.2	7.2	7.1
Incr Delay (d2), s/veh	10.1	0.7	1.1	10.7	1.0	1.4	10.1	0.5	0.2	9.0	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.6	0.7	0.6	0.7	0.7	0.8	1.0	0.3	1.6	0.9	0.4
LnGrp Delay(d),s/veh	30.2	18.0	18.5	31.0	18.9	19.3	30.1	8.7	8.1	28.2	7.6	7.3
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		171			149			215			282	
Approach Delay, s/veh		22.1			21.8			13.9			15.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	21.0	5.3	8.8	5.9	22.5	5.9	8.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.6	3.8	2.8	3.5	3.3	3.5	3.3	3.5
Green Ext Time (p_c), s	0.1	1.3	0.0	1.0	0.0	1.4	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	27	24	167	162	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	28	25	172	167	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	311	91	182	0	-	0
Stage 1	175	-	-	-	-	-
Stage 2	136	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	657	949	1391	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	644	949	1391	-	-	-
Mov Cap-2 Maneuver	644	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	858	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1391	-	644	949	-	-
HCM Lane V/C Ratio	0.018	-	0.032	0.029	-	-
HCM Control Delay (s)	7.6	0.1	10.8	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	76	87	99	115	159	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	84	96	109	126	175	44
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	112	617	554	248	791	806
Arrive On Green	0.06	0.33	0.16	0.16	0.45	0.45
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	84	96	109	126	175	44
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.7	1.3	1.0	2.6	2.2	0.5
Cycle Q Clear(g_c), s	1.7	1.3	1.0	2.6	2.2	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	112	617	554	248	791	806
V/C Ratio(X)	0.75	0.16	0.20	0.51	0.22	0.05
Avail Cap(c_a), veh/h	297	1350	1578	706	791	806
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	16.5	8.5	13.2	13.9	6.1	4.4
Incr Delay (d2), s/veh	9.5	0.1	0.2	1.6	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.7	0.5	1.2	1.2	0.7
LnGrp Delay(d),s/veh	26.1	8.6	13.3	15.5	6.8	4.6
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		180	235		219	
Approach Delay, s/veh		16.7	14.5		6.3	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				15.9		20.0	6.3	9.6
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				3.3		4.2	3.7	4.6
Green Ext Time (p_c), s				1.6		0.5	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	678	1352	787	420	0	538
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	729	1454	1037	324		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	788	4187	1800	510		
Arrive On Green	0.44	0.82	0.64	0.64		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	729	1454	1037	324		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	27.1	4.9	7.4	8.6		
Cycle Q Clear(g_c), s	27.1	4.9	7.4	8.6		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	788	4187	1800	510		
V/C Ratio(X)	0.93	0.35	0.58	0.64		
Avail Cap(c_a), veh/h	963	4795	1916	543		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.78	0.78	0.96	0.96		
Uniform Delay (d), s/veh	18.4	1.5	9.8	10.0		
Incr Delay (d2), s/veh	10.4	0.0	0.4	2.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	15.4	2.2	3.7	3.9		
LnGrp Delay(d),s/veh	28.8	1.6	10.1	12.1		
LnGrp LOS	C	A	B	B		
Approach Vol, veh/h		2183	1361			
Approach Delay, s/veh		10.7	10.6			
Approach LOS		B	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				61.6			35.1	26.5
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				66.0			38.0	24.0
Max Q Clear Time (g_c+I1), s				6.9			29.1	10.6
Green Ext Time (p_c), s				39.6			2.0	11.9

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	354	1108	445	180	889	286	0	0	0	400	0	394
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	369	1154	464	188	926	0				417	0	410
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	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
Cap, veh/h	424	1827	569	254	1338	417				811	0	724
Arrive On Green	0.24	0.36	0.36	0.14	0.26	0.00				0.23	0.00	0.23
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	369	1154	464	188	926	0				417	0	410
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	14.0	13.2	18.6	7.1	11.5	0.0				7.2	0.0	8.0
Cycle Q Clear(g_c), s	14.0	13.2	18.6	7.1	11.5	0.0				7.2	0.0	8.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	424	1827	569	254	1338	417				811	0	724
V/C Ratio(X)	0.87	0.63	0.82	0.74	0.69	0.00				0.51	0.00	0.57
Avail Cap(c_a), veh/h	608	1961	611	380	1338	417				811	0	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.44	0.83	0.83	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	18.6	20.3	28.8	23.2	0.0				23.6	0.0	23.9
Incr Delay (d2), s/veh	4.4	0.3	3.6	3.5	1.3	0.0				2.3	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	6.1	8.7	3.7	5.5	0.0				3.8	0.0	3.8
LnGrp Delay(d),s/veh	30.0	18.8	24.0	32.3	24.5	0.0				25.9	0.0	27.1
LnGrp LOS	C	B	C	C	C					C		C
Approach Vol, veh/h		1987			1114						827	
Approach Delay, s/veh		22.1			25.8						26.5	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			14.0	29.1		20.0	20.7	22.4
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			15.0	27.0		16.0	24.0	18.0
Max Q Clear Time (g_c+I1), s			9.1	20.6		10.0	16.0	13.5
Green Ext Time (p_c), s			1.2	4.6		1.8	0.8	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	36	0	206	130	243	0	0	207	118
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				39	0	0	141	264	0	0	225	128
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				54	0	48	985	3027	0	0	860	385
Arrive On Green				0.03	0.00	0.00	1.00	1.00	0.00	0.00	0.24	0.24
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				39	0	0	141	264	0	0	225	128
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.7
Cycle Q Clear(g_c), s				1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.6	4.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				54	0	48	985	3027	0	0	860	385
V/C Ratio(X)				0.72	0.00	0.00	0.14	0.09	0.00	0.00	0.26	0.33
Avail Cap(c_a), veh/h				583	0	520	985	3027	0	0	860	385
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.84	0.84	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.6	0.0	0.0	0.0	0.0	0.0	0.0	21.4	21.8
Incr Delay (d2), s/veh				16.7	0.0	0.0	0.1	0.0	0.0	0.0	0.7	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.3
LnGrp Delay(d),s/veh				50.3	0.0	0.0	0.1	0.0	0.0	0.0	22.2	24.1
LnGrp LOS				D			A	A			C	C
Approach Vol, veh/h					39			405			353	
Approach Delay, s/veh					50.3			0.1			22.9	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.9			42.9	21.0		6.1
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		39.0			18.0	17.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	6.7		3.5
Green Ext Time (p_c), s		2.2			1.8	1.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	152	3	99	25	5	0	52	79	166	256	37	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.97			0.86	0.85		0.90			
Flt Protected	0.95		1.00			1.00	1.00		1.00			
Satd. Flow (prot)	1770		1806			1522	1504		3200			
Flt Permitted	0.95		0.55			1.00	1.00		1.00			
Satd. Flow (perm)	1770		991			1522	1504		3200			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96
Adj. Flow (vph)	158	3	103	26	5	0	54	86	173	267	39	168
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	158	0	132	0	0	54	91	0	470	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	12.6		12.6			5.9	5.9		19.5			
Effective Green, g (s)	12.6		12.6			5.9	5.9		19.5			
Actuated g/C Ratio	0.18		0.18			0.08	0.08		0.28			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	318		178			128	126		891			
v/s Ratio Prot	0.09					0.04	c0.06		c0.15			
v/s Ratio Perm			c0.13									
v/c Ratio	0.50		0.74			0.42	0.72		0.53			
Uniform Delay, d1	25.8		27.2			30.4	31.3		21.4			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	1.2		15.3			2.2	18.4		2.2			
Delay (s)	27.1		42.4			32.7	49.6		23.6			
Level of Service	C		D			C	D		C			
Approach Delay (s)			34.1			43.3			23.6			
Approach LOS			C			D			C			

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	60	16
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.96
Satd. Flow (prot)	1610	3265
Flt Permitted	0.95	0.96
Satd. Flow (perm)	1610	3265
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	62	17
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	174	73
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	368	746
v/s Ratio Prot	c0.11	0.02
v/s Ratio Perm		
v/c Ratio	0.47	0.10
Uniform Delay, d1	23.4	21.3
Progression Factor	0.55	0.51
Incremental Delay, d2	4.3	0.3
Delay (s)	17.2	11.1
Level of Service	B	B
Approach Delay (s)		15.4
Approach LOS		B

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	964	293	642	606	89	239	16	687	81	22	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	1026	312	683	645	95	254	17	731	86	23	88
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	184	1157	360	833	2115	732	499	476	788	160	293	249
Arrive On Green	0.05	0.23	0.23	0.24	0.42	0.42	0.14	0.26	0.26	0.05	0.16	0.16
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	111	1026	312	683	645	95	254	17	731	86	23	88
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.2	13.7	13.3	13.1	5.9	2.4	4.8	0.5	6.4	1.7	0.7	2.8
Cycle Q Clear(g_c), s	2.2	13.7	13.3	13.1	5.9	2.4	4.8	0.5	6.4	1.7	0.7	2.8
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	184	1157	360	833	2115	732	499	476	788	160	293	249
V/C Ratio(X)	0.60	0.89	0.87	0.82	0.30	0.13	0.51	0.04	0.93	0.54	0.08	0.35
Avail Cap(c_a), veh/h	246	1162	362	885	2115	732	499	476	788	197	293	249
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)	0.66	0.66	0.66	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	26.2	26.0	25.1	13.7	10.8	27.6	19.6	6.0	32.6	25.2	16.9
Incr Delay (d2), s/veh	2.1	5.9	13.7	4.7	0.1	0.1	0.9	0.1	18.7	2.8	0.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	7.0	7.2	6.7	2.8	1.1	2.3	0.3	11.4	0.9	0.4	1.5
LnGrp Delay(d),s/veh	34.5	32.1	39.7	29.8	13.7	10.8	28.5	19.7	24.7	35.4	25.7	20.8
LnGrp LOS	C	C	D	C	B	B	C	B	C	D	C	C
Approach Vol, veh/h		1449			1423			1002			197	
Approach Delay, s/veh		33.9			21.3			25.5			27.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	21.9	20.9	19.9	14.1	15.0	7.7	33.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	18.0	16.0	9.0	11.0	5.0	29.0
Max Q Clear Time (g_c+I1), s	3.7	8.4	15.1	15.7	6.8	4.8	4.2	7.9
Green Ext Time (p_c), s	0.0	2.7	1.8	0.3	1.0	0.1	0.0	7.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	871	313	191	693	46	310	25	438	35	15	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	113	979	352	215	779	52	348	28	492	39	0	87
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	1231	592	311	1274	445	454	762	647	108	0	1232
Arrive On Green	0.08	0.24	0.24	0.03	0.08	0.08	0.13	0.41	0.41	0.03	0.00	0.31
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	113	979	352	215	779	52	348	28	492	39	0	87
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	4.4	12.7	7.3	4.3	10.4	2.0	6.8	0.6	12.2	0.8	0.0	1.2
Cycle Q Clear(g_c), s	4.4	12.7	7.3	4.3	10.4	2.0	6.8	0.6	12.2	0.8	0.0	1.2
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	145	1231	592	311	1274	445	454	762	647	108	0	1232
V/C Ratio(X)	0.78	0.80	0.59	0.69	0.61	0.12	0.77	0.04	0.76	0.36	0.00	0.07
Avail Cap(c_a), veh/h	228	1308	616	344	1274	445	590	762	647	203	0	1232
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.5	24.9	7.0	33.0	28.8	23.1	29.3	12.4	7.6	33.3	0.0	13.4
Incr Delay (d2), s/veh	8.7	3.3	1.5	4.9	0.8	0.1	4.5	0.1	8.2	2.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.3	3.4	2.3	5.0	0.9	3.5	0.3	6.7	0.4	0.0	0.5
LnGrp Delay(d),s/veh	40.3	28.2	8.4	37.9	29.6	23.2	33.8	12.5	15.8	35.3	0.0	13.5
LnGrp LOS	D	C	A	D	C	C	C	B	B	D		B
Approach Vol, veh/h		1444			1046			868			126	
Approach Delay, s/veh		24.3			31.0			22.9			20.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	32.6	10.3	20.9	13.2	25.5	9.7	21.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	25.0	7.0	18.0	12.0	17.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	14.2	6.3	14.7	8.8	3.2	6.4	12.4
Green Ext Time (p_c), s	0.0	1.9	0.1	2.3	0.4	2.1	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	222	3	0	228	3	0	0	2	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				236	0	0	240	3	0	0	2	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				360	189	0	1087	1461	0	0	404	0
Arrive On Green				0.10	0.00	0.00	0.61	0.78	0.00	0.00	0.11	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	3725	0
Grp Volume(v), veh/h				236	0	0	240	3	0	0	2	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				4.5	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				4.5	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				360	189	0	1087	1461	0	0	404	0
V/C Ratio(X)				0.66	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h				1115	585	0	1087	1461	0	0	404	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.3	0.0	0.0	6.1	1.6	0.0	0.0	27.5	0.0
Incr Delay (d2), s/veh				2.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.3	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				32.3	0.0	0.0	6.2	1.6	0.0	0.0	27.5	0.0
LnGrp LOS				C			A	A			C	
Approach Vol, veh/h					236			243			2	
Approach Delay, s/veh					32.3			6.1			27.5	
Approach LOS					C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		58.9			46.9	12.0		11.1
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		40.0			28.0	8.0		22.0
Max Q Clear Time (g_c+I1), s		2.0			6.2	2.0		6.5
Green Ext Time (p_c), s		0.7			0.7	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	3	77	0	0	0	0	195	256	3	223	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	38	3	82				0	207	272	3	237	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	126	10	121				0	2651	1186	6	2865	0
Arrive On Green	0.08	0.08	0.08				0.00	1.00	1.00	0.01	1.00	0.00
Sat Flow, veh/h	1650	130	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	41	0	82				0	207	272	3	237	0
Grp Sat Flow(s),veh/h/ln	1780	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.5	0.0	3.5				0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	3.5				0.0	0.0	0.0	0.1	0.0	0.0
Prop In Lane	0.93		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	136	0	121				0	2651	1186	6	2865	0
V/C Ratio(X)	0.30	0.00	0.68				0.00	0.08	0.23	0.52	0.08	0.00
Avail Cap(c_a), veh/h	509	0	452				0	2651	1186	152	2865	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.96	0.96	0.98	0.98	0.00
Uniform Delay (d), s/veh	30.6	0.0	31.5				0.0	0.0	0.0	34.7	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	6.6				0.0	0.1	0.4	57.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.8				0.0	0.0	0.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	31.8	0.0	38.1				0.0	0.1	0.4	91.8	0.1	0.0
LnGrp LOS	C		D					A	A	F	A	
Approach Vol, veh/h		123						479			240	
Approach Delay, s/veh		36.0						0.3			1.2	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	4.2	56.4		9.3		60.7		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	6.0	32.0		20.0		42.0		
Max Q Clear Time (g_c+I1), s	2.1	2.0		5.5		2.0		
Green Ext Time (p_c), s	0.0	4.1		0.3		4.2		

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	161	389	87	65	31	150	556	89	22	522	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	169	168	405	91	68	32	156	579	93	23	544	115
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	298	331	782	163	202	90	238	1392	220	798	2425	755
Arrive On Green	0.17	0.18	0.18	0.05	0.06	0.06	0.14	0.63	0.63	0.46	0.95	0.95
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4428	701	3442	5085	1583
Grp Volume(v), veh/h	169	168	405	91	68	32	156	441	231	23	544	115
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1739	1721	1695	1583
Q Serve(g_s), s	6.1	5.7	7.7	1.8	1.3	1.4	3.0	4.6	4.7	0.3	0.4	0.1
Cycle Q Clear(g_c), s	6.1	5.7	7.7	1.8	1.3	1.4	3.0	4.6	4.7	0.3	0.4	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	298	331	782	163	202	90	238	1065	547	798	2425	755
V/C Ratio(X)	0.57	0.51	0.52	0.56	0.34	0.35	0.65	0.41	0.42	0.03	0.22	0.15
Avail Cap(c_a), veh/h	304	612	1260	246	809	362	344	1065	547	798	2425	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.99	0.99	0.99
Uniform Delay (d), s/veh	26.8	26.0	22.8	32.6	31.7	31.8	29.4	9.8	9.8	14.5	0.9	0.2
Incr Delay (d2), s/veh	2.4	1.2	0.5	3.0	1.0	2.3	2.9	1.2	2.3	0.0	0.2	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	3.2	3.1	3.4	0.9	0.7	0.7	1.5	2.3	2.5	0.1	0.2	0.1
LnGrp Delay(d),s/veh	29.1	27.2	23.3	35.6	32.7	34.1	32.3	10.9	12.1	14.5	1.1	0.6
LnGrp LOS	C	C	C	D	C	C	C	B	B	B	A	A
Approach Vol, veh/h		742			191			828			682	
Approach Delay, s/veh		25.5			34.3			15.3			1.4	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	26.0	7.3	16.4	8.8	37.4	15.8	8.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	5.0	23.0	7.0	19.0	12.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	6.7	3.8	9.7	5.0	2.4	8.1	3.4
Green Ext Time (p_c), s	0.7	3.9	0.0	2.7	0.1	3.9	1.3	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	0	418	12	122	200	154	537	0	0	652	354
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	62	0	445	13	130	213	164	571	0	0	694	377
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	24	241	226	208	3778	0	0	2011	900
Arrive On Green	0.00	0.00	0.00	0.14	0.14	0.14	0.12	0.74	0.00	0.00	0.38	0.38
Sat Flow, veh/h		0		169	1686	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		143	0	213	164	571	0	0	694	377
Grp Sat Flow(s),veh/h/ln				1854	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				5.0	0.0	9.3	6.3	2.3	0.0	0.0	9.8	12.3
Cycle Q Clear(g_c), s				5.0	0.0	9.3	6.3	2.3	0.0	0.0	9.8	12.3
Prop In Lane				0.09		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				265	0	226	208	3778	0	0	2011	900
V/C Ratio(X)				0.54	0.00	0.94	0.79	0.15	0.00	0.00	0.35	0.42
Avail Cap(c_a), veh/h				265	0	226	456	3778	0	0	2011	900
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.97	0.97
Uniform Delay (d), s/veh				27.9	0.0	29.7	30.0	2.6	0.0	0.0	12.4	13.2
Incr Delay (d2), s/veh				2.2	0.0	43.8	6.5	0.1	0.0	0.0	0.5	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	0.0	6.8	3.4	1.1	0.0	0.0	4.9	5.7
LnGrp Delay(d),s/veh				30.1	0.0	73.5	36.5	2.7	0.0	0.0	12.8	14.6
LnGrp LOS				C		E	D	A			B	B
Approach Vol, veh/h					356			735			1071	
Approach Delay, s/veh					56.0			10.2			13.4	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		56.0			12.2	43.8		14.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		43.0			18.0	21.0		10.0
Max Q Clear Time (g_c+I1), s		4.3			8.3	14.3		11.3
Green Ext Time (p_c), s		14.0			0.3	4.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	1138	528	82	950	55	443	45	126	37	25	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	191	1198	556	86	1000	58	466	47	133	39	0	259
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	391	1598	498	115	1350	420	908	506	452	379	0	407
Arrive On Green	0.11	0.31	0.31	0.06	0.27	0.27	0.26	0.29	0.29	0.11	0.00	0.13
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	191	1198	556	86	1000	58	466	47	133	39	0	259
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	3.6	14.8	22.0	3.3	12.6	2.0	8.1	1.4	4.6	0.7	0.0	5.4
Cycle Q Clear(g_c), s	3.6	14.8	22.0	3.3	12.6	2.0	8.1	1.4	4.6	0.7	0.0	5.4
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	391	1598	498	115	1350	420	908	506	452	379	0	407
V/C Ratio(X)	0.49	0.75	1.12	0.75	0.74	0.14	0.51	0.09	0.29	0.10	0.00	0.64
Avail Cap(c_a), veh/h	393	1598	498	203	1598	498	908	506	452	379	0	407
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)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	21.5	24.0	32.2	23.5	19.6	21.9	18.3	19.5	28.2	0.0	28.9
Incr Delay (d2), s/veh	0.9	2.0	76.2	9.3	1.6	0.1	0.5	0.4	1.6	0.1	0.0	7.4
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	1.8	7.2	20.1	1.9	6.0	0.9	3.9	0.7	2.2	0.3	0.0	2.8
LnGrp Delay(d),s/veh	30.0	23.5	100.2	41.5	25.1	19.8	22.4	18.7	21.1	28.4	0.0	36.3
LnGrp LOS	C	C	F	D	C	B	C	B	C	C		D
Approach Vol, veh/h		1945			1144			646			298	
Approach Delay, s/veh		46.1			26.0			21.9			35.3	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	24.0	8.5	26.0	22.5	13.0	12.0	22.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	8.0	22.0	15.0	9.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	2.7	6.6	5.3	24.0	10.1	7.4	5.6	14.6
Green Ext Time (p_c), s	0.3	0.8	0.2	0.0	0.9	0.2	0.2	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	697	1237	1060	602	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	711	1262	1082	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.98	0.98	0.98	0.98		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	806	4510	1295	579		
Arrive On Green	0.45	0.89	0.37	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	711	1262	1082	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	21.9	2.2	16.8	0.0		
Cycle Q Clear(g_c), s	21.9	2.2	16.8	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	806	4510	1295	579		
V/C Ratio(X)	0.88	0.28	0.84	0.00		
Avail Cap(c_a), veh/h	828	4746	1416	633		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.73	0.73	0.72	0.00		
Uniform Delay (d), s/veh	14.9	0.5	17.4	0.0		
Incr Delay (d2), s/veh	8.3	0.0	3.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	12.5	0.9	8.7	0.0		
LnGrp Delay(d),s/veh	23.2	0.5	20.5	0.0		
LnGrp LOS	C	A	C			
Approach Vol, veh/h		1973	1082			
Approach Delay, s/veh		8.7	20.5			
Approach LOS		A	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				57.2			31.3	25.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			28.0	24.0
Max Q Clear Time (g_c+I1), s				4.2			23.9	18.8
Green Ext Time (p_c), s				18.9			3.4	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	665	0	297	299
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	693	0	309	311
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1467	346			693	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1467	346			693	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			66	
cM capacity (veh/h)	78	650			898	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	462	231	309	156	156
Volume Left	0	0	309	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	898	1700	1700
Volume to Capacity	0.27	0.14	0.34	0.09	0.09
Queue Length 95th (ft)	0	0	39	0	0
Control Delay (s)	0.0	0.0	11.1	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		5.5		
Approach LOS					

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1291	834	0	1063	501	375	31	438	211	4	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	119	1317	0	0	1085	511	406	0	0	218	0	76
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	142	1966	612	0	1288	401	1272	0	567	337	0	150
Arrive On Green	0.08	0.39	0.00	0.00	0.25	0.25	0.36	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	119	1317	0	0	1085	511	406	0	0	218	0	76
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	5.0	16.1	0.0	0.0	15.2	19.0	6.2	0.0	0.0	4.4	0.0	3.4
Cycle Q Clear(g_c), s	5.0	16.1	0.0	0.0	15.2	19.0	6.2	0.0	0.0	4.4	0.0	3.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	1966	612	0	1288	401	1272	0	567	337	0	150
V/C Ratio(X)	0.84	0.67	0.00	0.00	0.84	1.27	0.32	0.00	0.00	0.65	0.00	0.51
Avail Cap(c_a), veh/h	142	1966	612	0	1288	401	1272	0	567	757	0	338
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	0.00	0.00	0.62	0.62	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	19.0	0.0	0.0	26.6	28.0	17.4	0.0	0.0	32.7	0.0	32.3
Incr Delay (d2), s/veh	33.6	0.9	0.0	0.0	3.3	135.1	0.7	0.0	0.0	2.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.6	0.0	0.0	7.4	23.3	3.2	0.0	0.0	2.3	0.0	3.1
LnGrp Delay(d),s/veh	67.6	19.9	0.0	0.0	29.9	163.1	18.1	0.0	0.0	34.8	0.0	34.9
LnGrp LOS	E	B			C	F	B			C		C
Approach Vol, veh/h		1436			1596			406			294	
Approach Delay, s/veh		23.9			72.5			18.1			34.8	
Approach LOS		C			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		30.9		33.0		11.1	10.0	23.0
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		18.0		29.0		16.0	6.0	19.0
Max Q Clear Time (g_c+I1), s		8.2		18.1		6.4	7.0	21.0
Green Ext Time (p_c), s		1.1		6.8		0.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.9
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	284	63	127	458	121	113
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	379	0	169	611	161	151
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1661	517	349	2863	296	748
Arrive On Green	0.33	0.00	0.10	0.56	0.17	0.17
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	379	0	169	611	161	151
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.6	0.0	1.4	1.8	2.5	1.2
Cycle Q Clear(g_c), s	1.6	0.0	1.4	1.8	2.5	1.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1661	517	349	2863	296	748
V/C Ratio(X)	0.23	0.00	0.48	0.21	0.54	0.20
Avail Cap(c_a), veh/h	3262	1016	1162	5665	1138	2070
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	12.6	3.2	11.3	8.4
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.0	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.7	0.8	1.3	0.5
LnGrp Delay(d),s/veh	7.3	0.0	13.6	3.3	12.9	8.5
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	379			780	312	
Approach Delay, s/veh	7.3			5.5	10.8	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.9	7.0	13.7				20.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	10.0	19.0				33.0
Max Q Clear Time (g_c+I1), s		4.5	3.4	3.6				3.8
Green Ext Time (p_c), s		0.9	0.3	6.1				7.9

Intersection Summary	
HCM 2010 Ctrl Delay	7.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	28	19	52	38	8	20	254	36	5	172	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	39	33	23	62	45	10	24	302	43	6	205	33
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	79	55	86	134	30	41	1558	220	11	1479	235
Arrive On Green	0.03	0.08	0.08	0.05	0.09	0.09	0.02	0.50	0.50	0.01	0.48	0.48
Sat Flow, veh/h	1774	1024	713	1774	1477	328	1774	3116	439	1774	3061	485
Grp Volume(v), veh/h	39	0	56	62	0	55	24	170	175	6	117	121
Grp Sat Flow(s),veh/h/ln	1774	0	1737	1774	0	1805	1774	1770	1785	1774	1770	1777
Q Serve(g_s), s	0.9	0.0	1.3	1.5	0.0	1.2	0.6	2.3	2.4	0.1	1.6	1.6
Cycle Q Clear(g_c), s	0.9	0.0	1.3	1.5	0.0	1.2	0.6	2.3	2.4	0.1	1.6	1.6
Prop In Lane	1.00		0.41	1.00		0.18	1.00		0.25	1.00		0.27
Lane Grp Cap(c), veh/h	61	0	134	86	0	164	41	885	892	11	855	859
V/C Ratio(X)	0.64	0.00	0.42	0.72	0.00	0.34	0.58	0.19	0.20	0.53	0.14	0.14
Avail Cap(c_a), veh/h	286	0	639	327	0	706	163	885	892	163	855	859
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	20.7	0.0	19.1	20.4	0.0	18.5	21.0	6.0	6.0	21.5	6.2	6.2
Incr Delay (d2), s/veh	10.4	0.0	2.1	10.7	0.0	1.2	12.5	0.5	0.5	32.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.7	1.0	0.0	0.7	0.4	1.3	1.3	0.2	0.9	0.9
LnGrp Delay(d),s/veh	31.1	0.0	21.2	31.1	0.0	19.7	33.5	6.5	6.5	54.3	6.5	6.6
LnGrp LOS	C		C	C		B	C	A	A	D	A	A
Approach Vol, veh/h		95			117			369			244	
Approach Delay, s/veh		25.3			25.8			8.3			7.7	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	25.7	6.1	7.3	5.0	25.0	5.5	8.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	21.0	8.0	16.0	4.0	21.0	7.0	17.0
Max Q Clear Time (g_c+I1), s	2.1	4.4	3.5	3.3	2.6	3.6	2.9	3.2
Green Ext Time (p_c), s	0.0	3.2	0.0	0.4	0.0	3.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	51	81	13	40	9	403	47	22	3	34	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	82	131	21	65	15	650	76	35	5	55	27
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	130	1169	69	186	45	1118	949	437	9	190	93
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.63	0.79	0.79	0.01	0.16	0.16
Sat Flow, veh/h	343	1213	1583	217	1728	417	1774	1208	556	1774	1181	580
Grp Volume(v), veh/h	117	0	131	43	0	58	650	0	111	5	0	82
Grp Sat Flow(s),veh/h/ln	1556	0	1583	741	0	1621	1774	0	1765	1774	0	1760
Q Serve(g_s), s	4.9	0.0	0.0	0.8	0.0	3.9	25.3	0.0	1.7	0.3	0.0	4.9
Cycle Q Clear(g_c), s	8.9	0.0	0.0	9.6	0.0	3.9	25.3	0.0	1.7	0.3	0.0	4.9
Prop In Lane	0.30		1.00	0.49		0.26	1.00		0.32	1.00		0.33
Lane Grp Cap(c), veh/h	207	0	1169	125	0	174	1118	0	1387	9	0	283
V/C Ratio(X)	0.57	0.00	0.11	0.34	0.00	0.33	0.58	0.00	0.08	0.55	0.00	0.29
Avail Cap(c_a), veh/h	323	0	1279	226	0	288	1169	0	1387	60	0	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	0.0	4.4	49.5	0.0	48.9	12.8	0.0	2.9	58.7	0.0	43.7
Incr Delay (d2), s/veh	2.4	0.0	0.0	1.6	0.0	1.1	0.7	0.0	0.1	43.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	1.2	1.4	0.0	1.8	12.5	0.0	0.9	0.3	0.0	2.6
LnGrp Delay(d),s/veh	53.5	0.0	4.5	51.1	0.0	50.0	13.4	0.0	3.0	101.8	0.0	46.3
LnGrp LOS	D		A	D		D	B		A	F		D
Approach Vol, veh/h		248			101			761			87	
Approach Delay, s/veh		27.6			50.5			11.9			49.5	
Approach LOS		C			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	97.0		16.7	78.6	23.0		16.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	93.0		21.0	78.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	2.3	3.7		10.9	27.3	6.9		11.6
Green Ext Time (p_c), s	0.0	3.2		1.2	3.2	0.2		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

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												
Volume (veh/h)	5	1	159	5	0	0	561	342	14	4	220	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	211	6	0	0	719	438	18	5	282	5
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	133	226	11	0	0	784	2385	98	9	1658	29
Arrive On Green	0.00	0.00	0.07	0.01	0.00	0.00	0.38	1.00	1.00	0.01	0.47	0.47
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	3465	142	1774	3558	63
Grp Volume(v), veh/h	0	0	211	6	0	0	719	223	233	5	140	147
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1838	1774	1770	1852
Q Serve(g_s), s	0.0	0.0	4.6	0.2	0.0	0.0	13.9	0.0	0.0	0.2	3.2	3.2
Cycle Q Clear(g_c), s	0.0	0.0	4.6	0.2	0.0	0.0	13.9	0.0	0.0	0.2	3.2	3.2
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.08	1.00		0.03
Lane Grp Cap(c), veh/h	0	133	226	11	0	0	784	1218	1265	9	824	863
V/C Ratio(X)	0.00	0.00	0.93	0.54	0.00	0.00	0.92	0.18	0.18	0.53	0.17	0.17
Avail Cap(c_a), veh/h	0	133	226	405	0	0	787	1218	1265	101	824	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	32.3	34.7	0.0	0.0	21.1	0.0	0.0	34.7	10.8	10.8
Incr Delay (d2), s/veh	0.0	0.0	41.6	34.7	0.0	0.0	13.8	0.3	0.3	39.7	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	0.0	0.0	3.3	0.2	0.0	0.0	8.0	0.1	0.1	0.2	1.7	1.7
LnGrp Delay(d),s/veh	0.0	0.0	73.9	69.4	0.0	0.0	34.9	0.3	0.3	74.4	11.3	11.3
LnGrp LOS			E	E			C	A	A	E	B	B
Approach Vol, veh/h		211			6			1175			292	
Approach Delay, s/veh		73.9			69.4			21.5			12.4	
Approach LOS		E			E			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	52.2		9.0	19.9	36.6		4.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	29.0		5.0	16.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	2.0		6.6	15.9	5.2		2.2
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0	3.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	34	16	138	170	94	387	150	502	100	10	339	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	32	37	177	145	209	505	192	644	128	13	435	54
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	106	501	352	369	668	460	1484	294	44	910	407
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.26	0.50	0.50	0.00	0.08	0.08
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	2945	584	3442	3539	1583
Grp Volume(v), veh/h	32	37	177	145	209	505	192	387	385	13	435	54
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1760	1721	1770	1583
Q Serve(g_s), s	1.2	1.3	0.0	5.0	7.1	10.5	6.3	9.7	9.7	0.3	8.2	2.2
Cycle Q Clear(g_c), s	1.2	1.3	0.0	5.0	7.1	10.5	6.3	9.7	9.7	0.3	8.2	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	101	106	501	352	369	668	460	892	887	44	910	407
V/C Ratio(X)	0.32	0.35	0.35	0.41	0.57	0.76	0.42	0.43	0.43	0.30	0.48	0.13
Avail Cap(c_a), veh/h	152	160	547	405	426	764	460	892	887	344	910	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	31.7	31.8	18.4	24.5	25.3	25.9	21.5	11.0	11.0	34.5	27.5	24.8
Incr Delay (d2), s/veh	1.8	2.0	0.4	0.8	1.4	3.8	0.6	1.5	1.6	3.4	1.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	2.7	2.5	3.8	4.9	3.2	5.1	5.1	0.1	4.2	1.0
LnGrp Delay(d),s/veh	33.5	33.8	18.9	25.3	26.7	29.7	22.1	12.6	12.6	37.9	29.2	25.4
LnGrp LOS	C	C	B	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h		246			859			964			502	
Approach Delay, s/veh		23.0			28.2			14.5			29.0	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	39.3		8.0	22.2	22.0		17.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	25.0		6.0	14.0	18.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	11.7		3.3	8.3	10.2		12.5
Green Ext Time (p_c), s	0.0	4.6		0.2	0.5	1.8		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	460	548	44	0	296	293	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	605	721		0	389	386	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.76	0.76		0.94	0.76	0.76	0.76
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	953	1000		0	2239	3217	0
Arrive On Green	0.28	0.28		0.00	0.63	0.63	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	605	721		0	389	386	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	13.6	16.0		0.0	4.0	2.7	0.0
Cycle Q Clear(g_c), s	13.6	16.0		0.0	4.0	2.7	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	953	1000		0	2239	3217	0
V/C Ratio(X)	0.63	0.72		0.00	0.17	0.12	0.00
Avail Cap(c_a), veh/h	2566	2692		0	2239	3217	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.1	28.9		0.0	6.7	6.5	0.0
Incr Delay (d2), s/veh	0.7	1.0		0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	10.2		0.0	2.0	1.3	0.0
LnGrp Delay(d),s/veh	28.8	29.9		0.0	6.9	6.5	0.0
LnGrp LOS	C	C			A	A	
Approach Vol, veh/h	1326				389	386	
Approach Delay, s/veh	29.4				6.9	6.5	
Approach LOS	C				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		60.0		28.5		60.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		56.0		66.0		33.0		
Max Q Clear Time (g_c+I1), s		6.0		18.0		4.7		
Green Ext Time (p_c), s		6.3		6.5		5.8		

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	445	237	18	640	153	37
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	593	316	24	853	204	49
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1016	1269	48	1818	2136	953
Arrive On Green	0.20	0.20	0.03	0.28	0.60	0.60
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	593	316	24	853	204	49
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	7.4	3.5	0.9	7.7	1.7	0.9
Cycle Q Clear(g_c), s	7.4	3.5	0.9	7.7	1.7	0.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1016	1269	48	1818	2136	953
V/C Ratio(X)	0.58	0.25	0.50	0.47	0.10	0.05
Avail Cap(c_a), veh/h	1744	1496	177	3204	2136	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	1.7	33.6	20.7	5.9	5.7
Incr Delay (d2), s/veh	0.5	0.1	8.0	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	6.1	0.6	3.4	0.8	0.4
LnGrp Delay(d),s/veh	25.9	1.8	41.6	20.9	6.0	5.8
LnGrp LOS	C	A	D	C	A	A
Approach Vol, veh/h	909			877	253	
Approach Delay, s/veh	17.5			21.5	5.9	
Approach LOS	B			C	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		46.1	5.9	18.0				23.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		27.0	7.0	24.0				35.0
Max Q Clear Time (g_c+I1), s		3.7	2.9	9.4				9.7
Green Ext Time (p_c), s		0.8	2.1	4.6				6.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	50	30	30	366	58	33	47	28	65	81	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	78	47	47	572	91	52	73	44	102	127	67
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	564	315	63	834	132	67	713	606	133	783	666
Arrive On Green	0.02	0.26	0.26	0.04	0.27	0.27	0.04	0.38	0.38	0.08	0.42	0.42
Sat Flow, veh/h	1774	2190	1226	1774	3061	486	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	22	62	63	47	330	333	52	73	44	102	127	67
Grp Sat Flow(s),veh/h/ln	1774	1770	1646	1774	1770	1777	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.8	1.7	1.9	1.7	10.7	10.8	1.9	1.6	1.1	3.6	2.7	1.6
Cycle Q Clear(g_c), s	0.8	1.7	1.9	1.7	10.7	10.8	1.9	1.6	1.1	3.6	2.7	1.6
Prop In Lane	1.00		0.74	1.00		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	455	424	63	482	484	67	713	606	133	783	666
V/C Ratio(X)	0.61	0.14	0.15	0.75	0.68	0.69	0.78	0.10	0.07	0.76	0.16	0.10
Avail Cap(c_a), veh/h	193	827	769	221	854	858	249	713	606	414	783	666
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	18.3	18.4	30.7	20.9	20.9	30.6	12.7	12.6	29.1	11.6	11.3
Incr Delay (d2), s/veh	15.8	0.1	0.2	16.2	1.7	1.7	17.4	0.3	0.2	8.7	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.9	1.1	5.5	5.5	1.2	0.9	0.5	2.1	1.5	0.8
LnGrp Delay(d),s/veh	47.0	18.5	18.6	46.9	22.6	22.7	48.0	13.0	12.8	37.9	12.0	11.6
LnGrp LOS	D	B	B	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		147			710			169			296	
Approach Delay, s/veh		22.8			24.2			23.7			20.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	28.6	6.3	20.5	6.4	31.0	5.3	21.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	21.0	8.0	30.0	9.0	27.0	7.0	31.0
Max Q Clear Time (g_c+I1), s	5.6	3.6	3.7	3.9	3.9	4.7	2.8	12.8
Green Ext Time (p_c), s	0.1	1.3	0.0	5.3	0.0	1.4	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	12	14	66	79	108	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	20	93	111	152	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	428	110	220	0	-	0
Stage 1	186	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	555	922	1346	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	514	922	1346	-	-	-
Mov Cap-2 Maneuver	514	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	3.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1346	-	514	922	-	-
HCM Lane V/C Ratio	0.069	-	0.033	0.021	-	-
HCM Control Delay (s)	7.9	0.1	12.2	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	20	38	136	98	24
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	15	28	53	189	136	33
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	27	528	612	274	932	856
Arrive On Green	0.02	0.28	0.17	0.17	0.53	0.53
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	15	28	53	189	136	33
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.4	0.5	0.5	4.7	1.7	0.4
Cycle Q Clear(g_c), s	0.4	0.5	0.5	4.7	1.7	0.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	27	528	612	274	932	856
V/C Ratio(X)	0.55	0.05	0.09	0.69	0.15	0.04
Avail Cap(c_a), veh/h	254	1334	1690	756	932	856
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	20.5	10.9	14.5	16.3	5.1	4.5
Incr Delay (d2), s/veh	16.4	0.0	0.1	3.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.3	2.3	0.9	0.6
LnGrp Delay(d),s/veh	36.9	10.9	14.6	19.4	5.4	4.6
LnGrp LOS	D	B	B	B	A	A
Approach Vol, veh/h		43	242		169	
Approach Delay, s/veh		20.0	18.3		5.3	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				15.9		26.0	4.6	11.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				30.0		22.0	6.0	20.0
Max Q Clear Time (g_c+I1), s				2.5		3.7	2.4	6.7
Green Ext Time (p_c), s				1.1		0.4	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	147	663	535	256	0	501
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	188	850	798	254		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.78	0.78	0.78	0.78		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	365	2767	1571	445		
Arrive On Green	0.21	0.54	0.09	0.09		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	188	850	798	254		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	6.6	6.4	9.5	10.8		
Cycle Q Clear(g_c), s	6.6	6.4	9.5	10.8		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	365	2767	1571	445		
V/C Ratio(X)	0.51	0.31	0.51	0.57		
Avail Cap(c_a), veh/h	659	4795	2874	814		
HCM Platoon Ratio	1.00	1.00	0.33	0.33		
Upstream Filter(I)	0.97	0.97	0.93	0.93		
Uniform Delay (d), s/veh	24.7	8.7	27.1	27.7		
Incr Delay (d2), s/veh	1.1	0.1	0.2	1.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	3.0	4.9	4.9		
LnGrp Delay(d),s/veh	25.8	8.8	27.4	28.8		
LnGrp LOS	C	A	C	C		
Approach Vol, veh/h		1038	1052			
Approach Delay, s/veh		11.9	27.7			
Approach LOS		B	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				42.1			18.4	23.7
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				66.0			26.0	36.0
Max Q Clear Time (g_c+I1), s				8.4			8.6	12.8
Green Ext Time (p_c), s				8.2			6.2	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	139	269	112	101	734	193	0	0	0	279	0	859
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	165	320	133	120	874	0				332	0	1023
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84				0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	207	697	217	349	1103	343				1419	0	1267
Arrive On Green	0.12	0.14	0.14	0.20	0.22	0.00				0.40	0.00	0.40
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	165	320	133	120	874	0				332	0	1023
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	6.3	4.1	5.5	4.1	11.4	0.0				4.3	0.0	20.0
Cycle Q Clear(g_c), s	6.3	4.1	5.5	4.1	11.4	0.0				4.3	0.0	20.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	207	697	217	349	1103	343				1419	0	1267
V/C Ratio(X)	0.80	0.46	0.61	0.34	0.79	0.00				0.23	0.00	0.81
Avail Cap(c_a), veh/h	329	1453	452	349	1235	385				1419	0	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	27.8	28.5	24.2	25.9	0.0				13.9	0.0	18.6
Incr Delay (d2), s/veh	5.5	0.4	2.2	0.6	3.2	0.0				0.4	0.0	5.6
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	3.4	1.9	2.5	2.1	5.7	0.0				2.2	0.0	9.7
LnGrp Delay(d),s/veh	35.7	28.2	30.7	24.8	29.1	0.0				14.3	0.0	24.2
LnGrp LOS	D	C	C	C	C					B		C
Approach Vol, veh/h		618			994						1355	
Approach Delay, s/veh		30.7			28.6						21.8	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			17.8	13.6		32.0	12.2	19.2
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			10.0	20.0		28.0	13.0	17.0
Max Q Clear Time (g_c+I1), s			6.1	7.5		22.0	8.3	13.4
Green Ext Time (p_c), s			2.2	2.0		3.1	0.2	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	491	0	106	37	67	0	0	196	90
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				585	0	0	44	80	0	0	233	107
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				711	0	634	224	1675	0	0	1005	450
Arrive On Green				0.40	0.00	0.00	0.13	0.47	0.00	0.00	0.28	0.28
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				585	0	0	44	80	0	0	233	107
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				18.7	0.0	0.0	1.4	0.8	0.0	0.0	3.2	3.3
Cycle Q Clear(g_c), s				18.7	0.0	0.0	1.4	0.8	0.0	0.0	3.2	3.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				711	0	634	224	1675	0	0	1005	450
V/C Ratio(X)				0.82	0.00	0.00	0.20	0.05	0.00	0.00	0.23	0.24
Avail Cap(c_a), veh/h				1735	0	1549	224	1675	0	0	1005	450
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.0	0.0	0.0	24.8	9.0	0.0	0.0	17.4	17.4
Incr Delay (d2), s/veh				2.5	0.0	0.0	0.4	0.1	0.0	0.0	0.5	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				9.6	0.0	0.0	0.7	0.4	0.0	0.0	1.6	1.6
LnGrp Delay(d),s/veh				19.5	0.0	0.0	25.2	9.1	0.0	0.0	17.9	18.7
LnGrp LOS				B			C	A			B	B
Approach Vol, veh/h					585			124			340	
Approach Delay, s/veh					19.5			14.8			18.2	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		34.0			12.0	22.0		29.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		30.0			8.0	18.0		62.0
Max Q Clear Time (g_c+I1), s		2.8			3.4	5.3		20.7
Green Ext Time (p_c), s		0.6			0.2	1.4		4.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	39	34	315	160	0	49	26	15	9	6	141	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.86			1.00	0.85		0.93				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1611			1680	1504		3274				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1611			1680	1504		3274				1610
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	45	40	366	186	0	57	28	17	10	7	164	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	45	406	0	0	192	79	0	28	0	0	0	218
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	37.3	37.3			19.5	19.5		19.3				35.5
Effective Green, g (s)	37.3	37.3			19.5	19.5		19.3				35.5
Actuated g/C Ratio	0.29	0.29			0.15	0.15		0.15				0.28
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	517	470			256	229		495				447
v/s Ratio Prot	0.03	c0.25			c0.11	0.05		c0.01				0.14
v/s Ratio Perm												
v/c Ratio	0.09	0.86			0.75	0.34		0.06				0.49
Uniform Delay, d1	32.8	42.7			51.7	48.3		46.4				38.5
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.1	15.1			11.7	0.9		0.2				3.8
Delay (s)	32.9	57.9			63.4	49.2		46.6				42.2
Level of Service	C	E			E	D		D				D
Approach Delay (s)		55.4			59.3			46.6				
Approach LOS		E			E			D				

Intersection Summary			
HCM 2000 Control Delay	49.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	127.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	492
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	1.00
Satd. Flow (prot)	3388
Flt Permitted	1.00
Satd. Flow (perm)	3388
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	572
RTOR Reduction (vph)	0
Lane Group Flow (vph)	578
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	35.5
Effective Green, g (s)	35.5
Actuated g/C Ratio	0.28
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	942
v/s Ratio Prot	c0.17
v/s Ratio Perm	
v/c Ratio	0.61
Uniform Delay, d1	40.1
Progression Factor	1.00
Incremental Delay, d2	3.0
Delay (s)	43.1
Level of Service	D
Approach Delay (s)	42.8
Approach LOS	D

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	938	77	267	303	32	55	9	197	44	21	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	34	1172	96	334	379	40	69	11	246	55	26	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	2052	639	446	2581	857	234	467	602	116	403	343
Arrive On Green	0.03	0.40	0.40	0.13	0.51	0.51	0.07	0.25	0.25	0.03	0.22	0.22
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	34	1172	96	334	379	40	69	11	246	55	26	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.9	15.7	2.5	8.2	3.5	0.2	1.7	0.4	7.2	1.4	1.0	2.9
Cycle Q Clear(g_c), s	0.9	15.7	2.5	8.2	3.5	0.2	1.7	0.4	7.2	1.4	1.0	2.9
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	88	2052	639	446	2581	857	234	467	602	116	403	343
V/C Ratio(X)	0.38	0.57	0.15	0.75	0.15	0.05	0.30	0.02	0.41	0.47	0.06	0.22
Avail Cap(c_a), veh/h	314	3884	1209	1412	5507	1768	471	467	602	353	403	343
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	42.1	20.3	8.9	36.8	11.5	4.2	38.9	24.8	10.8	41.6	27.3	20.4
Incr Delay (d2), s/veh	2.7	0.3	0.1	2.5	0.0	0.0	0.7	0.1	2.0	3.0	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.3	1.4	4.1	1.6	0.3	0.8	0.2	3.5	0.7	0.5	1.5
LnGrp Delay(d),s/veh	44.8	20.5	9.0	39.3	11.5	4.2	39.6	24.9	12.8	44.6	27.6	21.9
LnGrp LOS	D	C	A	D	B	A	D	C	B	D	C	C
Approach Vol, veh/h		1302			753			326			155	
Approach Delay, s/veh		20.3			23.5			18.9			30.9	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	26.0	15.4	39.4	10.0	23.0	6.3	48.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	22.0	36.0	67.0	12.0	19.0	8.0	95.0
Max Q Clear Time (g_c+I1), s	3.4	9.2	10.2	17.7	3.7	4.9	2.9	5.5
Green Ext Time (p_c), s	0.2	0.7	1.2	17.7	0.2	0.2	0.0	19.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

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												
Volume (veh/h)	12	946	50	79	316	24	46	5	73	21	15	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	1140	60	95	381	29	55	6	88	25	0	94
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1784	647	241	2072	679	198	678	576	75	0	1080
Arrive On Green	0.01	0.35	0.35	0.07	0.41	0.41	0.06	0.36	0.36	0.02	0.00	0.33
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	14	1140	60	95	381	29	55	6	88	25	0	94
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	0.6	15.5	0.0	2.2	4.0	0.1	1.3	0.2	3.1	0.6	0.0	1.1
Cycle Q Clear(g_c), s	0.6	15.5	0.0	2.2	4.0	0.1	1.3	0.2	3.1	0.6	0.0	1.1
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	24	1784	647	241	2072	679	198	678	576	75	0	1080
V/C Ratio(X)	0.59	0.64	0.09	0.39	0.18	0.04	0.28	0.01	0.15	0.33	0.00	0.09
Avail Cap(c_a), veh/h	258	4319	1436	668	4566	1455	459	678	576	344	0	1080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.4	22.4	15.0	36.7	15.6	7.3	37.2	16.7	17.7	39.8	0.0	9.3
Incr Delay (d2), s/veh	21.5	0.4	0.1	1.1	0.0	0.0	0.8	0.0	0.6	2.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	7.2	0.8	1.1	1.8	0.3	0.6	0.1	1.4	0.3	0.0	0.6
LnGrp Delay(d),s/veh	61.9	22.8	15.1	37.7	15.7	7.3	38.0	16.7	18.2	42.3	0.0	9.5
LnGrp LOS	E	C	B	D	B	A	D	B	B	D		A
Approach Vol, veh/h		1214			505			149			119	
Approach Delay, s/veh		22.8			19.3			25.4			16.4	
Approach LOS		C			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	34.0	9.8	32.9	8.7	31.0	5.1	37.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	30.0	16.0	70.0	11.0	27.0	12.0	74.0
Max Q Clear Time (g_c+I1), s	2.6	5.1	4.2	17.5	3.3	3.1	2.6	6.0
Green Ext Time (p_c), s	0.1	0.3	2.3	11.5	0.1	0.3	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

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												
Volume (veh/h)	0	0	0	71	2	0	99	0	0	0	0	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				93	0	0	127	0	0	0	0	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				243	128	0	1239	1301	0	0	10	0
Arrive On Green				0.07	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	-72647	0
Grp Volume(v), veh/h				93	0	0	127	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				243	128	0	1239	1301	0	0	10	0
V/C Ratio(X)				0.38	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h				1859	976	0	1239	1301	0	0	515	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh				15.3	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				16.3	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
LnGrp LOS				B			A					
Approach Vol, veh/h					93			127			0	
Approach Delay, s/veh					16.3			1.7			0.0	
Approach LOS					B			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		28.0			28.0	0.0		6.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		24.0			15.0	5.0		18.0
Max Q Clear Time (g_c+I1), s		0.0			2.8	0.0		2.9
Green Ext Time (p_c), s		0.0			0.2	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	20	0	0	0	0	74	392	0	69	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	31	0	25				0	92	490	0	86	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.80	0.80	0.80				0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	52	0	46				0	3006	1345	54	3221	0
Arrive On Green	0.03	0.00	0.03				0.00	0.85	0.85	0.00	0.91	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	31	0	25				0	92	490	0	86	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	2.3	0.0	2.1				0.0	0.5	8.9	0.0	0.3	0.0
Cycle Q Clear(g_c), s	2.3	0.0	2.1				0.0	0.5	8.9	0.0	0.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	52	0	46				0	3006	1345	54	3221	0
V/C Ratio(X)	0.60	0.00	0.54				0.00	0.03	0.36	0.00	0.03	0.00
Avail Cap(c_a), veh/h	296	0	264				0	3006	1345	54	3221	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	63.2	0.0	63.1				0.0	1.5	2.2	0.0	0.5	0.0
Incr Delay (d2), s/veh	10.5	0.0	9.5				0.0	0.0	0.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.0				0.0	0.3	4.1	0.0	0.2	0.0
LnGrp Delay(d),s/veh	73.8	0.0	72.6				0.0	1.6	2.9	0.0	0.6	0.0
LnGrp LOS	E		E					A	A		A	
Approach Vol, veh/h		56						582			86	
Approach Delay, s/veh		73.2						2.7			0.6	
Approach LOS		E						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	8.0	116.0		7.9		124.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	4.0	112.0		22.0		120.0		
Max Q Clear Time (g_c+I1), s	0.0	10.9		4.3		2.3		
Green Ext Time (p_c), s	0.0	2.6		0.1		0.6		

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	21	61	16	37	8	64	532	30	2	188	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	16	24	70	18	43	9	74	611	34	2	216	33
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	27	102	1213	58	199	89	1130	3441	190	8	1889	588
Arrive On Green	0.02	0.05	0.05	0.02	0.06	0.06	0.66	1.00	1.00	0.00	0.37	0.37
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4932	273	3442	5085	1583
Grp Volume(v), veh/h	16	24	70	18	43	9	74	419	226	2	216	33
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1815	1721	1695	1583
Q Serve(g_s), s	0.6	0.9	0.1	0.4	0.8	0.4	0.5	0.0	0.0	0.0	2.0	0.7
Cycle Q Clear(g_c), s	0.6	0.9	0.1	0.4	0.8	0.4	0.5	0.0	0.0	0.0	2.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	27	102	1213	58	199	89	1130	2365	1266	8	1889	588
V/C Ratio(X)	0.59	0.24	0.06	0.31	0.22	0.10	0.07	0.18	0.18	0.27	0.11	0.06
Avail Cap(c_a), veh/h	152	426	1764	295	809	362	1130	2365	1266	295	1889	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	31.7	6.8	34.0	31.6	31.3	8.2	0.0	0.0	34.9	14.4	8.9
Incr Delay (d2), s/veh	18.8	1.2	0.0	3.0	0.5	0.5	0.0	0.2	0.3	17.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.5	0.3	0.2	0.4	0.2	0.3	0.1	0.1	0.0	0.9	0.3
LnGrp Delay(d),s/veh	53.0	32.9	6.8	37.0	32.1	31.8	8.2	0.2	0.3	52.7	14.6	9.1
LnGrp LOS	D	C	A	D	C	C	A	A	A	D	B	A
Approach Vol, veh/h		110			70			719			251	
Approach Delay, s/veh		19.2			33.3			1.0			14.1	
Approach LOS		B			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	52.8	5.2	7.8	27.0	30.0	5.1	7.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	6.0	16.0	6.0	26.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.0	2.0	2.4	2.9	2.5	4.0	2.6	2.8
Green Ext Time (p_c), s	0.0	4.6	0.0	0.5	0.1	1.4	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	7.6
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	0	57	6	51	93	62	525	0	0	157	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	10	0	66	7	59	107	71	603	0	0	180	123
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	19	157	150	668	4022	0	0	1264	565
Arrive On Green	0.00	0.00	0.00	0.09	0.09	0.09	0.38	0.79	0.00	0.00	0.71	0.71
Sat Flow, veh/h		0		197	1656	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		66	0	107	71	603	0	0	180	123
Grp Sat Flow(s),veh/h/ln				1853	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				2.3	0.0	4.6	1.8	2.0	0.0	0.0	1.1	1.8
Cycle Q Clear(g_c), s				2.3	0.0	4.6	1.8	2.0	0.0	0.0	1.1	1.8
Prop In Lane				0.11		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				176	0	150	668	4022	0	0	1264	565
V/C Ratio(X)				0.38	0.00	0.71	0.11	0.15	0.00	0.00	0.14	0.22
Avail Cap(c_a), veh/h				318	0	271	668	4022	0	0	1264	565
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.7	0.0	30.8	14.2	1.7	0.0	0.0	6.6	6.7
Incr Delay (d2), s/veh				1.3	0.0	6.2	0.1	0.1	0.0	0.0	0.2	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
%ile BackOfQ(50%),veh/ln				1.3	0.0	2.2	0.9	0.9	0.0	0.0	0.6	0.9
LnGrp Delay(d),s/veh				31.1	0.0	36.9	14.2	1.8	0.0	0.0	6.8	7.6
LnGrp LOS				C		D	B	A			A	A
Approach Vol, veh/h					173			674			303	
Approach Delay, s/veh					34.7			3.1			7.1	
Approach LOS					C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		59.4			30.4	29.0		10.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		40.0			11.0	25.0		12.0
Max Q Clear Time (g_c+I1), s		4.0			3.8	3.8		6.6
Green Ext Time (p_c), s		4.9			2.5	1.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	612	292	32	401	30	95	15	12	5	22	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	795	379	42	521	39	123	19	16	6	78	62
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	1	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	1361	424	64	1124	350	201	894	665	22	763	648
Arrive On Green	0.08	0.27	0.27	0.04	0.22	0.22	0.06	0.46	0.46	0.01	0.41	0.41
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1936	1442	3548	1863	1583
Grp Volume(v), veh/h	188	795	379	42	521	39	123	17	18	6	78	62
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1608	1774	1863	1583
Q Serve(g_s), s	3.7	9.5	12.3	1.6	6.2	1.4	2.4	0.4	0.4	0.1	1.8	1.7
Cycle Q Clear(g_c), s	3.7	9.5	12.3	1.6	6.2	1.4	2.4	0.4	0.4	0.1	1.8	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		1.00
Lane Grp Cap(c), veh/h	284	1361	424	64	1124	350	201	817	742	22	763	648
V/C Ratio(X)	0.66	0.58	0.89	0.66	0.46	0.11	0.61	0.02	0.02	0.27	0.10	0.10
Avail Cap(c_a), veh/h	492	1671	520	152	1380	430	295	817	742	203	763	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	22.3	14.4	33.3	23.7	21.8	32.2	10.2	10.3	34.6	12.7	12.7
Incr Delay (d2), s/veh	2.6	0.4	15.5	10.9	0.3	0.1	3.0	0.0	0.1	6.3	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.5	7.2	1.0	2.9	0.6	1.2	0.2	0.2	0.1	1.0	0.8
LnGrp Delay(d),s/veh	33.8	22.7	29.9	44.2	24.0	21.9	35.2	10.3	10.3	40.9	13.0	13.0
LnGrp LOS	C	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		1362			602			158			146	
Approach Delay, s/veh		26.2			25.2			29.7			14.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	36.3	6.5	22.7	8.1	32.7	9.8	19.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	21.0	6.0	23.0	6.0	19.0	10.0	19.0
Max Q Clear Time (g_c+I1), s	2.1	2.4	3.6	14.3	4.4	3.8	5.7	8.2
Green Ext Time (p_c), s	0.0	0.7	0.9	4.4	0.0	0.6	0.2	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	123	579	437	150	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	154	724	546	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.80	0.80	0.80	0.80		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	316	2702	896	401		
Arrive On Green	0.18	0.53	0.25	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	154	724	546	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	3.1	3.1	5.5	0.0		
Cycle Q Clear(g_c), s	3.1	3.1	5.5	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	316	2702	896	401		
V/C Ratio(X)	0.49	0.27	0.61	0.00		
Avail Cap(c_a), veh/h	621	4577	1593	712		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.93	0.93	0.91	0.00		
Uniform Delay (d), s/veh	14.8	5.1	13.2	0.0		
Incr Delay (d2), s/veh	1.1	0.0	0.6	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	1.4	2.7	0.0		
LnGrp Delay(d),s/veh	15.9	5.2	13.8	0.0		
LnGrp LOS	B	A	B			
Approach Vol, veh/h		878	546			
Approach Delay, s/veh		7.0	13.8			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				25.3			11.1	14.1
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				36.0			14.0	18.0
Max Q Clear Time (g_c+I1), s				5.1			5.1	7.5
Green Ext Time (p_c), s				6.2			3.6	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	263	0	222	189
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	302	0	255	217
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	921	151			302	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	921	151			302	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			80	
cM capacity (veh/h)	215	868			1256	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	202	101	255	109	109
Volume Left	0	0	255	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1256	1700	1700
Volume to Capacity	0.12	0.06	0.20	0.06	0.06
Queue Length 95th (ft)	0	0	19	0	0
Control Delay (s)	0.0	0.0	8.6	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.6		
Approach LOS					

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	247	168	0	331	216	150	15	325	129	0	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	44	313	0	0	419	273	204	0	0	163	0	75
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	68	1696	528	0	1000	311	959	0	428	359	0	160
Arrive On Green	0.04	0.33	0.00	0.00	0.20	0.20	0.27	0.00	0.00	0.10	0.00	0.10
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	44	313	0	0	419	273	204	0	0	163	0	75
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	1.0	1.8	0.0	0.0	2.9	6.8	1.8	0.0	0.0	1.8	0.0	1.8
Cycle Q Clear(g_c), s	1.0	1.8	0.0	0.0	2.9	6.8	1.8	0.0	0.0	1.8	0.0	1.8
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	1696	528	0	1000	311	959	0	428	359	0	160
V/C Ratio(X)	0.64	0.18	0.00	0.00	0.42	0.88	0.21	0.00	0.00	0.45	0.00	0.47
Avail Cap(c_a), veh/h	174	2000	623	0	1000	311	959	0	428	1395	0	623
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	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	9.6	0.0	0.0	14.3	15.9	11.5	0.0	0.0	17.2	0.0	17.2
Incr Delay (d2), s/veh	9.7	0.1	0.0	0.0	0.3	23.4	0.5	0.0	0.0	0.9	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.8	0.0	0.0	1.4	5.0	0.9	0.0	0.0	0.9	0.0	1.7
LnGrp Delay(d),s/veh	29.0	9.7	0.0	0.0	14.6	39.2	12.0	0.0	0.0	18.1	0.0	19.4
LnGrp LOS	C	A			B	D	B			B		B
Approach Vol, veh/h		357			692			204			238	
Approach Delay, s/veh		12.1			24.3			12.0			18.5	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		15.0		17.6		8.1	5.6	12.0
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		11.0		16.0		16.0	4.0	8.0
Max Q Clear Time (g_c+I1), s		3.8		3.8		3.8	3.0	8.8
Green Ext Time (p_c), s		0.4		1.7		0.6	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	901	422	168	587	161	206
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	959	0	179	624	171	219
Adj No. of Lanes	3	1	2	3	1	2
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	2206	687	316	3198	292	715
Arrive On Green	0.43	0.00	0.09	0.63	0.16	0.16
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	959	0	179	624	171	219
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.1	0.0	1.9	2.0	3.5	2.5
Cycle Q Clear(g_c), s	5.1	0.0	1.9	2.0	3.5	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2206	687	316	3198	292	715
V/C Ratio(X)	0.43	0.00	0.57	0.20	0.58	0.31
Avail Cap(c_a), veh/h	3018	940	799	4723	732	1406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.7	0.0	16.9	3.0	15.0	11.6
Incr Delay (d2), s/veh	0.1	0.0	1.6	0.0	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.0	0.9	1.8	1.0
LnGrp Delay(d),s/veh	7.8	0.0	18.5	3.1	16.8	11.9
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	959			803	390	
Approach Delay, s/veh	7.8			6.5	14.0	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.4	7.6	20.8				28.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	9.0	23.0				36.0
Max Q Clear Time (g_c+I1), s		5.5	3.9	7.1				4.0
Green Ext Time (p_c), s		1.0	0.2	9.7				14.5

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	43	572	55	40	13	24	375	68	11	633	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	62	48	636	61	44	14	27	417	76	12	703	36
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	46	609	76	553	176	43	820	148	21	897	46
Arrive On Green	0.04	0.41	0.41	0.04	0.41	0.41	0.02	0.27	0.27	0.01	0.26	0.26
Sat Flow, veh/h	1774	112	1488	1774	1355	431	1774	2995	542	1774	3426	175
Grp Volume(v), veh/h	62	0	684	61	0	58	27	245	248	12	363	376
Grp Sat Flow(s),veh/h/ln	1774	0	1600	1774	0	1787	1774	1770	1767	1774	1770	1832
Q Serve(g_s), s	2.1	0.0	25.0	2.1	0.0	1.2	0.9	7.1	7.2	0.4	11.6	11.7
Cycle Q Clear(g_c), s	2.1	0.0	25.0	2.1	0.0	1.2	0.9	7.1	7.2	0.4	11.6	11.7
Prop In Lane	1.00		0.93	1.00		0.24	1.00		0.31	1.00		0.10
Lane Grp Cap(c), veh/h	78	0	655	76	0	729	43	485	484	21	463	480
V/C Ratio(X)	0.79	0.00	1.04	0.80	0.00	0.08	0.63	0.51	0.51	0.56	0.78	0.78
Avail Cap(c_a), veh/h	174	0	655	116	0	729	116	485	484	116	463	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	28.9	0.0	18.1	29.0	0.0	11.1	29.5	18.7	18.7	30.0	20.9	20.9
Incr Delay (d2), s/veh	16.3	0.0	47.4	19.6	0.0	0.0	14.4	3.7	3.8	21.0	12.4	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	19.5	1.4	0.0	0.6	0.6	4.0	4.0	0.3	7.2	7.5
LnGrp Delay(d),s/veh	45.3	0.0	65.5	48.6	0.0	11.1	44.0	22.4	22.6	51.0	33.4	33.1
LnGrp LOS	D		F	D		B	D	C	C	D	C	C
Approach Vol, veh/h		746			119			520			751	
Approach Delay, s/veh		63.8			30.3			23.6			33.5	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	20.7	6.6	29.0	5.5	20.0	6.7	28.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	25.0	4.0	16.0	6.0	23.0
Max Q Clear Time (g_c+I1), s	2.4	9.2	4.1	27.0	2.9	13.7	4.1	3.2
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	1.6	0.0	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.5
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
3: Fairmont Ave & Twain Ave

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	603	1121	27	63	7	94	54	39	5	44	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	641	1193	29	67	7	100	57	41	5	47	44
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	693	1073	89	570	60	532	448	323	79	167	157
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.30	0.44	0.44	0.04	0.19	0.19
Sat Flow, veh/h	21	1833	1583	24	1510	158	1774	1009	726	1774	886	830
Grp Volume(v), veh/h	658	0	1193	29	0	74	100	0	98	5	0	91
Grp Sat Flow(s),veh/h/ln	1854	0	1583	24	0	1667	1774	0	1735	1774	0	1716
Q Serve(g_s), s	11.7	0.0	34.0	3.2	0.0	2.6	3.8	0.0	3.0	0.2	0.0	4.1
Cycle Q Clear(g_c), s	30.8	0.0	34.0	34.0	0.0	2.6	3.8	0.0	3.0	0.2	0.0	4.1
Prop In Lane	0.03		1.00	1.00		0.09	1.00		0.42	1.00		0.48
Lane Grp Cap(c), veh/h	741	0	1073	89	0	630	532	0	771	79	0	324
V/C Ratio(X)	0.89	0.00	1.11	0.33	0.00	0.12	0.19	0.00	0.13	0.06	0.00	0.28
Avail Cap(c_a), veh/h	741	0	1073	89	0	630	532	0	771	79	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	14.5	44.5	0.0	18.2	23.4	0.0	14.7	41.2	0.0	31.3
Incr Delay (d2), s/veh	12.6	0.0	63.5	2.1	0.0	0.1	0.2	0.0	0.3	0.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	0.0	33.0	0.8	0.0	1.2	1.9	0.0	1.5	0.1	0.0	2.1
LnGrp Delay(d),s/veh	39.6	0.0	78.0	46.6	0.0	18.3	23.5	0.0	15.1	41.5	0.0	33.4
LnGrp LOS	D		F	D		B	C		B	D		C
Approach Vol, veh/h		1851			103			198			96	
Approach Delay, s/veh		64.3			26.3			19.3			33.8	
Approach LOS		E			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	44.0		38.0	31.0	21.0		38.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	40.0		34.0	27.0	17.0		34.0
Max Q Clear Time (g_c+I1), s	2.2	5.0		36.0	5.8	6.1		36.0
Green Ext Time (p_c), s	0.0	0.6		0.0	0.2	0.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.3
HCM 2010 LOS	E

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												
Volume (veh/h)	11	1	1315	11	1	2	266	469	12	2	1247	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	1382	11	1	2	277	489	12	2	1299	12
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	733	1246	16	1	3	556	1295	32	216	1174	11
Arrive On Green	0.00	0.00	0.39	0.01	0.01	0.01	0.05	0.12	0.12	0.12	0.33	0.33
Sat Flow, veh/h	0	1863	3167	1375	125	250	3442	3531	87	1774	3593	33
Grp Volume(v), veh/h	0	0	1382	14	0	0	277	245	256	2	640	671
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1750	0	0	1721	1770	1847	1774	1770	1857
Q Serve(g_s), s	0.0	0.0	59.0	1.2	0.0	0.0	11.7	19.1	19.2	0.1	49.0	49.0
Cycle Q Clear(g_c), s	0.0	0.0	59.0	1.2	0.0	0.0	11.7	19.1	19.2	0.1	49.0	49.0
Prop In Lane	0.00		1.00	0.79		0.14	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	0	733	1246	21	0	0	556	649	677	216	578	607
V/C Ratio(X)	0.00	0.00	1.11	0.68	0.00	0.00	0.50	0.38	0.38	0.01	1.11	1.11
Avail Cap(c_a), veh/h	0	733	1246	187	0	0	556	649	677	216	578	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	45.5	73.8	0.0	0.0	65.1	50.2	50.2	57.9	50.5	50.5
Incr Delay (d2), s/veh	0.0	0.0	61.1	32.5	0.0	0.0	0.7	1.6	1.6	0.0	70.0	69.4
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	0.0	0.0	36.3	0.8	0.0	0.0	5.7	9.7	10.1	0.1	35.2	36.8
LnGrp Delay(d),s/veh	0.0	0.0	106.6	106.4	0.0	0.0	65.8	51.8	51.7	58.0	120.5	119.9
LnGrp LOS			F	F			E	D	D	E	F	F
Approach Vol, veh/h		1382			14			778			1313	
Approach Delay, s/veh		106.6			106.4			56.7			120.1	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.2	59.0		63.0	28.2	53.0		5.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	55.0		59.0	10.0	49.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	21.2		61.0	13.7	51.0		3.2
Green Ext Time (p_c), s	0.2	3.3		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	100.6
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	21	556	303	79	173	210	531	34	6	2508	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	38	45	573	325	152	119	216	547	35	6	2586	71
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	284	298	391	371	195	175	154	2104	134	20	1919	858
Arrive On Green	0.16	0.16	0.16	0.10	0.10	0.10	0.09	0.62	0.62	0.00	0.18	0.18
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3378	216	3442	3539	1583
Grp Volume(v), veh/h	38	45	573	325	152	119	216	286	296	6	2586	71
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1825	1721	1770	1583
Q Serve(g_s), s	2.8	3.1	24.0	13.5	11.9	10.8	13.0	10.9	11.0	0.3	81.3	5.6
Cycle Q Clear(g_c), s	2.8	3.1	24.0	13.5	11.9	10.8	13.0	10.9	11.0	0.3	81.3	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	284	298	391	371	195	175	154	1102	1137	20	1919	858
V/C Ratio(X)	0.13	0.15	1.47	0.88	0.78	0.68	1.40	0.26	0.26	0.30	1.35	0.08
Avail Cap(c_a), veh/h	284	298	391	378	199	178	154	1102	1137	184	1919	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.17	0.17	0.17
Uniform Delay (d), s/veh	54.1	54.2	56.5	66.2	65.5	64.2	68.5	12.7	12.7	74.5	61.6	30.5
Incr Delay (d2), s/veh	0.2	0.2	223.8	19.7	17.6	9.8	216.4	0.6	0.6	1.4	157.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.6	40.4	7.7	7.1	5.2	15.6	5.5	5.7	0.1	81.8	2.5
LnGrp Delay(d),s/veh	54.3	54.5	280.3	85.9	83.1	74.0	284.9	13.3	13.3	75.9	218.7	30.5
LnGrp LOS	D	D	F	F	F	E	F	B	B	E	F	C
Approach Vol, veh/h		656			596			798			2663	
Approach Delay, s/veh		251.7			82.8			86.8			213.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	97.4		28.0	17.0	85.3		19.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	8.0	86.0		24.0	13.0	81.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	13.0		26.0	15.0	83.3		15.5
Green Ext Time (p_c), s	0.0	63.5		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	180.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	430	1417	14	0	318	800	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	439	1446		0	324	816	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.98	0.98		0.94	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1559	1636		0	1747	2510	0
Arrive On Green	0.45	0.45		0.00	0.49	0.49	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	439	1446		0	324	816	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	12.0	54.8		0.0	7.7	14.5	0.0
Cycle Q Clear(g_c), s	12.0	54.8		0.0	7.7	14.5	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1559	1636		0	1747	2510	0
V/C Ratio(X)	0.28	0.88		0.00	0.19	0.33	0.00
Avail Cap(c_a), veh/h	2088	2190		0	1747	2510	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.7	37.4		0.0	21.2	22.9	0.0
Incr Delay (d2), s/veh	0.1	3.7		0.0	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	31.5		0.0	3.8	6.9	0.0
LnGrp Delay(d),s/veh	25.8	41.1		0.0	21.4	23.3	0.0
LnGrp LOS	C	D			C	C	
Approach Vol, veh/h	1885				324	816	
Approach Delay, s/veh	37.5				21.4	23.3	
Approach LOS	D				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		78.0		72.0		78.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		51.0		91.0		40.0		
Max Q Clear Time (g_c+I1), s		9.7		56.8		16.5		
Green Ext Time (p_c), s		2.3		11.1		6.1		

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1458	341	56	984	495	68
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1519	355	58	1025	516	71
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2052	1249	91	3255	1367	610
Arrive On Green	0.40	0.40	0.05	0.51	0.39	0.39
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1519	355	58	1025	516	71
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	19.1	4.6	2.4	7.0	7.8	2.2
Cycle Q Clear(g_c), s	19.1	4.6	2.4	7.0	7.8	2.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2052	1249	91	3255	1367	610
V/C Ratio(X)	0.74	0.28	0.64	0.31	0.38	0.12
Avail Cap(c_a), veh/h	2305	1328	142	3759	1367	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	2.2	34.9	10.8	16.6	14.8
Incr Delay (d2), s/veh	1.1	0.1	7.3	0.1	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	5.7	1.4	3.1	3.9	1.0
LnGrp Delay(d),s/veh	20.1	2.3	42.2	10.9	17.4	15.2
LnGrp LOS	C	A	D	B	B	B
Approach Vol, veh/h	1874			1083	587	
Approach Delay, s/veh	16.7			12.5	17.1	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		32.9	7.8	34.3				42.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		23.0	6.0	34.0				44.0
Max Q Clear Time (g_c+I1), s		9.8	4.4	21.1				9.0
Green Ext Time (p_c), s		1.8	1.1	9.2				9.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	141	1636	56	31	82	53	49	287	37	102	107	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	153	1778	61	34	89	58	53	312	40	111	116	60
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1855	63	46	956	578	68	360	306	121	416	353
Arrive On Green	0.11	0.53	0.53	0.03	0.45	0.45	0.04	0.19	0.19	0.07	0.22	0.22
Sat Flow, veh/h	1774	3492	119	1774	2123	1283	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	153	897	942	34	73	74	53	312	40	111	116	60
Grp Sat Flow(s),veh/h/ln	1774	1770	1842	1774	1770	1636	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.4	42.4	43.2	1.7	2.1	2.3	2.6	14.3	1.8	5.5	4.5	2.7
Cycle Q Clear(g_c), s	7.4	42.4	43.2	1.7	2.1	2.3	2.6	14.3	1.8	5.5	4.5	2.7
Prop In Lane	1.00		0.06	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	940	978	46	797	737	68	360	306	121	416	353
V/C Ratio(X)	0.81	0.95	0.96	0.75	0.09	0.10	0.78	0.87	0.13	0.92	0.28	0.17
Avail Cap(c_a), veh/h	302	945	984	81	797	737	121	360	306	121	416	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	19.6	19.8	42.6	13.9	13.9	42.0	34.4	29.4	40.8	28.3	27.6
Incr Delay (d2), s/veh	8.4	19.1	20.2	21.3	0.0	0.1	17.7	23.4	0.9	57.0	1.7	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	4.1	25.4	27.2	1.1	1.0	1.0	1.6	9.7	0.9	4.6	2.5	1.3
LnGrp Delay(d),s/veh	46.8	38.7	40.0	63.9	13.9	14.0	59.7	57.9	30.3	97.7	30.0	28.6
LnGrp LOS	D	D	D	E	B	B	E	E	C	F	C	C
Approach Vol, veh/h		1992			181			405			287	
Approach Delay, s/veh		39.9			23.3			55.4			55.9	
Approach LOS		D			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	21.0	6.3	50.7	7.4	23.6	13.4	43.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	17.0	4.0	47.0	6.0	17.0	15.0	36.0
Max Q Clear Time (g_c+I1), s	7.5	16.3	3.7	45.2	4.6	6.5	9.4	4.3
Green Ext Time (p_c), s	0.0	0.2	0.0	1.6	0.0	2.1	0.2	20.5

Intersection Summary	
HCM 2010 Ctrl Delay	42.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	195	292	29	167	162	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	201	301	30	172	167	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	323	94	188	0	-	0
Stage 1	177	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	646	944	1384	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	866	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	630	944	1384	-	-	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1384	-	630	944	-	-
HCM Lane V/C Ratio	0.022	-	0.319	0.319	-	-
HCM Control Delay (s)	7.7	0.1	13.4	10.6	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.4	1.4	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	76	87	99	120	424	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	84	96	109	132	466	44
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	106	541	510	228	954	946
Arrive On Green	0.06	0.29	0.14	0.14	0.54	0.54
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	84	96	109	132	466	44
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.2	1.8	1.3	3.6	7.7	0.5
Cycle Q Clear(g_c), s	2.2	1.8	1.3	3.6	7.7	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	106	541	510	228	954	946
V/C Ratio(X)	0.79	0.18	0.21	0.58	0.49	0.05
Avail Cap(c_a), veh/h	267	1082	1218	545	954	946
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	21.6	12.3	17.6	18.6	6.7	3.9
Incr Delay (d2), s/veh	12.2	0.2	0.2	2.3	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.9	0.6	1.7	4.1	0.8
LnGrp Delay(d),s/veh	33.7	12.5	17.8	20.9	8.5	4.0
LnGrp LOS	C	B	B	C	A	A
Approach Vol, veh/h		180	241		510	
Approach Delay, s/veh		22.4	19.5		8.1	
Approach LOS		C	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.5		29.0	6.8	10.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				27.0		25.0	7.0	16.0
Max Q Clear Time (g_c+I1), s				3.8		9.7	4.2	5.6
Green Ext Time (p_c), s				1.6		1.5	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2883	1797	797	595	0	558
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	3100	1932	837	653		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1325	4950	745	633		
Arrive On Green	0.75	0.97	0.40	0.40		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	3100	1932	837	653		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	112.0	2.5	30.0	30.0		
Cycle Q Clear(g_c), s	112.0	2.5	30.0	30.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	1325	4950	745	633		
V/C Ratio(X)	2.34	0.39	1.12	1.03		
Avail Cap(c_a), veh/h	1325	4950	745	633		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.09	0.09	0.95	0.95		
Uniform Delay (d), s/veh	19.0	0.1	45.0	45.0		
Incr Delay (d2), s/veh	603.3	0.0	71.7	43.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	276.1	0.9	22.7	16.8		
LnGrp Delay(d),s/veh	622.3	0.1	116.7	88.0		
LnGrp LOS	F	A	F	F		
Approach Vol, veh/h		5032	1490			
Approach Delay, s/veh		383.4	104.1			
Approach LOS		F	F			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				150.0			116.0	34.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			112.0	30.0
Max Q Clear Time (g_c+I1), s				4.5			114.0	32.0
Green Ext Time (p_c), s				140.1			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	319.6
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	354	3753	1500	180	919	286	0	0	0	405	0	439
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	369	3909	1562	188	957	0				422	0	457
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	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
Cap, veh/h	397	3594	1119	154	2898	902				449	0	401
Arrive On Green	0.22	0.71	0.71	0.09	0.57	0.00				0.13	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	369	3909	1562	188	957	0				422	0	457
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.6	106.0	106.0	13.0	15.0	0.0				17.7	0.0	19.0
Cycle Q Clear(g_c), s	30.6	106.0	106.0	13.0	15.0	0.0				17.7	0.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	397	3594	1119	154	2898	902				449	0	401
V/C Ratio(X)	0.93	1.09	1.40	1.22	0.33	0.00				0.94	0.00	1.14
Avail Cap(c_a), veh/h	532	3594	1119	154	2898	902				449	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	57.1	22.0	22.0	68.5	17.1	0.0				64.9	0.0	65.5
Incr Delay (d2), s/veh	12.1	42.5	181.2	105.7	0.0	0.0				29.6	0.0	88.7
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	16.3	63.1	102.0	10.9	7.0	0.0				10.5	0.0	13.2
LnGrp Delay(d),s/veh	69.2	64.5	203.2	174.2	17.1	0.0				94.6	0.0	154.2
LnGrp LOS	E	F	F	F	B					F		F
Approach Vol, veh/h		5840			1145						879	
Approach Delay, s/veh		101.9			42.9						125.5	
Approach LOS		F			D						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			17.0	110.0		23.0	37.5	89.5
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			13.0	106.0		19.0	45.0	74.0
Max Q Clear Time (g_c+I1), s			15.0	108.0		21.0	32.6	17.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.9	9.5

Intersection Summary	
HCM 2010 Ctrl Delay	96.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	56	0	206	1275	243	0	0	297	118
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				61	0	0	1386	264	0	0	323	128
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				79	0	70	1388	3193	0	0	330	148
Arrive On Green				0.04	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				61	0	0	1386	264	0	0	323	128
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.1	0.0	0.0	0.0	0.0	0.0	0.0	13.7	12.0
Cycle Q Clear(g_c), s				5.1	0.0	0.0	0.0	0.0	0.0	0.0	13.7	12.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				79	0	70	1388	3193	0	0	330	148
V/C Ratio(X)				0.77	0.00	0.00	1.00	0.08	0.00	0.00	0.98	0.87
Avail Cap(c_a), veh/h				189	0	169	1388	3193	0	0	330	148
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				70.9	0.0	0.0	0.0	0.0	0.0	0.0	67.8	67.1
Incr Delay (d2), s/veh				14.8	0.0	0.0	7.0	0.0	0.0	0.0	44.2	45.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	0.0	2.7	0.0	0.0	0.0	8.7	7.1
LnGrp Delay(d),s/veh				85.7	0.0	0.0	7.0	0.0	0.0	0.0	112.1	112.2
LnGrp LOS				F			A	A			F	F
Approach Vol, veh/h					61			1650			451	
Approach Delay, s/veh					85.7			5.8			112.1	
Approach LOS					F			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		139.3			121.3	18.0		10.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		126.0			108.0	14.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	15.7		7.1
Green Ext Time (p_c), s		15.7			15.6	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	152	3	95	54	20	0	70	61	1293	1154	742	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.95			0.89	0.85		0.91			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1762			1553	1504		3224			
Flt Permitted	0.95		0.57			0.99	1.00		1.00			
Satd. Flow (perm)	1770		1006			1553	1504		3224			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96
Adj. Flow (vph)	158	3	99	56	21	0	73	66	1347	1202	773	261
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	158	0	158	0	0	81	79	0	3303	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	18.0		18.0			6.0	6.0		91.0			
Effective Green, g (s)	18.0		18.0			6.0	6.0		91.0			
Actuated g/C Ratio	0.12		0.12			0.04	0.04		0.61			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	212		120			62	60		1955			
v/s Ratio Prot	0.09					0.05	c0.05		c1.02			
v/s Ratio Perm			c0.16									
v/c Ratio	0.75		1.32			1.31	1.32		1.98dr			
Uniform Delay, d1	63.8		66.0			72.0	72.0		29.5			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	13.3		189.4			216.7	222.4		312.5			
Delay (s)	77.1		255.4			288.7	294.4		342.0			
Level of Service	E		F			F	F		F			
Approach Delay (s)			166.2			291.5			342.0			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	308.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	138.4%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	64	32
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3284
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3284
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	67	33
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	268	93
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	19.0	19.0
Effective Green, g (s)	19.0	19.0
Actuated g/C Ratio	0.13	0.13
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	203	415
v/s Ratio Prot	c0.17	0.03
v/s Ratio Perm		
v/c Ratio	1.32	0.22
Uniform Delay, d1	65.5	58.9
Progression Factor	0.15	0.06
Incremental Delay, d2	167.8	0.9
Delay (s)	178.0	4.7
Level of Service	F	A
Approach Delay (s)		133.3
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	1029	293	642	3691	89	239	16	687	81	22	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	1095	312	683	3927	95	254	17	731	86	23	88
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	1311	408	1728	3695	1193	321	199	964	92	75	63
Arrive On Green	0.03	0.26	0.26	0.50	0.73	0.73	0.09	0.11	0.11	0.03	0.04	0.04
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	111	1095	312	683	3927	95	254	17	731	86	23	88
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	4.8	30.5	27.3	18.5	109.0	2.4	10.8	1.2	6.9	3.7	1.8	5.5
Cycle Q Clear(g_c), s	4.8	30.5	27.3	18.5	109.0	2.4	10.8	1.2	6.9	3.7	1.8	5.5
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	115	1311	408	1728	3695	1193	321	199	964	92	75	63
V/C Ratio(X)	0.97	0.84	0.76	0.40	1.06	0.08	0.79	0.09	0.76	0.94	0.31	1.39
Avail Cap(c_a), veh/h	115	1458	454	1728	3695	1193	321	199	964	92	75	63
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)	0.82	0.82	0.82	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.4	52.6	51.4	23.2	20.5	4.9	66.6	60.4	11.7	72.9	70.0	59.6
Incr Delay (d2), s/veh	65.9	3.3	5.7	0.1	34.4	0.0	12.6	0.8	5.6	73.3	10.4	247.2
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	3.3	14.7	12.6	8.8	62.1	1.0	5.7	0.7	17.3	2.7	1.1	6.7
LnGrp Delay(d),s/veh	138.3	56.0	57.1	23.3	54.9	4.9	79.1	61.3	17.2	146.2	80.4	306.7
LnGrp LOS	F	E	E	C	F	A	E	E	B	F	F	F
Approach Vol, veh/h		1518			4705			1002			197	
Approach Delay, s/veh		62.2			49.3			33.7			210.2	
Approach LOS		E			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	79.3	42.7	18.0	10.0	9.0	113.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	71.0	43.0	14.0	6.0	5.0	109.0
Max Q Clear Time (g_c+I1), s	5.7	8.9	20.5	32.5	12.8	7.5	6.8	111.0
Green Ext Time (p_c), s	0.0	2.6	50.2	6.1	0.6	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.1
HCM 2010 LOS	D

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												
Volume (veh/h)	101	936	313	191	3778	46	310	25	438	35	15	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	113	1052	352	215	4245	52	348	28	492	39	0	87
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	3138	1104	262	3288	1058	275	333	283	76	0	528
Arrive On Green	0.05	0.62	0.62	0.10	0.86	0.86	0.08	0.18	0.18	0.02	0.00	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	113	1052	352	215	4245	52	348	28	492	39	0	87
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	7.0	15.0	13.0	9.2	97.0	0.4	12.0	1.9	26.8	1.6	0.0	0.5
Cycle Q Clear(g_c), s	7.0	15.0	13.0	9.2	97.0	0.4	12.0	1.9	26.8	1.6	0.0	0.5
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	83	3138	1104	262	3288	1058	275	333	283	76	0	528
V/C Ratio(X)	1.36	0.34	0.32	0.82	1.29	0.05	1.26	0.08	1.74	0.51	0.00	0.16
Avail Cap(c_a), veh/h	83	3138	1104	344	3288	1058	275	333	283	95	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.5	13.9	8.8	66.4	10.5	1.4	69.0	51.4	61.6	72.6	0.0	35.8
Incr Delay (d2), s/veh	223.9	0.1	0.2	1.1	131.1	0.0	144.5	0.5	347.4	5.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	7.0	5.7	4.4	82.8	0.2	11.2	1.0	39.0	0.9	0.0	1.3
LnGrp Delay(d),s/veh	295.4	13.9	9.0	67.5	141.6	1.4	213.5	51.9	409.0	77.9	0.0	36.5
LnGrp LOS	F	B	A	E	F	A	F	D	F	E		D
Approach Vol, veh/h		1517			4512			868			126	
Approach Delay, s/veh		33.7			136.5			319.1			49.3	
Approach LOS		C			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	30.8	15.4	96.6	16.0	22.0	11.0	101.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	15.0	89.0	12.0	18.0	7.0	97.0
Max Q Clear Time (g_c+I1), s	3.6	28.8	11.2	17.0	14.0	2.5	9.0	99.0
Green Ext Time (p_c), s	0.0	0.0	0.2	13.2	0.0	2.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	135.3
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	1722	3	0	228	3	0	0	2	0
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				1815	0	0	240	3	0	0	2	0
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				1962	1030	0	604	733	0	0	94	0
Arrive On Green				0.55	0.00	0.00	0.34	0.39	0.00	0.00	0.03	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	3725	0
Grp Volume(v), veh/h				1815	0	0	240	3	0	0	2	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	0
Q Serve(g_s), s				70.2	0.0	0.0	15.5	0.1	0.0	0.0	0.1	0.0
Cycle Q Clear(g_c), s				70.2	0.0	0.0	15.5	0.1	0.0	0.0	0.1	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				1962	1030	0	604	733	0	0	94	0
V/C Ratio(X)				0.92	0.00	0.00	0.40	0.00	0.00	0.00	0.02	0.00
Avail Cap(c_a), veh/h				2436	1279	0	604	733	0	0	94	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.7	0.0	0.0	37.8	27.6	0.0	0.0	71.1	0.0
Incr Delay (d2), s/veh				5.8	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				35.9	0.0	0.0	7.7	0.1	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				36.5	0.0	0.0	38.2	27.6	0.0	0.0	71.5	0.0
LnGrp LOS				D			D	C			E	
Approach Vol, veh/h					1815			243			2	
Approach Delay, s/veh					36.5			38.0			71.5	
Approach LOS					D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.0			55.0	8.0		87.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		39.0			31.0	4.0		103.0
Max Q Clear Time (g_c+I1), s		2.1			17.5	2.1		72.2
Green Ext Time (p_c), s		0.7			0.6	0.0		10.8

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	3	77	0	0	0	0	195	286	3	1723	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	38	3	82				0	207	304	3	1833	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	108	9	104				0	3013	1348	6	3118	0
Arrive On Green	0.07	0.07	0.07				0.00	1.00	1.00	0.01	1.00	0.00
Sat Flow, veh/h	1650	130	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	41	0	82				0	207	304	3	1833	0
Grp Sat Flow(s),veh/h/ln	1780	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	3.3	0.0	7.7				0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	7.7				0.0	0.0	0.0	0.3	0.0	0.0
Prop In Lane	0.93		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	117	0	104				0	3013	1348	6	3118	0
V/C Ratio(X)	0.35	0.00	0.79				0.00	0.07	0.23	0.54	0.59	0.00
Avail Cap(c_a), veh/h	225	0	201				0	3013	1348	59	3118	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.97	0.97	0.53	0.53	0.00
Uniform Delay (d), s/veh	67.0	0.0	69.1				0.0	0.0	0.0	74.4	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	12.4				0.0	0.0	0.4	36.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	3.7				0.0	0.0	0.1	0.2	0.2	0.0
LnGrp Delay(d),s/veh	68.8	0.0	81.4				0.0	0.0	0.4	111.1	0.4	0.0
LnGrp LOS	E		F					A	A	F	A	
Approach Vol, veh/h		123						511			1836	
Approach Delay, s/veh		77.2						0.2			0.6	
Approach LOS		E						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	4.5	131.7		13.8		136.2		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	5.0	114.0		19.0		123.0		
Max Q Clear Time (g_c+I1), s	2.3	2.0		9.7		2.0		
Green Ext Time (p_c), s	0.0	45.2		0.3		46.2		

Intersection Summary	
HCM 2010 Ctrl Delay	4.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	161	389	87	65	31	150	586	89	22	2022	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	169	168	405	91	68	32	156	610	93	23	2106	115
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	193	243	597	136	216	97	200	2678	403	425	3383	1053
Arrive On Green	0.11	0.13	0.13	0.04	0.06	0.06	0.12	1.00	1.00	0.25	1.00	1.00
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4463	672	3442	5085	1583
Grp Volume(v), veh/h	169	168	405	91	68	32	156	461	242	23	2106	115
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1744	1721	1695	1583
Q Serve(g_s), s	14.1	12.9	15.2	3.9	2.8	2.4	6.6	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	14.1	12.9	15.2	3.9	2.8	2.4	6.6	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	193	243	597	136	216	97	200	2034	1047	425	3383	1053
V/C Ratio(X)	0.88	0.69	0.68	0.67	0.31	0.33	0.78	0.23	0.23	0.05	0.62	0.11
Avail Cap(c_a), veh/h	284	397	860	184	378	169	275	2034	1047	425	3383	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	0.79	0.79	0.79
Uniform Delay (d), s/veh	65.8	62.3	41.6	71.1	67.4	44.5	65.3	0.0	0.0	49.8	0.0	0.0
Incr Delay (d2), s/veh	18.1	3.5	1.4	5.6	0.8	2.0	8.7	0.2	0.5	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	6.9	6.8	2.0	1.4	1.1	3.4	0.1	0.1	0.4	0.2	0.0
LnGrp Delay(d),s/veh	84.0	65.9	42.9	76.7	68.2	46.4	74.1	0.2	0.5	49.8	0.7	0.2
LnGrp LOS	F	E	D	E	E	D	E	A	A	D	A	A
Approach Vol, veh/h		742			191			859			2244	
Approach Delay, s/veh		57.5			68.6			13.7			1.2	
Approach LOS		E			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	94.0	9.9	23.6	12.7	103.8	20.3	13.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	90.0	8.0	32.0	12.0	82.0	24.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	2.0	5.9	17.2	8.6	2.0	16.1	4.8
Green Ext Time (p_c), s	0.0	5.5	0.1	2.3	0.1	38.4	0.3	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	0	418	12	122	200	154	567	0	0	742	1764
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	62	0	445	13	130	213	164	603	0	0	789	1877
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	10	101	95	118	4509	0	0	2808	1256
Arrive On Green	0.00	0.00	0.00	0.06	0.06	0.06	0.07	0.89	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		169	1686	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		143	0	213	164	603	0	0	789	1877
Grp Sat Flow(s),veh/h/ln				1854	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				9.0	0.0	9.0	10.0	2.3	0.0	0.0	0.0	119.0
Cycle Q Clear(g_c), s				9.0	0.0	9.0	10.0	2.3	0.0	0.0	0.0	119.0
Prop In Lane				0.09		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				111	0	95	118	4509	0	0	2808	1256
V/C Ratio(X)				1.29	0.00	2.24	1.39	0.13	0.00	0.00	0.28	1.49
Avail Cap(c_a), veh/h				111	0	95	118	4509	0	0	2808	1256
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.72	0.72
Uniform Delay (d), s/veh				70.5	0.0	70.5	70.0	1.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				180.3	0.0	591.3	217.6	0.1	0.0	0.0	0.2	225.5
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				10.2	0.0	19.5	12.0	1.1	0.0	0.0	0.1	78.7
LnGrp Delay(d),s/veh				250.8	0.0	661.8	287.6	1.2	0.0	0.0	0.2	225.5
LnGrp LOS				F		F	F	A			A	F
Approach Vol, veh/h					356			767			2666	
Approach Delay, s/veh					496.7			62.4			158.8	
Approach LOS					F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		137.0			14.0	123.0		13.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		125.0			10.0	111.0		9.0
Max Q Clear Time (g_c+I1), s		4.3			12.0	121.0		11.0
Green Ext Time (p_c), s		109.2			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	171.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	1168	528	82	2535	55	443	45	126	37	25	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	191	1229	556	86	2668	58	466	47	133	39	0	259
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	236	2904	904	106	2860	891	582	389	348	150	0	296
Arrive On Green	0.07	0.57	0.57	0.06	0.56	0.56	0.17	0.22	0.22	0.04	0.00	0.09
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	191	1229	556	86	2668	58	466	47	133	39	0	259
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	8.2	20.5	16.8	7.2	72.4	2.5	19.5	3.2	10.7	1.6	0.0	12.1
Cycle Q Clear(g_c), s	8.2	20.5	16.8	7.2	72.4	2.5	19.5	3.2	10.7	1.6	0.0	12.1
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	2904	904	106	2860	891	582	389	348	150	0	296
V/C Ratio(X)	0.81	0.42	0.61	0.81	0.93	0.07	0.80	0.12	0.38	0.26	0.00	0.88
Avail Cap(c_a), veh/h	252	2904	904	166	2882	897	582	389	348	150	0	296
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)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	68.9	18.2	4.9	69.7	30.2	14.9	59.9	46.9	49.8	69.5	0.0	67.1
Incr Delay (d2), s/veh	16.6	0.1	1.2	15.0	6.4	0.0	7.9	0.6	3.2	0.9	0.0	28.5
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	4.4	9.6	7.6	4.0	35.5	1.1	10.0	1.6	5.0	0.8	0.0	6.5
LnGrp Delay(d),s/veh	85.5	18.3	6.2	84.7	36.6	14.9	67.8	47.5	53.0	70.4	0.0	95.7
LnGrp LOS	F	B	A	F	D	B	E	D	D	E		F
Approach Vol, veh/h		1976			2812			646			298	
Approach Delay, s/veh		21.4			37.6			63.3			92.4	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	37.0	13.0	89.7	29.4	18.0	14.3	88.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	33.0	14.0	82.0	24.0	14.0	11.0	85.0
Max Q Clear Time (g_c+I1), s	3.6	12.7	9.2	22.5	21.5	14.1	10.2	74.4
Green Ext Time (p_c), s	0.3	1.0	0.1	19.6	0.5	0.0	0.1	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	697	1247	2295	952	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	711	1272	2342	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.98	0.98	0.98	0.98		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	621	4940	2098	939		
Arrive On Green	0.35	0.97	0.59	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	711	1272	2342	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	49.0	1.3	83.0	0.0		
Cycle Q Clear(g_c), s	49.0	1.3	83.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	621	4940	2098	939		
V/C Ratio(X)	1.15	0.26	1.12	0.00		
Avail Cap(c_a), veh/h	621	4940	2098	939		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.73	0.73	0.32	0.00		
Uniform Delay (d), s/veh	45.5	0.1	28.5	0.0		
Incr Delay (d2), s/veh	79.1	0.0	54.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	37.6	0.6	56.2	0.0		
LnGrp Delay(d),s/veh	124.6	0.1	83.3	0.0		
LnGrp LOS	F	A	F			
Approach Vol, veh/h		1983	2342			
Approach Delay, s/veh		44.7	83.3			
Approach LOS		D	F			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				140.0			53.0	87.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				136.0			49.0	83.0
Max Q Clear Time (g_c+I1), s				3.3			51.0	85.0
Green Ext Time (p_c), s				21.5			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.6
HCM 2010 LOS	E

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	665	0	297	299
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	693	0	309	311
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1467	346			693	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1467	346			693	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			66	
cM capacity (veh/h)	78	650			898	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	462	231	309	156	156
Volume Left	0	0	309	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	898	1700	1700
Volume to Capacity	0.27	0.14	0.34	0.09	0.09
Queue Length 95th (ft)	0	0	39	0	0
Control Delay (s)	0.0	0.0	11.1	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		5.5		
Approach LOS					

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1296	834	0	1238	501	375	31	443	211	4	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	119	1322	0	0	1263	511	406	0	0	218	0	76
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	138	2091	651	0	1469	457	1300	0	580	316	0	141
Arrive On Green	0.08	0.41	0.00	0.00	0.29	0.29	0.37	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	119	1322	0	0	1263	511	406	0	0	218	0	76
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	6.0	18.6	0.0	0.0	21.1	26.0	7.4	0.0	0.0	5.4	0.0	4.1
Cycle Q Clear(g_c), s	6.0	18.6	0.0	0.0	21.1	26.0	7.4	0.0	0.0	5.4	0.0	4.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	2091	651	0	1469	457	1300	0	580	316	0	141
V/C Ratio(X)	0.86	0.63	0.00	0.00	0.86	1.12	0.31	0.00	0.00	0.69	0.00	0.54
Avail Cap(c_a), veh/h	138	2091	651	0	1469	457	1300	0	580	631	0	281
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	0.00	0.00	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	21.1	0.0	0.0	30.3	32.0	20.4	0.0	0.0	39.8	0.0	39.2
Incr Delay (d2), s/veh	39.3	0.6	0.0	0.0	0.5	55.9	0.6	0.0	0.0	2.7	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	8.8	0.0	0.0	9.9	18.4	3.7	0.0	0.0	2.8	0.0	3.7
LnGrp Delay(d),s/veh	80.3	21.7	0.0	0.0	30.8	87.9	21.0	0.0	0.0	42.5	0.0	42.4
LnGrp LOS	F	C			C	F	C			D		D
Approach Vol, veh/h		1441			1774			406			294	
Approach Delay, s/veh		26.5			47.2			21.0			42.5	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		37.0		41.0		12.0	11.0	30.0
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		25.0		37.0		16.0	7.0	26.0
Max Q Clear Time (g_c+I1), s		9.4		20.6		7.4	8.0	28.0
Green Ext Time (p_c), s		1.3		9.0		0.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes

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

APPENDIX C

CITY OF SAN DIEGO MASTER BICYCLE PLAN AND PEDESTRIAN MASTER PLAN EXCERPTS

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City of San Diego Bicycle Master Plan

San Diego, California

FINAL – Deceber 2013

PREPARED BY:
Alta Planning + Design
PREPARED FOR:
The City of San Diego

alta
PLANNING + DESIGN

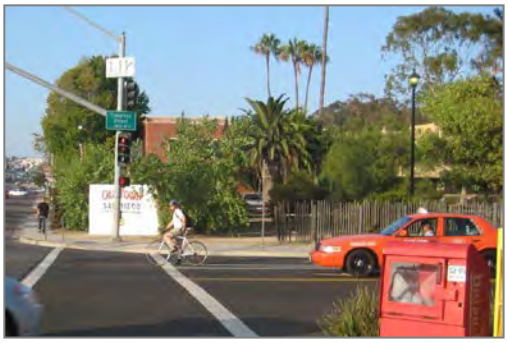
Executive Summary

The San Diego Bicycle Master Plan is an update to the City's 2002 plan, presenting a renewed vision for bicycle transportation, recreation, and quality of life in San Diego. This vision is closely aligned with the City's 2008 San Diego General Plan's mobility, sustainability, health, economic, and social goals. The bicycle network, projects, policies, and programs included in this document provide the City with a strong framework for improving bicycling through 2030 and beyond. The major components of the Plan are described below.

Goals and Policies

The goals and objectives of the Bicycle Master Plan are derived from the 2008 San Diego General Plan and are strengthened with additional policies that provide specific guidance for achieving an ideal bicycling environment. The goals of the Plan are to create:

- A city where bicycling is a viable travel choice, particularly for trips of less than five miles
- A safe and comprehensive local and regional bikeway network
- Environmental quality, public health, recreation and mobility benefits through increased bicycling



Bicyclist stopped for a traffic light at the Congress Street/Taylor Street intersection

These goals are supported by twelve key policies that will help bicycling become a more viable transportation mode for trips of less than five miles, to connect to transit and for recreation.

Existing Bicycling Conditions

Understanding existing bicycling conditions is critical to identifying appropriate and impactful recommendations and is achieved by reviewing existing land uses, the bicycle network and support facilities, multimodal connections, bicycle programs, and constraints and opportunities.

San Diego's existing bicycle network consists of approximately 72 miles of off-street paved Bike Paths (Class I), 309 miles of Bike Lanes (Class II), 113 miles of Bike Routes (Class III), and 16 miles of freeway shoulder open to bicycling. It is anticipated that the freeway shoulder facilities will be replaced once the proposed network is constructed. San Diego's current network is supported by multimodal connectivity and bike parking; however, there are ample opportunities for strengthening these crucial elements of the city's bicycle system. In 2009, the City revitalized its bicycle education and public awareness efforts with the "Lose the Roaditude" campaign that targets bicyclists, motorists, and pedestrians with the aim of promoting safe roadway behaviors. The campaign highlights hazardous actions such as failing to stop at stop signs and promotes safety measures such as wearing bright colors when bicycling or walking at night.

Relationship to Other Plans and Policies

This Plan includes a summary of legislation and other planning or policy documents from the State of California, San Diego Association of Governments (SANDAG), and the City that are most pertinent to

bicycling in San Diego. This includes a brief synopsis of important state policies such as California Government Code §65302 and California SB 375 as well as the bicycle-related elements of each of San Diego's currently adopted community plans.

Bicycle Needs Analysis

The Bicycle Master Plan includes an assessment of current bicycling demand and barriers in San Diego and estimates potential future demand and benefits that could be realized through implementation of this Plan. Assessing needs and potential benefits are instrumental to planning a system that serves the needs of all user groups, and is useful when pursuing competitive funding and attempting to quantify future usage and benefits to justify expenditures.

The needs analysis relies on spatial modeling techniques, public input, bicycle collision data, and bicycle commuting statistics to gauge current demand and to establish a baseline against which progress can be measured. The spatial modeling highlights segments of the roadway network with the greatest propensity for bicycle activity compared to other locations in San Diego. Reviewing US Census data reveals that San Diego's bicycle commute mode share is 0.8 percent, which is slightly higher than the county estimate (0.6 percent) and above the national average (0.5 percent) but slightly lower than the state average (0.9 percent). Reviewing the number of total collisions and collisions involving bicyclists in San Diego from 2004 – 2008 shows that San Diego has relatively consistent collision rates over this five-year period and that the proportion of fatal bicycle collisions in San Diego in 2007 was substantially higher at 4.8 percent compared to the statewide average of 2.7 percent and the nationwide average of 1.7 percent. Collectively, the needs analysis validates a robust approach to bicycle facility improvements and programs and provides guidance on where to direct improvements.

Bicycle Facility Recommendations

The Plan's major infrastructure recommendations consist of bikeway facilities, intersections and other spot improvements, as well as bicycle support facilities. Recommended bicycle support facilities and programs include bike parking, routine maintenance, signage, and bicycle signal detection maintenance. The recommended bicycle network consists primarily of on-street facilities, including approximately 878 miles of proposed Bike Lanes and Bike Routes, 40 miles of Bicycle Boulevards, and 7 miles of Cycle Tracks (see **Table 3.1** for definitions and illustrations of the California Bikeway Classification System). The Plan also recommends 166 miles of paved multi-use paths. These totals include existing facilities and proposed facilities for a total of 1,090 bicycle facility miles. Note, the implementation of the network will eliminate the need for a freeway shoulder facility. Thus the 16 miles of freeway shoulder has been excluded from the total mileage recommended in this Plan.

Bicycle Master Plan Update Pubic Workshop
Photo credit: Vincent Noto

The Plan also identifies high priority bicycle projects by applying a prioritization process to the recommended bicycle network. These high priority projects will be considered in the first phase in implementing the recommended bicycle network.

The bikeway projects and facility improvements recommended in the Bicycle Master Plan Update will be complemented by programs designed to educate people about bicyclists' rights, responsibilities and safe bicycle operation; connect current and future bicyclists to existing resources; encourage residents to bicycle more frequently; and monitor the performance of the bicycle system and programs.

Bicyclist riding on Genessee Avenue

Bicycle Program Recommendations

The Plan recommends several education, enforcement, encouragement, monitoring, and evaluation efforts that the City will pursue, as well as programs the City currently provides and will continue. Major programmatic recommendations (see Chapter 7) include developing a bike commute challenge program, instituting CicloSDias, convening a Bicycle Advisory Committee and implementing a bicycle and pedestrian count and annual progress report program. The Plan also recommends maintaining the City's current education programs and Safe Routes to School efforts.

Implementation and Funding

The Plan supports the implementation of this Plan's recommendations by providing planning level cost estimates of the proposed network, more detailed cost estimates associated with the high priority projects and an overview of funding sources that the City will pursue. The cost of completing the proposed bicycle network is estimated to be about $312 million for total system build out. The estimated cost for implementation of the 40 high priority bicycle projects is approximately $35 million.

3 Existing Conditions

This chapter describes existing bicycling conditions within the City of San Diego. Information presented in this chapter was obtained via field visits, existing planning documents and data, mapping analyses, and conversations with City and other agency staff. The information is representative of conditions at plan preparation.

3.1 Land Use

Figure 3-1 displays the city of San Diego's existing land uses. San Diego has a large mix of land use types, with the greatest proportion (28 percent) of city land acreage being parks, open space, and recreation areas. Residential uses comprise the second largest use of land (24 percent) and range from low-density suburban to relatively dense multifamily and mixed-use development. Older urban neighborhoods, such as City Heights, Greater North Park, and Uptown, include medium and high density residential, intermixed with commercial land uses. Recently developed areas of the city, such as Rancho Bernardo, Mira Mesa, Carmel Valley, and Tierrasanta, include a mix of high, medium, and low intensity residential and commercial land uses although uses tend to be more segregated in these newer communities. San Diego also has an increasingly vibrant urban downtown core, which in recent years has attracted high-density housing development.

Several large districts of industrial/office/commercial land uses are located in the city, including the Kearny Mesa and University City areas. San Diego is home to many military facilities, including Fort Rosecrans on Point Loma and Miramar Marine Corps Air Station. Three airports currently exist, including San Diego International Airport/Lindbergh Field near downtown, Montgomery Field in Kearny Mesa, and Brown Field in Otay Mesa. Open space reserves currently exist in the form of regional parks and preserves, including Los Penasquitos Canyon Preserve, Mission Trails Regional Park, and Torrey Pines State Reserve.

The City of San Diego General Plan set forth a renewed approach to development with the "City of Villages" strategy. The "City of Villages" strategy emphasizes infill development and redevelopment and envisions focusing growth into mixed-use activity centers that contain transit-oriented and pedestrian-friendly features, including accessible, attractive streets and public spaces. Each "village," defined as "the mixed-use heart of a community where residential, commercial, employment, and civic uses are present and integrated," is intended to embody the unique characteristics of that community (LU-6). The "City of Villages" strategy also calls for high capacity transit corridors to connect all "villages,' thereby providing for non-single-occupant vehicle travel across the city. This strategy is introduced in the General Plan Strategic Framework and is central to the Mobility Element theme of a balanced multi-modal and minimally intrusive transportation system. Currently, the potential for villages is being investigated as a part of the community plan update process. In addition, work is progressing on five urban "village" pilot projects. **Figure 3-2** shows San Diego's planned land uses.

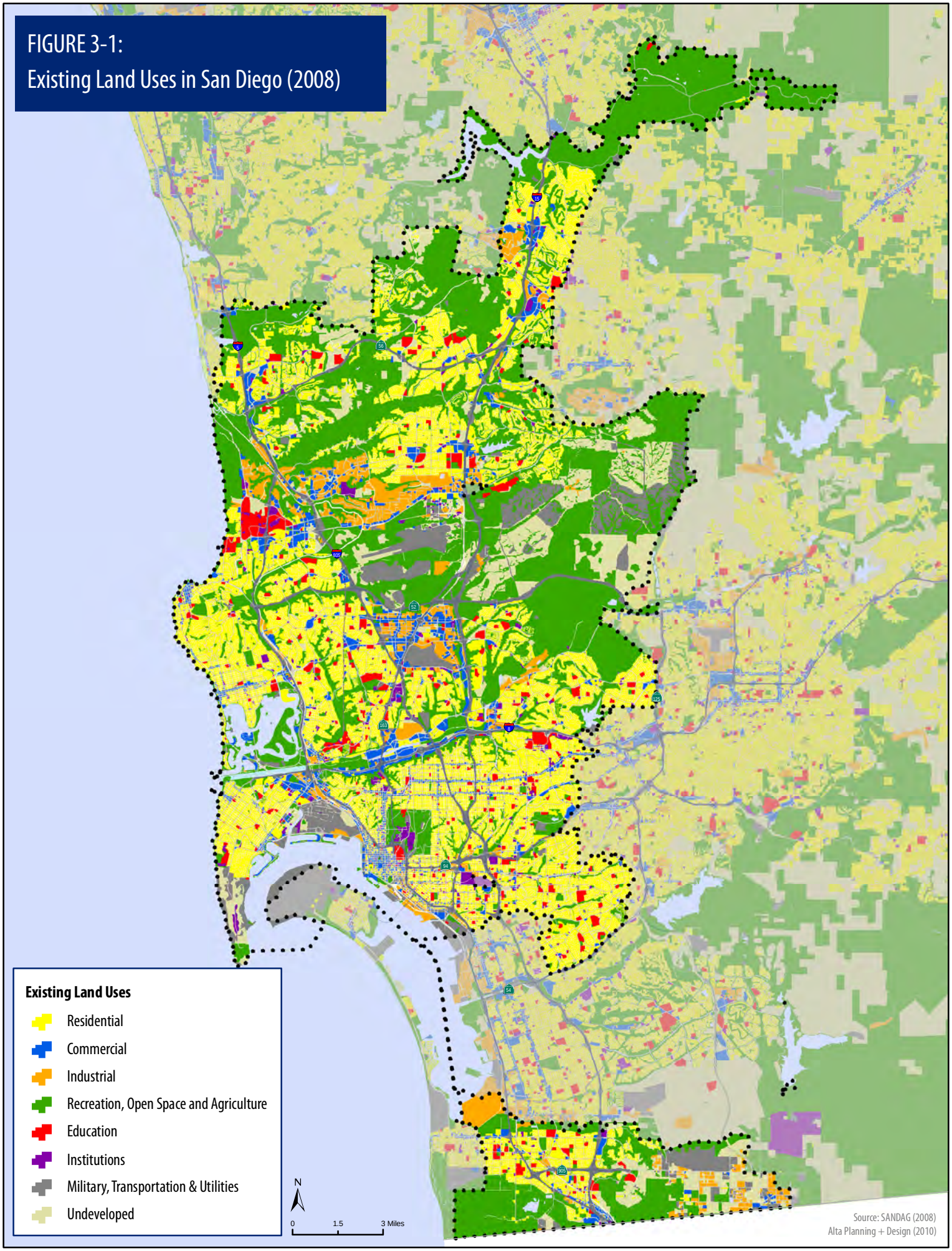
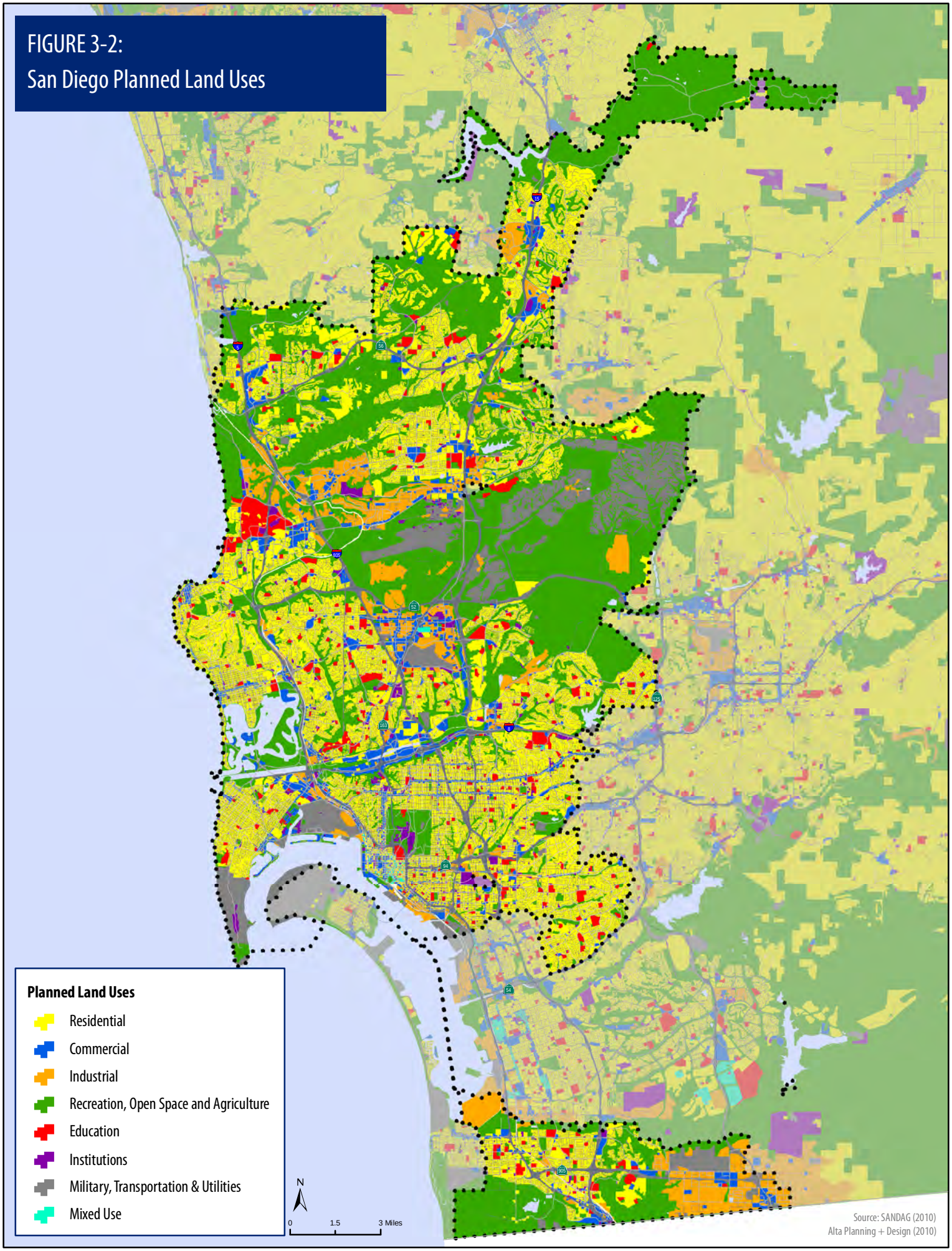


FIGURE 3-1:
Existing Land Uses in San Diego (2008)
Existing Land Uses
Residential
Commercial
Industrial
Recreation, Open Space and Agriculture
Education
Institutions
Military, Transportation & Utilities
Undeveloped
N
0
1.5
3 Miles
Source: SANDAG (2008)
Alta Planning + Design (2010)

FIGURE 3-2:
San Diego Planned Land Uses

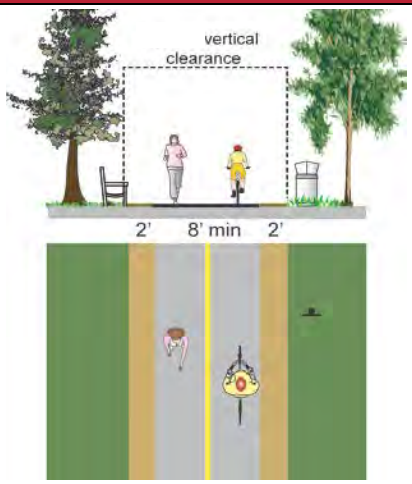


Source: SANDAG (2010)
Alta Planning + Design (2010)

3.2 Bikeways

"Chapter 1000 Bikeway Planning and Design" of the *California Highway Design Manual* identifies three classes of bikeways. **Table 3-1** describes these bikeway classes. The City may consider modified bikeway design to better enhance user experience.

Table 3-1: California Bikeway Classification System

Class Description	Example Graphic
Class I – Bike Path Bike paths, also termed shared-use or multi-use paths, are paved right-of-way for exclusive use by bicyclists, pedestrians, and those using non-motorized modes of travel. They are physically separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way. Bike paths provide critical connections in the city where roadways are absent or are not conducive to bicycle travel.	
Class II – Bike Lane Bike lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel. Bike lanes are one-way facilities on either side of a roadway. Whenever possible, Bike Lanes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues, such as additional warning or wayfinding signage.	
Class III - Bike Route Bike routes provide shared use with motor vehicle traffic within the same travel lane. Designated by signs, Bike Routes provide continuity to other bike facilities or designate preferred routes through corridors with high demand. Whenever possible, Bike Routes should be enhanced with treatments that improve safety and connectivity, such as the use of "Sharrows" or shared lane markings to delineate that the road is a shared-use facility.	

2 Goals and Policies

The City's General Plan provides the foundation for all land use and development decisions in the city. It articulates the community's vision of an ideal built environment and contains public policies to direct future land uses toward this ideal state. The Strategic Framework section of the General Plan sets forth details of the City of Villages strategy, establishes the structure of the General Plan, and espouses ten guiding principles, including:

> *"An integrated regional transportation network of walkways, bikeways, transit, roadways, and freeways that efficiently link communities and villages to each other and to employment centers;" (SF-6)*

The San Diego General Plan Mobility Element elaborates upon the vision for mobility in San Diego. The Mobility Element's overarching goal is to advance a balanced, efficient, multi-modal transportation network that minimizes adverse environmental and neighborhood impacts. The Mobility Element contains goals and policies specific to various transportation modes and components of the transportation system, including walking, transit, street and freeway systems, transportation demand management, and bicycling. The most pertinent bicycle-related goals and policies of the Mobility Element form the foundation for the General Plan's goals and policies. As such, they are restated below verbatim. This Plan augments these Mobility Element policies with additional policies to further enhance the state of bicycling in San Diego. Most of this Plan's policies are from the 2002 San Diego Bicycle Master Plan.

The goals portray the desired end-state of bicycling in San Diego, whereas policies describe how the goals will be achieved. The General Plan Action Plan (2009) delineates a strategy for implementing the General Plan. The Action Plan's bicycle-related implementation measures are reflected in Chapter 6 and Chapter 7 along with the other major Plan recommendations.

The City is updating its 2005 Climate Action Plan (CAP). The updated CAP will provide a roadmap for achieving 2020 and 2035 greenhouse gas (GHG) reduction targets. The CAP will identify strategies and measures to achieve this target and introduce approaches to prepare for and adapt to a changing climate. The CAP will identify bicycle mode share percentage goals for 2020 and 2035 and the Bicycle Master Plan will work in concert with the CAP to attain identified goals.

2.1 Goals

- A city where bicycling is a viable travel choice, particularly for trips of less than five miles
- A safe and comprehensive local and regional bikeway network
- Environmental quality, public health, recreation, and mobility benefits through increased bicycling

2.2 Policies

1. Implement the Bicycle Master Plan, which identifies existing and future needs, and provides specific recommendations for facilities and programs over the next 20 years. (Mobility Element, Policy ME-F.1)
   a. Update the plan periodically as required by the California Department of Transportation (Caltrans), in a manner consistent with General Plan goals and policies. (Mobility Element, Policy ME-F.1.a)
   b. Coordinate with other local jurisdictions, SANDAG, schools, and community organizations to review and comment on bicycle issues of mutual concern. (Mobility Element, Policy ME-F.1.b)
   c. Create a bicycle advisory committee that will coordinate with various City agencies, schools,

neighboring jurisdictions, SANDAG, and community organizations, and will comment on bicycle issues.

d. Reference and refine the plan, as needed, in conjunction with community plan updates. (Mobility Element, Policy ME-F.1.c)

e. Improve connectivity of the multi-use trail network, for use by bicyclists and others as appropriate. (Mobility Element, Policy ME-F.1.d)

f. Fully fund and maintain a City bicycle coordinator position to ensure plan implementation.

g. Regularly monitor bicycle-related crash levels, and seek a significant reduction on a per capita basis over the next twenty years.

2. Identify and implement a network of bikeways that are feasible, fundable, and serve bicyclists' needs, especially for travel to employment centers, village centers, schools, commercial districts, transit stations, and institutions. (Mobility Element, Policy ME-F.2)

   a. Develop a bikeway network that is continuous, closes gaps in the existing system, improves safety, and serves important destinations. (Mobility Element, Policy ME-F.2.a)

   b. Implement bicycle facilities based on a priority program that considers existing deficiencies, safety, commuting needs, connectivity of routes, and community input. (Mobility Element, Policy ME-F.2.b)

   c. Recognize that bicyclists use all city roadways.

      i. Design future roadways to accommodate bicycle travel; and

      ii. Upgrade existing roadways to enhance bicycle travel, where feasible. (Mobility Element, Policy ME-F.2.c)

   d. Support bicycle rental opportunities at San Diego and Mission Bays, Balboa Park, transit stations, and other key recreation destinations.

3. Maintain and improve the quality, operation, and integrity of the bikeway network and roadways regularly used by bicyclists. (Mobility Element, Policy ME-F.3)

   a. Expand upon the existing destination-based signage system for the bikeway network.

   b. Provide alternate Bicycle Routes when removing established bikeways.

   c. Coordinate roadway improvements so that bicycle facilities are not reduced or eliminated in construction zones and are maintained or incorporated into future improvements in order to maintain the existing local and regional bicycle network or provide reasonable alternatives.

      i. Ensure that detours through or around construction zones are designed safely and conveniently, and are accompanied with adequate signage for cyclists and motorists.

      ii. Develop a procedure to ensure that all trench work performed within city streets be inspected after construction is completed to ensure that pavement quality is restored to acceptable conditions.

   d. Ensure impacts to bicycles as a transportation mode receive routine review in environmental assessments.

   e. Consider use of shared lane markings, also known as "Sharrows" to provide guidance to bicyclists and motorists on roadways that are too narrow for Class II Bike Lanes.

   f. Consider use of innovative pavement treatment and signage, such as the use of "bike boxes" and colored Bike Lanes in high conflict areas.

4. Provide safe, convenient, and adequate short- and long-term bicycle parking facilities and other bicycle amenities for employment, retail, multifamily housing, schools and colleges, and transit facility uses. (Mobility Element, Policy ME-F.4)

a. Continue to require bicycle parking in commercial and multiple unit residential zones. (Mobility Element, Policy ME-F.4.a)
b. Provide bicycle facilities and amenities to help reduce the number of vehicle trips. (Mobility Element, Policy ME-F.4.b)
c. Provide high volume bicycle parking facilities where demand is high.
d. Strengthen requirements for end-of-trip facilities as needed.

5. Increase the number of bicycle-to-transit trips by coordinating with transit agencies to provide safe routes to transit stops and stations, to provide secure bicycle parking facilities, and to accommodate bicycles on transit vehicles. (Mobility Element, Policy ME-F.5)
    a. Include bikeways as part of future light-rail or Bus Rapid Transit corridors with exclusive right-of-way.
    b. Coordinate with Metropolitan Transit System (MTS) to increase bicycle carrying capacity on buses by installing bicycle racks that accommodate three bicycles on all new buses and whenever racks are replaced on existing buses.
    c. Coordinate with MTS to educate transit vehicle drivers about operating their vehicles in a manner that is safe and cooperative with bicyclists.
    d. Investigate potential for bicycle sharing stations/programs (see page 113) in medium/higher density areas (greater than 50 people/acre), especially to facilitate travel to and from transit stations.

6. Develop and implement public education programs promoting bicycling and bicycle safety. (Mobility Element, Policy ME-F.6)
    a. Increase public awareness of the benefits of bicycling and the availability of resources and facilities. (Mobility Element, Policy ME-F.6.a)
        i. Expand the Bicycle Program Website to include more information about educational material, maps, schedules of upcoming events, and other bicycling-related information.
        ii. Collaborate with local advocacy and community groups to disseminate bicycle-related information to the public.
    b. Increase government and public recognition of bicyclists' right to use public roadways. (Mobility Element, Policy ME-F.6.b)
    c. Engage in a public education campaign to increase drivers' awareness of pedestrians and bicyclists, and to encourage more courteous driving. (Mobility Element, Policy ME-A.3)
        i. Seek funds for public awareness campaign.
        ii. Develop Public Service Announcements (PSA's) for distribution through print, audio, and video media.
        iii. Educate professional drivers on bicyclist's rights and safe vehicle behavior around bicyclists.
    d. Work with schools and local community groups to seek funds for safe routes to schools programs. Promote "Walking School Bus" efforts where parents or other responsible adults share the responsibility of escorting children to and from school by foot or bicycle. (Mobility Element, Policy ME-A.2.b).

7. Increase government enforcement of bicyclists' equal right to use public roadways.
    a. Periodically provide bicycle education to City staff involved in decisions regarding bicycle facilities to include traffic engineers, planners, field engineers, field inspectors, street maintenance personnel, and parks and recreation staff.
    b. Periodically provide bicycle education for law enforcement personnel and increase enforcement of traffic violations by motorists and bicyclists.
    c. Implement a program that offers bicycle safety training as an alternative to regular traffic school for motorists and bicyclists cited for traffic violations.
    d. Reinstate the bicycle registration program to deter bicycle theft.

8. Identify the general location and extent of streets, sidewalks, trails, and other transportation facilities and services needed to enhance mobility in community plans. (Mobility Element Policy ME-C.1)
    a. Identify streets or street segments, if any, where higher levels of vehicle congestion are acceptable in order to achieve vibrant community centers, increase transit-orientation, preserve or create streetscape character, or support other community-specific objectives (Mobility Element, Policy ME-C.1.d).

9. Design an interconnected street network within and between communities, which includes pedestrian and bicycle access, while minimizing landform and community character impacts. (Mobility Element, Policy ME-C.3)
    a. Identify locations where the connectivity of the street network could be improved through the community plan update and amendment process, the Regional Transportation Plan update process, and through discretionary project review (see also Urban Design Element, Policy UD-B.5). (Mobility Element, Policy ME-C.3.a)
    b. Ensure that bikeway design includes the latest standards including *AASHTO Guide for the Development of Bicycle Facilities*, the *Manual on Uniform Control Devices (MUTCD)*, and *Caltrans Highway Design Manual, Chapter 1000* and the *City of San Diego Street Design Manual*. However, certain areas may require experimental or other proven non-standard treatments. These treatments should be considered for implementation where feasible.
    c. Use local and collector streets to form a network of connections to disperse traffic and give people a choice of routes to neighborhood destinations such as schools, parks, and village centers. This network should also be designed to control traffic volumes and speeds through residential neighborhoods. (Mobility Element, Policy ME-C.3.b)
        i. In newly developing areas or in large-scale redevelopment/infill projects, strive for blocks along local and collector streets to have a maximum perimeter of 1,800 feet. (Mobility Element, Policy ME-C.3.b)
        ii. When designing modifications/improvements to an existing street system, enhance street or pedestrian connections where possible. (Mobility Element, Policy ME-C.3.b)
        iii. Ensure that traffic calming efforts are carried out in coordination with the Bicycle Master Plan and will not preclude bicycle access or negatively affect the ability of bicyclists to proceed through an area targeted by traffic calming.

d. Provide direct and multiple street and sidewalk connections within development projects, to neighboring projects, and to the community-at-large. (Mobility Element, Policy ME-C.3.c)
e. Where possible, design or redesign the street network, so that wide arterial streets do not form barriers to pedestrian traffic and community cohesiveness. (Mobility Element, Policy ME-C.3.d)
f. Support connections to regional multi-use trails such as the Bayshore Bikeway, the Coastal Rail Trail, and the San Diego River Trail.

10. Improve operations and maintenance on city streets and sidewalks. (Mobility Element, Policy ME-C.4)
    a. Regularly optimize traffic signal timing and coordination to improve circulation. Implement new signal and intersection technologies that improve pedestrian, bicycle, and vehicular safety while improving overall circulation. (Mobility Element, Policy ME-C.4.a)
    b. Adequately maintain the transportation system through regular preventative maintenance and repair, and life cycle replacement. (Mobility Element, Policy ME-C.4.b)
        i. Undertake routine maintenance of bikeway facilities, such as sweeping streets, bike lanes and paths. This will include paint and striping, signage, pavement surface maintenance, tree trimming, and other facets of maintaining the operational integrity of the bikeway network.
        ii. Establish an online program to encourage and empower citizens to report maintenance issues that impact bicyclist safety, track maintenance requests, and add them to scheduled maintenance activities.
    c. Encourage community participation in planning, assessing, and prioritizing the life cycle management of the circulation system. (Mobility Element, Policy ME-C.4.c)
    d. When new streets and sidewalks are built and as existing streets and sidewalks are modified, design, construct, operate, and maintain them to accommodate and balance service to all users/modes, including walking, bicycling, transit, high occupancy vehicles (HOVs), autos, trucks, automated waste and recycling collection vehicles, and emergency vehicles. (Mobility Element, Policy ME-C.4.d).

11. Implement best practices for multi-modal quality/level of service analysis guidelines to evaluate potential transportation improvements from a multi-modal perspective in order to determine optimal improvements that balance the needs of all users of the right of way (Mobility Element, Policy ME-c.9).

12. Require new development to have site designs and on-site amenities that support alternative modes of transportation. Emphasize pedestrian and bicycle-friendly design, accessibility to transit, and provision of amenities that are supportive and conducive to implementing TDM strategies such as car sharing vehicles and parking spaces, bike lockers, preferred rideshare parking, showers and lockers, on-site food service, and child care, where appropriate. (Mobility Element, Policy ME-E.6)

13. Implement innovative and up-to-date parking regulations that address the vehicular and bicycle parking needs generated by development. (Mobility Element, Policy ME-G.2)
    a. Adjust parking rates for development projects to consider access to existing and funded transit with a base mid-day service frequency of ten to fifteen minutes, affordable housing

parking needs, shared parking opportunities for mixed-use development, provision of on-site car sharing vehicles and parking spaces and implementation of TDM plans. (Mobility Element, Policy ME-G.2.a)

b. Strive to reduce the amount of land devoted to parking through measures such as parking structures, shared parking, mixed-use developments, and managed public parking (see also ME-G.3), while still providing appropriate levels of parking. (Mobility Element, Policy ME-G.2.b)

14. Work with SANDAG to increase the share of regional funding (over the 2030 RTP levels) allocated to pedestrian, bicycle, and transportation systems management projects. (Mobility Element, Policy ME-K.3).

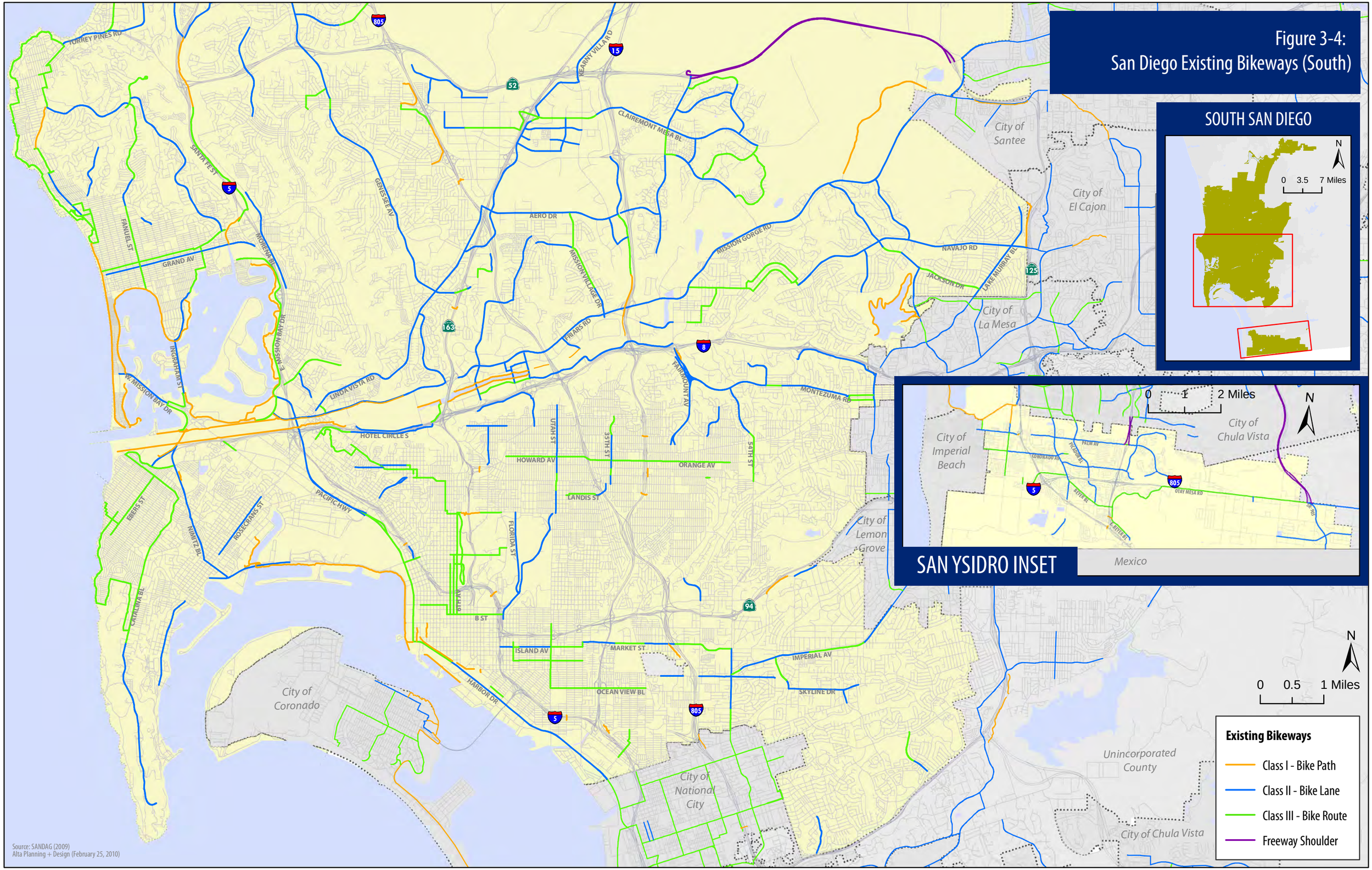


Figure 3-4:
San Diego Existing Bikeways (South)
SOUTH SAN DIEGO
N
0 3.5 7 Miles
SAN YSIDRO INSET
0 1 2 Miles
N
0 0.5 1 Miles
Existing Bikeways
Class I - Bike Path
Class II - Bike Lane
Class III - Bike Route
Freeway Shoulder
City of Santee
City of El Cajon
City of La Mesa
City of Imperial Beach
City of Chula Vista
City of Lemon Grove
City of Coronado
City of National City
Unincorporated County
Mexico
TORREY PINES RD
SANTA FE ST
FANUEL ST
GRAND AV
MOREMA BL
MISSION BAY DR
INGRAHAM ST
W. MISSION BAY DR
LINDA VISTA RD
HOTEL CIRCLE S
PACIFIC HWY
EGERS ST
NIMITZ BL
ROSECRANS ST
CATALINA BL
GENESSEE AV
KEARNY VILLA RD
CLAIREMONT MESA BL
AERO DR
MISSION VILLAGE DR
FRIARS RD
MISSION GORGE RD
FARMOUNT AV
MONTEZUMA RD
NAVAJO RD
JACKSON DR
LAKE MURRAY BL
UTAH ST
35TH ST
54TH ST
HOWARD AV
ORANGE AV
LANDIS ST
FLORIDA ST
6TH AV
B ST
ISLAND AV
MARKET ST
OCEAN VIEW BL
HARBOR DR
IMPERIAL AV
SKYLINE DR
PALM AV
CORONADO AV
PALM ST
OTAY MESA RD
BLUE BL
E. BLUE BL
805
15
52
5
163
8
125
94
Source: SANDAG (2009)
Alta Planning + Design (February 25, 2010)

Bicyclists are permitted to ride on freeway shoulders along five sections of the freeway system within San Diego, specifically:

- I-5 between Sorrento Valley Road and Genesee Avenue
- I-15 between Via Rancho Parkway in Escondido and West Bernardo Drive/Pomerado Road
- SR-52 between Santo Road and Mast Boulevard in Santee
- I-805 between Palm Avenue and Main Street in Chula Vista
- SR-125 between Birch Road in Chula Vista and Otay Mesa Road

These freeway bikeway links are in areas where there is no viable alternative for bicycle travel. There is no signage along city streets informing bicyclists of the availability of the freeway route.

Table 3-4 shows some of the bikeway projects that either have been completed since the adoption of the city's 2002 Bicycle Master Plan or are currently in planning or design phases.

Table 3-4: List of Existing On-Going Bikeway Projects

Street/Path	From	To	Class	Approximate Mileage	Current Status
San Diego River Path	Qualcomm Way	Qualcomm Stadium	1	1.0	Planning/Design
San Diego River Path	Qualcomm Stadium	Zion Avenue	1	2.0	Planning/Design
San Diego River Path	Zion Avenue	Princes View Drive	1	2.0	Planning/Design
Jamacha Bike Path	Jamacha Road and Meadowbrook Drive	Woodman Street and Imperial Avenue	1	1.0	Planning/Design
Coastal Rail Trail	Downtown San Diego	Del Mar	1	20.0	Planning/Design
SR- 56	SR- 56 Eastern termini	SR-56 Western termini	1	9.6	Planning/Design
Jacob Dekema Freeway	Governor Drive	Convoy Street	1	3.0	Planning/Design
Interstate 15	Camino del Rio	Landis St	1	2.0	Planning/Design
San Diego River Path	Ocean Beach	Hotel Circle Bike Path	1	3.5	Completed
Lake Hodges Bridge Crossing	Lake Hodges Path	West Bernardo Dr	1	0.2	Completed
SR- 56	Rancho Penasquitos Blvd	I -5	1	9.0	Completed
Bayshore Bikeway	Otay Mesa	Imperial Beach	1	2.5	Completed
Island Avenue	I-5	28th Street	2	0.8	Completed
35th Street	Adams Avenue	Wightman Street	2	1.0	Completed
Utah Street	Collier Avenue	Upas Street	2	1.6	Completed
Beyer Boulevard	Smythe Avenue	Otay Mesa Road	2	0.6	Completed
Barnett Avenue	Pacific Hwy and Enterprise Street	Pacific Hwy and Barnett Ave	2	0.25	Completed

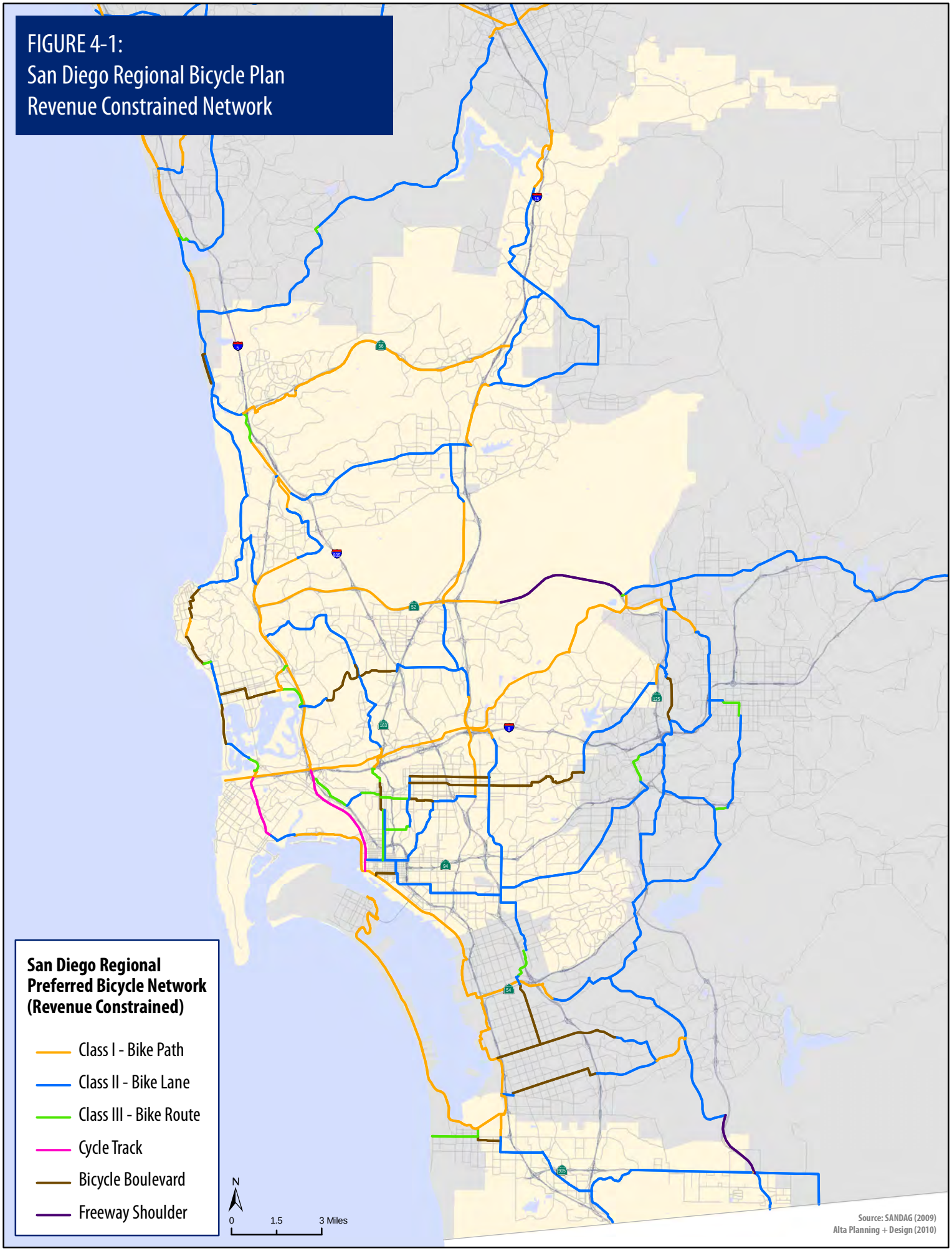


FIGURE 4-1:
San Diego Regional Bicycle Plan
Revenue Constrained Network
San Diego Regional
Preferred Bicycle Network
(Revenue Constrained)
Class I - Bike Path
Class II - Bike Lane
Class III - Bike Route
Cycle Track
Bicycle Boulevard
Freeway Shoulder
N
0
1.5
3 Miles
Source: SANDAG (2009)
Alta Planning + Design (2010)

4.5 Community Plans

The city of San Diego is comprised of a number of communities that stretch from the coast to inland hills and mesas. These communities have different physical, community, and design characteristics that define one community from another.

The following is a short summary of the goals for each community plan as they relate to bicycle facilities and a description of the proposed bicycle facilities at the time the community plan was adopted. Development of a system of bicycle facilities within this Plan considers community goals, future bicycle facilities for each community, and a regional network that provides continuity and connectivity. The Bicycle Master Plan is a companion item to the City of San Diego General Plan and provides goals and policies for establishing a network. Where community plans provide site specific guidance related to bikeway paths and facilities, the community plan takes precedence. In cases where site specific guidance is absent in a community plan, the Bike Master Plan will take precedence so long as proposed improvements are not inconsistent with the goals and policies of the community plan.

Many of the community plans are dated and some of the facilities mentioned in these plans have been installed since the plans were adopted. **Table 4.1** lists the Community Plans and the year of adoption or most recent revision.

Table 4-1: San Diego Community Plans

Community Plan	Adoption Year of Current Plans	Notes
Barrio Logan Community Plan	1978	Undergoing update
Black Mountain Ranch Subarea Plan	1998	
Carmel Mountain Ranch Community Plan	1984	Minor revisions in 1995
Carmel Valley Community Plan	1975	Specific Plans added in 1997
Centre City/Downtown Community Plan	2006	
Clairemont Mesa Community Plan	1989	
College Area Community Plan	1989	
Del Mar Mesa Specific Plan	2000	
East Elliot	2002	
Fairbanks Ranch Country Club Specific Plan	1982	
Greater Golden Hill Community Plan	1990	
Greater North Park Community Plan	1986	Undergoing update
Kearny Mesa Community Plan	2002	
La Jolla Community Plan	2004	
Linda Vista Community Plan	1998	
Midway/Pacific Highway Corridor Community Plan	1991	Undergoing update
Mid-City Communities Plan (City Heights, Eastern Areas)	1998	
Miramar Ranch North	1980	
Mira Mesa Community Plan	1992	Last amended in 2001

Community Plan	Adoption Year of Current Plans	Notes
Mission Beach Precise Plan	1974	Amended in 1982
Mission Valley Community Plan	1984	Update to begin in 2013
Navajo Community Plan	1982	
Normal Heights	1998	
Ocean Beach Local Coastal Program	1991, NA	Undergoing update
Old Town San Diego Community Plan	1987	Undergoing update
Otay Mesa	1981	Undergoing update
Otay Mesa-Nestor Community Plan	1997	
Pacific Beach Community Plan and Local Coastal Program Land Use Plan	1995	
Pacific Highlands Ranch	1998	
Peninsula Community Plan and Local Coastal Program Land Use Plan	1981	Last amended in 1999
Rancho Bernardo Community Plan	1988	
Rancho Encantada	2001	
Rancho Penasquitos Community Plan	1993	
Sabre Springs Community Plan	1982	
San Pasqual Valley Plan	1995	
San Ysidro Community Plan	2000	Undergoing update
Scripps Miramar Ranch Community Plan	1978	
Serra Mesa Community Plan	1977	Last amended in 2000
Skyline-Paradise Hills Community Plan	1987	
Southeast San Diego Community Plan (Encanto)	1987	Undergoing update
Tierrasanta Community Plan	1982	
Tijuana River Valley	1976	
Torrey Highlands	1996	
Torrey Hills	1997	
Torrey Pines	1995	
University Community Plan	1990	
Uptown Community Plan	1988	Undergoing update
Via de la Valle	1984	

Source: City of San Diego Bicycle Master Plan Update 2011

4.5.1 Barrio Logan Community Plan

The Barrio Logan Community Plan update is nearing completion, with public hearings scheduled in mid-2013. The Community Plan includes bicycling related policies to implement the San Diego Bicycle Master Plan and provide secure and accessible bicycle parking at transit location. The Barrio Logan proposed bicycle network presented in the Plan is consistent with the proposed facilities presented in the San Diego Bicycle Master Plan update 2013.

4.5.17 Mira Mesa Community Plan

The Mira Mesa Community Plan identifies a system of bikeways and standards. Class II Bike Lanes are recommended along major roadways including Carroll Canyon Road, Carroll Road, Miramar Road, Mira Mesa Boulevard, Sorrento Valley Road, Black Mountain Road, Camino Ruiz, and Camino Sante Fe. Most of these facilities have been constructed since this community plan was adopted. Also since that time, the City has planned to close gaps in the Mira Mesa Boulevard Class II facility through the community.

4.5.18 Mission Beach Precise Plan

Due to traffic congestion and lack of adequate parking, biking is a convenient form of transportation in this area. Bicycle activity primarily occurs along a 2-mile stretch along the beach known as the Ocean Front Walk. The Bayside Walk is also a popular multi-use pathway along the shores of Mission Bay. The Plan recommends widening both Ocean Front Walk and the Bayside Walk in order to accommodate the demand for these frequently used multi-use pathways. The Ocean Front Walk has been widened; however, the Bayside Walk has not been widened. The plan also recommends Bike Routes extending the entire length of the community.

4.5.19 Mission Valley Community Plan

An objective of the plan is to "create an intra-community bikeway system which would provide access to the various land use developments within the Mission Valley and connect to the regional system" and to "encourage bicycle use in the Valley." The plan identifies a bicycle system that utilizes major roadways and offers Class I paths where they can be accommodated. The key components of the bikeway system include connections to Mission Bay, activity centers within Mission Valley, and Mission Hills. The plan recommends support bicycle facilities including installing bicycle sensitive signal detectors at signalized intersections, requiring development fees to improve bicycle facilities, and providing lockers, showers, and changing facilities at major developments in order to encourage bicycling as a convenient mode of transportation.

Since this community plan was adopted, Mission Valley has had an extensive system of Class I Bike Paths developed. Class I facilities now exist on both sides of the San Diego River. Plans are to close gaps in the existing network and extend it easterly into the Navajo community to connect to Mission Trails Regional Park and eventually to the Santee city limit. The City of San Diego plans to eliminate at-grade crossings at major intersections with bridges.

4.5.20 Navajo Community Plan

At the time of its adoption, this community plan identified existing Class II Bike Lanes along Navajo Road and Lake Murray Boulevard. Proposed bicycle facilities include:

- Regional Class I Bike Path from the beach through Mission Valley to Mission Trails Regional Park along the San Diego River (incomplete)
- A 2.0-mile Bike Route along Del Cerro Boulevard.
- A 2.0-mile Bike Route connecting the Allied Gardens Bike Route and the proposed San Diego River route in the vicinity of Zion Avenue (Bike Route exists along Zion Avenue)
- An extension of the Jackson Drive route connecting to the San Carlos Community Center.

Since the time of the adoption of this community plan, three bikeway facilities have been developed, including Class II lanes on Mission Gorge Road and Jackson Drive.

Bicyclists are permitted to ride on freeway shoulders along five sections of the freeway system within San Diego, specifically:

- I-5 between Sorrento Valley Road and Genesee Avenue
- I-15 between Via Rancho Parkway in Escondido and West Bernardo Drive/Pomerado Road
- SR-52 between Santo Road and Mast Boulevard in Santee
- I-805 between Palm Avenue and Main Street in Chula Vista
- SR-125 between Birch Road in Chula Vista and Otay Mesa Road

These freeway bikeway links are in areas where there is no viable alternative for bicycle travel. There is no signage along city streets informing bicyclists of the availability of the freeway route.

Table 3-4 shows some of the bikeway projects that either have been completed since the adoption of the city's 2002 Bicycle Master Plan or are currently in planning or design phases.

Table 3-4: List of Existing On-Going Bikeway Projects

Street/Path	From	To	Class	Approximate Mileage	Current Status
San Diego River Path	Qualcomm Way	Qualcomm Stadium	1	1.0	Planning/Design
San Diego River Path	Qualcomm Stadium	Zion Avenue	1	2.0	Planning/Design
San Diego River Path	Zion Avenue	Princes View Drive	1	2.0	Planning/Design
Jamacha Bike Path	Jamacha Road and Meadowbrook Drive	Woodman Street and Imperial Avenue	1	1.0	Planning/Design
Coastal Rail Trail	Downtown San Diego	Del Mar	1	20.0	Planning/Design
SR- 56	SR- 56 Eastern termini	SR-56 Western termini	1	9.6	Planning/Design
Jacob Dekema Freeway	Governor Drive	Convoy Street	1	3.0	Planning/Design
Interstate 15	Camino del Rio	Landis St	1	2.0	Planning/Design
San Diego River Path	Ocean Beach	Hotel Circle Bike Path	1	3.5	Completed
Lake Hodges Bridge Crossing	Lake Hodges Path	West Bernardo Dr	1	0.2	Completed
SR- 56	Rancho Penasquitos Blvd	I -5	1	9.0	Completed
Bayshore Bikeway	Otay Mesa	Imperial Beach	1	2.5	Completed
Island Avenue	I-5	28th Street	2	0.8	Completed
35th Street	Adams Avenue	Wightman Street	2	1.0	Completed
Utah Street	Collier Avenue	Upas Street	2	1.6	Completed
Beyer Boulevard	Smythe Avenue	Otay Mesa Road	2	0.6	Completed
Barnett Avenue	Pacific Hwy and Enterprise Street	Pacific Hwy and Barnett Ave	2	0.25	Completed

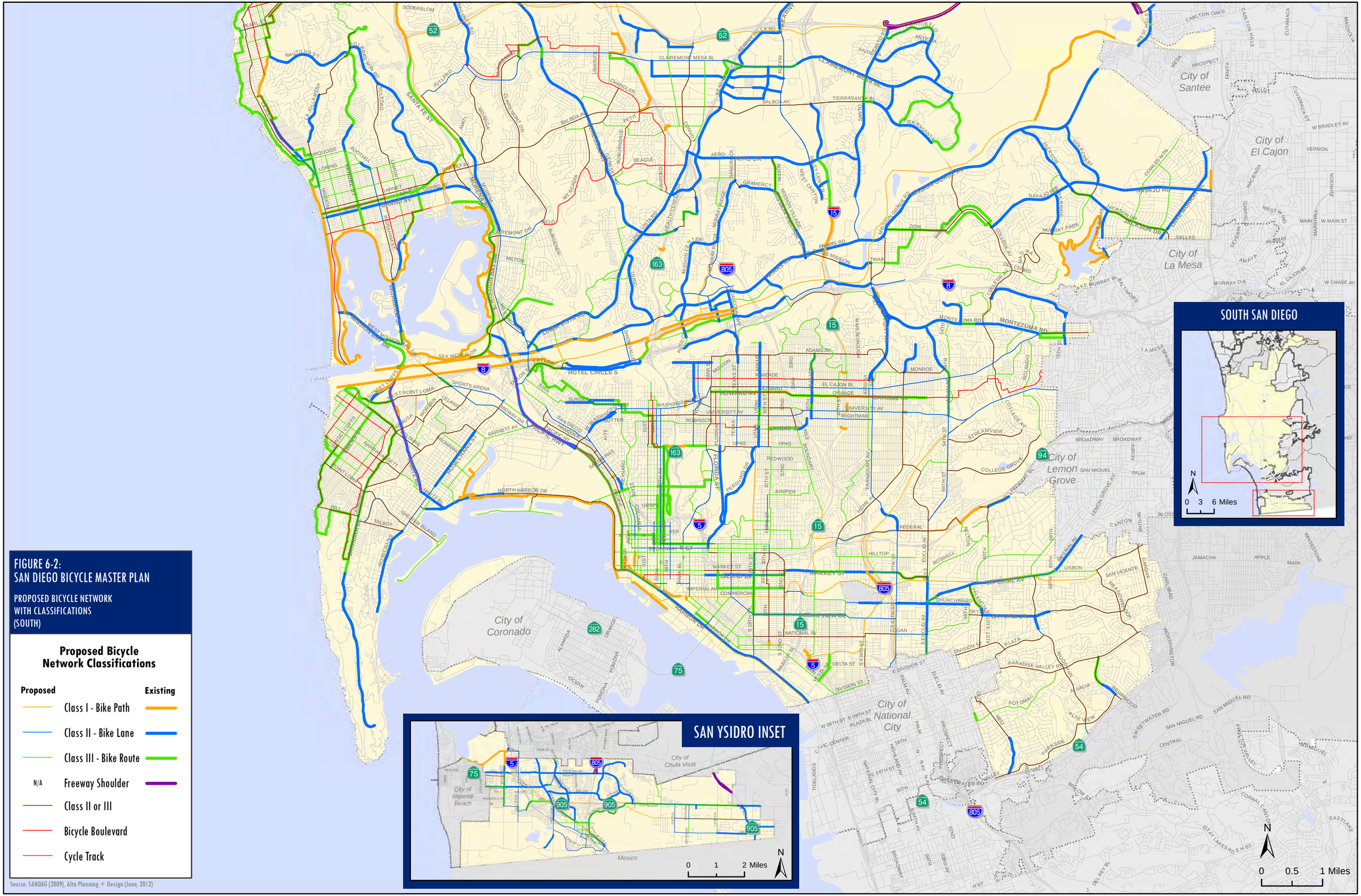


FIGURE 6-2:
SAN DIEGO BICYCLE MASTER PLAN

PROPOSED BICYCLE NETWORK
WITH CLASSIFICATIONS
(SOUTH)

Source: SANDAG (2009), Alta Planning + Design (June, 2012)

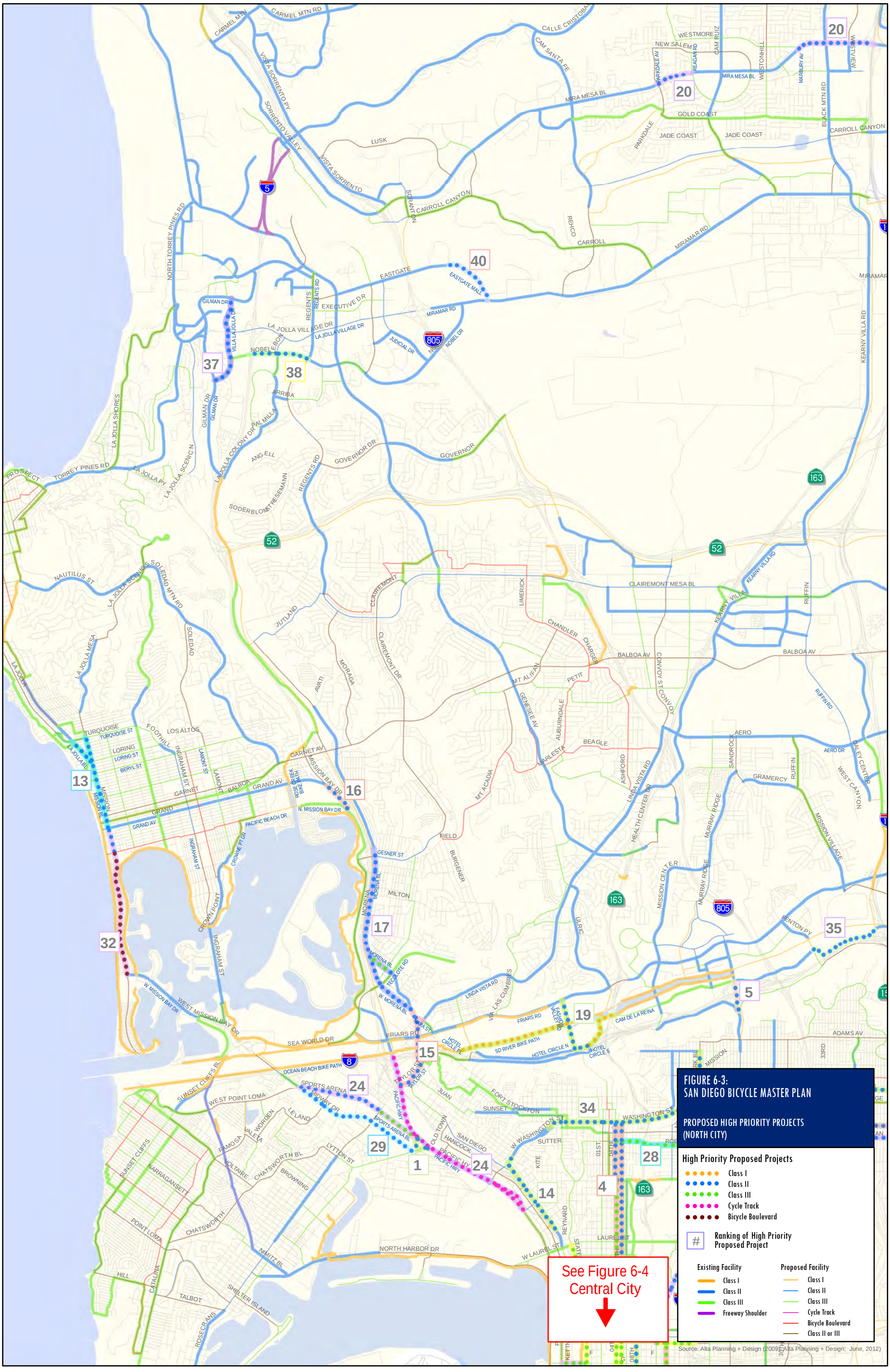


FIGURE 6-3:
SAN DIEGO BICYCLE MASTER PLAN
PROPOSED HIGH PRIORITY PROJECTS
(NORTH CITY)
High Priority Proposed Projects
Class I
Class II
Class III
Cycle Track
Bicycle Boulevard
Ranking of High Priority Proposed Project
Existing Facility
Class I
Class II
Class III
Freeway Shoulder
Proposed Facility
Class I
Class II
Class III
Cycle Track
Bicycle Boulevard
Class II or III
See Figure 6-4
Central City
Source: Alta Planning + Design (2009); Alta Planning + Design; June, 2012)

Table 6-4 defines the high priority projects' extents, proposed facility type(s), and project mileage. Each of these high priority projects are also displayed on an individual project sheet that includes a description of the project area and issues; a listing of recommended improvements; a planning-level cost estimate; and an overview map of the project area with existing and proposed bicycle facilities. **Chapter 8** presents the high priority bicycle project sheets.

In regards to the prioritization process, it should be noted that the purpose of the ranking process is to create a recommended prioritized list of projects for implementation. The project list and ranking are flexible concepts based on needs analysis and ease of implementation that serve as guidelines. The list may change over time due to changing bicycle patterns, implementation opportunities and constraints, and the development of other transportation system facilities.

Table 6-4: High Priority Bicycle Projects

Location	From	To	Proposed Facility	Segment Miles	Project Miles
Pacific Hwy and Barnett Ave	Enterprise Rd	Barnet Ave	Class II; spot treatments	.0.26	0.26
Broadway	Park Blvd	19th Street	Class III	0.41	0.41
Ash Street	N. Harbor Dr	Kettner Blvd	Class III	0.23	0.23
4th Ave	Washington Street	Elm Street	Class II; Class III	1.41	3.1
5th Ave	Washington Street	Elm Street	Class II	1.69	
Texas Street/Qualcomm Way	Camino del Rio North	Camino del Rio South	Class II; spot treatments	0.69	0.69
G Street	Harbor Drive	State Street	Class III	0.27	1.71
State Street	G Street	Market Street	Class III	0.08	
Market Street	Harbor Drive	Union Street	Class III	0.16	
Union Street	Market Street	Island Avenue	Class III	0.07	
Front Street	Island Avenue	Harbor Drive	Bicycle Boulevard	0.08	
Island Avenue	Front Street	I-5	Bicycle Boulevard	1.05	
Park Blvd	Upas Street	Broadway	Class II; Class III	1.88	1.88
54th Street	Montezuma Rd	El Cajon Blvd	Class II; Class III	0.96	1.05
Collowood Boulevard	Monroe Avenue	54th Street	Class II	0.09	
14th Street	C Street	Commercial Street	Class II/Class III	0.79	1.53
National Ave	Commercial Street	Cesar E. Chavez Pkwy	Class III	0.52	
Cesar E. Chavez Pkwy	National Ave	Harbor Drive	Class II	0.22	
El Cajon Blvd	43rd Street	Montezuma Rd	Class II	2.88	2.88
El Cajon Blvd	Utah Street	43rd Street	Class II	1.73	1.86
43rd Street	Meade Avenue	El Cajon Boulevard	Class III	0.13	
4th Ave	Elm Street	Island Ave	Class III	0.93	2.11
5th Ave	Elm Street	Harbor Dr	Class II/Class III	1.18	
Mission Blvd	Turquoise Street	Grand Ave	Class II	1.01	1.01
India Street	Washington Street	Olive Street	Class II	0.87	0.98
Washington Street	India Street	0.1miles east of India Street	Class II	0.11	
Morena Blvd	W. Morena Blvd	Taylor Street	Class II	1.06	1.47
Napa Street (spur)	Morena Blvd	Linda Vista Rode	Class II	0.09	
Taylor Street	Morena Blvd	Pacific Hwy	Class II	0.32	

Location	From	To	Proposed Facility	Segment Miles	Project Miles
E. Mission Bay Dr	Interstate 5	Grand Ave	Class II	1.24	1.24
Morena Blvd	Gesner Street	W. Morena Blvd (S)	Class II	2.44	2.44
State Street	Columbia Street	Market Street	Class III	1.31	1.31
Fashion Valley Road	Friars Road	Hotel Circle N.	Class II	0.55	2.54
Hotel Circle N.	Fashion Valley Road	Hotel Circle S.	Class II	0.3	
San Diego River Bike Path	Hotel Circle Place	Fashion Valley Road	Class I	1.21	
Camino de la Reina	Hotel Circle South	S. San Diego River Bike Path	Class I	0.48	
Mira Mesa Blvd	Parkdale Rd	Interstate 15	Class II (gap closures)	1.13	1.13
Bayshore Bikeway	Embarcadero Path	National City City limits	Class I	3.24	3.24
University Avenue	Utah Street	Fairmount Ave	Class II	1.8	1.8
Fairmount Ave and Montezuma Rd	Camino del Rio South	Talmadge Canyon Row	Class II; spot treatments	2.2	2.2
Pacific Hwy	Ocean Beach Bike Path	Sassafras Street	Cycle Track	2.36	2.36
University Avenue	Florida Street	Utah Street	Class II	0.65	0.65
8th Ave	Date Street	J Street	Class II	0.94	0.94
University Avenue	Fairmount Ave	La Mesa City limit	Class II	2.13	2.13
Robinson Ave	4th Street	Alabama Street	Class III; Class I	1.23	1.97
Landis Street	Alabama Street	30th Street	Bike Blvd	0.74	
Midway Dr	W. Point Loma Bl	Barnett Ave	Class II	1.42	1.42
Wightman Street	Swift Avenue	Fairmount Ave	Class II	1.07	1.07
Hollister Street	Main Street	Coronado Av	Class II	1.36	1.63
Outer Road	Hollister Street	Coronado Av	Class II	0.27	
Mission Blvd	Grand Ave	W. Mission Bay Dr	Class II/Bike Blvd	1.59	1.59
30th Street	Upas Street	B Street	Class III	1.54	4.47
Fern Street	Juniper Street	B Street	Class II	0.68	
Upas Street	28th Street	30th Street	Class III	2.25	
Washington Street	University Avenue	Normal Street	Class II	2.01	2.59
Normal Street	Washington Street	El Cajon Blvd	Class II	0.19	
Park Boulevard	El Cajon Blvd	Madison Av	Class III	0.39	
Camino del Rio North	Mission City Pkwy	Interstate 15	Class II	1.29	1.29
25th Street	Market Street	Commercial Street	Class II	0.44	1.89
Ocean View Blvd	Commercial Street	36th Street	Class II	1.45	
Villa La Jolla Dr	Gilman Dr (N)	Gilman Dr (S)	Class II	0.97	0.97
Nobel Dr	Interstate 5	Regents Rd	Class II	0.67	0.67
W. San Ysidro Blvd	Dairy Mart Rd	Southern terminus of San Ysidro Blvd	Class II	2.2	2.2
Eastgate Mall	Olson Dr	Miramar Road	Class II	0.61	0.61
				Total Miles	**65.52**

Source: Alta Planning + Design, April 2011

Table 8-2: High Priority Project Cost Estimates

ID	Project Description	Cost
1	Pacific Highway and Barnett Avenue	N/A
2	Broadway: Park Boulevard to 19th Street	$43,682
3	West Ash Street: North Harbor Dr to Kettner Blvd; Ash Street: 3rd Av to 8th Av; and A Street: India St to 8th Av	$38,163
4	4th Avenue: Washington Street to Juniper Street; and 5th Avenue: Washington Street to Elm Street	$ 334,688
5	Texas Street/ Qualcomm Way: Camino Del Rio N to Camino Del Rio S	$3,417,851
6	Marina District to East Village – Along G Street, Market Street, and Island Avenue	$104,508
7	Park Boulevard: Upas Street to Broadway	$2,693,933
8	54th Street: Montezuma Road to El Cajon Boulevard; and Collwood Boulevard: Monroe Avenue to 54th Street	$46,965
9	14th Street: C St to Commercial St; National Avenue: Commercial St to Cesar E. Chavez Pkwy; and Cesar E. Chavez Parkway: National Av to Harbor Dr	$91,411
10	El Cajon Boulevard: 43rd Street to Montezuma Road	$476,772
11	El Cajon Boulevard: Utah Street to 43rd Street; and 43rd Street: Meade Avenue to El Cajon Boulevard	$482,790
12	4th Avenue: B Street to Island Avenue; and 5th Avenue: Elm Street to Harbor Drive	$59,182
13	Mission Boulevard: Turquoise Street to Grand Avenue	$210,851
14	India Street: Washington Street to Olive Street	$195,051
15	Morena Boulevard: W. Morena Boulevard to Taylor Street, and Taylor Street: Morena Boulevard to Pacific Highway	$957,755
16	Mission Bay Drive: Grand Avenue to North Mission Bay Drive via Onramp to Southbound Interstate 5	$218,999
17	Morena Boulevard: Gesner Street to Tecolote Road; West Morena Boulevard: Morena Boulevard to Linda Vista	$516,843
18	State Street: Columbia Street to Market Street	$37,576
19	Mission Valley San Diego River Bike Path and Fashion Valley Road: Friars Road to Hotel Circle South	$3,780,799
20	Mira Mesa Boulevard: Parkdale Avenue to Reagan Road; and Mira Mesa Boulevard: Marbury Avenue to I-15	$1,053,811
21	Bayshore Bikeway: Embarcadero Path to National City city limits	$2,178,239
22	University Avenue: Utah Street to Fairmont Avenue	$465,183
23	Fairmount Avenue and Montezuma Avenue intersection	$349,081
24	Pacific Highway: Ocean Beach Bike Path to Sassafras St	$5,890,372
25	University Avenue: Florida Street to Utah Street	$152,705
26	8th Avenue: Date Street to J Street	$83,147
27	University Avenue: Fairmont Avenue to La Mesa city limit	702,621
28	Robinson Avenue/Landis Street: 4th Avenue to 30th Street	$720,883
29	Midway Drive: West Point Loma Boulevard to Barnett Avenue	$4,104,796
30	Wightman Street: Swift Avenue to Fairmount Avenue	$257,638

ID	Project Description	Cost
31	Hollister Street: Main Street to Outer Road and Outer Road: Hollister Street to Coronado Avenue	$1,449,136
32	Mission Boulevard: Grand Avenue to West Mission Bay Drive	$400,366
33	Upas Street: 28th Street to 30th Street; 30th Street: Upas Street to B Street; and Fern Street: Juniper Street to Beech Street	$109,366
34	Washington Street: University Avenue to Normal Street; Normal Street: Washington Street to Park Boulevard; and Park Boulevard: El Cajon Boulevard to Madison Avenue	$1,254,908
35	Camino Del Rio N: Mission City Parkway to Interstate 15	$93,090
36	25th Street: Market Street to Commercial Street and Ocean View Boulevard: Commercial Street to 36th Street	$274,217
37	Villa La Jolla Drive: Gilman Drive (N) to Gilman Drive (S)	$925,089
38	Nobel Drive: Interstate 5 to Regents Road	$46,566
39	San Ysidro Boulevard: Dairy Mart Road to the southern terminus of San Ysidro Boulevard	$402,822
40	Eastgate Mall: Olson Drive to Miramar Road	$92,851
Total High Priority Project Costs		**$34,714,706**

Source: City of San Diego Bicycle Master Plan Update 2013

Project 5 – Texas Street/Qualcomm Way: Camino de la Reina/Camino Del Rio North to Camino Del Rio South

Project Description

This project serves bicycle demands in the communities of Mission Valley, University Heights, and North Park by providing Class II bicycle facilities along Texas Street/Qualcomm Way from Camino de la Reina/Camino Del Rio North to Camino Del Rio South. This high priority project is nearly a half mile long and connects the relatively dense residential neighborhoods of University Heights and North Park to key land uses in Mission Valley, such as major employment and shopping centers. This facility also provides a connection over the freeway between the existing Class II facilities on Qualcomm Way and Texas Street. This bike facility provides connections to local bus Routes 6 and 18.

In order to implement this project, it would be necessary to restripe the roadway along the project extent to provide the necessary space for Class II bike facilities in each direction*. Another proposed improvement is the realignment of highway I-8 access and exit ramps, so vehicles entering or exiting the Texas Street/Qualcomm Way corridor will need to stop and give priority to through traffic, including bicyclists. This improvement will also help reducing the traffic speed of vehicles accessing/exiting the highway and improve bicyclist safety. There are no anticipated parking impacts associated with this project.

Bicycling issues along this project corridor include high travel speeds above 40 mph, a difficult freeway bridge crossing over I-8, and high traffic volumes between 26,400 and 41,100 AADTs. This segment had fourteen reported bike crashes from 2002-2007.

This high priority project ranked 5th with an average weighted prioritization score of 34.6 points.

Proposed Improvements

▪ Remove traffic striping along Texas St to accommodate Class II bike facility	$20,400
▪ New Roadside signage along Texas St	$10,000
▪ Class II paint and traffic striping	$8,905
▪ Class II pavement markings	$16,000
▪ Install sidewalks and concrete curb along Texas St	$69,000
▪ Bicycle Loops Detector	$2,400
▪ Street lighting	$84,000
▪ Reconfiguration of highway ramps†	$1,271,476
▪ Other construction related costs	$1,935,670

Cost

$3,417,851

*No loss of travel lanes

† *This improvement is in Caltrans right-of-way and would need to be coordinated with Caltrans.*

Project 19 – Mission Valley San Diego River Bike Path and Fashion Valley Road: Friars Rd to Hotel Circle South

Project Description

This project serves intra-community bicycle demands in Mission Valley by providing Class I bicycle facilities along the San Diego River Bike Path from Hotel Circle Place to the western terminus of the Fashion Valley Bike Path (at Fashion Valley Road), Class II facilities along Fashion Valley Road from Friars Road to Hotel Circle North, along Hotel Circle North from Fashion Valley Road to Hotel Circle South, and by upgrading the existing Class III bicycle facilities to Class I facilities along Camino de la Reina from Hotel Circle North to the western terminus of the existing Class I South San Diego River Bike Path. This project also proposes closing a short gap in the existing Class II facility along Hotel Circle South near the intersection with Hotel Circle North. This high priority project is approximately two and a half miles long and provides a critical connection of the Class I South San Diego River Bike Path and the Fashion Valley Bike Path west to the Ocean Beach Bike Path. This project provides connections to local bus Routes 6, 14, 25, 41, and 928; express bus Routes 20 and 120; premium express Routes 810, 820, 850, and 860; and the Green Line trolley.

In order to implement this project it would be necessary to narrow the width of the existing travel lanes along Fashion Valley Boulevard, restripe Hotel Circle North to eliminate two way left turn lane and widened a section of Hotel Circle North near the intersections with I-8 and Camino de La Reina in order to provide the necessary space for Class II bike facilities. There are no anticipated parking impacts associated with this project.

Bicycling issues along this project corridor include traffic speeds of 25 mph along Camino de la Reina and 35 mph along Fashion Valley Road and Hotel Circle South, and traffic volumes from 9,100 to 18,700 AADTs along Camino de la Reina, approximately 13,300 AADTs along Fashion Valley Road, and from 17,000 to 23,400 AADTs along Hotel Circle North. This segment reports a total of two bicycle crashes from 2002 – 2007.

This high priority project ranked 19th with an average weighted prioritization score of 29.6 points.

Proposed Improvements

- Remove traffic striping along Fashion Valley Road to accommodate Class II bike facilities — $27,000
- Roadside signage on post — $6,250
- Install asphalt pavement — 1,551,300
- Class II & I and traffic striping — $19,580
- Class II pavement markings — $12,000
- Street lighting — $280,000
- Bicycle loop detector — 4,800
- Other construction related costs — $1,879,869

Cost

$3,780,799

Project 35 – Camino Del Rio North: Mission City Parkway to Interstate 15

Project Description

This project serves the intra-community bicycle demands of the Mission Valley community by providing Class II bicycle facilities and closing a gap along Camino Del Rio North from Mission City Parkway to Interstate 15 (0.4 miles west of Ward Road). This high priority project is over one half mile long and connects existing Class II bicycle paths along Camino Del Rio North to the east and west of the project. It also provides connections between key land uses including major employment, shopping centers, and Qualcomm Stadium. This project provides access to local bus Route 18.

In order to implement this project, it would be necessary to restripe Camino del Rio North throughout the entire project extent for one lane in each direction with Class II bike lanes in each direction. There are no anticipated parking impacts associated with this project.

Posted traffic speeds along this corridor are 35 mph and traffic volumes are 10,200 ADTs. There were no reported bike crashes from 2002-2007.

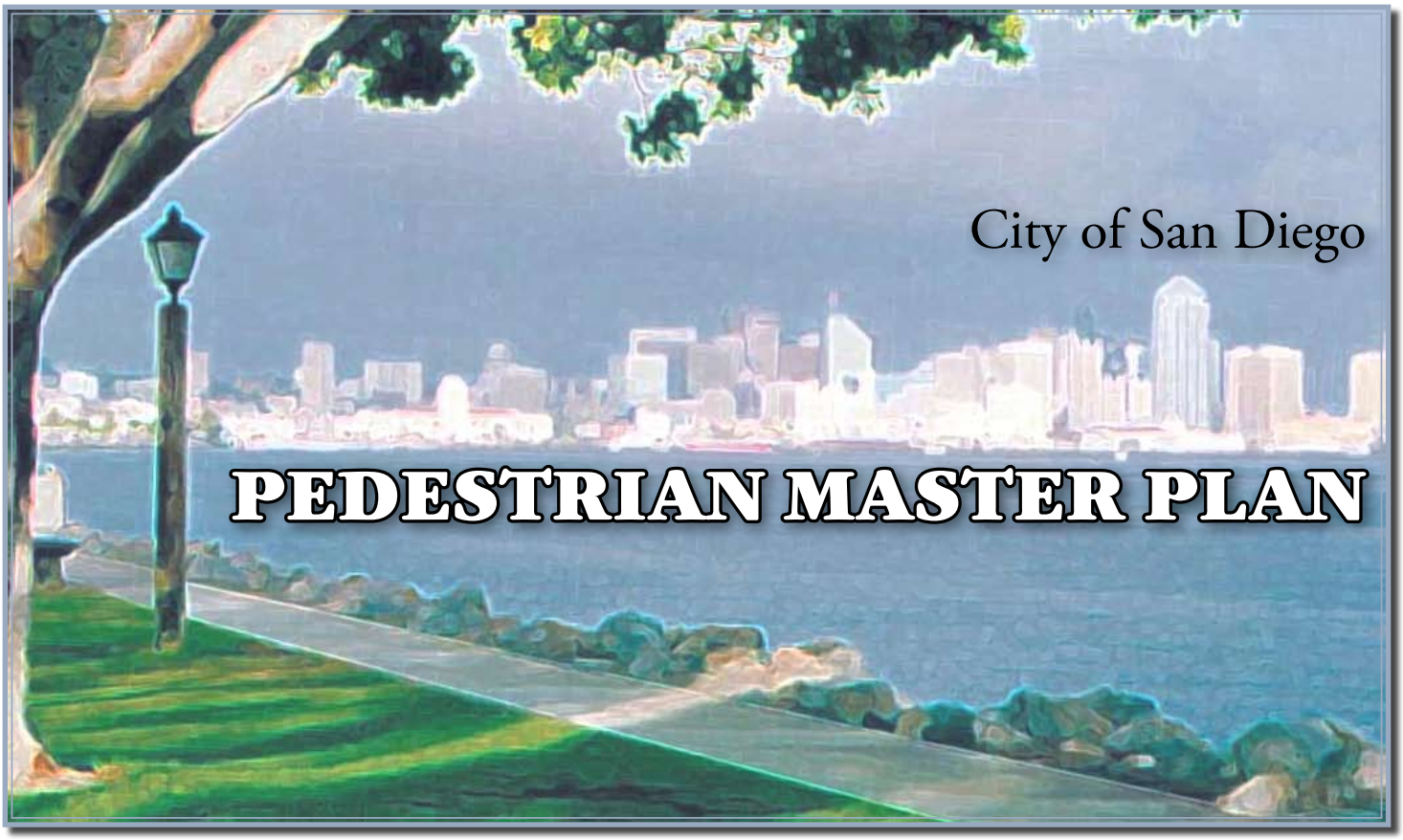
This high priority project ranked 35th with an average weighted prioritization score of 25.4 points.

Proposed Improvements

- Remove traffic striping to accommodate Class II bike facilities $20,406
- Roadside signage on post $9,000
- Class II paint and traffic striping $6,632
- Class II pavement markings $3,000
- Bicycle loop detectors $600
- Other construction related costs $53,452

Cost

$93,090



CITY-WIDE IMPLEMENTATION FRAMEWORK REPORT

December 2006

THE CITY OF SAN DIEGO

Executive Summary

1 Introduction

The City of San Diego has developed this Pedestrian Master Plan **(PMP)** to guide the way the City plans and implements new or enhanced pedestrian projects. This PMP will help the City enhance neighborhood quality and mobility options by facilitating pedestrian improvement projects. The Plan identifies and prioritizes pedestrian projects based on technical analysis and community input, and improves the City's ability to receive grant funding for implementing these projects. The Project Working Group and the consultant team prepared an overall vision statement for the PMP:

> ***"To create a safe, accessible, connected and walkable pedestrian environment that enhances neighborhood quality and promotes walking as a practical and attractive means of transportation in a cost-effective manner."***

The goals needed to support this vision statement are described in detail in Chapter 1. Goals include Safety, Accessibility, Connectivity and Walkability.

2 Plan Context

Relationship with other City Planning Documents

The PMP is intended to be a complementary document to the City of San Diego General Plan, the Transit Oriented Development Guidelines, the San Diego Association of Government's **(SANDAG)** Planning and Designing for Pedestrians, the City of San Diego Street Design Manual and more specifically, the Mobility Element of the City's General Plan.

Chapter 2 makes the following recommendations for follow-on action items:

- *Encourage research on the relationship between urban form, street layout, land use mixture and circulation hierarchy and its affect on walking rates.*
- *For new areas, or those that are retrofitted for increased walkability, initiate research on walking rates and how the implementation of walking policies may be positively affecting these rates.*
- *Support the creation of cooperative programs between health care providers, park and recreation programs and community development and redevelopment efforts to highlight the connection between land use, transportation options, the physical environment and health.*

3 Issues and Possible Solutions

Walking Trends

Walking in the U.S. has declined over time among both adults and children. The 1990 Journey to Work (US Census) indicated a combined percentage for walking and biking to work of seven percent of commute trips in San Diego. In 2000, the combined percentage was down to five percent. Numerous studies throughout the country suggest non-commute walking trips are significantly more common in walkable neighborhoods. These studies conclude that pedestrian improvements are likely to provide the most benefit in areas with higher densities, higher transit use, lower vehicle ownership rates, and a variety of destinations within walking distance of residences.

Health Trends

Traditionally, the argument for creating more walkable communities has centered on the need to reduce congestion, mitigate environmental impacts and bring about economic revitalization. There is increasing awareness that urban form and the walkability of our neighborhoods have multiple and fundamental impacts on the health of residents.

Safety Summary

On average, from 1999 to 2004, two people were hit by a car each day in San Diego, or 598 pedestrians each year. Since 1999, over 133 San Diegans have died due to pedestrian collisions, while 3,500 survived with injuries. Compared to the county, the City has a higher rate of pedestrian injury (.48 vs .39 per 1,000 population) but a slightly lower rate of pedestrian fatalities (.018 vs. .023 per 1,000 population). Pedestrian deaths in the City account for over 25 percent of all traffic-related fatalities, yet only 6 percent of all trips are made on foot.

Chapter 3 makes the following recommendations for follow-on action items:

The following policies should be reviewed for adjustments and potential policy amendments or additions.

1) *Policies controlling pedestrian crosswalk striping; and*
2) *Policies allowing the use of mid-block crosswalks (with only flashing lights) across multiple traffic lanes without active traffic control, and policies that could allow for better mid-block crossings; and*
3) *Policies that allow for the use of third and fourth leg pedestrian restrictions in situations where left turn conflicts are minimal; and*
4) *Warrants based on pedestrian safety for the installation of stop signs and traffic signals that will accommodate safer crossings in areas where there are no controlled crossings for several blocks; and*
5) *Guidelines for increased lighting levels along pedestrian intensive routes.*

Accessibility Findings

The PMP suggests that accessibility is only second to safety in terms of priority for projects and solutions to public issues faced by pedestrians. This plan suggests that coordination of standards, guidelines, policies, field inspection and repair of facilities all need to take into account the importance and responsibility for creating an accessible public realm along the full travel route.

Connectivity Findings

In San Diego, sidewalk obstacles that make walking difficult include gaps in the sidewalks, multi-block areas without pedestrian facilities, steep slope/canyon barriers, difficult to cross road barriers, and land use barriers that prevent the easy pedestrian flows through a site. Solutions to these problems need to occur at the site planning and project approval stage.

Walkability Findings

Walkability is defined as a mixture of physical and perceptual elements that make up the built environment that are conducive to walking. The ultimate measure of walkability is whether pedestrians seek out the walking environment, ignore the environment as they pass through it, or actually avoid it because it is perceived as not being walkable.

Neighborhood Quality Findings

Though not a primary issue topic, neighborhood quality is often the result of a variety of environmental and social elements that have been brought together to create a quality living and working environment. If a pedestrian and public environment has been provided that is safe, accessible, connected and walkable, a quality neighborhood is almost assured.

Alternative Transportation Findings

One of the expected outcomes of this PMP is to encourage the use of alternative means of transportation by facilitating pedestrian activity. Transit success is reliant upon a walkable and pedestrian friendly environment. Walking to work and other destinations as a primary transportation mode has a higher mode split than public transportation systems, with a fraction of the cost of investment.

4 Route Types & Treatments

Walkway Classifications

All walking facilities found within the City of San Diego fit into one of 7 route types:

- **Route Type 1:** District Sidewalks are walks along roads that support heavy pedestrian levels in mixed-use concentrated urban areas.
- **Route Type 2:** Corridor sidewalks are walks along roads that support moderate density business and shopping districts with moderate pedestrian levels. They range from wide walks along boulevards to small walks along a heavily auto oriented roadway.

- **Route Type 3:** Connector sidewalks tend to have low pedestrian levels and are along roads with moderate to high average vehicular traffic. Connector sidewalks tend to be long and generally do not have accessible land uses directly adjacent to the sidewalk.
- **Route Type 4:** Neighborhood sidewalks are walks along roads that support low to moderate density housing with low to moderate pedestrian levels. Neighborhood streets and their associated walkways are generally lower volume streets, with low to moderate widths, single lanes and posted or prima facie speed limits of 25 miles per hour.
- **Route Type 5:** Ancillary Pedestrian Facilities are facilities away from or crossing over streets such as plazas, paseos, promenades, courtyards or pedestrian bridges and stairways.
- **Route Type 6:** Paths are paved facilities with exclusive right-of-ways that act as corridors and have little or no vehicular cross flows. Many of these paths are exclusive to pedestrians and bicycles and are not associated with streets.
- **Route Type 7:**. Trails are separated from roads and support activities such as hiking, biking and walking primarily through parks and open space. They differ from paths in that they are not paved with concrete or asphalt. Trails are not included in this study.

Treatment Levels

Route types deserve different design treatments so four levels of pedestrian facility improvements have been proposed. The "**Basic Level"** is that it is the minimum level that should be provided in all circumstances. In the case of certain neighborhoods and along certain connector streets, this "Basic Level" is adequate to provide the minimum level of safety, connectivity, access, and walkability. In certain areas, the presence of major roadways and other detractors from pedestrian activity require a higher level and expense associated with pedestrian treatments. In these situations, an **"Enhanced Level"** is recommended. In yet other areas, the urban densities and design requirements and the presence of certain safety issues require a **"Premium Level"** to meet safety, connectivity, accessibility, and walkability minimums.

Chapter 4 makes the following recommendations for follow-on action items:

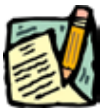
- *Table 29 and the discussion of potential solutions in this chapter, should be reviewed by various Departments of the City of San Diego and be integrated into a variety of policies, operating procedures and directives.*
- *Current city policies regarding requirements for pedestrian facilities, should be adjusted to use the route types described in this document. The route types each have different minimum width requirements and street crossing requirements as well as walkability amenities.*
- *An operating guide and brochure should be produced that can be distributed to the general public and to both developers and design / engineering professionals that describe the types of routes, typical issues and treatments that can be applied to those situations.*
- *Project development policies should be reviewed to assure that projects in high pedestrian use areas where credit for smart growth or transit overlay zone parking reductions are taken, are providing off-site improvements if pedestrian connectivity or accessibility is not adequate in the immediate area.*
- *Policies should be developed that either require or encourage the right level of pedestrian improvements with the existing or potential level of pedestrian activity. The route types and associated treatments should be compared to the pedestrian priority areas discussed and mapped in the following chapter. Each infill, new development or redevelopment effort should be required to review pedestrian priorities, classification of existing route types in the area and recommended improvements for both on-site or off-site requirements.*

5 Pedestrian Priority Model

The Pedestrian Priority Model **(PPM)** was developed to determine the most likely areas within the City of San Diego where pedestrians are currently (or would be if improvements were made). The model was created to prioritize communities for the preparation of community PMPs and to help prioritize projects to affect the largest number of pedestrians possible. The model utilizes existing data available city-wide as part of an extensive GIS database. The model has three basic components, which include: **Pedestrian Attractors, Pedestrian Generators and Pedestrian Detractors**.

Chapter 5 makes the following recommendations for follow-on action items:

- *The results of the Pedestrian Priority Model and the ranking of communities (Table 36) should be used to help set priorities for follow-on PMPs and funding of community wide pedestrian improvement projects.*
- *The appropriate City of San Diego Departments should continue to add to and adjust the model given changing conditions and validation of elements within the model.*
- *The results of the model should be made available to all community groups, planning interests, developers, project applicants, and planning / design / engineering professionals to assist in their efforts at improving pedestrian safety, accessibility, connectivity, and walkability.*



6 Project Prioritization

A substantial amount of funding is needed to bring all of the city's pedestrian facilities up to a standard that makes them safe, walkable, accessible, connected and assets to our neighborhoods. The amount far exceeds what is likely to be obtained. Because of this, the Master Plan lists "cost effectiveness" as one of its primary objectives. To be cost effective, a system of ranking projects for priority funding needs to be fully developed. Matrices are currently under development by the pedestrian working group.

Chapter 6 makes the following recommendations for follow-on action items:

- *A refinement of the checklists and priority forms are needed. Ultimately, the forms should take into account most all of the questions and priorities identified by the various funding sources.*
- *The City should continue to coordinate with SANDAG staff in regards to the criteria used and the forms supplied for the annual ranking process.*
- *A formal process for project identification, initial review, application completion, application verification and overall ranking of all pedestrian projects within the City of San Diego is needed.*

7 Funding Sources

Pedestrian projects and programs are funded through multiple sources, and not all sources apply to all projects. Many sources require a local funding match and most are competitive based on project merit and adherence to grant criteria. There is a wide range of sources potentially available to improve the pedestrian environment.

Chapter 7 makes the following recommendations for follow-on action items:

- *As part of community planning efforts, community plan updates and broader community development projects, the City of San Diego will help community groups, agencies or private applicants, identify different funding sources to supplement private investment for the improvement of pedestrian facilities.*
- *Policies regarding the private property owners requirements of safety, accessibility and connectivity associated with pedestrian improvements in the public right of way adjoining their property, should be reviewed and strengthened to clarify the property owners responsibility of funding these improvements.*

8 Maintenance Issues

A facility originally designed to be safe, walkable, accessible and connected, may become unsafe, unwalkable, inaccessible and disconnected if it is not properly maintained.

Chapter 8 makes the following recommendations for follow-on action items:

- *A more aggressive role requiring the adjacent property owner to repair damaged walkways should be taken.*
- *The 50 / 50 program (and other related programs) should refine their policies and procedures to allow for cost savings resulting from larger blocks of repair and curb ramp improvements.*

9 Phase Two Guidance

This chapter is intended to provide direction for the creation of supplemental pedestrian master plans for each of the 46 officially recognized community planning group areas of San Diego. By providing this direction, a level of consistency can be obtained between these plans. The overall goal is to describe a process and identify specific products needed for each plan. A sample project has been chosen and is discussed as a prototype. The Greater North Park area was selected as one of the first communities to be analyzed for the creation of a Community Pedestrian Master Plan (CPMP). It will be used here as an example on how these plans should be completed. It will also serve as the summary of initial meetings and workshops conducted for the study.

3.2 ACCESSIBILITY RELATED GOALS, ISSUES & SOLUTIONS

Make facilities accessible to pedestrians of all abilities and meet all local, state and federal requirements.

Following the specific requirements of federal and state legislation for accessibility is a focal point of this section. However, all improvements to the walking environment that these regulations require, have many benefits for making the walking environment better for all users, with or without physical challenges for access.

3.2.1 Regulatory Context - Americans with Disabilities Act of 1990

The Americans with Disabilities Act (ADA) of 1990 set standards and a compliance schedule for providing public accommodations for persons with disabilities. Typically, right-of-way accommodations included:

- Continuous, maintained sidewalks with uplifts not exceeding one-half inch
- Slopes not exceeding 1:12 (or 8.33 percent) for pathways with handrails and not exceeding 1:20 (or 5 percent) without handrails
- Curb ramps at street corners
- Accessible signals at signalized intersections
- Tactile strips at hazardous locations along rail line edges such as trolley platforms

3.2.2 State of California Title 24 Summary

In addition to the ADA, California has additional accessibility regulations through California Code of Regulation, Title 24. The federal ADA Accessibility Guidelines and California Title 24 differ in several technical respects, but the most important distinction between the two is that the ADA is civil rights legislation and Title 24 is a building code. Another important difference is that ADA applies to existing facilities, while Title 24 only applies when alterations, additions or new construction takes place. Therefore, if remedial work is performed to eliminate a physical barrier, the more stringent of ADA Accessibility Guidelines or Title 24 applies.

The ADA and Title 24 are also enforced differently. The ADA can be enforced only in a court of law when no other resolution is possible, and Title 24 is enforced by state and local building departments, either when a building permit is obtained or when a citizen complaint is filed in regard to an existing facility. Title 24 is the regulation that most directly affects the built environment in San Diego and provides the state leverage for implementing the federal ADA through the building review, approval and inspection process.

Universal access goals provide a better environment for all users, including those severely disabled to those with only minor physical challenges.

3.2.3 City of San Diego ADA Transition Plan

The City's 1997 ADA Transition Plan supplied a compliance "baseline" for providing navigable walkways and corner curb ramps. The 1997 Plan indicated:

- Since the 1970's, the City has administered an aggressive curb ramp retrofit program.
- A survey from the early 1990's found that approximately 39 percent, or 20,931 corner curb ramps were in place.
- There were 20 public stairways, none of which provided adjacent ramps. The Plan called for providing signs indicating an alternative route via public sidewalks.
- Of the approximately 4,000 transit stops within the City, half were estimated to be accessible.
- Since the adoption of the Transition Plan in 1997, the City has continued to install curb ramps, repair uplifted or broken sidewalks and to make transit stops accessible. Accessible (audible) pedestrian crossing signals have been installed at many intersections throughout the City.

The property owner and the City both have responsibility in making certain that the public right-of-way for pedestrians is fully accessible under the reasoning that accessibility is not limited to the installation of curb ramps. Universal access as well as Title 24 and ADA require accessible paths of travel that are free from obstructions, meet specific slope and cross slope requirements and are maintained to be safe and accessible. This requirement transfers to the street pavement used for crossing streets, whether in a marked or unmarked crosswalk.

3.2.4 Solutions that Address Accessibility Issues

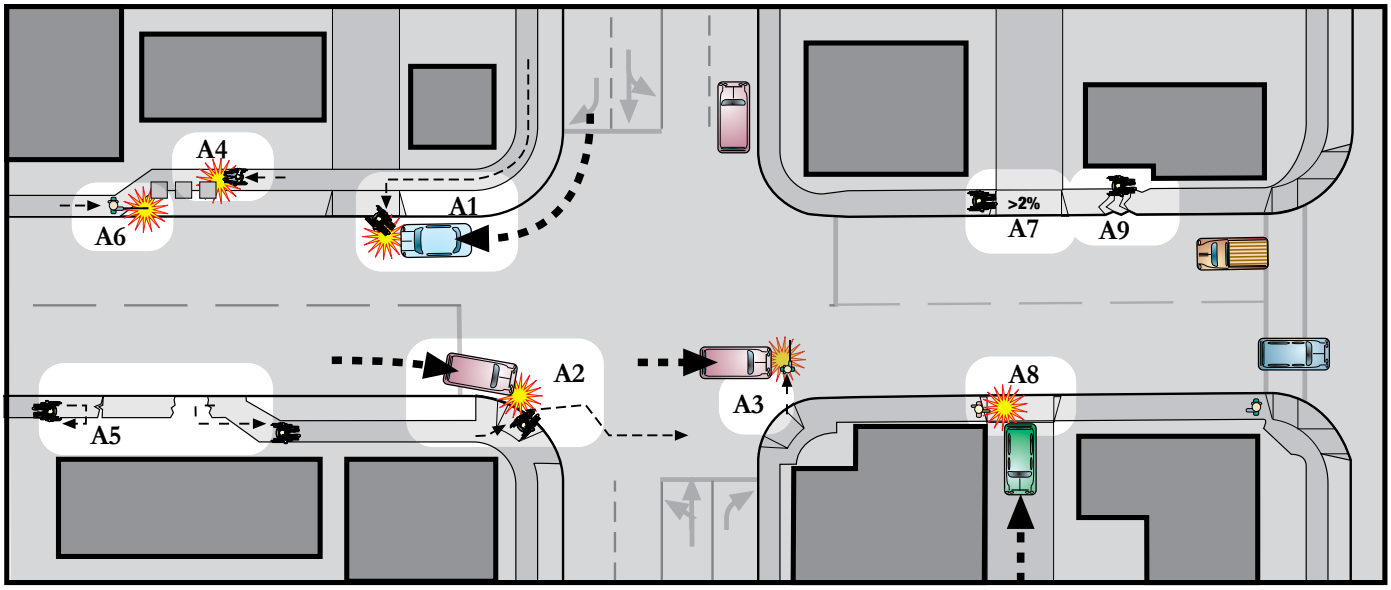
Table 22 has been developed to describe the typical accessibility issues associated with public rights-of-way that require walking or non-vehicular access. Several solutions are suggested, but it remains the responsibility of the property owner or agency to make sure that all reasonable efforts have been made to make as much of the environment universally accessible as possible and that the intent and the letter of ADA and Title 24 regulations have been met.

Findings within this PMP should be considered in future updates of the Transition Plan. The PMP suggests that accessibility is only second to safety in terms of priority for projects and solutions to public issues faced by pedestrians. The Transition Plan helps to set the priorities for improvements of the public right of way, considering limited financial ability to address all shortcomings. The highest priority should be given to improving areas that have accessibility issues as well as safety issues and other connectivity and walkability issues.

If any part of a route is inaccessible, the entire route is inaccessible. Not only is this a difficulty for the physically challenged but all users are forced to walk in the street. Photo Credit: Mike Singleton

Table 22: Accessibility Issues

These tables and graphics are for illustrative purposes only and are not to be used for engineering analysis or design.



Issues	Potential Solutions *(See legend*)*
A1 – Missing curb ramps. Pedestrians requiring the use of ramps for maneuverability may not be able to cross the street, or may be forced to travel in the street, increasing the risk of vehicular/pedestrian collision.	**1A**
A2 – Curb ramps do not meet standards. Ramps that lack tactile indicators, or ramps that are constructed with steep running slopes, large gutter transitions or excessive cross slopes, decrease accessibility. Some intersections require two ramps per corner for safety and access.	**1A, 3A, 6A**
A3 – Missing pedestrian signals. Missing or non-accessible (height or location) pedestrian signals or signal actuators diminish maneuverability.	**2A**
A4- Sidewalk obstacles. Site furnishings, above-grade utilities, parked vehicles on sidewalks, vehicles overhanging walk, & construction fencing create vertical clearance & protruding barriers.	**4A, 7A,** *also see* **19S** *on page 4-21*
A5 – Sidewalk gaps. Missing sidewalk segments can make an entire route inaccessible for some pedestrians.	**4A,** *also see* **20S** *on page 4-21*
A6 – Inconsistent sidewalk design. Meandering walkways or abrupt changes in the travel path can be difficult for the visually impaired to navigate.	**4A**
A7 – Cross slopes. Excessive cross slopes, often at driveways, can decrease accessibility.	**5A, 6A**
A8 – Blind corners. Visual obstructions (especially at alleys) are made worse when combined with the lower height of wheelchairs or the visually challenged that may not know they are crossing an alley.	**1A, 5A**
A9 – Substandard walking surfaces. Slick or uneven walking surfaces, or trip hazards, can make maneuverability difficult.	**3A, 6A,7A**

Potential Solutions Legend *(See Table 27 and sample photos in Chapter 4)*

1A) Add/upgrade curb ramps equipped with tactile indicators/truncated domes *(See page 4-13)*
2A) Accessible crosswalk signals *(See page 4-13)*
3A) Walkways and ramps free of damage or slip hazards *(See page 4-16)*
4A) Pedestrian paths free of gaps, abrupt directional changes and with obstructions confined to utility/furnishing zone *(See page 4-14)*
5A) Sidewalks with limited driveways and minimal cross-slope *(See page 4-14)*
6A) Re-grade slope of walkway to meet ADA/Title 24 standards *(See page 4-14)*
7A) Repair, slice or patch lifts on walking surfaces and re-set utilities boxes to flush to eliminate trip hazards *(See page 4-14)*

** The potential solutions are a possible list of methods to address the problem. Implemented solutions will be determined by actual site conditions, interpretation of policies and engineering evaluation.*

5.5 MODEL RESULTS BY COMMUNITY PLANNING AREA

The model results were adjusted so to as not give an advantage to any community based solely on size and it was adjusted to not unfairly affect communities that were mostly made up of single family residences and open space.

In order to normalize and rank the results of the model by community, the raw score was divided by the total number of acres found within the community. The resultant average score per acre is shown on Table 33.

In addition to normalizing the results by acre, it was determined by the PWG that communities that consisted of a large amount of low density housing and open space, were not being reflected fairly in the overall rankings. The intent of the model was to identify concentration of conditions that either do or would support high levels of pedestrian activity or that possessed barriers and issues that were preventing this level of activity.

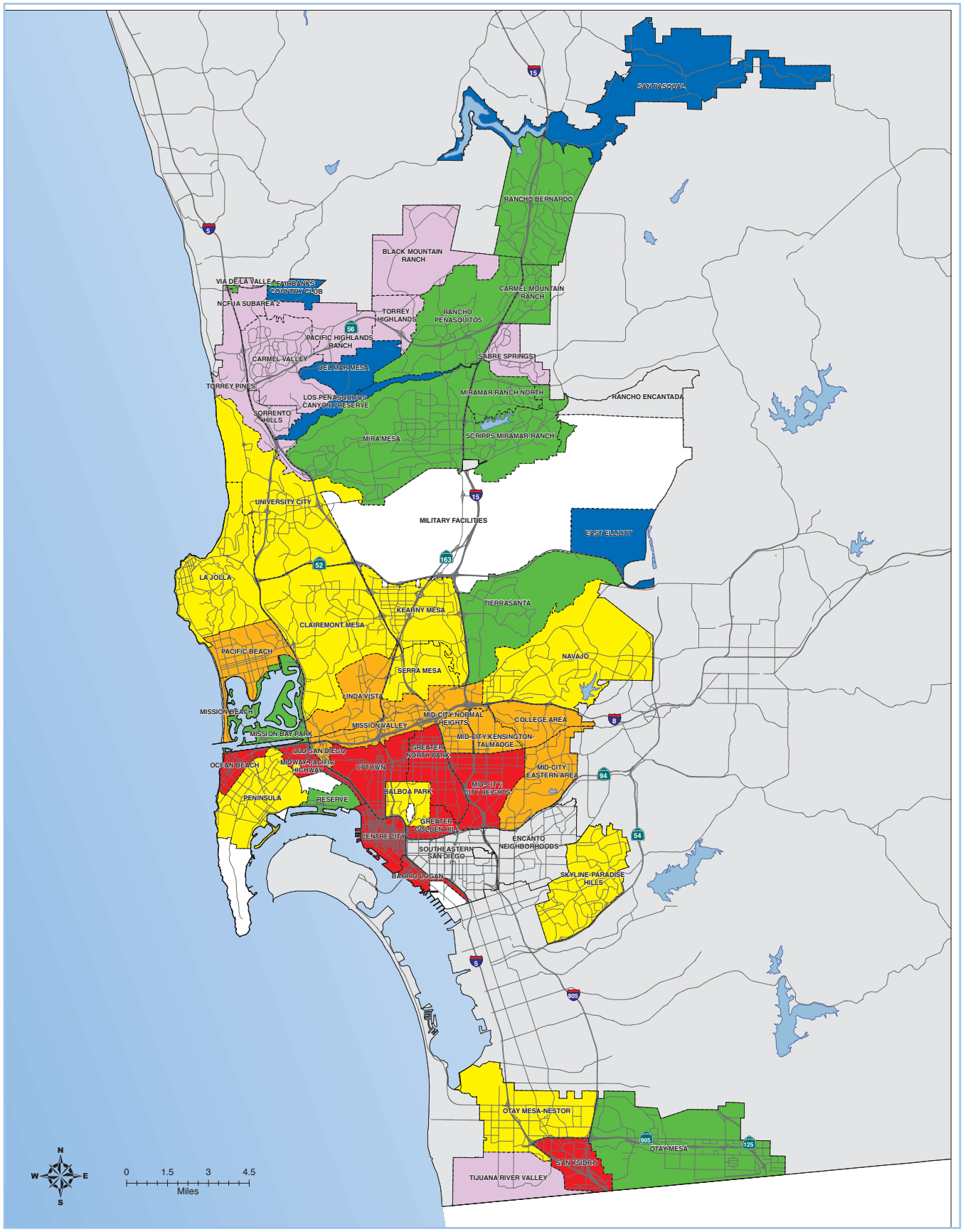
To avoid penalizing those communities with large land areas of open space and single family residential uses, the model results were adjusted by the removal of all acreage that was classified as low to moderate density single family housing and the removal of all passive open space areas. Both the cells scores and the acres were removed from the model calculations. The primary intent of the model is to identify the highest existing or potential concentrations of pedestrian activity and based on the rankings used in this model, single family residential neighborhoods and undeveloped open space will never be concentrated areas of pedestrian activity. With this adjustment, the rankings of each community are more reflective of the goals sought by this model.

5.6 PRIORITY FOR PLAN DEVELOPMENT BY COMMUNITY PLANNING GROUP AREA

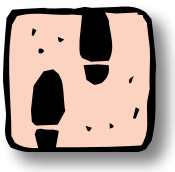
The model results follow known understandings that the highest potential for pedestrian use tends to be in our older neighborhoods that were provided with a good interconnected street system, have higher densities and mixtures of land use and transit access that all support more walking.

The overall rankings described in Table 36 are displayed on Figure 12. The ranked communities have been grouped by sets of 10. This ranking will be used as a guide to determine the order of plan development. The results of this map coincide with the higher pedestrian activity levels found in the traditional grid layout of the older communities, and with those communities having higher concentrations and mixtures of land use. The model also ranks communities high when they show a pattern of areas that have a predominance of district and corridor route types as well as areas with higher levels of pedestrian related crashes.

Figure 12: Community Ranking (see legend and results on Table 33)



Steps that can be taken ...



- *The results of the Pedestrian Priority Model and the ranking of communities (Table 33) should be used to help set priorities for follow-on pedestrian master plans and potential funding of community wide or district wide pedestrian improvement projects.*

- *The appropriate City of San Diego Departments should continue to add to and adjust the model given changing conditions and validation of elements within the model that may or may not have been as accurate as desired.*

- *The results of the model should be made available to all community groups, planning interests, developers, project applicants, and planning / design / engineering professionals to assist in their efforts at improving pedestrian safety, accessibility, connectivity, and walkability.*

- *The results of the PMP must be provided and updated as part of any follow on community specific pedestrian master plan.*

Table 33: Community Ranking Normalized by Size
(adjusted for open space and low density residential)

	Community	Avg Score per Acre (Total Scores / Acres - Open Space & Low Density Residential)
1	CENTRE CITY	268.8
2	GREATER NORTH PARK	223.0
3	SOUTHEASTERN SAN DIEGO	219.9
4	GREATER GOLDEN HILL	219.4
5	UPTOWN	219.2
6	MID-CITY:NORMAL HEIGHTS	212.8
7	BARRIO LOGAN	210.6
8	MID-CITY:CITY HEIGHTS	207.7
9	SAN YSIDRO	205.6
10	MIDWAY-PACIFIC HIGHWAY	200.7
11	OLD SAN DIEGO	197.6
12	OCEAN BEACH	195.8
13	COLLEGE AREA	195.4
14	PACIFIC BEACH	188.4
15	MID-CITY:KENSINGTON-TALMADGE	183.8
16	ENCANTO NEIGHBORHOODS	183.0
17	MISSION BEACH	180.5
18	MID-CITY:EASTERN AREA	176.5
19	LINDA VISTA	173.2
20	SERRA MESA	149.4
21	CLAIREMONT MESA	147.9
22	MISSION VALLEY	147.2
23	PENINSULA	146.7
24	SKYLINE-PARADISE HILLS	140.9
25	OTAY MESA-NESTOR	137.6
26	BALBOA PARK	134.1
27	LA JOLLA	129.0
28	UNIVERSITY	125.5
29	KEARNY MESA	125.2
30	NAVAJO	123.5
31	CARMEL MOUNTAIN RANCH	114.1
32	MIRA MESA	106.1
33	SCRIPPS MIRAMAR RANCH	105.5
34	RANCHO PENASQUITOS	104.9
35	TIERRASANTA	102.0
36	RESERVE	101.1
37	MIRAMAR RANCH NORTH	99.4
38	MISSION BAY PARK	99.1
39	TORREY PINES	93.9
40	VIA DE LA VALLE	92.8
41	RANCHO BERNARDO	92.8
42	LOS PENASQUITOS CANYON PRESERVE	92.0
43	CARMEL VALLEY	91.6
44	SABRE SPRINGS	86.3
45	OTAY MESA	85.9
46	TIJUANA RIVER VALLEY	82.0
47	PACIFIC HIGHLANDS RANCH	74.1
48	NCFUA SUBAREA 2	70.5
49	TORREY HIGHLANDS	68.1
50	SORRENTO HILLS	65.0
51	BLACK MOUNTAIN RANCH	62.6
52	MILITARY FACILITIES	61.6
53	DEL MAR MESA	56.3
54	EAST ELLIOTT	46.8
55	RANCHO ENCANTADA	46.0
56	FAIRBANKS COUNTRY CLUB	44.7
57	SAN PASQUAL	39.1

Chapter 6

Pedestrian Project Prioritization Process

A project as discussed in this chapter, is a grouping of improvements that generally would cost more than $25,000 to implement. Wherever possible, groupings of improvements should be considered in order to obtain magnitude of cost savings.

A project prioritization process is needed to assure cost effective use of limited public and private funding for pedestrian facilities. Safety, followed by accessibility, then connectivity and walkability are the general priorities set forth in this plan. However, the project that addresses the greatest number of the priorities listed above, should be given the top priority.

A substantial amount of funding is needed to bring all of the city's public pedestrian facilities up to a standard that makes them safe, walkable, accessible, connected and assets to our neighborhoods. The amount far exceeds what is likely to be obtained. To be cost effective, a system of ranking and selecting priority projects for funding has been developed.

6.1 PROJECT DEFINITION AND ORIGIN

A repair or an improvement to a pedestrian facility does not necessarily make it a project. A project should be defined as new construction or a major retrofit that is likely to require the development of design and engineering plans and will result in a permit or other ministerial or discretionary review and will likely be built by a contractor or substantial city work forces. A project as discussed in this chapter, is a grouping of improvements that generally would cost more than $25,000 to implement. Wherever possible, groupings of improvements should be considered in order to obtain magnitude of cost savings.

6.2 PRIORITY OBJECTIVES

Multiple Benefit Criteria

1. Projects in areas of high pedestrian use that provide improvements for safety, access, connectivity and walkability issues, that also increase walking as an alternative transportation mode, should receive the highest scoring overall.

Safety Criteria

2. Walkways and crosswalks that are along wide, high speed, high traffic volume streets should take priority over residential and local collector streets with lower speeds and volume. Streets where collision data, speed, street geometry all indicate potential safety concerns, should receive the highest score for safety improvements.

3. Projects that improve safety and connectivity to schools and other public facilities such as community centers, libraries and recreation centers, especially those attracting a high concentration of seniors, should be considered to be the second highest priority for safety improvements.

Accessibility Criteria

4. Projects that modify a completely non-accessible route with fully accessible pedestrian routes in areas identified by this Master Plan as having high pedestrian activity (or by the most recent version of the ADA transition plan) will be given the highest accessible priority.

5. Other pedestrian improvements that enhance accessibility along lower use pedestrian routes that already have some level of access, will be given the next highest level of accessibility priority.

Connectivity Criteria

6. Projects that increase connectivity around "smart growth" mixed use projects that will generate significant levels of pedestrian activity but are in need of off-site connections, should receive the highest connectivity scoring.

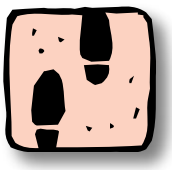
7. Projects that remove barriers, close gaps or increase connectivity with other high pedestrian uses, should receive the second highest connectivity scoring.

Walkability Criteria

8. Projects that improve overall site amenities, protection from adjacent environmental conditions and improve clarity, comfort and interest for walking, should receive the highest scoring for walkability.

9. Projects that support greater interaction amongst the public, should be given the second highest priority for walkability.

Steps that can be taken ...



• A refinement of the checklists and priority forms are needed. Ultimately, the forms should take into account most all of the questions and priorities identified by the various funding sources.

• The City should continue to coordinate with SANDAG staff in regards to the criteria used and the forms supplied for the annual ranking process. Certain modifications would help to integrate the City's efforts with SANDAG's and benefit other municipalities that are competing for these funds as well.

• A formal process for project identification, initial review, application completion, application verification and overall ranking of all pedestrian projects within the City of San Diego is needed. Several optional forms and processes are indicated in this Chapter.

6.3 OPTIONAL PRIORITY CHECKLISTS

Tables 34 - 36 have been included to show different methods of prioritizing pedestrian projects. Table 34 is one methodology that puts an emphasis on the PPM GIS maps that indicate areas of high or potentially high pedestrian use. A project that has multiple characteristics of improvements across the safety, accessibility, connectivity and walkability categories, and is also in a high use zone, will rise to the surface of this ranking system. This system will require some ongoing effort by planning staff to review the project location and have the GIS system pinpoint the project extent, buffer the extent by 1/4 mile, summarize the raw score of all pixels in the buffer, then divide by the total number of pixels in the total area to arrive at an average score per pixel.

Table 35 represents the current FY 2007 selection criteria from SANDAG, with this PMP's suggested revisions shown in red. If the reasons for these revisions are logical and compelling, the hope is that the City of San Diego can provide input on future versions of the SANDAG ranking form. Even without these changes to the SANDAG form, the system can be used to identify specific important items to the City, while still keeping as paramount, the ranking criteria that SANDAG is likely to use in selecting the projects. Ultimately, since many of the funding sources are managed by SANDAG and the Bike and Pedestrian Working Group under the administration of SANDAG rank all San Diego County bike and pedestrian projects, some consistency with the SANDAG prioritization model is needed.Table 36 is the latest version of the selection and priority criteria developed by the City of San Diego. It includes some criteria that neither Table 34 or Table 35 have included.

6.4 PROJECT IDENTIFICATION

Long range planners, transportation planners, facility financing planners and community planners in the City Planning and Community Investment Department as well as others in Development Services and engineers in the Engineering and Capital Projects Department as well as in Streets Division, will serve as the front line for project initiation. Requests for these projects may come from the Mayor's office, Council Offices, from the Community Planning Group or at staff level. Projects may be identified under future community plan updates, redevelopment projects or during the review of major development projects that will not be able to fully implement the area's pedestrian requirements. The institution of a regular inventory process is needed between Streets Division and Disability Services. This will help to identify needs above and beyond the CPMP or other community wide planning efforts. This process will also help to determine major maintenance issues and accessibility shortfalls.

6.5 PRIORITY SELECTION PROCESS

An initial review of the project is necessary to make sure that too much effort is not taken on a project that might only result in a low priority. Transportation planning staff will take the lead on determining the proper funding source and category that the project would best fit within. Initial review would verify if the project is included in an existing CPMP, adopted Community Plan or Facility Financing Plan. If the project did not originate with the Council Office or Community Group, a review of support by these groups is also advisable. Finally, a quick review of the PPM GIS maps is warranted to verify that it is within a high or moderate priority area. The initial likelihood of priority should be communicated to the project proponent and a copy of the adopted forms sent to them for their completion of the checklist and the development of backup materials. Once reviewed and verified by transportation planning staff, the project should be ranked with other pedestrian projects on at least a quarterly basis. This will assure that the most important projects with the greatest chance of approval for funding, will be put forward.

Table 34: Draft PMP Checklist

Pedestrian Project Prioritization Process Checklist	Project Scoring*
The project proponent will complete sections 2-5 below. GIS staff will provide the rankings for Item#1.	
1. Pedestrian Use Levels (existing or potential)	
According to the Pedestrian Priority Model, the area has the following rating for pedestrian activity**:	(Circle One Only)
Very High (50-75 Points using the Average GIS Mapping Score within 1/4 mile)	3
High (25-49 Points using the Average GIS Mapping Score within 1/4 mile)	2
Moderate (10-24 Points using the Average GIS Mapping Score within 1/4 mile)	1.5
Very High (1-9 Points using the Average GIS Mapping Score within 1/4 mile)	1
2. Safety	
What are the current pedestrian safety issues that this project will address?	(Circle One Only)
High pedestrian collision rates at intersections	10
High pedestrian collision rates along roadway segments	8
Low to Moderate pedestrian collision rates at intersections or roadway segments	5
No collisions can be verified but close calls exist & comfort levels would be improved resulting in increased use	2
3. Accessibility	
What issues of accessibility will benefit from this project?	(Circle One Only)
Adds missing segments of walkways will be added that will make a route fully accessible	8
Adds missing curb ramps and/or accessible pedestrian signals will be added	5
Removes obstacles from the throughway on walkways to create a wider path of travel that is obstruction free	3
Brings existing facilities that were once considered accessible, up to new standards	2
Adds or improves overall lighting levels of the pedestrian route	1
4. Connectivity	
How will this project improve connectivity and what will it help connect to?	(Circle One Only)
Adds missing pedestrian facilities or connections that will support mixed-use smart growth	5
Provides shorter, improved, safe & walkable routes to transit	4
Provides shorter, improved, safe & walkable connections to schools or public facilities	3
Provides safe, walkable & accessible connections between businesses & public facilities	2
Provides safe, walkable & accessible connections between residential areas & other uses	1
5. Walkability	
How will this project improve walkability?	(Circle One Only)
Reduces harsh environmental conditions through the addition of amenities that also support traffic calming & safety	3
Assists in reducing crime with improved street lighting, more defensible space & more eyes on the street	2
Creates more plazas, promenades & / or open space that will allow the gatherings for social interaction	1
Improves comfort & convenience for pedestrians by adding places to sit, trash receptacles & drinking fountains	1
Improves the overall streetscape design to be more inviting for people to walk, look, engage with others & shop	1
Total Score (add items # 2-5)	
Enter Weighting Score (Item #1)	
Total Weighted Score	

* suggested rating score from the consultant team that will be adjusted by staff and the PWG

** ratings are determined by using a clipping of a 1/4 mile radius centered on the middle of the improvements, then taking the total points found in this radius divided by the total number of cells to obtain an average GIS Mapping Score.

Table 36: City of San Diego Suggested Prioritization Criteria Point System

Suggested Criteria	Consideration		Points (100 Max)
Health & Safety	*Safety, accessibility, connectivity & walkability*		
	Provides pedestrian safety, universal accessibility, connectivity, and walkability improvements.	High	20
	Provides universal accessibility, connectivity and walkability improvements for pedestrians.	Medium	15
	Provides walkability improvements for pedestrians.	Low	10
Capacity & Service	*Proximity to a pedestrian destination point*		
	Within ¼ mi of school or 1/8 mi of transit stop	High	20
	Within ½ mi of school, ¼ mi of transit stop, ¼ mi of neighborhood or community retail, 1/8 mi of park, 1/8 mi of library, or 1/8 mi of post office	Medium	15
	Farther than ½ mi of school, ¼ mi of transit stop, ¼ mi of neighborhood or community retail, 1/8 mi of park, 1/8 mi of library, or 1/8 mi of post office	Low	10
Maintenance	*Maintenance Assessment District Funded*		
	Has MAD or MAD is not required.	High	5
	Requires existing MAD to be expanded.	Medium	3
	Requires establishment of a new MAD	Low	1
Public Interest & Community	*Supported by Council or CPG*		
	Provides critical link. Included in a community plan or a council approved document.	High	15
	Provides for part of pedestrian circulation needed. Supported by Community Planning Group.	Medium	10
	Alternative facilities exist. Not included in a community plan or a council approved document.	Low	5
Readiness & Deliverability	*Funding for planning, design or implementation*		
	Full funding and R.O.W. available. Final plans ready to start or already completed.	High	10
	Partial funding available. Final plans ready to start or already completed.	Medium	7
	Feasibility study only.	Low	3
Multi-Benefit	*Serves multiple pedestrian destinations*		
	Provides pedestrian facilities that serve three or more destinations including schools, transit stops, parks, neighborhood or community retail, libraries or post office.	High	15
	Provides pedestrian facilities that serve two destinations including schools, transit stops, parks, neighborhood or community retail, libraries or post office.	Medium	10
	Provides pedestrian facilities that serve only one destination including schools, transit stops, parks, neighborhood or community retail, libraries or post office.	Low	5
Misc.	*Smart growth, population & employment density*		
	Within area with population density > 100 people per acre or employment density > 300 employees per acre.	High	15
	Within area with population density between 50 and 100 people per acre or employment density between 100 and 300 employees per acre.	Medium	10
	Within area with population density < 50 people per acre or employment density < 100 employees per acre.	Low	5

APPENDIX D

2019 CONSTRUCTION AND DEMOLITION YEAR INTERSECTION ANALYSIS WORKSHEETS

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	520	190	290	2050	230	150
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	547	0	305	2158	242	158
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1956	609	451	3124	334	891
Arrive On Green	0.38	0.00	0.13	0.61	0.19	0.19
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	547	0	305	2158	242	158
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	3.0	0.0	3.4	11.5	5.2	1.7
Cycle Q Clear(g_c), s	3.0	0.0	3.4	11.5	5.2	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1956	609	451	3124	334	891
V/C Ratio(X)	0.28	0.00	0.68	0.69	0.72	0.18
Avail Cap(c_a), veh/h	2006	624	509	3259	481	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	16.8	5.2	15.5	10.0
Incr Delay (d2), s/veh	0.1	0.0	3.0	0.6	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.8	5.4	2.8	0.6
LnGrp Delay(d),s/veh	8.7	0.0	19.8	5.8	18.5	10.0
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	547			2463	400	
Approach Delay, s/veh	8.7			7.6	15.2	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.6	9.3	19.6				28.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		11.0	6.0	16.0				26.0
Max Q Clear Time (g_c+I1), s		7.2	5.4	5.0				13.5
Green Ext Time (p_c), s		0.5	0.1	10.1				11.4

Intersection Summary	
HCM 2010 Ctrl Delay	8.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	30	100	150	180	20	110	840	100	20	490	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	32	105	158	189	21	116	884	105	21	516	63
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	49	162	200	271	30	148	1173	139	112	1105	134
Arrive On Green	0.08	0.13	0.13	0.11	0.16	0.16	0.08	0.37	0.37	0.06	0.35	0.35
Sat Flow, veh/h	1774	383	1258	1774	1647	183	1774	3187	379	1774	3177	387
Grp Volume(v), veh/h	42	0	137	158	0	210	116	491	498	21	287	292
Grp Sat Flow(s),veh/h/ln	1774	0	1641	1774	0	1830	1774	1770	1796	1774	1770	1795
Q Serve(g_s), s	1.1	0.0	3.9	4.2	0.0	5.3	3.1	11.9	11.9	0.5	6.2	6.2
Cycle Q Clear(g_c), s	1.1	0.0	3.9	4.2	0.0	5.3	3.1	11.9	11.9	0.5	6.2	6.2
Prop In Lane	1.00		0.77	1.00		0.10	1.00		0.21	1.00		0.22
Lane Grp Cap(c), veh/h	138	0	212	200	0	301	148	651	661	112	615	624
V/C Ratio(X)	0.31	0.00	0.65	0.79	0.00	0.70	0.78	0.75	0.75	0.19	0.47	0.47
Avail Cap(c_a), veh/h	181	0	537	218	0	636	181	651	661	145	615	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	21.3	0.0	20.2	21.1	0.0	19.3	22.0	13.5	13.5	21.7	12.4	12.4
Incr Delay (d2), s/veh	1.2	0.0	3.3	16.5	0.0	2.9	16.5	7.9	7.8	0.8	2.5	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	0.6	0.0	1.9	3.0	0.0	2.9	2.2	7.2	7.2	0.3	3.4	3.5
LnGrp Delay(d),s/veh	22.6	0.0	23.5	37.6	0.0	22.2	38.5	21.4	21.3	22.5	14.9	14.9
LnGrp LOS	C		C	D		C	D	C	C	C	B	B
Approach Vol, veh/h		179			368			1105			600	
Approach Delay, s/veh		23.3			28.8			23.1			15.2	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	22.0	9.5	10.3	8.1	21.0	7.8	12.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	2.5	13.9	6.2	5.9	5.1	8.2	3.1	7.3
Green Ext Time (p_c), s	0.5	2.3	0.0	0.5	0.0	2.4	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	80	80	60	240	30	120	210	50	10	100	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	84	84	63	253	32	126	221	53	11	105	189
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	227	504	189	555	72	161	681	163	20	233	419
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.47	0.47	0.01	0.39	0.39
Sat Flow, veh/h	377	995	1583	310	2437	315	1774	1453	348	1774	597	1075
Grp Volume(v), veh/h	147	0	84	181	0	167	126	0	274	11	0	294
Grp Sat Flow(s),veh/h/ln	1373	0	1583	1422	0	1640	1774	0	1801	1774	0	1673
Q Serve(g_s), s	0.5	0.0	0.0	1.1	0.0	3.6	2.9	0.0	3.9	0.3	0.0	5.3
Cycle Q Clear(g_c), s	4.0	0.0	0.0	5.1	0.0	3.6	2.9	0.0	3.9	0.3	0.0	5.3
Prop In Lane	0.43		1.00	0.35		0.19	1.00		0.19	1.00		0.64
Lane Grp Cap(c), veh/h	438	0	504	442	0	373	161	0	844	20	0	652
V/C Ratio(X)	0.34	0.00	0.17	0.41	0.00	0.45	0.78	0.00	0.32	0.54	0.00	0.45
Avail Cap(c_a), veh/h	669	0	760	696	0	639	259	0	844	173	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	10.1	13.9	0.0	13.6	18.3	0.0	6.8	20.2	0.0	9.3
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.6	0.0	0.8	8.1	0.0	1.0	20.4	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.7	1.9	0.0	1.7	1.8	0.0	2.1	0.2	0.0	2.9
LnGrp Delay(d),s/veh	13.9	0.0	10.2	14.5	0.0	14.5	26.4	0.0	7.9	40.6	0.0	11.5
LnGrp LOS	B		B	B		B	C		A	D		B
Approach Vol, veh/h		231			348			400			305	
Approach Delay, s/veh		12.5			14.5			13.7			12.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.5	23.2		13.4	7.7	20.0		13.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	5.9		6.0	4.9	7.3		7.1
Green Ext Time (p_c), s	0.0	1.6		2.4	0.1	1.1		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	420	70	30	30	610	1190	50	10	610	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	461	74	32	32	642	1253	53	11	642	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	317	539	92	40	40	1106	1488	63	251	874	29
Arrive On Green	0.00	0.00	0.17	0.10	0.10	0.10	0.64	0.86	0.86	0.14	0.25	0.25
Sat Flow, veh/h	0	1863	3167	935	405	405	3442	3460	146	1774	3498	114
Grp Volume(v), veh/h	0	0	461	138	0	0	642	640	666	11	325	338
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1745	0	0	1721	1770	1837	1774	1770	1843
Q Serve(g_s), s	0.0	0.0	14.1	7.7	0.0	0.0	10.6	18.3	18.4	0.5	16.8	16.9
Cycle Q Clear(g_c), s	0.0	0.0	14.1	7.7	0.0	0.0	10.6	18.3	18.4	0.5	16.8	16.9
Prop In Lane	0.00		1.00	0.54		0.23	1.00		0.08	1.00		0.06
Lane Grp Cap(c), veh/h	0	317	539	172	0	0	1106	761	790	251	442	461
V/C Ratio(X)	0.00	0.00	0.86	0.80	0.00	0.00	0.58	0.84	0.84	0.04	0.73	0.73
Avail Cap(c_a), veh/h	0	391	665	279	0	0	1106	761	790	251	442	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.28	0.28	0.28	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	40.3	44.1	0.0	0.0	14.0	5.3	5.3	37.1	34.4	34.5
Incr Delay (d2), s/veh	0.0	0.0	9.0	8.5	0.0	0.0	0.2	3.3	3.2	0.1	10.3	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.8	4.1	0.0	0.0	4.8	8.5	8.8	0.3	9.5	9.8
LnGrp Delay(d),s/veh	0.0	0.0	49.3	52.6	0.0	0.0	14.2	8.6	8.5	37.2	44.8	44.4
LnGrp LOS			D	D			B	A	A	D	D	D
Approach Vol, veh/h		461			138			1948			674	
Approach Delay, s/veh		49.3			52.6			10.4			44.5	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.1	47.0		21.0	36.1	29.0		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	43.0		21.0	22.0	25.0		16.0
Max Q Clear Time (g_c+I1), s	2.5	20.4		16.1	12.6	18.9		9.7
Green Ext Time (p_c), s	0.4	9.9		0.9	1.8	2.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	240	30	310	460	450	320	430	1320	220	30	1000	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	276	0	326	323	868	225	453	1389	232	32	1053	274
Adj No. of Lanes	2	0	1	1	2	1	1	2	0	2	2	1
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	319	0	538	355	745	427	444	1460	241	241	1062	475
Arrive On Green	0.09	0.00	0.09	0.20	0.20	0.20	0.25	0.48	0.48	0.09	0.40	0.40
Sat Flow, veh/h	3548	0	1583	1774	3725	1583	1774	3042	502	3442	3539	1583
Grp Volume(v), veh/h	276	0	326	323	868	225	453	801	820	32	1053	274
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1774	1863	1583	1774	1770	1774	1721	1770	1583
Q Serve(g_s), s	7.7	0.0	0.0	17.8	20.0	5.1	25.0	43.0	44.7	0.9	29.6	13.5
Cycle Q Clear(g_c), s	7.7	0.0	0.0	17.8	20.0	5.1	25.0	43.0	44.7	0.9	29.6	13.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	319	0	538	355	745	427	444	849	852	241	1062	475
V/C Ratio(X)	0.86	0.00	0.61	0.91	1.16	0.53	1.02	0.94	0.96	0.13	0.99	0.58
Avail Cap(c_a), veh/h	319	0	538	355	745	427	444	849	852	241	1062	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	44.9	0.0	27.4	39.1	40.0	31.1	37.5	24.7	25.1	42.6	29.9	25.1
Incr Delay (d2), s/veh	21.0	0.0	1.9	26.7	88.5	1.2	48.3	19.8	23.1	0.2	21.4	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	7.7	11.3	19.4	2.3	18.1	25.6	27.1	0.4	17.4	6.4
LnGrp Delay(d),s/veh	65.9	0.0	29.4	65.8	128.5	32.3	85.8	44.5	48.2	42.7	51.4	28.7
LnGrp LOS	E		C	E	F	C	F	D	D	D	D	C
Approach Vol, veh/h		602			1416			2074			1359	
Approach Delay, s/veh		46.1			98.9			55.0			46.6	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	52.0		13.0	29.0	34.0		24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	48.0		9.0	25.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	2.9	46.7		9.7	27.0	31.6		22.0
Green Ext Time (p_c), s	0.7	1.1		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.3
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1010	980	130	0	840	700	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1063	1032		0	884	737	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1307	1371		0	1629	2340	0
Arrive On Green	0.38	0.38		0.00	0.46	0.46	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1063	1032		0	884	737	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	13.9	12.4		0.0	9.0	4.6	0.0
Cycle Q Clear(g_c), s	13.9	12.4		0.0	9.0	4.6	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1307	1371		0	1629	2340	0
V/C Ratio(X)	0.81	0.75		0.00	0.54	0.31	0.00
Avail Cap(c_a), veh/h	1377	1444		0	1629	2340	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.9	13.5		0.0	9.7	8.5	0.0
Incr Delay (d2), s/veh	3.7	2.2		0.0	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	7.9		0.0	4.6	2.2	0.0
LnGrp Delay(d),s/veh	17.6	15.6		0.0	11.0	8.9	0.0
LnGrp LOS	B	B			B	A	
Approach Vol, veh/h	2095				884	737	
Approach Delay, s/veh	16.6				11.0	8.9	
Approach LOS	B				B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		27.0		23.0		27.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		22.0		20.0		11.0		
Max Q Clear Time (g_c+I1), s		11.0		15.9		6.6		
Green Ext Time (p_c), s		4.6		3.1		2.0		

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1110	260	80	2150	480	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1168	274	84	2263	505	53
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1744	1109	106	3093	1268	566
Arrive On Green	0.34	0.34	0.06	0.48	0.36	0.36
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1168	274	84	2263	505	53
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	9.8	3.1	2.3	14.1	5.3	1.1
Cycle Q Clear(g_c), s	9.8	3.1	2.3	14.1	5.3	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1744	1109	106	3093	1268	566
V/C Ratio(X)	0.67	0.25	0.79	0.73	0.40	0.09
Avail Cap(c_a), veh/h	1744	1109	177	3204	1268	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	2.7	23.2	10.3	12.0	10.7
Incr Delay (d2), s/veh	1.0	0.1	12.3	0.8	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.0	1.5	6.3	2.8	0.5
LnGrp Delay(d),s/veh	15.0	2.8	35.5	11.2	13.0	11.0
LnGrp LOS	B	A	D	B	B	B
Approach Vol, veh/h	1442			2347	558	
Approach Delay, s/veh	12.7			12.1	12.8	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.9	7.0	21.1				28.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		7.3	4.3	11.8				16.1
Green Ext Time (p_c), s		1.5	0.0	4.1				8.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	70	70	160	270	160	180	160	60	100	220	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	74	74	168	284	168	189	168	63	105	232	74
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	62	245	219	208	478	275	208	662	562	134	584	496
Arrive On Green	0.04	0.14	0.14	0.12	0.22	0.22	0.12	0.36	0.36	0.08	0.31	0.31
Sat Flow, veh/h	1774	1772	1581	1774	2166	1246	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	42	74	74	168	231	221	189	168	63	105	232	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1584	1774	1770	1643	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.2	1.9	2.2	4.7	6.0	6.2	5.4	3.3	1.4	3.0	5.0	1.7
Cycle Q Clear(g_c), s	1.2	1.9	2.2	4.7	6.0	6.2	5.4	3.3	1.4	3.0	5.0	1.7
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	245	219	208	390	363	208	662	562	134	584	496
V/C Ratio(X)	0.67	0.30	0.34	0.81	0.59	0.61	0.91	0.25	0.11	0.78	0.40	0.15
Avail Cap(c_a), veh/h	174	554	496	208	589	547	208	662	562	208	584	496
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	24.3	19.8	19.9	22.0	17.8	17.9	22.3	11.7	11.1	23.2	13.8	12.6
Incr Delay (d2), s/veh	11.9	0.7	0.9	20.3	1.4	1.7	37.7	0.9	0.4	9.7	2.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	1.0	3.5	3.0	2.9	4.8	1.8	0.7	1.8	2.8	0.8
LnGrp Delay(d),s/veh	36.2	20.5	20.8	42.2	19.3	19.6	60.0	12.6	11.5	32.9	15.8	13.3
LnGrp LOS	D	C	C	D	B	B	E	B	B	C	B	B
Approach Vol, veh/h		190			620			420			411	
Approach Delay, s/veh		24.1			25.6			33.7			19.7	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	22.1	10.0	11.1	10.0	20.0	5.8	15.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	6.0	16.0	6.0	16.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	5.0	5.3	6.7	4.2	7.4	7.0	3.2	8.2
Green Ext Time (p_c), s	0.0	2.1	0.0	2.9	0.0	1.9	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	70	20	300	350	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	74	21	316	368	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	579	195	389	0	-	0
Stage 1	379	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	446	814	1166	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	436	814	1166	-	-	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1166	-	436	814	-	-
HCM Lane V/C Ratio	0.018	-	0.072	0.091	-	-
HCM Control Delay (s)	8.1	0.1	13.9	9.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	60	80	440	270	230	200
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	84	463	284	242	211
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	88	782	968	433	686	691
Arrive On Green	0.05	0.42	0.27	0.27	0.39	0.39
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	63	84	463	284	242	211
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.4	1.1	4.5	6.6	4.0	3.6
Cycle Q Clear(g_c), s	1.4	1.1	4.5	6.6	4.0	3.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	88	782	968	433	686	691
V/C Ratio(X)	0.71	0.11	0.48	0.66	0.35	0.31
Avail Cap(c_a), veh/h	257	1170	1368	612	686	691
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	19.4	7.3	12.6	13.3	9.0	7.6
Incr Delay (d2), s/veh	10.1	0.1	0.4	1.7	1.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.6	2.2	3.0	2.2	4.0
LnGrp Delay(d),s/veh	29.5	7.3	12.9	15.0	10.4	8.7
LnGrp LOS	C	A	B	B	B	A
Approach Vol, veh/h		147	747		453	
Approach Delay, s/veh		16.8	13.7		9.6	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				21.4		20.0	6.1	15.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				3.1		6.0	3.4	8.6
Green Ext Time (p_c), s				4.7		1.1	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	380	1440	1930	910	0	520
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	400	1516	2348	748		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	454	4609	3186	903		
Arrive On Green	0.26	0.91	1.00	1.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	400	1516	2348	748		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	10.8	2.0	0.0	0.0		
Cycle Q Clear(g_c), s	10.8	2.0	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	454	4609	3186	903		
V/C Ratio(X)	0.88	0.33	0.74	0.83		
Avail Cap(c_a), veh/h	461	4678	3241	918		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.82	0.82	0.71	0.71		
Uniform Delay (d), s/veh	17.9	0.3	0.0	0.0		
Incr Delay (d2), s/veh	14.8	0.0	0.6	4.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.1	0.9	0.2	1.1		
LnGrp Delay(d),s/veh	32.7	0.3	0.6	4.6		
LnGrp LOS	C	A	A	A		
Approach Vol, veh/h		1916	3096			
Approach Delay, s/veh		7.1	1.6			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				49.3			16.8	32.5
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				46.0			13.0	29.0
Max Q Clear Time (g_c+I1), s				4.0			12.8	2.0
Green Ext Time (p_c), s				40.9			0.0	26.5

Intersection Summary	
HCM 2010 Ctrl Delay	3.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	580	270	340	1640	470	0	0	0	800	0	590
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	242	611	284	358	1726	0				842	0	621
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	276	1552	483	398	1901	592				1171	0	1045
Arrive On Green	0.16	0.31	0.31	0.22	0.37	0.00				0.33	0.00	0.33
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	242	611	284	358	1726	0				842	0	621
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	13.3	9.5	15.2	19.6	32.2	0.0				20.8	0.0	16.3
Cycle Q Clear(g_c), s	13.3	9.5	15.2	19.6	32.2	0.0				20.8	0.0	16.3
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	276	1552	483	398	1901	592				1171	0	1045
V/C Ratio(X)	0.88	0.39	0.59	0.90	0.91	0.00				0.72	0.00	0.59
Avail Cap(c_a), veh/h	302	1552	483	550	1932	602				1171	0	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.42	0.42	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	41.3	27.4	29.4	37.7	29.7	0.0				29.4	0.0	27.9
Incr Delay (d2), s/veh	20.3	0.1	1.6	6.8	3.1	0.0				3.8	0.0	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
%ile BackOfQ(50%),veh/ln	8.1	4.4	6.8	10.3	15.6	0.0				10.8	0.0	7.5
LnGrp Delay(d),s/veh	61.6	27.6	31.0	44.6	32.7	0.0				33.2	0.0	30.4
LnGrp LOS	E	C	C	D	C					C		C
Approach Vol, veh/h		1137			2084						1463	
Approach Delay, s/veh		35.7			34.8						32.0	
Approach LOS		D			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			26.4	34.5		37.0	19.5	41.4
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			31.0	24.0		33.0	17.0	38.0
Max Q Clear Time (g_c+I1), s			21.6	17.2		22.8	15.3	34.2
Green Ext Time (p_c), s			0.8	3.3		4.6	0.2	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	70	0	320	130	310	0	0	320	200
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				74	0	0	137	326	0	0	337	211
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				97	0	87	790	2779	0	0	920	412
Arrive On Green				0.05	0.00	0.00	0.89	1.00	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				74	0	0	137	326	0	0	337	211
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				2.1	0.0	0.0	0.5	0.0	0.0	0.0	3.9	5.7
Cycle Q Clear(g_c), s				2.1	0.0	0.0	0.5	0.0	0.0	0.0	3.9	5.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				97	0	87	790	2779	0	0	920	412
V/C Ratio(X)				0.76	0.00	0.00	0.17	0.12	0.00	0.00	0.37	0.51
Avail Cap(c_a), veh/h				568	0	507	790	2779	0	0	920	412
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.74	0.74	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.3	0.0	0.0	1.5	0.0	0.0	0.0	15.1	15.8
Incr Delay (d2), s/veh				11.5	0.0	0.0	0.1	0.1	0.0	0.0	1.1	4.5
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				1.3	0.0	0.0	0.2	0.0	0.0	0.0	2.0	3.0
LnGrp Delay(d),s/veh				34.8	0.0	0.0	1.6	0.1	0.0	0.0	16.3	20.3
LnGrp LOS				C			A	A			B	C
Approach Vol, veh/h					74			463			548	
Approach Delay, s/veh					34.8			0.5			17.8	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.3			26.3	17.0		6.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		26.0			9.0	13.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			2.5	7.7		4.1
Green Ext Time (p_c), s		2.5			1.4	1.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	120	52	28	20	0	314	66	16	4	10	250	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.95			0.86	0.85		0.93				1.00
Flt Protected	0.95	1.00			1.00	1.00		1.00				0.95
Satd. Flow (prot)	1770	1766			1523	1504		3290				1610
Flt Permitted	0.95	1.00			1.00	1.00		1.00				0.95
Satd. Flow (perm)	1770	1766			1523	1504		3290				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	55	29	21	0	331	72	17	4	11	263	103
RTOR Reduction (vph)	0	0	0	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	126	84	0	0	213	211	0	24	0	0	0	273
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	12.2	12.2			18.8	18.8		25.0				28.0
Effective Green, g (s)	12.2	12.2			18.8	18.8		25.0				28.0
Actuated g/C Ratio	0.12	0.12			0.19	0.19		0.25				0.28
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	215	215			286	282		822				450
v/s Ratio Prot	c0.07	0.05			0.14	c0.14		c0.01				c0.17
v/s Ratio Perm												
v/c Ratio	0.59	0.39			0.74	0.75		0.03				0.61
Uniform Delay, d1	41.5	40.5			38.3	38.4		28.3				31.2
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.77
Incremental Delay, d2	4.0	1.2			10.1	10.4		0.1				5.9
Delay (s)	45.5	41.6			48.4	48.7		28.4				29.8
Level of Service	D	D			D	D		C				C
Approach Delay (s)		44.0			48.6			28.4				
Approach LOS		D			D			C				

Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	52
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.97
Satd. Flow (prot)	3287
Flt Permitted	0.97
Satd. Flow (perm)	3287
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	55
RTOR Reduction (vph)	0
Lane Group Flow (vph)	148
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	28.0
Effective Green, g (s)	28.0
Actuated g/C Ratio	0.28
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	920
v/s Ratio Prot	0.05
v/s Ratio Perm	
v/c Ratio	0.16
Uniform Delay, d1	27.1
Progression Factor	0.77
Incremental Delay, d2	0.4
Delay (s)	21.4
Level of Service	C
Approach Delay (s)	26.9
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	580	200	440	1190	40	80	20	180	170	40	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	611	211	463	1253	42	84	21	189	179	42	137
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	96	1057	329	516	1677	635	246	532	689	246	532	452
Arrive On Green	0.03	0.21	0.21	0.15	0.33	0.33	0.07	0.29	0.29	0.07	0.29	0.29
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	32	611	211	463	1253	42	84	21	189	179	42	137
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.5	6.1	6.8	7.4	12.3	0.9	1.3	0.5	1.1	2.9	0.9	2.9
Cycle Q Clear(g_c), s	0.5	6.1	6.8	7.4	12.3	0.9	1.3	0.5	1.1	2.9	0.9	2.9
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	96	1057	329	516	1677	635	246	532	689	246	532	452
V/C Ratio(X)	0.33	0.58	0.64	0.90	0.75	0.07	0.34	0.04	0.27	0.73	0.08	0.30
Avail Cap(c_a), veh/h	246	1452	452	516	1814	678	246	532	689	246	532	452
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	20.0	20.3	23.4	16.7	10.3	24.8	14.5	3.1	25.5	14.6	9.1
Incr Delay (d2), s/veh	2.0	0.5	2.1	18.4	1.6	0.0	0.8	0.1	1.0	10.4	0.3	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	3.1	4.8	5.9	0.4	0.6	0.3	1.1	1.7	0.5	1.7
LnGrp Delay(d),s/veh	28.7	20.5	22.4	41.8	18.3	10.4	25.6	14.6	4.1	35.9	14.9	10.8
LnGrp LOS	C	C	C	D	B	B	C	B	A	D	B	B
Approach Vol, veh/h		854			1758			294			358	
Approach Delay, s/veh		21.3			24.3			11.0			23.8	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	12.4	15.7	8.0	20.0	5.6	22.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	4.9	3.1	9.4	8.8	3.3	4.9	2.5	14.3
Green Ext Time (p_c), s	0.0	0.8	0.0	2.8	0.1	0.4	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	610	80	190	1180	20	100	10	140	60	30	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	642	84	200	1242	21	105	11	147	63	0	179
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	50	1354	514	308	1666	611	201	546	464	207	0	1017
Arrive On Green	0.03	0.27	0.27	0.09	0.33	0.33	0.06	0.29	0.29	0.06	0.00	0.29
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	32	642	84	200	1242	21	105	11	147	63	0	179
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	1.0	5.8	2.1	3.1	11.9	0.0	1.6	0.2	2.6	0.9	0.0	0.4
Cycle Q Clear(g_c), s	1.0	5.8	2.1	3.1	11.9	0.0	1.6	0.2	2.6	0.9	0.0	0.4
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	50	1354	514	308	1666	611	201	546	464	207	0	1017
V/C Ratio(X)	0.64	0.47	0.16	0.65	0.75	0.03	0.52	0.02	0.32	0.30	0.00	0.18
Avail Cap(c_a), veh/h	130	1676	614	378	1862	672	252	546	464	260	0	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	16.8	13.2	24.0	16.3	10.4	25.0	13.7	6.7	24.7	0.0	5.1
Incr Delay (d2), s/veh	12.8	0.3	0.1	2.8	1.5	0.0	2.1	0.1	1.8	0.8	0.0	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	0.6	2.7	0.9	1.6	5.8	0.2	0.8	0.1	1.8	0.5	0.0	0.6
LnGrp Delay(d),s/veh	39.1	17.1	13.3	26.8	17.8	10.5	27.1	13.8	8.5	25.5	0.0	5.5
LnGrp LOS	D	B	B	C	B	B	C	B	A	C		A
Approach Vol, veh/h		758			1463			263			242	
Approach Delay, s/veh		17.6			19.0			16.1			10.7	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	20.0	8.9	18.5	7.2	20.0	5.5	21.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	6.0	18.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	2.9	4.6	5.1	7.8	3.6	2.4	3.0	13.9
Green Ext Time (p_c), s	0.1	0.4	0.1	3.4	0.0	0.7	0.5	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	170	0	80	390	180	0	0	160	40
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				132	66	84	411	189	0	0	168	42
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				204	86	109	1038	1499	0	0	508	124
Arrive On Green				0.12	0.12	0.12	0.98	1.00	0.00	0.00	0.18	0.18
Sat Flow, veh/h				1774	746	949	1774	1863	0	0	2916	688
Grp Volume(v), veh/h				132	0	150	411	189	0	0	104	106
Grp Sat Flow(s),veh/h/ln				1774	0	1695	1774	1863	0	0	1770	1741
Q Serve(g_s), s				7.1	0.0	8.6	0.9	0.0	0.0	0.0	5.1	5.3
Cycle Q Clear(g_c), s				7.1	0.0	8.6	0.9	0.0	0.0	0.0	5.1	5.3
Prop In Lane				1.00		0.56	1.00		0.00	0.00		0.40
Lane Grp Cap(c), veh/h				204	0	195	1038	1499	0	0	319	313
V/C Ratio(X)				0.65	0.00	0.77	0.40	0.13	0.00	0.00	0.33	0.34
Avail Cap(c_a), veh/h				390	0	373	1038	1499	0	0	319	313
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.99	0.99	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.3	0.0	42.9	0.5	0.0	0.0	0.0	35.7	35.8
Incr Delay (d2), s/veh				3.4	0.0	6.2	0.2	0.2	0.0	0.0	2.7	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
%ile BackOfQ(50%),veh/ln				3.7	0.0	4.3	0.4	0.1	0.0	0.0	2.7	2.8
LnGrp Delay(d),s/veh				45.7	0.0	49.2	0.7	0.2	0.0	0.0	38.4	38.7
LnGrp LOS				D		D	A	A			D	D
Approach Vol, veh/h					282			600			210	
Approach Delay, s/veh					47.6			0.6			38.6	
Approach LOS					D			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		84.5			62.5	22.0		15.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		70.0			48.0	18.0		22.0
Max Q Clear Time (g_c+I1), s		2.0			2.9	7.3		10.6
Green Ext Time (p_c), s		2.5			2.5	0.8		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	0	120	0	0	0	0	460	220	50	270	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	126	0	126				0	484	232	53	284	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	191	0	170				0	1522	681	608	2875	0
Arrive On Green	0.11	0.00	0.11				0.00	0.86	0.86	0.68	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	126	0	126				0	484	232	53	284	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	6.8	0.0	7.7				0.0	2.6	2.9	1.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	7.7				0.0	2.6	2.9	1.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	191	0	170				0	1522	681	608	2875	0
V/C Ratio(X)	0.66	0.00	0.74				0.00	0.32	0.34	0.09	0.10	0.00
Avail Cap(c_a), veh/h	532	0	475				0	1522	681	608	2875	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.92	0.92	0.95	0.95	0.00
Uniform Delay (d), s/veh	42.9	0.0	43.3				0.0	4.2	4.2	10.5	0.0	0.0
Incr Delay (d2), s/veh	3.9	0.0	6.2				0.0	0.5	1.3	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	3.7				0.0	1.3	1.4	0.5	0.0	0.0
LnGrp Delay(d),s/veh	46.7	0.0	49.4				0.0	4.7	5.4	10.6	0.1	0.0
LnGrp LOS	D		D					A	A	B	A	
Approach Vol, veh/h		252						716			337	
Approach Delay, s/veh		48.1						4.9			1.7	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	38.2	47.0		14.8		85.2		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	15.0	43.0		30.0		62.0		
Max Q Clear Time (g_c+I1), s	3.0	4.9		9.7		2.0		
Green Ext Time (p_c), s	1.5	4.5		1.0		2.2		

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	90	120	120	120	110	110	820	330	80	390	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	63	95	126	126	126	116	116	863	347	84	411	63
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	85	145	1110	240	351	157	939	1571	629	870	2136	665
Arrive On Green	0.05	0.08	0.08	0.07	0.10	0.10	0.27	0.44	0.44	0.25	0.42	0.42
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	3570	1430	3442	5085	1583
Grp Volume(v), veh/h	63	95	126	126	126	116	116	819	391	84	411	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1610	1721	1695	1583
Q Serve(g_s), s	3.5	5.0	0.0	3.5	3.3	7.1	2.5	17.8	17.9	1.9	5.1	2.4
Cycle Q Clear(g_c), s	3.5	5.0	0.0	3.5	3.3	7.1	2.5	17.8	17.9	1.9	5.1	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	85	145	1110	240	351	157	939	1492	709	870	2136	665
V/C Ratio(X)	0.74	0.66	0.11	0.53	0.36	0.74	0.12	0.55	0.55	0.10	0.19	0.09
Avail Cap(c_a), veh/h	231	410	1560	379	708	317	939	1492	709	870	2136	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	0.99	0.99	0.99
Uniform Delay (d), s/veh	47.0	44.8	22.0	44.9	42.1	43.8	27.4	20.7	20.7	28.6	18.3	17.5
Incr Delay (d2), s/veh	11.7	5.0	0.0	1.8	0.6	6.6	0.1	1.3	2.7	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.8	1.2	1.7	1.7	3.4	1.2	8.6	8.5	0.9	2.4	1.1
LnGrp Delay(d),s/veh	58.6	49.8	22.0	46.7	42.7	50.4	27.4	22.0	23.4	28.7	18.5	17.8
LnGrp LOS	E	D	C	D	D	D	C	C	C	C	B	B
Approach Vol, veh/h		284			368			1326			558	
Approach Delay, s/veh		39.4			46.5			22.9			19.9	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.3	48.0	11.0	11.8	31.3	46.0	8.8	13.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	44.0	11.0	22.0	9.0	42.0	13.0	20.0
Max Q Clear Time (g_c+I1), s	3.9	19.9	5.5	7.0	4.5	7.1	5.5	9.1
Green Ext Time (p_c), s	0.2	9.4	0.3	0.8	0.2	3.3	0.3	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	0	110	40	100	410	130	770	0	0	370	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	42	0	116	42	105	432	137	811	0	0	389	305
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	157	393	475	568	3154	0	0	920	412
Arrive On Green	0.00	0.00	0.00	0.30	0.30	0.30	0.32	0.62	0.00	0.00	0.52	0.52
Sat Flow, veh/h		0		525	1312	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		147	0	432	137	811	0	0	389	305
Grp Sat Flow(s),veh/h/ln				1837	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				6.1	0.0	26.3	5.7	7.2	0.0	0.0	6.8	15.0
Cycle Q Clear(g_c), s				6.1	0.0	26.3	5.7	7.2	0.0	0.0	6.8	15.0
Prop In Lane				0.29		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				551	0	475	568	3154	0	0	920	412
V/C Ratio(X)				0.27	0.00	0.91	0.24	0.26	0.00	0.00	0.42	0.74
Avail Cap(c_a), veh/h				680	0	586	568	3154	0	0	920	412
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh				26.6	0.0	33.7	25.0	8.6	0.0	0.0	19.4	21.4
Incr Delay (d2), s/veh				0.3	0.0	16.2	0.2	0.2	0.0	0.0	1.4	11.3
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				3.1	0.0	13.6	2.8	3.4	0.0	0.0	3.4	7.7
LnGrp Delay(d),s/veh				26.9	0.0	49.9	25.3	8.8	0.0	0.0	20.8	32.6
LnGrp LOS				C		D	C	A			C	C
Approach Vol, veh/h					579			948			694	
Approach Delay, s/veh					44.0			11.2			26.0	
Approach LOS					D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		66.0			36.0	30.0		34.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		45.0			15.0	26.0		37.0
Max Q Clear Time (g_c+I1), s		9.2			7.7	17.0		28.3
Green Ext Time (p_c), s		7.2			3.4	2.5		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	740	1010	450	50	1240	160	130	90	50	30	30	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	779	1063	474	53	1305	168	137	95	53	32	0	242
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	884	2763	860	68	1651	514	476	528	276	84	0	380
Arrive On Green	0.26	0.54	0.54	0.04	0.32	0.32	0.14	0.23	0.23	0.02	0.00	0.12
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	2249	1176	3548	0	3167
Grp Volume(v), veh/h	779	1063	474	53	1305	168	137	73	75	32	0	242
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1655	1774	0	1583
Q Serve(g_s), s	21.7	12.1	10.2	3.0	23.3	8.0	3.6	3.3	3.6	0.9	0.0	4.5
Cycle Q Clear(g_c), s	21.7	12.1	10.2	3.0	23.3	8.0	3.6	3.3	3.6	0.9	0.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	884	2763	860	68	1651	514	476	416	389	84	0	380
V/C Ratio(X)	0.88	0.38	0.55	0.78	0.79	0.33	0.29	0.18	0.19	0.38	0.00	0.64
Avail Cap(c_a), veh/h	1067	2899	902	124	1678	523	476	416	389	142	0	380
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)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	13.2	4.1	47.7	30.7	25.5	38.7	30.5	30.7	48.1	0.0	16.0
Incr Delay (d2), s/veh	7.4	0.1	0.6	17.2	2.6	0.4	0.3	0.9	1.1	2.9	0.0	7.9
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	11.2	5.6	4.5	1.8	11.3	3.5	1.7	1.7	1.8	0.5	0.0	2.4
LnGrp Delay(d),s/veh	43.1	13.3	4.7	64.9	33.3	25.9	39.0	31.5	31.8	51.0	0.0	23.9
LnGrp LOS	D	B	A	E	C	C	D	C	C	D		C
Approach Vol, veh/h		2316			1526			285			274	
Approach Delay, s/veh		21.6			33.6			35.2			27.1	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	27.5	7.8	58.3	17.8	16.0	29.7	36.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	7.0	57.0	8.0	12.0	31.0	33.0
Max Q Clear Time (g_c+I1), s	2.9	5.6	5.0	14.1	5.6	6.5	23.7	25.3
Green Ext Time (p_c), s	0.0	0.9	0.0	32.3	0.3	0.4	1.9	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	410	1320	990	600	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	432	1389	1042	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	553	4009	1403	628		
Arrive On Green	0.62	1.00	0.40	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	432	1389	1042	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	8.9	0.0	12.6	0.0		
Cycle Q Clear(g_c), s	8.9	0.0	12.6	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	553	4009	1403	628		
V/C Ratio(X)	0.78	0.35	0.74	0.00		
Avail Cap(c_a), veh/h	603	4678	1770	792		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.49	0.49	0.63	0.00		
Uniform Delay (d), s/veh	8.2	0.0	12.9	0.0		
Incr Delay (d2), s/veh	3.0	0.0	0.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.5	0.0	6.2	0.0		
LnGrp Delay(d),s/veh	11.2	0.0	13.7	0.0		
LnGrp LOS	B	A	B			
Approach Vol, veh/h		1821	1042			
Approach Delay, s/veh		2.7	13.7			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				43.4			19.6	23.8
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				46.0			17.0	25.0
Max Q Clear Time (g_c+I1), s				2.0			10.9	14.6
Green Ext Time (p_c), s				17.4			4.7	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	460	0	490	400
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	484	0	516	421
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1726	242			484	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1726	242			484	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			52	
cM capacity (veh/h)	41	759			1075	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	323	161	516	211	211
Volume Left	0	0	516	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1075	1700	1700
Volume to Capacity	0.19	0.09	0.48	0.12	0.12
Queue Length 95th (ft)	0	0	67	0	0
Control Delay (s)	0.0	0.0	11.4	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.3		
Approach LOS					

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	580	340	0	810	400	350	30	800	310	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	611	0	0	853	421	391	0	0	334	0	84
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	53	2118	659	0	1762	549	1218	0	544	427	0	190
Arrive On Green	0.03	0.42	0.00	0.00	0.35	0.35	0.34	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	42	611	0	0	853	421	391	0	0	334	0	84
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	2.4	8.0	0.0	0.0	13.2	23.7	8.1	0.0	0.0	9.1	0.0	4.9
Cycle Q Clear(g_c), s	2.4	8.0	0.0	0.0	13.2	23.7	8.1	0.0	0.0	9.1	0.0	4.9
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	2118	659	0	1762	549	1218	0	544	427	0	190
V/C Ratio(X)	0.79	0.29	0.00	0.00	0.48	0.77	0.32	0.00	0.00	0.78	0.00	0.44
Avail Cap(c_a), veh/h	71	3255	1013	0	2848	887	1218	0	544	639	0	285
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	0.00	0.00	0.81	0.81	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.2	19.3	0.0	0.0	25.7	29.1	24.2	0.0	0.0	42.7	0.0	40.9
Incr Delay (d2), s/veh	33.8	0.1	0.0	0.0	0.2	1.9	0.7	0.0	0.0	3.7	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.7	0.0	0.0	6.2	10.6	4.1	0.0	0.0	4.7	0.0	4.4
LnGrp Delay(d),s/veh	82.0	19.4	0.0	0.0	25.8	30.9	24.9	0.0	0.0	46.4	0.0	42.5
LnGrp LOS	F	B			C	C	C			D		D
Approach Vol, veh/h		653			1274			391			418	
Approach Delay, s/veh		23.4			27.5			24.9			45.6	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		38.3		45.6		16.0	7.0	38.7
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		6.0		64.0		18.0	4.0	56.0
Max Q Clear Time (g_c+I1), s		10.1		10.0		11.1	4.4	25.7
Green Ext Time (p_c), s		0.0		5.0		0.9	0.0	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1990	240	250	770	330	520
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2095	0	263	811	347	547
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2333	726	352	3199	416	939
Arrive On Green	0.46	0.00	0.10	0.63	0.23	0.23
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2095	0	263	811	347	547
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	22.3	0.0	4.4	4.1	10.9	9.5
Cycle Q Clear(g_c), s	22.3	0.0	4.4	4.1	10.9	9.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2333	726	352	3199	416	939
V/C Ratio(X)	0.90	0.00	0.75	0.25	0.83	0.58
Avail Cap(c_a), veh/h	2339	728	352	3206	453	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	0.0	25.6	4.8	21.4	16.1
Incr Delay (d2), s/veh	5.1	0.0	8.5	0.0	11.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.0	2.5	1.9	6.7	3.7
LnGrp Delay(d),s/veh	19.7	0.0	34.1	4.8	33.2	16.8
LnGrp LOS	B		C	A	C	B
Approach Vol, veh/h	2095			1074	894	
Approach Delay, s/veh	19.7			12.0	23.2	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		17.8	10.0	30.9				40.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		15.0	6.0	27.0				37.0
Max Q Clear Time (g_c+I1), s		12.9	6.4	24.3				6.1
Green Ext Time (p_c), s		0.8	0.0	2.7				26.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	140	160	110	50	40	80	880	140	30	730	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	147	168	116	53	42	84	926	147	32	768	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	183	209	148	222	176	107	1112	177	50	1114	77
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.06	0.36	0.36	0.03	0.33	0.33
Sat Flow, veh/h	1774	795	908	1774	964	764	1774	3061	486	1774	3360	232
Grp Volume(v), veh/h	116	0	315	116	0	95	84	535	538	32	404	417
Grp Sat Flow(s),veh/h/ln	1774	0	1703	1774	0	1728	1774	1770	1777	1774	1770	1822
Q Serve(g_s), s	3.5	0.0	9.5	3.5	0.0	2.4	2.5	15.0	15.0	1.0	10.8	10.8
Cycle Q Clear(g_c), s	3.5	0.0	9.5	3.5	0.0	2.4	2.5	15.0	15.0	1.0	10.8	10.8
Prop In Lane	1.00		0.53	1.00		0.44	1.00		0.27	1.00		0.13
Lane Grp Cap(c), veh/h	148	0	392	148	0	398	107	643	646	50	587	604
V/C Ratio(X)	0.78	0.00	0.80	0.78	0.00	0.24	0.79	0.83	0.83	0.64	0.69	0.69
Avail Cap(c_a), veh/h	163	0	502	163	0	509	163	643	646	131	587	604
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	19.7	24.4	0.0	17.0	25.2	15.8	15.8	26.1	15.7	15.7
Incr Delay (d2), s/veh	20.0	0.0	7.2	20.0	0.0	0.3	13.1	12.0	12.0	12.8	6.5	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	5.2	2.5	0.0	1.2	1.6	9.4	9.5	0.6	6.2	6.4
LnGrp Delay(d),s/veh	44.4	0.0	27.0	44.4	0.0	17.3	38.3	27.8	27.8	38.9	22.2	22.1
LnGrp LOS	D		C	D		B	D	C	C	D	C	C
Approach Vol, veh/h		431			211			1157			853	
Approach Delay, s/veh		31.6			32.2			28.5			22.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	23.7	8.5	16.5	7.3	22.0	8.5	16.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	5.0	18.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	17.0	5.5	11.5	4.5	12.8	5.5	4.4
Green Ext Time (p_c), s	0.0	1.7	0.0	1.0	0.0	4.3	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	230	120	60	130	20	130	110	100	50	160	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	242	126	63	137	21	137	116	105	53	168	116
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	374	654	215	521	87	175	362	327	74	353	244
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.10	0.40	0.40	0.04	0.34	0.34
Sat Flow, veh/h	424	1189	1583	301	1656	278	1774	902	817	1774	1028	710
Grp Volume(v), veh/h	358	0	126	97	0	124	137	0	221	53	0	284
Grp Sat Flow(s),veh/h/ln	1613	0	1583	589	0	1646	1774	0	1719	1774	0	1738
Q Serve(g_s), s	6.8	0.0	2.5	2.0	0.0	2.8	3.7	0.0	4.4	1.5	0.0	6.3
Cycle Q Clear(g_c), s	9.6	0.0	2.5	11.6	0.0	2.8	3.7	0.0	4.4	1.5	0.0	6.3
Prop In Lane	0.32		1.00	0.65		0.17	1.00		0.48	1.00		0.41
Lane Grp Cap(c), veh/h	604	0	654	306	0	518	175	0	689	74	0	598
V/C Ratio(X)	0.59	0.00	0.19	0.32	0.00	0.24	0.78	0.00	0.32	0.71	0.00	0.48
Avail Cap(c_a), veh/h	715	0	765	390	0	633	251	0	689	179	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	9.2	15.8	0.0	12.6	21.7	0.0	10.2	23.4	0.0	12.7
Incr Delay (d2), s/veh	0.9	0.0	0.1	0.6	0.0	0.2	9.6	0.0	1.2	12.0	0.0	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	4.4	0.0	1.1	1.3	0.0	1.3	2.3	0.0	2.3	1.0	0.0	3.4
LnGrp Delay(d),s/veh	15.7	0.0	9.4	16.4	0.0	12.8	31.3	0.0	11.4	35.4	0.0	15.4
LnGrp LOS	B		A	B		B	C		B	D		B
Approach Vol, veh/h		484			221			358			337	
Approach Delay, s/veh		14.1			14.4			19.0			18.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	23.8		19.5	8.9	21.0		19.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	19.0		19.0	7.0	17.0		19.0
Max Q Clear Time (g_c+I1), s	3.5	6.4		11.6	5.7	8.3		13.6
Green Ext Time (p_c), s	0.0	2.6		2.5	0.0	2.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	350	60	20	30	280	980	70	30	940	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	387	63	21	32	295	1032	74	32	989	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	276	469	81	27	41	838	1377	99	314	1235	14
Arrive On Green	0.00	0.00	0.15	0.09	0.09	0.09	0.49	0.82	0.82	0.18	0.34	0.34
Sat Flow, veh/h	0	1863	3167	940	313	478	3442	3350	240	1774	3585	40
Grp Volume(v), veh/h	0	0	387	116	0	0	295	545	561	32	488	512
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1731	0	0	1721	1770	1820	1774	1770	1856
Q Serve(g_s), s	0.0	0.0	10.7	5.9	0.0	0.0	4.8	12.8	12.8	1.4	22.5	22.5
Cycle Q Clear(g_c), s	0.0	0.0	10.7	5.9	0.0	0.0	4.8	12.8	12.8	1.4	22.5	22.5
Prop In Lane	0.00		1.00	0.54		0.28	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	0	276	469	149	0	0	838	728	748	314	610	639
V/C Ratio(X)	0.00	0.00	0.83	0.78	0.00	0.00	0.35	0.75	0.75	0.10	0.80	0.80
Avail Cap(c_a), veh/h	0	352	598	308	0	0	838	728	748	314	610	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.60	0.60	0.60	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	37.2	40.3	0.0	0.0	18.7	5.9	5.9	31.0	26.7	26.7
Incr Delay (d2), s/veh	0.0	0.0	7.4	8.4	0.0	0.0	0.2	4.3	4.2	0.1	10.6	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.1	3.2	0.0	0.0	2.2	6.6	6.8	0.7	12.8	13.3
LnGrp Delay(d),s/veh	0.0	0.0	44.6	48.7	0.0	0.0	18.8	10.1	10.0	31.2	37.3	36.9
LnGrp LOS			D	D			B	B	B	C	D	D
Approach Vol, veh/h		387			116			1401			1032	
Approach Delay, s/veh		44.6			48.7			11.9			36.9	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.9	41.0		17.3	25.9	35.0		11.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	10.0	31.0		16.0
Max Q Clear Time (g_c+I1), s	3.4	14.8		12.7	6.8	24.5		7.9
Green Ext Time (p_c), s	0.1	7.9		0.7	0.4	3.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	140	670	740	150	250	290	920	220	20	1390	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	147	147	705	779	290	175	305	968	232	21	1463	53
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	276	290	440	710	373	345	217	1271	304	62	1219	545
Arrive On Green	0.16	0.16	0.16	0.20	0.20	0.20	0.12	0.45	0.45	0.02	0.46	0.46
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	2835	678	3442	3539	1583
Grp Volume(v), veh/h	147	147	705	779	290	175	305	603	597	21	1463	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1743	1721	1770	1583
Q Serve(g_s), s	6.9	6.5	14.0	18.0	13.3	8.7	11.0	25.7	25.8	0.5	31.0	1.7
Cycle Q Clear(g_c), s	6.9	6.5	14.0	18.0	13.3	8.7	11.0	25.7	25.8	0.5	31.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	276	290	440	710	373	345	217	794	782	62	1219	545
V/C Ratio(X)	0.53	0.51	1.60	1.10	0.78	0.51	1.41	0.76	0.76	0.34	1.20	0.10
Avail Cap(c_a), veh/h	276	290	440	710	373	345	217	794	782	153	1219	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	35.0	34.8	32.5	36.0	34.1	30.9	39.5	20.8	20.8	43.4	24.4	16.4
Incr Delay (d2), s/veh	2.0	1.4	281.8	63.7	10.1	1.2	208.2	6.8	7.0	2.1	95.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	3.5	45.3	15.0	7.9	3.9	17.9	13.9	13.9	0.3	31.2	0.8
LnGrp Delay(d),s/veh	37.0	36.3	314.3	99.7	44.2	32.1	247.7	27.5	27.8	45.5	120.1	16.7
LnGrp LOS	D	D	F	F	D	C	F	C	C	D	F	B
Approach Vol, veh/h		999			1244			1505			1537	
Approach Delay, s/veh		232.6			77.2			72.3			115.5	
Approach LOS		F			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	44.4		18.0	15.0	35.0		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	38.0		14.0	11.0	31.0		18.0
Max Q Clear Time (g_c+I1), s	2.5	27.8		16.0	13.0	33.0		20.0
Green Ext Time (p_c), s	0.0	9.3		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	820	2420	40	0	530	1280	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	863	2547		0	558	1347	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2226	2334		0	1062	1526	0
Arrive On Green	0.65	0.65		0.00	0.30	0.30	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	863	2547		0	558	1347	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	17.7	97.0		0.0	19.7	37.8	0.0
Cycle Q Clear(g_c), s	17.7	97.0		0.0	19.7	37.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2226	2334		0	1062	1526	0
V/C Ratio(X)	0.39	1.09		0.00	0.53	0.88	0.00
Avail Cap(c_a), veh/h	2226	2334		0	1062	1526	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.5	26.5		0.0	43.6	50.0	0.0
Incr Delay (d2), s/veh	0.1	48.7		0.0	1.9	7.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	54.2		0.0	9.9	18.8	0.0
LnGrp Delay(d),s/veh	12.6	75.2		0.0	45.5	57.7	0.0
LnGrp LOS	B	F			D	E	
Approach Vol, veh/h	3410				558	1347	
Approach Delay, s/veh	59.4				45.5	57.7	
Approach LOS	E				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		49.0		101.0		49.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		45.0		97.0		37.0		
Max Q Clear Time (g_c+I1), s		21.7		99.0		39.8		
Green Ext Time (p_c), s		15.0		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	57.5
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2490	500	90	1520	370	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2621	526	95	1600	389	179
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2935	1265	121	4420	786	351
Arrive On Green	0.58	0.58	0.07	0.69	0.22	0.22
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2621	526	95	1600	389	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	40.5	9.0	4.7	9.3	8.6	8.9
Cycle Q Clear(g_c), s	40.5	9.0	4.7	9.3	8.6	8.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2935	1265	121	4420	786	351
V/C Ratio(X)	0.89	0.42	0.79	0.36	0.50	0.51
Avail Cap(c_a), veh/h	2938	1265	138	4485	786	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	2.7	41.3	5.8	30.6	30.8
Incr Delay (d2), s/veh	2.7	0.1	22.8	0.0	2.2	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	8.2	3.1	4.0	4.5	4.4
LnGrp Delay(d),s/veh	19.3	2.9	64.1	5.8	32.9	36.0
LnGrp LOS	B	A	E	A	C	D
Approach Vol, veh/h	3147			1695	568	
Approach Delay, s/veh	16.6			9.1	33.9	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.9	10.1	56.0				66.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	7.0	52.0				63.0
Max Q Clear Time (g_c+I1), s		10.9	6.7	42.5				11.3
Green Ext Time (p_c), s		1.4	0.0	9.5				50.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	350	290	120	100	160	90	220	140	140	200	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	368	305	126	105	168	95	232	147	147	211	105
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	174	468	383	160	434	388	122	515	438	184	581	494
Arrive On Green	0.10	0.25	0.25	0.09	0.25	0.25	0.07	0.28	0.28	0.10	0.31	0.31
Sat Flow, veh/h	1774	1851	1514	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	137	352	321	126	105	168	95	232	147	147	211	105
Grp Sat Flow(s),veh/h/ln	1774	1770	1596	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.4	10.7	10.9	4.0	2.8	5.2	3.0	6.0	4.3	4.7	5.1	2.8
Cycle Q Clear(g_c), s	4.4	10.7	10.9	4.0	2.8	5.2	3.0	6.0	4.3	4.7	5.1	2.8
Prop In Lane	1.00		0.95	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	447	403	160	434	388	122	515	438	184	581	494
V/C Ratio(X)	0.79	0.79	0.80	0.79	0.24	0.43	0.78	0.45	0.34	0.80	0.36	0.21
Avail Cap(c_a), veh/h	184	489	441	184	489	438	184	515	438	184	581	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	20.2	20.2	25.8	17.5	18.4	26.5	17.3	16.7	25.3	15.4	14.7
Incr Delay (d2), s/veh	19.3	7.7	9.2	17.6	0.3	0.8	11.4	2.8	2.1	21.5	1.8	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	3.1	6.1	5.8	2.7	1.4	2.3	1.9	3.4	2.1	3.4	2.9	1.4
LnGrp Delay(d),s/veh	44.8	27.8	29.4	43.4	17.8	19.2	38.0	20.1	18.7	46.8	17.2	15.7
LnGrp LOS	D	C	C	D	B	B	D	C	B	D	B	B
Approach Vol, veh/h		810			399			474			463	
Approach Delay, s/veh		31.3			26.5			23.3			26.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	20.0	9.2	18.6	8.0	22.0	9.7	18.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	6.0	16.0	6.0	16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	6.7	8.0	6.0	12.9	5.0	7.1	6.4	7.2
Green Ext Time (p_c), s	0.0	2.2	0.0	1.7	0.0	2.4	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	30	40	390	530	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	42	411	558	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	878	311	621	0	-	0
Stage 1	589	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	287	685	956	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	271	685	956	-	-	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	693	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	956	-	271	685	-	-
HCM Lane V/C Ratio	0.044	-	0.117	0.046	-	-
HCM Control Delay (s)	8.9	0.2	20	10.5	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	280	510	160	200	410	140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	295	537	168	211	432	147
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	353	917	772	345	634	881
Arrive On Green	0.20	0.49	0.22	0.22	0.36	0.36
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	295	537	168	211	432	147
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	8.5	10.9	2.1	6.4	11.0	2.4
Cycle Q Clear(g_c), s	8.5	10.9	2.1	6.4	11.0	2.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	353	917	772	345	634	881
V/C Ratio(X)	0.83	0.59	0.22	0.61	0.68	0.17
Avail Cap(c_a), veh/h	434	1156	1064	476	634	881
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	20.5	9.6	17.1	18.8	14.5	5.8
Incr Delay (d2), s/veh	11.2	0.6	0.1	1.8	5.8	0.4
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	5.7	1.0	2.9	6.3	3.2
LnGrp Delay(d),s/veh	31.6	10.2	17.2	20.5	20.4	6.2
LnGrp LOS	C	B	B	C	C	A
Approach Vol, veh/h		832	379		579	
Approach Delay, s/veh		17.8	19.0		16.8	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				30.2		23.0	14.6	15.6
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				33.0		19.0	13.0	16.0
Max Q Clear Time (g_c+I1), s				12.9		13.0	10.5	8.4
Green Ext Time (p_c), s				5.4		1.1	0.2	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	590	3300	1050	810	0	620
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	621	3474	1100	856		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	769	4554	1391	1182		
Arrive On Green	0.43	0.90	0.75	0.75		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	621	3474	1100	856		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	13.7	10.1	8.2	6.7		
Cycle Q Clear(g_c), s	13.7	10.1	8.2	6.7		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	769	4554	1391	1182		
V/C Ratio(X)	0.81	0.76	0.79	0.72		
Avail Cap(c_a), veh/h	769	4633	1573	1337		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.10	0.10	0.92	0.92		
Uniform Delay (d), s/veh	11.1	0.8	4.6	4.4		
Incr Delay (d2), s/veh	0.7	0.1	2.3	1.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.7	3.9	4.0	2.8		
LnGrp Delay(d),s/veh	11.8	0.9	6.9	6.0		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		4095	1956			
Approach Delay, s/veh		2.5	6.5			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				44.3			23.5	20.8
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				41.0			18.0	19.0
Max Q Clear Time (g_c+I1), s				12.1			15.7	10.2
Green Ext Time (p_c), s				28.2			2.3	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	3.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	1820	700	300	1170	360	0	0	0	980	0	430
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	389	1916	737	316	1232	0				1032	0	453
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	426	1921	598	315	1605	500				1104	0	985
Arrive On Green	0.24	0.38	0.38	0.18	0.32	0.00				0.31	0.00	0.31
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	389	1916	737	316	1232	0				1032	0	453
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	19.2	33.9	34.0	16.0	19.7	0.0				25.4	0.0	10.3
Cycle Q Clear(g_c), s	19.2	33.9	34.0	16.0	19.7	0.0				25.4	0.0	10.3
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	426	1921	598	315	1605	500				1104	0	985
V/C Ratio(X)	0.91	1.00	1.23	1.00	0.77	0.00				0.93	0.00	0.46
Avail Cap(c_a), veh/h	473	1921	598	315	1605	500				1104	0	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.54	0.54	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	28.0	28.0	37.0	27.8	0.0				30.1	0.0	24.9
Incr Delay (d2), s/veh	2.7	5.6	105.9	37.8	1.3	0.0				15.4	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	9.7	16.8	32.4	11.1	9.3	0.0				14.8	0.0	4.7
LnGrp Delay(d),s/veh	36.0	33.5	133.9	74.8	29.1	0.0				45.5	0.0	26.5
LnGrp LOS	D	C	F	F	C					D		C
Approach Vol, veh/h		3042			1548						1485	
Approach Delay, s/veh		58.2			38.4						39.7	
Approach LOS		E			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			20.0	38.0		32.0	25.6	32.4
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			16.0	34.0		28.0	24.0	26.0
Max Q Clear Time (g_c+I1), s			18.0	36.0		27.4	21.2	21.7
Green Ext Time (p_c), s			0.0	0.0		0.4	0.4	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	220	0	310	170	330	0	0	810	420
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				232	0	0	179	347	0	0	853	442
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				280	0	250	213	2665	0	0	2084	932
Arrive On Green				0.16	0.00	0.00	0.24	1.00	0.00	0.00	0.59	0.59
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				232	0	0	179	347	0	0	853	442
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				11.4	0.0	0.0	8.6	0.0	0.0	0.0	11.8	14.3
Cycle Q Clear(g_c), s				11.4	0.0	0.0	8.6	0.0	0.0	0.0	11.8	14.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				280	0	250	213	2665	0	0	2084	932
V/C Ratio(X)				0.83	0.00	0.00	0.84	0.13	0.00	0.00	0.41	0.47
Avail Cap(c_a), veh/h				453	0	405	355	2665	0	0	2084	932
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.70	0.70	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.7	0.0	0.0	33.4	0.0	0.0	0.0	10.0	10.6
Incr Delay (d2), s/veh				6.6	0.0	0.0	6.4	0.1	0.0	0.0	0.6	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	0.0	4.5	0.0	0.0	0.0	5.9	6.7
LnGrp Delay(d),s/veh				43.3	0.0	0.0	39.8	0.1	0.0	0.0	10.6	12.3
LnGrp LOS				D			D	A			B	B
Approach Vol, veh/h					232			526			1295	
Approach Delay, s/veh					43.3			13.6			11.2	
Approach LOS					D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		71.8			14.8	57.0		18.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		59.0			18.0	37.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			10.6	16.3		13.4
Green Ext Time (p_c), s		15.0			0.3	10.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	270	197	83	20	0	118	92	112	78	40	400	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.96			0.88	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (prot)	1770	1780			1536	1504		3267				1610
Flt Permitted	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (perm)	1770	1780			1536	1504		3267				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	207	87	21	0	124	100	118	82	42	421	466
RTOR Reduction (vph)	0	0	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	284	294	0	0	124	121	0	222	0	0	0	468
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	17.3	17.3			8.9	8.9		16.8				31.0
Effective Green, g (s)	17.3	17.3			8.9	8.9		16.8				31.0
Actuated g/C Ratio	0.19	0.19			0.10	0.10		0.19				0.34
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	340	342			151	148		609				554
v/s Ratio Prot	0.16	c0.17			c0.08	0.08		c0.07				c0.29
v/s Ratio Perm												
v/c Ratio	0.84	0.86			0.82	0.82		0.37				0.84
Uniform Delay, d1	35.0	35.2			39.8	39.8		31.9				27.3
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.72
Incremental Delay, d2	16.1	18.9			28.7	28.2		1.7				13.3
Delay (s)	51.0	54.0			68.5	68.0		33.6				32.9
Level of Service	D	D			E	E		C				C
Approach Delay (s)		52.6			68.2			33.6				
Approach LOS		D			E			C				

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	187
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.97
Satd. Flow (prot)	3279
Flt Permitted	0.97
Satd. Flow (perm)	3279
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	197
RTOR Reduction (vph)	0
Lane Group Flow (vph)	616
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	31.0
Effective Green, g (s)	31.0
Actuated g/C Ratio	0.34
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	1129
v/s Ratio Prot	0.19
v/s Ratio Perm	
v/c Ratio	0.55
Uniform Delay, d1	23.8
Progression Factor	0.70
Incremental Delay, d2	1.7
Delay (s)	18.3
Level of Service	B
Approach Delay (s)	24.6
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	2050	250	560	970	130	240	40	750	80	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	2158	263	589	1021	137	253	42	789	84	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	198	2334	727	691	3063	1012	315	291	565	127	189	161
Arrive On Green	0.06	0.46	0.46	0.20	0.60	0.60	0.09	0.16	0.16	0.04	0.10	0.10
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	137	2158	263	589	1021	137	253	42	789	84	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	4.2	43.4	11.7	17.9	10.9	3.7	7.8	2.1	17.0	2.6	1.7	4.8
Cycle Q Clear(g_c), s	4.2	43.4	11.7	17.9	10.9	3.7	7.8	2.1	17.0	2.6	1.7	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	198	2334	727	691	3063	1012	315	291	565	127	189	161
V/C Ratio(X)	0.69	0.92	0.36	0.85	0.33	0.14	0.80	0.14	1.40	0.66	0.17	0.46
Avail Cap(c_a), veh/h	285	2338	728	1044	3460	1136	348	291	565	127	189	161
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	50.3	27.6	19.1	41.9	10.8	7.8	48.5	39.6	35.0	51.7	44.6	46.0
Incr Delay (d2), s/veh	4.3	6.9	0.3	4.5	0.1	0.1	11.8	1.0	188.6	12.3	1.9	9.2
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	2.1	21.7	5.2	8.9	5.0	1.6	4.2	1.2	46.6	1.5	1.0	2.5
LnGrp Delay(d),s/veh	54.6	34.6	19.4	46.4	10.8	7.8	60.3	40.6	223.5	64.0	46.6	55.2
LnGrp LOS	D	C	B	D	B	A	E	D	F	E	D	E
Approach Vol, veh/h		2558			1747			1084			190	
Approach Delay, s/veh		34.1			22.6			178.3			57.6	
Approach LOS		C			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	25.8	53.9	13.9	15.1	10.2	69.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	33.0	50.0	11.0	10.0	9.0	74.0
Max Q Clear Time (g_c+I1), s	4.6	19.0	19.9	45.4	9.8	6.8	6.2	12.9
Green Ext Time (p_c), s	0.0	0.0	1.9	4.5	0.1	1.4	0.1	52.6

Intersection Summary	
HCM 2010 Ctrl Delay	59.3
HCM 2010 LOS	E

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												
Volume (veh/h)	130	1970	400	200	1020	70	310	20	420	20	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	2074	421	211	1074	74	326	21	442	21	0	91
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	172	2098	811	215	1922	628	344	571	485	66	0	1020
Arrive On Green	0.10	0.41	0.41	0.06	0.38	0.38	0.10	0.31	0.31	0.02	0.00	0.22
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	137	2074	421	211	1074	74	326	21	442	21	0	91
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	6.0	32.4	14.1	4.9	13.3	2.4	7.5	0.6	21.5	0.5	0.0	1.6
Cycle Q Clear(g_c), s	6.0	32.4	14.1	4.9	13.3	2.4	7.5	0.6	21.5	0.5	0.0	1.6
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	172	2098	811	215	1922	628	344	571	485	66	0	1020
V/C Ratio(X)	0.80	0.99	0.52	0.98	0.56	0.12	0.95	0.04	0.91	0.32	0.00	0.09
Avail Cap(c_a), veh/h	266	2098	811	215	1922	628	344	571	485	177	0	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	23.3	12.9	37.5	19.6	15.3	35.8	19.5	26.7	38.8	0.0	18.9
Incr Delay (d2), s/veh	8.9	17.0	0.6	55.7	0.4	0.1	34.9	0.1	23.9	2.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	18.3	6.2	4.0	6.2	1.0	5.2	0.3	12.6	0.3	0.0	0.7
LnGrp Delay(d),s/veh	44.2	40.3	13.5	93.2	20.0	15.4	70.7	19.6	50.5	41.5	0.0	19.1
LnGrp LOS	D	D	B	F	B	B	E	B	D	D		B
Approach Vol, veh/h		2632			1359			789			112	
Approach Delay, s/veh		36.2			31.1			58.0			23.3	
Approach LOS		D			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	28.5	9.0	37.0	12.0	22.0	11.8	34.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	5.0	33.0	8.0	18.0	12.0	26.0
Max Q Clear Time (g_c+I1), s	2.5	23.5	6.9	34.4	9.5	3.6	8.0	15.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.9	0.1	10.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	420	0	70	470	200	0	0	230	110
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				511	0	0	495	211	0	0	242	116
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				625	328	0	553	1369	0	0	889	413
Arrive On Green				0.18	0.00	0.00	0.10	0.24	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2442	1091
Grp Volume(v), veh/h				511	0	0	495	211	0	0	180	178
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1670
Q Serve(g_s), s				12.5	0.0	0.0	24.8	8.0	0.0	0.0	6.3	6.7
Cycle Q Clear(g_c), s				12.5	0.0	0.0	24.8	8.0	0.0	0.0	6.3	6.7
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				625	328	0	553	1369	0	0	670	632
V/C Ratio(X)				0.82	0.00	0.00	0.89	0.15	0.00	0.00	0.27	0.28
Avail Cap(c_a), veh/h				946	497	0	729	1369	0	0	670	632
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.97	0.97	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.7	0.0	0.0	38.9	12.1	0.0	0.0	19.3	19.4
Incr Delay (d2), s/veh				3.4	0.0	0.0	10.9	0.2	0.0	0.0	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
%ile BackOfQ(50%),veh/ln				6.4	0.0	0.0	13.9	4.2	0.0	0.0	3.3	3.3
LnGrp Delay(d),s/veh				39.1	0.0	0.0	49.8	12.3	0.0	0.0	20.3	20.6
LnGrp LOS				D			D	B			C	C
Approach Vol, veh/h					511			706			358	
Approach Delay, s/veh					39.1			38.6			20.4	
Approach LOS					D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		70.1			32.1	38.1		19.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		58.0			37.0	17.0		24.0
Max Q Clear Time (g_c+I1), s		10.0			26.8	8.7		14.5
Green Ext Time (p_c), s		3.9			1.3	2.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	0	280	0	0	0	0	540	390	120	540	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	137	0	295				0	568	411	126	568	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	380	0	339				0	1997	893	157	2467	0
Arrive On Green	0.21	0.00	0.21				0.00	0.19	0.19	0.18	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	137	0	295				0	568	411	126	568	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	5.9	0.0	16.2				0.0	12.4	20.8	6.1	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	16.2				0.0	12.4	20.8	6.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	380	0	339				0	1997	893	157	2467	0
V/C Ratio(X)	0.36	0.00	0.87				0.00	0.28	0.46	0.80	0.23	0.00
Avail Cap(c_a), veh/h	493	0	440				0	1997	893	335	2467	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.86	0.86	0.88	0.88	0.00
Uniform Delay (d), s/veh	30.1	0.0	34.2				0.0	21.0	24.4	36.3	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	14.0				0.0	0.3	1.5	8.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	8.4				0.0	6.2	9.5	3.4	0.1	0.0
LnGrp Delay(d),s/veh	30.7	0.0	48.1				0.0	21.3	25.9	44.5	0.2	0.0
LnGrp LOS	C		D					C	C	D	A	
Approach Vol, veh/h		432						979			694	
Approach Delay, s/veh		42.6						23.2			8.2	
Approach LOS		D						C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.0	54.8		23.3		66.7		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	17.0	36.0		25.0		57.0		
Max Q Clear Time (g_c+I1), s	8.1	22.8		18.2		2.0		
Green Ext Time (p_c), s	0.2	7.5		1.1		13.3		

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	360	370	340	190	120	200	670	190	180	1090	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	322	427	358	200	126	211	705	200	189	1147	158
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	226	376	901	468	745	333	285	1317	369	520	2042	636
Arrive On Green	0.13	0.20	0.20	0.14	0.21	0.21	0.17	0.67	0.67	0.15	0.40	0.40
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	3951	1106	3442	5085	1583
Grp Volume(v), veh/h	189	322	427	358	200	126	211	604	301	189	1147	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1667	1721	1695	1583
Q Serve(g_s), s	9.4	15.0	6.3	9.0	4.3	4.3	5.2	8.3	8.5	4.4	15.7	6.0
Cycle Q Clear(g_c), s	9.4	15.0	6.3	9.0	4.3	4.3	5.2	8.3	8.5	4.4	15.7	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	226	376	901	468	745	333	285	1130	556	520	2042	636
V/C Ratio(X)	0.84	0.86	0.47	0.76	0.27	0.38	0.74	0.53	0.54	0.36	0.56	0.25
Avail Cap(c_a), veh/h	315	414	966	574	747	334	421	1130	556	520	2042	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Uniform Delay (d), s/veh	38.3	34.7	12.0	37.5	29.7	14.8	36.6	11.4	11.4	34.3	20.8	17.9
Incr Delay (d2), s/veh	12.9	15.1	0.4	4.9	0.2	0.7	3.5	1.7	3.4	0.4	1.1	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	5.4	9.3	2.8	4.6	2.1	1.9	2.6	3.9	4.2	2.1	7.5	2.7
LnGrp Delay(d),s/veh	51.2	49.7	12.4	42.4	29.9	15.5	40.1	13.0	14.9	34.7	21.9	18.8
LnGrp LOS	D	D	B	D	C	B	D	B	B	C	C	B
Approach Vol, veh/h		938			684			1116			1494	
Approach Delay, s/veh		33.1			33.8			18.7			23.2	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	34.0	16.2	22.2	11.4	40.1	15.5	22.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	30.0	15.0	20.0	11.0	28.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	6.4	10.5	11.0	17.0	7.2	17.7	11.4	6.3
Green Ext Time (p_c), s	0.2	6.1	1.2	1.2	0.2	6.3	0.2	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	470	50	160	340	260	660	0	0	1170	620
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	495	53	168	358	274	695	0	0	1232	653
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	69	218	246	310	3842	0	0	1897	849
Arrive On Green	0.00	0.00	0.00	0.16	0.16	0.16	0.18	0.76	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		441	1399	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		221	0	358	274	695	0	0	1232	653
Grp Sat Flow(s),veh/h/ln				1841	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				10.4	0.0	14.0	13.6	3.5	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				10.4	0.0	14.0	13.6	3.5	0.0	0.0	0.0	0.0
Prop In Lane				0.24		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				286	0	246	310	3842	0	0	1897	849
V/C Ratio(X)				0.77	0.00	1.45	0.88	0.18	0.00	0.00	0.65	0.77
Avail Cap(c_a), veh/h				286	0	246	355	3842	0	0	1897	849
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				36.5	0.0	38.0	36.2	3.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				12.2	0.0	225.3	20.2	0.1	0.0	0.0	1.3	5.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.3	0.0	21.5	8.4	1.6	0.0	0.0	0.3	1.2
LnGrp Delay(d),s/veh				48.7	0.0	263.3	56.5	3.2	0.0	0.0	1.3	5.1
LnGrp LOS				D		F	E	A			A	A
Approach Vol, veh/h					579			969			1885	
Approach Delay, s/veh					181.4			18.3			2.6	
Approach LOS					F			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.0			19.8	52.2		18.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		57.0			18.0	35.0		14.0
Max Q Clear Time (g_c+I1), s		5.5			15.6	2.0		16.0
Green Ext Time (p_c), s		30.9			0.2	23.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	460	2120	590	140	1360	120	370	70	140	130	80	650
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	484	2232	621	147	1432	126	389	74	147	137	0	740
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	658	2260	704	158	1739	542	421	407	364	208	0	528
Arrive On Green	0.19	0.44	0.44	0.09	0.34	0.34	0.12	0.23	0.23	0.06	0.00	0.17
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	484	2232	621	147	1432	126	389	74	147	137	0	740
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	11.9	39.1	20.0	7.4	23.2	4.0	10.1	3.0	7.1	3.4	0.0	15.0
Cycle Q Clear(g_c), s	11.9	39.1	20.0	7.4	23.2	4.0	10.1	3.0	7.1	3.4	0.0	15.0
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	658	2260	704	158	1739	542	421	407	364	208	0	528
V/C Ratio(X)	0.74	0.99	0.88	0.93	0.82	0.23	0.92	0.18	0.40	0.66	0.00	1.40
Avail Cap(c_a), veh/h	658	2260	704	158	1865	581	421	407	364	276	0	528
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)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	24.8	8.8	40.7	27.1	12.7	39.1	27.8	29.4	41.5	0.0	37.5
Incr Delay (d2), s/veh	3.7	14.6	11.0	51.9	3.0	0.2	26.2	1.0	3.3	3.5	0.0	192.1
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	6.0	21.2	10.8	5.9	11.3	1.7	6.3	1.6	3.4	1.8	0.0	20.6
LnGrp Delay(d),s/veh	37.9	39.4	19.8	92.6	30.1	13.0	65.3	28.8	32.7	45.0	0.0	229.6
LnGrp LOS	D	D	B	F	C	B	E	C	C	D		F
Approach Vol, veh/h		3337			1705			610			877	
Approach Delay, s/veh		35.5			34.2			53.0			200.8	
Approach LOS		D			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	24.7	12.0	44.0	15.0	19.0	21.2	34.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	19.0	8.0	40.0	11.0	15.0	15.0	33.0
Max Q Clear Time (g_c+I1), s	5.4	9.1	9.4	41.1	12.1	17.0	13.9	25.2
Green Ext Time (p_c), s	0.1	2.1	0.0	0.0	0.0	0.0	1.1	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	59.0
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	750	2450	1570	970	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	789	2579	1653	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	670	4856	1885	843		
Arrive On Green	0.38	0.95	0.53	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	789	2579	1653	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	34.0	4.2	36.9	0.0		
Cycle Q Clear(g_c), s	34.0	4.2	36.9	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	670	4856	1885	843		
V/C Ratio(X)	1.18	0.53	0.88	0.00		
Avail Cap(c_a), veh/h	670	4859	1888	844		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.49	0.00		
Uniform Delay (d), s/veh	28.0	0.2	18.4	0.0		
Incr Delay (d2), s/veh	81.3	0.0	2.6	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	31.7	1.7	18.6	0.0		
LnGrp Delay(d),s/veh	109.3	0.2	21.0	0.0		
LnGrp LOS	F	A	C			
Approach Vol, veh/h		3368	1653			
Approach Delay, s/veh		25.8	21.0			
Approach LOS		C	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				89.9			38.0	51.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				86.0			34.0	48.0
Max Q Clear Time (g_c+I1), s				6.2			36.0	38.9
Green Ext Time (p_c), s				76.0			0.0	9.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	930	0	380	620
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	979	0	400	653
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2105	489			979	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2105	489			979	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			43	
cM capacity (veh/h)	19	524			701	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	653	326	400	326	326
Volume Left	0	0	400	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	701	1700	1700
Volume to Capacity	0.38	0.19	0.57	0.19	0.19
Queue Length 95th (ft)	0	0	91	0	0
Control Delay (s)	0.0	0.0	16.7	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		6.4		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1770	730	0	1280	740	420	50	950	440	10	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	1863	0	0	1347	779	480	0	0	471	0	189
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	178	2984	929	0	2222	692	352	0	157	585	0	261
Arrive On Green	0.10	0.59	0.00	0.00	0.44	0.44	0.10	0.00	0.00	0.16	0.00	0.16
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	137	1863	0	0	1347	779	480	0	0	471	0	189
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	6.1	19.2	0.0	0.0	16.3	35.2	8.0	0.0	0.0	10.3	0.0	9.1
Cycle Q Clear(g_c), s	6.1	19.2	0.0	0.0	16.3	35.2	8.0	0.0	0.0	10.3	0.0	9.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	2984	929	0	2222	692	352	0	157	585	0	261
V/C Ratio(X)	0.77	0.62	0.00	0.00	0.61	1.13	1.36	0.00	0.00	0.81	0.00	0.72
Avail Cap(c_a), veh/h	1564	5304	1652	0	2222	692	352	0	157	705	0	315
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	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	10.8	0.0	0.0	17.4	22.7	36.3	0.0	0.0	32.4	0.0	31.9
Incr Delay (d2), s/veh	6.9	0.2	0.0	0.0	0.5	74.4	180.2	0.0	0.0	5.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	8.9	0.0	0.0	7.7	29.5	12.7	0.0	0.0	5.5	0.0	8.2
LnGrp Delay(d),s/veh	42.2	11.1	0.0	0.0	17.8	97.1	216.4	0.0	0.0	38.1	0.0	38.3
LnGrp LOS	D	B			B	F	F			D		D
Approach Vol, veh/h		2000			2126			480			660	
Approach Delay, s/veh		13.2			46.9			216.4			38.2	
Approach LOS		B			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		12.0		51.3		17.3	12.1	39.2
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		8.0		84.0		16.0	71.0	9.0
Max Q Clear Time (g_c+I1), s		10.0		21.2		12.3	8.1	37.2
Green Ext Time (p_c), s		0.0		26.0		1.0	0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.4
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1995	245	250	900	525	520
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2100	0	263	947	553	547
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2174	677	276	2854	589	1148
Arrive On Green	0.43	0.00	0.08	0.56	0.33	0.33
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2100	0	263	947	553	547
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	30.1	0.0	5.7	7.5	22.6	10.7
Cycle Q Clear(g_c), s	30.1	0.0	5.7	7.5	22.6	10.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2174	677	276	2854	589	1148
V/C Ratio(X)	0.97	0.00	0.95	0.33	0.94	0.48
Avail Cap(c_a), veh/h	2174	677	276	2854	593	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	34.3	8.9	24.3	16.1
Incr Delay (d2), s/veh	12.3	0.0	41.5	0.1	23.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	0.0	4.3	3.5	14.8	4.2
LnGrp Delay(d),s/veh	33.2	0.0	75.7	8.9	47.2	16.4
LnGrp LOS	C		E	A	D	B
Approach Vol, veh/h	2100			1210	1100	
Approach Delay, s/veh	33.2			23.4	31.9	
Approach LOS	C			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		28.8	10.0	36.0				46.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	6.0	32.0				42.0
Max Q Clear Time (g_c+I1), s		24.6	7.7	32.1				9.5
Green Ext Time (p_c), s		0.2	0.0	0.0				28.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	140	170	110	50	40	80	1075	140	30	735	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	147	179	116	53	42	84	1132	147	32	774	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	174	212	144	219	173	107	1278	166	49	1252	86
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.06	0.41	0.41	0.03	0.37	0.37
Sat Flow, veh/h	1774	766	932	1774	964	764	1774	3152	408	1774	3362	230
Grp Volume(v), veh/h	116	0	326	116	0	95	84	634	645	32	407	420
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	0	1728	1774	1770	1791	1774	1770	1822
Q Serve(g_s), s	4.0	0.0	11.3	4.0	0.0	2.8	2.9	20.5	20.6	1.1	11.6	11.6
Cycle Q Clear(g_c), s	4.0	0.0	11.3	4.0	0.0	2.8	2.9	20.5	20.6	1.1	11.6	11.6
Prop In Lane	1.00		0.55	1.00		0.44	1.00		0.23	1.00		0.13
Lane Grp Cap(c), veh/h	144	0	386	144	0	392	107	718	726	49	659	679
V/C Ratio(X)	0.81	0.00	0.85	0.81	0.00	0.24	0.78	0.88	0.89	0.66	0.62	0.62
Avail Cap(c_a), veh/h	144	0	440	144	0	448	144	718	726	115	659	679
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	27.9	0.0	22.8	27.9	0.0	19.5	28.6	17.0	17.0	29.7	15.8	15.8
Incr Delay (d2), s/veh	27.8	0.0	12.8	27.8	0.0	0.3	18.0	14.9	15.1	14.2	4.3	4.2
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	3.0	0.0	6.6	3.0	0.0	1.4	1.9	12.8	13.1	0.7	6.4	6.6
LnGrp Delay(d),s/veh	55.7	0.0	35.6	55.7	0.0	19.8	46.6	31.9	32.1	43.9	20.1	20.0
LnGrp LOS	E		D	E		B	D	C	C	D	C	B
Approach Vol, veh/h		442			211			1363			859	
Approach Delay, s/veh		40.9			39.5			32.9			20.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	29.0	9.0	18.0	7.7	27.0	9.0	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	24.0	5.0	16.0	5.0	23.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	22.6	6.0	13.3	4.9	13.6	6.0	4.8
Green Ext Time (p_c), s	0.0	1.2	0.0	0.7	0.0	7.6	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	240	140	60	130	20	1315	110	100	50	160	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	253	147	63	137	21	1384	116	105	53	168	116
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	148	1224	46	307	49	993	577	523	118	151	104
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.56	0.64	0.64	0.07	0.15	0.15
Sat Flow, veh/h	316	694	1583	0	1437	229	1774	902	817	1774	1028	710
Grp Volume(v), veh/h	369	0	147	69	0	152	1384	0	221	53	0	284
Grp Sat Flow(s),veh/h/ln	1010	0	1583	12	0	1655	1774	0	1719	1774	0	1738
Q Serve(g_s), s	20.1	0.0	0.0	0.0	0.0	11.9	84.0	0.0	8.0	4.3	0.0	22.0
Cycle Q Clear(g_c), s	32.0	0.0	0.0	32.0	0.0	11.9	84.0	0.0	8.0	4.3	0.0	22.0
Prop In Lane	0.31		1.00	0.91		0.14	1.00		0.48	1.00		0.41
Lane Grp Cap(c), veh/h	247	0	1224	48	0	353	993	0	1100	118	0	255
V/C Ratio(X)	1.49	0.00	0.12	1.44	0.00	0.43	1.39	0.00	0.20	0.45	0.00	1.11
Avail Cap(c_a), veh/h	247	0	1224	48	0	353	993	0	1100	118	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.1	0.0	4.2	73.3	0.0	51.1	33.0	0.0	11.2	67.3	0.0	64.0
Incr Delay (d2), s/veh	242.6	0.0	0.0	281.5	0.0	0.8	183.1	0.0	0.4	2.6	0.0	90.6
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	26.9	0.0	1.5	5.8	0.0	5.5	91.4	0.0	3.9	2.2	0.0	17.0
LnGrp Delay(d),s/veh	308.7	0.0	4.3	354.9	0.0	51.9	216.1	0.0	11.6	70.0	0.0	154.6
LnGrp LOS	F		A	F		D	F		B	E		F
Approach Vol, veh/h		516			221			1605			337	
Approach Delay, s/veh		222.0			147.0			187.9			141.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	100.0		36.0	88.0	26.0		36.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	96.0		32.0	84.0	22.0		32.0
Max Q Clear Time (g_c+I1), s	6.3	10.0		34.0	86.0	24.0		34.0
Green Ext Time (p_c), s	2.5	1.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	185.2
HCM 2010 LOS	F

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												
Volume (veh/h)	10	10	370	60	20	30	1465	1175	70	30	955	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	408	63	21	32	1542	1237	74	32	1005	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	236	401	75	25	38	1492	2104	126	118	908	10
Arrive On Green	0.00	0.00	0.13	0.08	0.08	0.08	0.72	1.00	1.00	0.07	0.25	0.25
Sat Flow, veh/h	0	1863	3167	940	313	478	3442	3394	203	1774	3586	39
Grp Volume(v), veh/h	0	0	408	116	0	0	1542	644	667	32	496	520
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1731	0	0	1721	1770	1827	1774	1770	1856
Q Serve(g_s), s	0.0	0.0	19.0	9.9	0.0	0.0	65.0	0.0	0.0	2.6	38.0	38.0
Cycle Q Clear(g_c), s	0.0	0.0	19.0	9.9	0.0	0.0	65.0	0.0	0.0	2.6	38.0	38.0
Prop In Lane	0.00		1.00	0.54		0.28	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	0	236	401	138	0	0	1492	1097	1133	118	448	470
V/C Ratio(X)	0.00	0.00	1.02	0.84	0.00	0.00	1.03	0.59	0.59	0.27	1.11	1.11
Avail Cap(c_a), veh/h	0	236	401	185	0	0	1492	1097	1133	118	448	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	65.5	68.1	0.0	0.0	20.7	0.0	0.0	66.5	56.0	56.0
Incr Delay (d2), s/veh	0.0	0.0	49.4	21.7	0.0	0.0	18.0	0.2	0.2	1.2	74.6	73.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	11.1	5.6	0.0	0.0	33.8	0.1	0.1	1.3	27.8	29.1
LnGrp Delay(d),s/veh	0.0	0.0	114.9	89.7	0.0	0.0	38.7	0.2	0.2	67.7	130.6	129.7
LnGrp LOS			F	F			F	A	A	E	F	F
Approach Vol, veh/h		408			116			2853			1048	
Approach Delay, s/veh		114.9			89.7			21.0			128.2	
Approach LOS		F			F			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	97.0		23.0	69.0	42.0		16.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	93.0		19.0	61.0	38.0		16.0
Max Q Clear Time (g_c+I1), s	4.6	2.0		21.0	67.0	40.0		11.9
Green Ext Time (p_c), s	1.0	13.7		0.0	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	56.9
HCM 2010 LOS	E

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												
Volume (veh/h)	140	140	675	740	215	1105	420	1445	220	20	1425	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	147	147	711	519	541	1196	442	1521	232	21	1500	53
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	260	273	496	438	459	830	296	1496	224	54	1180	528
Arrive On Green	0.15	0.15	0.15	0.25	0.25	0.25	0.17	0.48	0.48	0.03	0.67	0.67
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	3087	463	3442	3539	1583
Grp Volume(v), veh/h	147	147	711	519	541	1196	442	861	892	21	1500	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1781	1721	1770	1583
Q Serve(g_s), s	11.6	11.0	22.0	37.0	37.0	37.0	25.0	72.7	72.7	0.9	50.0	1.8
Cycle Q Clear(g_c), s	11.6	11.0	22.0	37.0	37.0	37.0	25.0	72.7	72.7	0.9	50.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	260	273	496	438	459	830	296	857	863	54	1180	528
V/C Ratio(X)	0.56	0.54	1.43	1.19	1.18	1.44	1.49	1.00	1.03	0.39	1.27	0.10
Avail Cap(c_a), veh/h	260	273	496	438	459	830	296	857	863	252	1180	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	59.5	59.3	51.5	56.5	56.5	55.3	62.5	38.7	38.7	72.0	25.0	17.0
Incr Delay (d2), s/veh	2.8	2.1	206.3	104.7	100.5	205.0	239.8	31.8	39.6	0.4	122.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	5.8	38.0	30.8	31.8	40.8	31.9	43.1	45.2	0.4	43.7	0.8
LnGrp Delay(d),s/veh	62.4	61.4	257.8	161.2	157.0	260.3	302.3	70.5	78.3	72.4	147.8	17.0
LnGrp LOS	E	E	F	F	F	F	F	F	F	E	F	B
Approach Vol, veh/h		1005			2256			2195			1574	
Approach Delay, s/veh		200.5			212.7			120.3			142.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	76.7		26.0	29.0	54.0		41.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	11.0	64.0		22.0	25.0	50.0		37.0
Max Q Clear Time (g_c+I1), s	2.9	74.7		24.0	27.0	52.0		39.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	166.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1345	2420	40	0	660	1285	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1416	2547		0	695	1353	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2203	2310		0	1085	1559	0
Arrive On Green	0.64	0.64		0.00	0.31	0.31	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1416	2547		0	695	1353	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	37.7	96.0		0.0	25.4	37.7	0.0
Cycle Q Clear(g_c), s	37.7	96.0		0.0	25.4	37.7	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2203	2310		0	1085	1559	0
V/C Ratio(X)	0.64	1.10		0.00	0.64	0.87	0.00
Avail Cap(c_a), veh/h	2203	2310		0	1085	1559	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.5	27.0		0.0	44.9	49.1	0.0
Incr Delay (d2), s/veh	0.6	53.3		0.0	2.9	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	54.8		0.0	12.9	18.6	0.0
LnGrp Delay(d),s/veh	17.2	80.3		0.0	47.8	55.9	0.0
LnGrp LOS	B	F			D	E	
Approach Vol, veh/h	3963				695	1353	
Approach Delay, s/veh	57.8				47.8	55.9	
Approach LOS	E				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		100.0		50.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		46.0		96.0		38.0		
Max Q Clear Time (g_c+I1), s		27.4		98.0		39.7		
Green Ext Time (p_c), s		4.6		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	56.2
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2500	695	90	1850	375	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2632	732	95	1947	395	179
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2842	1224	118	4350	761	340
Arrive On Green	0.56	0.56	0.07	0.68	0.21	0.21
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2632	732	95	1947	395	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	35.5	14.6	4.0	10.5	7.4	7.5
Cycle Q Clear(g_c), s	35.5	14.6	4.0	10.5	7.4	7.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2842	1224	118	4350	761	340
V/C Ratio(X)	0.93	0.60	0.80	0.45	0.52	0.53
Avail Cap(c_a), veh/h	2848	1226	118	4357	761	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	3.6	34.5	5.6	26.0	26.1
Incr Delay (d2), s/veh	4.0	0.5	31.7	0.1	2.5	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	12.4	3.0	4.6	3.9	3.8
LnGrp Delay(d),s/veh	19.1	4.1	66.2	5.6	28.6	31.8
LnGrp LOS	B	A	E	A	C	C
Approach Vol, veh/h	3364			2042	574	
Approach Delay, s/veh	15.8			8.4	29.6	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.1	9.0	45.9				54.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	5.0	42.0				51.0
Max Q Clear Time (g_c+I1), s		9.5	6.0	37.5				12.5
Green Ext Time (p_c), s		1.2	0.0	4.4				23.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	380	290	120	1285	160	90	225	140	140	330	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	400	305	126	1353	168	95	237	147	147	347	174
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	155	812	614	160	1348	166	111	373	317	155	419	356
Arrive On Green	0.09	0.42	0.42	0.09	0.43	0.43	0.06	0.20	0.20	0.09	0.22	0.22
Sat Flow, veh/h	1774	1923	1453	1774	3172	391	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	137	368	337	126	751	770	95	237	147	147	347	174
Grp Sat Flow(s),veh/h/ln	1774	1770	1606	1774	1770	1794	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.1	12.1	12.3	5.6	33.9	34.0	4.2	9.3	6.6	6.6	14.2	7.7
Cycle Q Clear(g_c), s	6.1	12.1	12.3	5.6	33.9	34.0	4.2	9.3	6.6	6.6	14.2	7.7
Prop In Lane	1.00		0.90	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	747	679	160	752	762	111	373	317	155	419	356
V/C Ratio(X)	0.88	0.49	0.50	0.79	1.00	1.01	0.86	0.64	0.46	0.95	0.83	0.49
Avail Cap(c_a), veh/h	155	747	679	266	752	762	111	373	317	155	419	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	16.8	16.9	35.6	23.0	23.0	37.1	29.3	28.2	36.3	29.5	27.0
Incr Delay (d2), s/veh	40.3	0.5	0.6	8.3	32.4	35.2	44.5	8.1	4.8	56.4	17.0	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	4.7	6.0	5.5	3.1	23.2	24.2	3.5	5.6	3.3	5.7	9.2	3.8
LnGrp Delay(d),s/veh	76.4	17.3	17.5	44.0	55.4	58.2	81.7	37.4	33.0	92.7	46.5	31.7
LnGrp LOS	E	B	B	D	E	F	F	D	C	F	D	C
Approach Vol, veh/h		842			1647			479			668	
Approach Delay, s/veh		27.0			55.8			44.8			52.8	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	20.0	11.2	37.8	9.0	22.0	11.0	38.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	12.0	29.0	5.0	18.0	7.0	34.0
Max Q Clear Time (g_c+I1), s	8.6	11.3	7.6	14.3	6.2	16.2	8.1	36.0
Green Ext Time (p_c), s	0.0	2.0	0.1	11.8	0.0	0.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	35	35	235	390	530	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	37	247	411	558	200

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1358	379	758	0	-	0
Stage 1	658	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	140	619	849	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	87	619	849	-	-	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	283	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	42.6	4.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	849	-	87	619	-	-
HCM Lane V/C Ratio	0.291	-	0.423	0.06	-	-
HCM Control Delay (s)	11	0.9	73.9	11.2	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	1.7	0.2	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	280	510	160	395	415	140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	295	537	168	416	437	147
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	347	1002	969	434	577	825
Arrive On Green	0.20	0.54	0.27	0.27	0.33	0.33
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	295	537	168	416	437	147
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	9.4	10.9	2.1	15.1	12.9	2.9
Cycle Q Clear(g_c), s	9.4	10.9	2.1	15.1	12.9	2.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	347	1002	969	434	577	825
V/C Ratio(X)	0.85	0.54	0.17	0.96	0.76	0.18
Avail Cap(c_a), veh/h	395	1052	969	434	577	825
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	8.8	16.2	20.9	17.7	7.4
Incr Delay (d2), s/veh	14.6	0.5	0.1	32.9	9.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	5.7	1.0	10.5	7.8	3.6
LnGrp Delay(d),s/veh	37.2	9.2	16.3	53.8	26.7	7.9
LnGrp LOS	D	A	B	D	C	A
Approach Vol, veh/h		832	584		584	
Approach Delay, s/veh		19.2	43.0		21.9	
Approach LOS		B	D		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				35.4		23.0	15.4	20.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				33.0		19.0	13.0	16.0
Max Q Clear Time (g_c+I1), s				12.9		14.9	11.4	17.1
Green Ext Time (p_c), s				6.3		0.9	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	630	3440	1380	815	0	1410
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	663	3621	1873	578		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	693	4795	2939	833		
Arrive On Green	0.39	0.94	1.00	1.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	663	3621	1873	578		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	54.6	21.2	0.0	0.0		
Cycle Q Clear(g_c), s	54.6	21.2	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	693	4795	2939	833		
V/C Ratio(X)	0.96	0.76	0.64	0.69		
Avail Cap(c_a), veh/h	816	4950	2939	833		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.09	0.09	0.88	0.88		
Uniform Delay (d), s/veh	44.5	0.8	0.0	0.0		
Incr Delay (d2), s/veh	3.2	0.1	0.4	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	27.3	9.1	0.1	0.5		
LnGrp Delay(d),s/veh	47.7	0.9	0.4	2.2		
LnGrp LOS	D	A	A	A		
Approach Vol, veh/h		4284	2451			
Approach Delay, s/veh		8.1	0.8			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				145.4			62.6	82.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			69.0	73.0
Max Q Clear Time (g_c+I1), s				23.2			56.6	2.0
Green Ext Time (p_c), s				118.3			2.0	70.6

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	1870	720	300	2225	360	0	0	0	1110	0	2075
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	389	1968	758	316	2342	0				1168	0	2184
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	272	1797	559	225	1661	517				1561	0	1393
Arrive On Green	0.15	0.35	0.35	0.13	0.33	0.00				0.44	0.00	0.44
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	389	1968	758	316	2342	0				1168	0	2184
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	23.0	53.0	53.0	19.0	49.0	0.0				41.2	0.0	66.0
Cycle Q Clear(g_c), s	23.0	53.0	53.0	19.0	49.0	0.0				41.2	0.0	66.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	272	1797	559	225	1661	517				1561	0	1393
V/C Ratio(X)	1.43	1.10	1.35	1.41	1.41	0.00				0.75	0.00	1.57
Avail Cap(c_a), veh/h	272	1797	559	225	1661	517				1561	0	1393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.63	0.63	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	63.5	48.5	48.5	65.5	50.5	0.0				35.1	0.0	42.0
Incr Delay (d2), s/veh	195.5	43.9	160.8	198.8	186.7	0.0				3.3	0.0	258.9
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	26.0	32.1	48.1	21.7	51.6	0.0				20.8	0.0	78.9
LnGrp Delay(d),s/veh	259.0	92.4	209.3	264.3	237.2	0.0				38.4	0.0	300.9
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3115			2658						3352	
Approach Delay, s/veh		141.6			240.4						209.4	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			23.0	57.0		70.0	27.0	53.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			19.0	53.0		66.0	23.0	49.0
Max Q Clear Time (g_c+I1), s			21.0	55.0		68.0	25.0	51.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	195.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	880	0	375	190	330	0	0	810	420
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				926	0	0	200	347	0	0	853	442
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				947	0	845	224	1462	0	0	920	412
Arrive On Green				0.53	0.00	0.00	0.25	0.83	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				926	0	0	200	347	0	0	853	442
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				76.4	0.0	0.0	16.3	3.2	0.0	0.0	35.2	39.0
Cycle Q Clear(g_c), s				76.4	0.0	0.0	16.3	3.2	0.0	0.0	35.2	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				947	0	845	224	1462	0	0	920	412
V/C Ratio(X)				0.98	0.00	0.00	0.89	0.24	0.00	0.00	0.93	1.07
Avail Cap(c_a), veh/h				958	0	855	224	1462	0	0	920	412
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.71	0.71	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.1	0.0	0.0	55.0	7.9	0.0	0.0	54.1	55.5
Incr Delay (d2), s/veh				23.7	0.0	0.0	25.5	0.3	0.0	0.0	16.5	65.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				43.5	0.0	0.0	9.6	1.6	0.0	0.0	19.3	24.5
LnGrp Delay(d),s/veh				57.8	0.0	0.0	80.5	8.2	0.0	0.0	70.6	120.9
LnGrp LOS				E			F	A			E	F
Approach Vol, veh/h					926			547			1295	
Approach Delay, s/veh					57.8			34.6			87.8	
Approach LOS					E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		66.0			23.0	43.0		84.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		61.0			18.0	39.0		81.0
Max Q Clear Time (g_c+I1), s		5.2			18.3	41.0		78.4
Green Ext Time (p_c), s		3.1			0.0	0.0		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	270	300	835	545	0	118	92	132	93	55	400	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1657			1682	1504		3258				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1657			1682	1504		3258				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	316	879	574	0	124	100	139	98	58	421	358
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	284	1195	0	0	586	212	0	281	0	0	0	579
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	58.0	58.0			26.0	26.0		17.0				33.0
Effective Green, g (s)	58.0	58.0			26.0	26.0		17.0				33.0
Actuated g/C Ratio	0.39	0.39			0.17	0.17		0.11				0.22
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	684	640			291	260		369				354
v/s Ratio Prot	0.16	c0.72			c0.35	0.14		c0.09				c0.36
v/s Ratio Perm												
v/c Ratio	0.42	1.87			2.01	0.82		0.76				1.64
Uniform Delay, d1	33.6	46.0			62.0	59.7		64.5				58.5
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.67
Incremental Delay, d2	0.4	396.2			468.2	17.6		13.8				290.3
Delay (s)	34.0	442.2			530.2	77.3		78.3				329.6
Level of Service	C	F			F	E		E				F
Approach Delay (s)		363.8			409.8			78.3				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	336.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	154.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	950
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3362
Flt Permitted	0.99
Satd. Flow (perm)	3362
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	1000
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1200
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	33.0
Effective Green, g (s)	33.0
Actuated g/C Ratio	0.22
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	739
v/s Ratio Prot	0.36
v/s Ratio Perm	
v/c Ratio	1.62
Uniform Delay, d1	58.5
Progression Factor	0.67
Incremental Delay, d2	282.8
Delay (s)	322.1
Level of Service	F
Approach Delay (s)	324.5
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	4355	250	560	1025	130	240	40	750	80	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	4584	263	589	1079	137	253	42	789	84	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	183	3017	939	551	3561	1151	298	211	433	92	100	85
Arrive On Green	0.05	0.59	0.59	0.16	0.70	0.70	0.09	0.11	0.11	0.03	0.05	0.05
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	137	4584	263	589	1079	137	253	42	789	84	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.9	89.0	8.0	24.0	12.1	3.9	10.9	3.1	14.0	3.7	2.5	7.0
Cycle Q Clear(g_c), s	5.9	89.0	8.0	24.0	12.1	3.9	10.9	3.1	14.0	3.7	2.5	7.0
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	183	3017	939	551	3561	1151	298	211	433	92	100	85
V/C Ratio(X)	0.75	1.52	0.28	1.07	0.30	0.12	0.85	0.20	1.82	0.92	0.32	0.87
Avail Cap(c_a), veh/h	252	3017	939	551	3561	1151	321	211	433	92	100	85
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	30.5	6.4	63.0	8.6	6.1	67.6	60.3	42.1	72.8	68.4	70.5
Incr Delay (d2), s/veh	0.7	233.8	0.0	35.3	0.0	0.0	18.0	2.1	379.4	66.8	8.3	67.3
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	2.8	106.7	3.4	14.1	5.6	1.7	5.9	1.7	51.6	2.6	1.5	4.6
LnGrp Delay(d),s/veh	70.8	264.3	6.4	98.3	8.6	6.1	85.6	62.4	421.5	139.6	76.7	137.8
LnGrp LOS	E	F	A	F	A	A	F	E	F	F	E	F
Approach Vol, veh/h		4984			1805			1084			190	
Approach Delay, s/veh		245.4			37.7			329.2			128.3	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	28.0	93.0	17.0	12.0	12.0	109.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	24.0	89.0	14.0	7.0	11.0	102.0
Max Q Clear Time (g_c+I1), s	5.7	16.0	26.0	91.0	12.9	9.0	7.9	14.1
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.1	0.0	0.1	16.8

Intersection Summary	
HCM 2010 Ctrl Delay	207.4
HCM 2010 LOS	F

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												
Volume (veh/h)	130	4275	400	200	1075	70	310	20	420	20	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	4500	421	211	1132	74	326	21	442	21	0	91
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	160	3221	1151	161	2999	958	321	368	313	55	0	666
Arrive On Green	0.09	0.63	0.63	0.09	1.00	1.00	0.09	0.20	0.20	0.02	0.00	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	137	4500	421	211	1132	74	326	21	442	21	0	91
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	11.4	95.0	0.9	7.0	0.0	0.0	14.0	1.4	26.0	0.9	0.0	2.7
Cycle Q Clear(g_c), s	11.4	95.0	0.9	7.0	0.0	0.0	14.0	1.4	26.0	0.9	0.0	2.7
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	160	3221	1151	161	2999	958	321	368	313	55	0	666
V/C Ratio(X)	0.86	1.40	0.37	1.31	0.38	0.08	1.01	0.06	1.41	0.38	0.00	0.14
Avail Cap(c_a), veh/h	237	3221	1151	161	2999	958	321	368	313	95	0	666
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.3	27.5	7.6	68.0	0.0	0.0	68.0	48.8	46.1	73.1	0.0	30.4
Incr Delay (d2), s/veh	17.8	180.7	0.2	175.9	0.1	0.0	54.0	0.3	203.1	4.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	98.0	0.3	7.2	0.0	0.0	9.1	0.7	29.0	0.5	0.0	1.2
LnGrp Delay(d),s/veh	85.0	208.2	7.8	243.9	0.1	0.0	122.1	49.1	249.2	77.4	0.0	30.9
LnGrp LOS	F	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		5058			1417			789			112	
Approach Delay, s/veh		188.2			36.4			191.4			39.6	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	33.7	11.0	99.0	18.0	22.0	17.5	92.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	28.0	7.0	95.0	14.0	18.0	20.0	82.0
Max Q Clear Time (g_c+I1), s	2.9	28.0	9.0	97.0	16.0	4.7	13.4	2.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.2	0.2	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	157.1
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	445	0	70	470	200	0	0	230	110
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				537	0	0	495	211	0	0	242	116
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				615	323	0	1005	1440	0	0	423	196
Arrive On Green				0.17	0.00	0.00	0.95	1.00	0.00	0.00	0.18	0.18
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2442	1091
Grp Volume(v), veh/h				537	0	0	495	211	0	0	180	178
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1670
Q Serve(g_s), s				22.1	0.0	0.0	4.2	0.0	0.0	0.0	14.0	14.6
Cycle Q Clear(g_c), s				22.1	0.0	0.0	4.2	0.0	0.0	0.0	14.0	14.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				615	323	0	1005	1440	0	0	319	301
V/C Ratio(X)				0.87	0.00	0.00	0.49	0.15	0.00	0.00	0.57	0.59
Avail Cap(c_a), veh/h				1017	534	0	1005	1440	0	0	319	301
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.99	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				60.4	0.0	0.0	1.9	0.0	0.0	0.0	56.2	56.4
Incr Delay (d2), s/veh				4.8	0.0	0.0	0.4	0.2	0.0	0.0	7.1	8.3
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				11.2	0.0	0.0	1.9	0.1	0.0	0.0	7.4	7.4
LnGrp Delay(d),s/veh				65.2	0.0	0.0	2.2	0.2	0.0	0.0	63.3	64.7
LnGrp LOS				E			A	A			E	E
Approach Vol, veh/h					537			706			358	
Approach Delay, s/veh					65.2			1.6			64.0	
Approach LOS					E			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		120.0			89.0	31.0		30.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		99.0			68.0	27.0		43.0
Max Q Clear Time (g_c+I1), s		2.0			6.2	16.6		24.1
Green Ext Time (p_c), s		3.1			3.1	1.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	0	280	0	0	0	0	540	1510	120	565	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	137	0	295				0	568	1589	126	595	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	189	0	169				0	2666	1193	106	2973	0
Arrive On Green	0.11	0.00	0.11				0.00	1.00	1.00	0.12	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	137	0	295				0	568	1589	126	595	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	11.2	0.0	16.0				0.0	0.0	113.0	9.0	0.0	0.0
Cycle Q Clear(g_c), s	11.2	0.0	16.0				0.0	0.0	113.0	9.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	189	0	169				0	2666	1193	106	2973	0
V/C Ratio(X)	0.72	0.00	1.75				0.00	0.21	1.33	1.18	0.20	0.00
Avail Cap(c_a), veh/h	189	0	169				0	2666	1193	106	2973	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.54	0.54	0.80	0.80	0.00
Uniform Delay (d), s/veh	64.9	0.0	67.0				0.0	0.0	0.0	66.0	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.0	359.3				0.0	0.1	152.7	136.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	23.8				0.0	0.0	50.6	8.4	0.1	0.0
LnGrp Delay(d),s/veh	77.7	0.0	426.3				0.0	0.1	152.7	202.0	0.1	0.0
LnGrp LOS	E		F					A	F	F	A	
Approach Vol, veh/h		432						2157			721	
Approach Delay, s/veh		315.8						112.5			35.4	
Approach LOS		F						F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	13.0	117.0		20.0		130.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	9.0	113.0		16.0		126.0		
Max Q Clear Time (g_c+I1), s	11.0	115.0		18.0		2.0		
Green Ext Time (p_c), s	0.0	0.0		0.0		5.1		

Intersection Summary	
HCM 2010 Ctrl Delay	122.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	360	370	340	190	120	200	1790	190	180	1115	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	322	427	358	200	126	211	1884	200	189	1174	158
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	384	349	831	409	318	142	258	2422	256	236	2604	811
Arrive On Green	0.22	0.19	0.19	0.12	0.09	0.09	0.15	1.00	1.00	0.02	0.17	0.17
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4673	493	3442	5085	1583
Grp Volume(v), veh/h	189	322	427	358	200	126	211	1364	720	189	1174	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1776	1721	1695	1583
Q Serve(g_s), s	14.0	25.5	12.6	15.3	8.2	10.2	8.9	0.0	0.0	8.2	31.2	5.8
Cycle Q Clear(g_c), s	14.0	25.5	12.6	15.3	8.2	10.2	8.9	0.0	0.0	8.2	31.2	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	384	349	831	409	318	142	258	1757	921	236	2604	811
V/C Ratio(X)	0.49	0.92	0.51	0.88	0.63	0.89	0.82	0.78	0.78	0.80	0.45	0.19
Avail Cap(c_a), veh/h	384	360	850	482	566	253	390	1757	921	275	2604	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.94	0.94	0.94
Uniform Delay (d), s/veh	51.5	59.9	27.0	65.0	65.8	50.6	62.8	0.0	0.0	72.3	43.4	7.2
Incr Delay (d2), s/veh	1.0	28.3	0.5	14.6	2.0	16.1	6.0	2.5	4.9	12.7	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	7.0	15.9	5.6	8.1	4.1	5.1	4.4	0.6	1.3	4.3	14.8	2.6
LnGrp Delay(d),s/veh	52.5	88.1	27.5	79.6	67.9	66.7	68.7	2.5	4.9	85.0	43.9	7.7
LnGrp LOS	D	F	C	E	E	E	E	A	A	F	D	A
Approach Vol, veh/h		938			684			2295			1521	
Approach Delay, s/veh		53.4			73.8			9.4			45.2	
Approach LOS		D			E			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	81.8	21.8	32.1	15.2	80.8	36.5	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	72.0	21.0	29.0	17.0	67.0	26.0	24.0
Max Q Clear Time (g_c+I1), s	10.2	2.0	17.3	27.5	10.9	33.2	16.0	12.2
Green Ext Time (p_c), s	0.1	57.1	0.5	0.6	0.3	30.5	1.4	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	470	50	160	340	260	1780	0	0	1170	645
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	495	53	168	358	274	1874	0	0	1232	679
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	100	317	359	297	3661	0	0	1861	833
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	0.17	0.72	0.00	0.00	0.53	0.53
Sat Flow, veh/h		0		441	1399	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		221	0	358	274	1874	0	0	1232	679
Grp Sat Flow(s),veh/h/ln				1841	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				15.8	0.0	33.9	22.8	24.5	0.0	0.0	38.0	53.4
Cycle Q Clear(g_c), s				15.8	0.0	33.9	22.8	24.5	0.0	0.0	38.0	53.4
Prop In Lane				0.24		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				417	0	359	297	3661	0	0	1861	833
V/C Ratio(X)				0.53	0.00	1.00	0.92	0.51	0.00	0.00	0.66	0.82
Avail Cap(c_a), veh/h				417	0	359	343	3661	0	0	1861	833
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.81	0.81
Uniform Delay (d), s/veh				51.0	0.0	58.0	61.5	9.3	0.0	0.0	25.9	29.5
Incr Delay (d2), s/veh				1.3	0.0	46.8	27.5	0.5	0.0	0.0	1.5	7.2
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				8.2	0.0	19.5	13.5	11.5	0.0	0.0	18.9	24.9
LnGrp Delay(d),s/veh				52.2	0.0	104.8	88.9	9.8	0.0	0.0	27.4	36.7
LnGrp LOS				D		F	F	A			C	D
Approach Vol, veh/h					579			2148			1911	
Approach Delay, s/veh					84.7			19.9			30.7	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.0			29.1	82.9		38.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		94.0			29.0	61.0		34.0
Max Q Clear Time (g_c+I1), s		26.5			24.8	55.4		35.9
Green Ext Time (p_c), s		58.5			0.3	5.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	460	3305	590	140	1390	120	370	70	140	130	80	650
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	484	3479	621	147	1463	126	389	74	147	137	0	740
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	909	2814	876	118	1809	563	321	354	317	260	0	570
Arrive On Green	0.26	0.55	0.55	0.07	0.36	0.36	0.09	0.20	0.20	0.07	0.00	0.18
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	484	3479	621	147	1463	126	389	74	147	137	0	740
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	18.1	83.0	29.0	10.0	39.0	8.4	14.0	5.2	12.3	5.6	0.0	27.0
Cycle Q Clear(g_c), s	18.1	83.0	29.0	10.0	39.0	8.4	14.0	5.2	12.3	5.6	0.0	27.0
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	909	2814	876	118	1809	563	321	354	317	260	0	570
V/C Ratio(X)	0.53	1.24	0.71	1.24	0.81	0.22	1.21	0.21	0.46	0.53	0.00	1.30
Avail Cap(c_a), veh/h	909	2814	876	118	2170	676	321	354	317	260	0	570
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)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.2	33.5	11.1	70.0	43.7	33.8	68.0	50.1	52.9	67.0	0.0	61.5
Incr Delay (d2), s/veh	0.5	108.9	2.1	161.9	2.0	0.2	120.3	1.3	4.8	2.0	0.0	146.8
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	8.7	66.9	13.1	10.2	18.6	3.7	12.0	2.7	5.8	2.8	0.0	23.4
LnGrp Delay(d),s/veh	47.7	142.4	13.2	231.9	45.7	34.0	188.3	51.4	57.7	69.0	0.0	208.3
LnGrp LOS	D	F	B	F	D	C	F	D	E	E		F
Approach Vol, veh/h		4584			1736			610			877	
Approach Delay, s/veh		114.9			60.6			140.3			186.5	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	34.0	14.0	87.0	18.0	31.0	43.6	57.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	30.0	10.0	83.0	14.0	27.0	29.0	64.0
Max Q Clear Time (g_c+I1), s	7.6	14.3	12.0	85.0	16.0	29.0	20.1	41.0
Green Ext Time (p_c), s	0.7	1.1	0.0	0.0	0.0	0.0	8.9	12.3

Intersection Summary	
HCM 2010 Ctrl Delay	112.9
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	750	2845	1590	975	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	789	2995	1674	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	698	4779	1840	823		
Arrive On Green	0.79	1.00	0.52	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	789	2995	1674	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	59.0	0.0	64.6	0.0		
Cycle Q Clear(g_c), s	59.0	0.0	64.6	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	698	4779	1840	823		
V/C Ratio(X)	1.13	0.63	0.91	0.00		
Avail Cap(c_a), veh/h	698	4950	1958	876		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.46	0.00		
Uniform Delay (d), s/veh	16.0	0.0	32.8	0.0		
Incr Delay (d2), s/veh	60.8	0.0	3.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	39.3	0.0	32.2	0.0		
LnGrp Delay(d),s/veh	76.8	0.0	36.1	0.0		
LnGrp LOS	F	A	D			
Approach Vol, veh/h		3784	1674			
Approach Delay, s/veh		16.0	36.1			
Approach LOS		B	D			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				145.0			63.0	82.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			59.0	83.0
Max Q Clear Time (g_c+I1), s				2.0			61.0	66.6
Green Ext Time (p_c), s				119.4			0.0	11.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	930	0	380	620
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	979	0	400	653
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2105	489			979	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2105	489			979	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			43	
cM capacity (veh/h)	19	524			701	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	653	326	400	326	326
Volume Left	0	0	400	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	701	1700	1700
Volume to Capacity	0.38	0.19	0.57	0.19	0.19
Queue Length 95th (ft)	0	0	91	0	0
Control Delay (s)	0.0	0.0	16.7	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		6.4		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1900	730	0	1285	740	420	50	1215	440	10	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	2000	0	0	1353	779	480	0	0	471	0	189
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	162	3177	989	0	2578	803	503	0	225	545	0	243
Arrive On Green	0.09	0.62	0.00	0.00	0.51	0.51	0.14	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	137	2000	0	0	1353	779	480	0	0	471	0	189
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	11.4	36.5	0.0	0.0	26.8	71.6	20.1	0.0	0.0	19.4	0.0	17.2
Cycle Q Clear(g_c), s	11.4	36.5	0.0	0.0	26.8	71.6	20.1	0.0	0.0	19.4	0.0	17.2
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	3177	989	0	2578	803	503	0	225	545	0	243
V/C Ratio(X)	0.85	0.63	0.00	0.00	0.52	0.97	0.95	0.00	0.00	0.86	0.00	0.78
Avail Cap(c_a), veh/h	355	3560	1108	0	2578	803	503	0	225	686	0	306
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	0.00	0.00	0.40	0.40	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.1	17.4	0.0	0.0	24.8	35.9	63.9	0.0	0.0	62.0	0.0	61.0
Incr Delay (d2), s/veh	11.5	0.3	0.0	0.0	0.1	13.9	30.2	0.0	0.0	9.3	0.0	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	17.1	0.0	0.0	12.5	34.2	12.0	0.0	0.0	10.3	0.0	15.1
LnGrp Delay(d),s/veh	78.6	17.7	0.0	0.0	24.9	49.8	94.1	0.0	0.0	71.3	0.0	70.5
LnGrp LOS	E	B			C	D	F			E		E
Approach Vol, veh/h		2137			2132			480			660	
Approach Delay, s/veh		21.6			34.0			94.1			71.1	
Approach LOS		C			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		25.3		97.7		27.0	17.7	80.0
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		4.0		105.0		29.0	30.0	71.0
Max Q Clear Time (g_c+I1), s		22.1		38.5		21.4	13.4	73.6
Green Ext Time (p_c), s		0.0		55.2		1.6	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1995	245	250	880	495	520
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2100	0	263	926	521	547
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2246	699	304	2952	565	1134
Arrive On Green	0.44	0.00	0.09	0.58	0.32	0.32
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2100	0	263	926	521	547
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	31.1	0.0	6.0	7.4	22.4	11.5
Cycle Q Clear(g_c), s	31.1	0.0	6.0	7.4	22.4	11.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2246	699	304	2952	565	1134
V/C Ratio(X)	0.94	0.00	0.86	0.31	0.92	0.48
Avail Cap(c_a), veh/h	2248	700	304	2955	583	1162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	35.6	8.5	26.0	17.3
Incr Delay (d2), s/veh	8.1	0.0	21.8	0.1	20.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	0.0	3.8	3.4	14.1	4.5
LnGrp Delay(d),s/veh	29.1	0.0	57.5	8.6	46.1	17.6
LnGrp LOS	C		E	A	D	B
Approach Vol, veh/h	2100			1189	1068	
Approach Delay, s/veh	29.1			19.4	31.5	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		29.2	11.0	39.0				50.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		26.0	7.0	35.0				46.0
Max Q Clear Time (g_c+I1), s		24.4	8.0	33.1				9.4
Green Ext Time (p_c), s		0.8	0.0	1.9				31.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	140	170	110	50	40	80	1045	140	30	735	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	147	179	116	53	42	84	1100	147	32	774	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	174	212	144	219	173	107	1273	170	49	1252	86
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.06	0.41	0.41	0.03	0.37	0.37
Sat Flow, veh/h	1774	766	932	1774	964	764	1774	3140	419	1774	3362	230
Grp Volume(v), veh/h	116	0	326	116	0	95	84	619	628	32	407	420
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	0	1728	1774	1770	1789	1774	1770	1822
Q Serve(g_s), s	4.0	0.0	11.3	4.0	0.0	2.8	2.9	19.8	19.9	1.1	11.6	11.6
Cycle Q Clear(g_c), s	4.0	0.0	11.3	4.0	0.0	2.8	2.9	19.8	19.9	1.1	11.6	11.6
Prop In Lane	1.00		0.55	1.00		0.44	1.00		0.23	1.00		0.13
Lane Grp Cap(c), veh/h	144	0	386	144	0	392	107	718	725	49	659	679
V/C Ratio(X)	0.81	0.00	0.85	0.81	0.00	0.24	0.78	0.86	0.87	0.66	0.62	0.62
Avail Cap(c_a), veh/h	144	0	440	144	0	448	144	718	725	115	659	679
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	27.9	0.0	22.8	27.9	0.0	19.5	28.6	16.8	16.8	29.7	15.8	15.8
Incr Delay (d2), s/veh	27.8	0.0	12.8	27.8	0.0	0.3	18.0	13.0	13.1	14.2	4.3	4.2
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	3.0	0.0	6.6	3.0	0.0	1.4	1.9	12.2	12.4	0.7	6.4	6.6
LnGrp Delay(d),s/veh	55.7	0.0	35.6	55.7	0.0	19.8	46.6	29.8	29.9	43.9	20.1	20.0
LnGrp LOS	E		D	E		B	D	C	C	D	C	B
Approach Vol, veh/h		442			211			1331			859	
Approach Delay, s/veh		40.9			39.5			30.9			20.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	29.0	9.0	18.0	7.7	27.0	9.0	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	24.0	5.0	16.0	5.0	23.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	21.9	6.0	13.3	4.9	13.6	6.0	4.8
Green Ext Time (p_c), s	0.0	1.9	0.0	0.7	0.0	7.6	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	240	140	60	130	20	1110	110	100	50	160	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	253	147	63	137	21	1168	116	105	53	168	116
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	174	1235	46	335	53	970	559	506	118	144	99
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.55	0.62	0.62	0.07	0.14	0.14
Sat Flow, veh/h	335	746	1583	0	1436	228	1774	902	817	1774	1028	710
Grp Volume(v), veh/h	369	0	147	68	0	153	1168	0	221	53	0	284
Grp Sat Flow(s),veh/h/ln	1081	0	1583	9	0	1655	1774	0	1719	1774	0	1738
Q Serve(g_s), s	23.3	0.0	0.0	0.0	0.0	11.7	82.0	0.0	8.4	4.3	0.0	21.0
Cycle Q Clear(g_c), s	35.0	0.0	0.0	35.0	0.0	11.7	82.0	0.0	8.4	4.3	0.0	21.0
Prop In Lane	0.31		1.00	0.92		0.14	1.00		0.48	1.00		0.41
Lane Grp Cap(c), veh/h	284	0	1235	48	0	386	970	0	1066	118	0	243
V/C Ratio(X)	1.30	0.00	0.12	1.42	0.00	0.40	1.20	0.00	0.21	0.45	0.00	1.17
Avail Cap(c_a), veh/h	284	0	1235	48	0	386	970	0	1066	118	0	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	64.4	0.0	4.0	73.5	0.0	48.6	34.0	0.0	12.4	67.3	0.0	64.5
Incr Delay (d2), s/veh	158.7	0.0	0.0	274.1	0.0	0.7	101.8	0.0	0.4	2.6	0.0	110.6
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	24.2	0.0	1.5	5.7	0.0	5.4	67.3	0.0	4.1	2.2	0.0	17.5
LnGrp Delay(d),s/veh	223.0	0.0	4.0	347.6	0.0	49.2	135.8	0.0	12.9	70.0	0.0	175.1
LnGrp LOS	F		A	F		D	F		B	E		F
Approach Vol, veh/h		516			221			1389			337	
Approach Delay, s/veh		160.6			141.4			116.3			158.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	97.0		39.0	86.0	25.0		39.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	93.0		35.0	82.0	21.0		35.0
Max Q Clear Time (g_c+I1), s	6.3	10.4		37.0	84.0	23.0		37.0
Green Ext Time (p_c), s	2.1	1.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	133.6
HCM 2010 LOS	F

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												
Volume (veh/h)	10	10	370	60	20	30	1260	1145	70	30	955	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	408	63	21	32	1326	1205	74	32	1005	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	248	422	75	25	38	1377	2078	127	118	1004	11
Arrive On Green	0.00	0.00	0.13	0.08	0.08	0.08	0.67	1.00	1.00	0.07	0.28	0.28
Sat Flow, veh/h	0	1863	3167	940	313	478	3442	3388	208	1774	3586	39
Grp Volume(v), veh/h	0	0	408	116	0	0	1326	629	650	32	496	520
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1731	0	0	1721	1770	1826	1774	1770	1856
Q Serve(g_s), s	0.0	0.0	19.2	9.9	0.0	0.0	53.8	0.0	0.0	2.6	42.0	42.0
Cycle Q Clear(g_c), s	0.0	0.0	19.2	9.9	0.0	0.0	53.8	0.0	0.0	2.6	42.0	42.0
Prop In Lane	0.00		1.00	0.54		0.28	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	0	248	422	138	0	0	1377	1085	1120	118	495	520
V/C Ratio(X)	0.00	0.00	0.97	0.84	0.00	0.00	0.96	0.58	0.58	0.27	1.00	1.00
Avail Cap(c_a), veh/h	0	248	422	185	0	0	1377	1085	1120	118	495	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	64.7	68.1	0.0	0.0	23.9	0.0	0.0	66.5	54.0	54.0
Incr Delay (d2), s/veh	0.0	0.0	35.0	21.7	0.0	0.0	2.5	0.2	0.2	1.2	40.6	39.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	10.5	5.6	0.0	0.0	25.3	0.1	0.1	1.3	26.1	27.2
LnGrp Delay(d),s/veh	0.0	0.0	99.7	89.7	0.0	0.0	26.4	0.2	0.2	67.7	94.6	93.7
LnGrp LOS			F	F			C	A	A	E	F	F
Approach Vol, veh/h		408			116			2605			1048	
Approach Delay, s/veh		99.7			89.7			13.5			93.4	
Approach LOS		F			F			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	96.0		24.0	64.0	46.0		16.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	92.0		20.0	56.0	42.0		16.0
Max Q Clear Time (g_c+I1), s	4.6	2.0		21.2	55.8	44.0		11.9
Green Ext Time (p_c), s	0.9	13.0		0.0	0.1	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

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												
Volume (veh/h)	140	140	675	740	205	960	400	1355	220	20	1425	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	147	147	711	884	0	1057	421	1426	232	21	1500	53
Adj No. of Lanes	1	1	1	2	0	3	1	2	0	2	2	1
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	260	273	496	852	0	1214	296	1501	241	54	1203	538
Arrive On Green	0.15	0.15	0.15	0.24	0.00	0.24	0.17	0.49	0.49	0.03	0.68	0.68
Sat Flow, veh/h	1774	1863	1583	3548	0	4750	1774	3055	490	3442	3539	1583
Grp Volume(v), veh/h	147	147	711	884	0	1057	421	818	840	21	1500	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1583	1774	1770	1776	1721	1770	1583
Q Serve(g_s), s	11.6	11.0	22.0	36.0	0.0	32.0	25.0	65.6	68.5	0.9	51.0	1.7
Cycle Q Clear(g_c), s	11.6	11.0	22.0	36.0	0.0	32.0	25.0	65.6	68.5	0.9	51.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	260	273	496	852	0	1214	296	869	872	54	1203	538
V/C Ratio(X)	0.56	0.54	1.43	1.04	0.00	0.87	1.42	0.94	0.96	0.39	1.25	0.10
Avail Cap(c_a), veh/h	260	273	496	852	0	1214	296	869	872	229	1203	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.15	0.15	0.15
Uniform Delay (d), s/veh	59.5	59.3	51.5	57.0	0.0	53.5	62.5	36.1	36.9	72.0	24.0	16.1
Incr Delay (d2), s/veh	2.8	2.1	206.3	41.2	0.0	7.1	209.4	19.2	22.7	0.7	112.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	5.8	38.0	22.5	0.0	14.8	29.4	36.7	39.1	0.4	42.8	0.7
LnGrp Delay(d),s/veh	62.4	61.4	257.8	98.2	0.0	60.6	271.9	55.3	59.6	72.7	136.1	16.2
LnGrp LOS	E	E	F	F		E	F	E	E	E	F	B
Approach Vol, veh/h		1005			1941			2079			1574	
Approach Delay, s/veh		200.5			77.7			100.9			131.2	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	77.7		26.0	29.0	55.0		40.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	66.0		22.0	25.0	51.0		36.0
Max Q Clear Time (g_c+I1), s	2.9	70.5		24.0	27.0	53.0		38.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1255	2420	40	0	640	1285	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1321	2547		0	674	1353	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2203	2310		0	1085	1559	0
Arrive On Green	0.64	0.64		0.00	0.31	0.31	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1321	2547		0	674	1353	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	33.6	96.0		0.0	24.5	37.7	0.0
Cycle Q Clear(g_c), s	33.6	96.0		0.0	24.5	37.7	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2203	2310		0	1085	1559	0
V/C Ratio(X)	0.60	1.10		0.00	0.62	0.87	0.00
Avail Cap(c_a), veh/h	2203	2310		0	1085	1559	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	27.0		0.0	44.5	49.1	0.0
Incr Delay (d2), s/veh	0.5	53.3		0.0	2.7	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	54.8		0.0	12.4	18.6	0.0
LnGrp Delay(d),s/veh	16.2	80.3		0.0	47.2	55.9	0.0
LnGrp LOS	B	F			D	E	
Approach Vol, veh/h	3868				674	1353	
Approach Delay, s/veh	58.4				47.2	55.9	
Approach LOS	E				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		100.0		50.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		46.0		96.0		38.0		
Max Q Clear Time (g_c+I1), s		26.5		98.0		39.7		
Green Ext Time (p_c), s		4.6		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	56.6
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2500	690	90	1795	400	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2632	726	95	1889	421	179
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2842	1224	118	4350	761	340
Arrive On Green	0.56	0.56	0.07	0.68	0.21	0.21
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2632	726	95	1889	421	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	35.5	14.4	4.0	10.1	7.9	7.5
Cycle Q Clear(g_c), s	35.5	14.4	4.0	10.1	7.9	7.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2842	1224	118	4350	761	340
V/C Ratio(X)	0.93	0.59	0.80	0.43	0.55	0.53
Avail Cap(c_a), veh/h	2848	1226	118	4357	761	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	3.6	34.5	5.5	26.2	26.1
Incr Delay (d2), s/veh	4.0	0.5	31.7	0.1	2.9	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	12.3	3.0	4.3	4.2	3.8
LnGrp Delay(d),s/veh	19.1	4.0	66.2	5.6	29.1	31.8
LnGrp LOS	B	A	E	A	C	C
Approach Vol, veh/h	3358			1984	600	
Approach Delay, s/veh	15.8			8.5	29.9	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.1	9.0	45.9				54.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	5.0	42.0				51.0
Max Q Clear Time (g_c+I1), s		9.9	6.0	37.5				12.1
Green Ext Time (p_c), s		1.2	0.0	4.4				22.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	405	290	120	1080	160	90	250	140	140	310	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	426	305	126	1137	168	95	263	147	147	326	163
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	152	725	515	161	1150	169	122	426	362	152	458	389
Arrive On Green	0.09	0.37	0.37	0.09	0.37	0.37	0.07	0.23	0.23	0.09	0.25	0.25
Sat Flow, veh/h	1774	1978	1406	1774	3096	456	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	137	381	350	126	649	656	95	263	147	147	326	163
Grp Sat Flow(s),veh/h/ln	1774	1770	1615	1774	1770	1782	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.4	12.2	12.3	4.9	25.5	25.7	3.7	8.9	5.5	5.8	11.2	6.1
Cycle Q Clear(g_c), s	5.4	12.2	12.3	4.9	25.5	25.7	3.7	8.9	5.5	5.8	11.2	6.1
Prop In Lane	1.00		0.87	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	648	592	161	657	662	122	426	362	152	458	389
V/C Ratio(X)	0.90	0.59	0.59	0.78	0.99	0.99	0.78	0.62	0.41	0.97	0.71	0.42
Avail Cap(c_a), veh/h	152	648	592	253	657	662	152	426	362	152	458	389
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	31.7	17.9	17.9	31.2	21.8	21.9	32.1	24.3	23.0	31.9	24.1	22.2
Incr Delay (d2), s/veh	45.2	1.4	1.6	8.1	31.6	32.8	18.4	6.6	3.4	62.8	9.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	6.2	5.7	2.7	18.0	18.6	2.4	5.3	2.7	5.5	6.9	3.0
LnGrp Delay(d),s/veh	76.9	19.3	19.5	39.2	53.5	54.7	50.4	30.8	26.3	94.7	33.2	25.5
LnGrp LOS	E	B	B	D	D	D	D	C	C	F	C	C
Approach Vol, veh/h		868			1431			505			636	
Approach Delay, s/veh		28.5			52.8			33.2			45.4	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	20.0	10.3	29.7	8.8	21.2	10.0	30.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	10.0	22.0	6.0	16.0	6.0	26.0
Max Q Clear Time (g_c+I1), s	7.8	10.9	6.9	14.3	5.7	13.2	7.4	27.7
Green Ext Time (p_c), s	0.0	2.2	0.1	6.4	0.0	1.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	60	60	230	390	530	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	63	242	411	558	205

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1350	382	763	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	142	616	845	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	89	616	845	-	-	-
Mov Cap-2 Maneuver	89	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	289	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	61.4	4.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	845	-	89	616	-	-
HCM Lane V/C Ratio	0.287	-	0.71	0.103	-	-
HCM Control Delay (s)	11	0.9	111.2	11.5	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	3.5	0.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	305	510	160	365	415	165
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	321	537	168	384	437	174
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	370	1015	952	426	568	837
Arrive On Green	0.21	0.55	0.27	0.27	0.32	0.32
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	321	537	168	384	437	174
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	10.4	10.9	2.2	13.9	13.2	3.5
Cycle Q Clear(g_c), s	10.4	10.9	2.2	13.9	13.2	3.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	370	1015	952	426	568	837
V/C Ratio(X)	0.87	0.53	0.18	0.90	0.77	0.21
Avail Cap(c_a), veh/h	389	1036	954	427	568	837
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	8.6	16.6	20.9	18.2	7.4
Incr Delay (d2), s/veh	17.8	0.5	0.1	21.9	9.7	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	6.9	5.7	1.1	8.6	8.0	4.3
LnGrp Delay(d),s/veh	40.5	9.1	16.7	42.8	27.9	8.0
LnGrp LOS	D	A	B	D	C	A
Approach Vol, veh/h		858	552		611	
Approach Delay, s/veh		20.8	34.9		22.2	
Approach LOS		C	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				36.3		23.0	16.4	20.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				33.0		19.0	13.0	16.0
Max Q Clear Time (g_c+I1), s				12.9		15.2	12.4	15.9
Green Ext Time (p_c), s				6.2		0.9	0.1	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	630	3440	1325	840	0	1275
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	663	3621	1244	984		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	693	4803	1965	1670		
Arrive On Green	0.39	0.94	1.00	1.00		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	663	3621	1244	984		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	54.6	20.6	0.0	0.0		
Cycle Q Clear(g_c), s	54.6	20.6	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	693	4803	1965	1670		
V/C Ratio(X)	0.96	0.75	0.63	0.59		
Avail Cap(c_a), veh/h	816	4950	1965	1670		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.09	0.09	0.88	0.88		
Uniform Delay (d), s/veh	44.5	0.8	0.0	0.0		
Incr Delay (d2), s/veh	3.2	0.1	0.6	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	27.3	8.7	0.2	0.1		
LnGrp Delay(d),s/veh	47.7	0.9	0.6	0.5		
LnGrp LOS	D	A	A	A		
Approach Vol, veh/h		4284	2228			
Approach Delay, s/veh		8.1	0.5			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				145.7			62.6	83.1
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			69.0	73.0
Max Q Clear Time (g_c+I1), s				22.6			56.6	2.0
Green Ext Time (p_c), s				119.1			2.0	70.6

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	1870	720	300	2040	360	0	0	0	1115	0	1795
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	389	1968	758	316	2147	0				1174	0	1889
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	308	1865	581	248	1695	528				1467	0	1309
Arrive On Green	0.17	0.37	0.37	0.14	0.33	0.00				0.41	0.00	0.41
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	389	1968	758	316	2147	0				1174	0	1889
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	26.0	55.0	55.0	21.0	50.0	0.0				43.5	0.0	62.0
Cycle Q Clear(g_c), s	26.0	55.0	55.0	21.0	50.0	0.0				43.5	0.0	62.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	308	1865	581	248	1695	528				1467	0	1309
V/C Ratio(X)	1.27	1.06	1.31	1.27	1.27	0.00				0.80	0.00	1.44
Avail Cap(c_a), veh/h	308	1865	581	248	1695	528				1467	0	1309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.64	0.64	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	62.0	47.5	47.5	64.5	50.0	0.0				38.6	0.0	44.0
Incr Delay (d2), s/veh	121.7	26.5	138.7	141.3	123.1	0.0				4.7	0.0	203.8
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	23.1	30.3	46.4	20.0	42.7	0.0				22.3	0.0	64.1
LnGrp Delay(d),s/veh	183.7	74.0	186.2	205.8	173.1	0.0				43.3	0.0	247.8
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3115			2463						3063	
Approach Delay, s/veh		115.0			177.3						169.4	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			25.0	59.0		66.0	30.0	54.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			21.0	55.0		62.0	26.0	50.0
Max Q Clear Time (g_c+I1), s			23.0	57.0		64.0	28.0	52.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	152.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	765	0	365	190	330	0	0	810	420
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				805	0	0	200	347	0	0	853	442
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				843	0	752	305	1670	0	0	967	433
Arrive On Green				0.47	0.00	0.00	0.34	0.94	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				805	0	0	200	347	0	0	853	442
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				65.4	0.0	0.0	14.3	1.0	0.0	0.0	34.6	41.0
Cycle Q Clear(g_c), s				65.4	0.0	0.0	14.3	1.0	0.0	0.0	34.6	41.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				843	0	752	305	1670	0	0	967	433
V/C Ratio(X)				0.96	0.00	0.00	0.66	0.21	0.00	0.00	0.88	1.02
Avail Cap(c_a), veh/h				899	0	802	305	1670	0	0	967	433
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.71	0.71	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.9	0.0	0.0	45.5	2.3	0.0	0.0	52.2	54.5
Incr Delay (d2), s/veh				19.5	0.0	0.0	3.6	0.2	0.0	0.0	11.4	48.8
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				36.5	0.0	0.0	7.3	0.5	0.0	0.0	18.5	23.8
LnGrp Delay(d),s/veh				57.3	0.0	0.0	49.1	2.5	0.0	0.0	63.6	103.3
LnGrp LOS				E			D	A			E	F
Approach Vol, veh/h					805			547			1295	
Approach Delay, s/veh					57.3			19.5			77.1	
Approach LOS					E			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		74.8			29.8	45.0		75.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		66.0			21.0	41.0		76.0
Max Q Clear Time (g_c+I1), s		3.0			16.3	43.0		67.4
Green Ext Time (p_c), s		3.1			1.2	0.0		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	59.2
HCM 2010 LOS	E

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	270	293	697	455	0	118	92	132	93	55	400	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1666			1681	1504		3258				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1666			1681	1504		3258				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	308	734	479	0	124	100	139	98	58	421	365
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	284	1042	0	0	491	212	0	281	0	0	0	538
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	57.0	57.0			25.0	25.0		18.0				34.0
Effective Green, g (s)	57.0	57.0			25.0	25.0		18.0				34.0
Actuated g/C Ratio	0.38	0.38			0.17	0.17		0.12				0.23
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	672	633			280	250		390				364
v/s Ratio Prot	0.16	c0.63			c0.29	0.14		c0.09				c0.33
v/s Ratio Perm												
v/c Ratio	0.42	1.65			1.75	0.85		0.72				1.48
Uniform Delay, d1	34.3	46.5			62.5	60.7		63.6				58.0
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.67
Incremental Delay, d2	0.4	297.8			353.5	22.5		10.9				222.2
Delay (s)	34.8	344.3			416.0	83.1		74.5				261.1
Level of Service	C	F			F	F		E				F
Approach Delay (s)		278.0			315.6			74.5				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	261.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	138.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	828
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3353
Flt Permitted	0.99
Satd. Flow (perm)	3353
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	872
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1120
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	34.0
Effective Green, g (s)	34.0
Actuated g/C Ratio	0.23
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	760
v/s Ratio Prot	0.33
v/s Ratio Perm	
v/c Ratio	1.47
Uniform Delay, d1	58.0
Progression Factor	0.67
Incremental Delay, d2	216.6
Delay (s)	255.5
Level of Service	F
Approach Delay (s)	257.3
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	3955	250	560	1025	130	240	40	750	80	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	4163	263	589	1079	137	253	42	789	84	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	183	2916	908	619	3561	1151	321	211	464	92	87	74
Arrive On Green	0.05	0.57	0.57	0.18	0.70	0.70	0.09	0.11	0.11	0.03	0.05	0.05
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	137	4163	263	589	1079	137	253	42	789	84	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.9	86.0	8.4	25.4	12.1	1.1	10.8	3.1	17.0	3.7	2.5	6.2
Cycle Q Clear(g_c), s	5.9	86.0	8.4	25.4	12.1	1.1	10.8	3.1	17.0	3.7	2.5	6.2
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	183	2916	908	619	3561	1151	321	211	464	92	87	74
V/C Ratio(X)	0.75	1.43	0.29	0.95	0.30	0.12	0.79	0.20	1.70	0.92	0.37	1.00
Avail Cap(c_a), veh/h	252	2916	908	619	3561	1151	321	211	464	92	87	74
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	32.0	7.1	60.8	8.6	2.1	66.5	60.3	42.2	72.8	69.4	56.4
Incr Delay (d2), s/veh	0.7	192.7	0.0	4.0	0.0	0.0	12.3	2.1	323.6	66.8	11.6	105.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	92.0	3.7	12.4	5.6	0.8	5.7	1.7	59.6	2.6	1.6	4.9
LnGrp Delay(d),s/veh	70.8	224.7	7.1	64.8	8.6	2.1	78.8	62.4	365.8	139.6	80.9	161.5
LnGrp LOS	E	F	A	E	A	A	E	E	F	F	F	F
Approach Vol, veh/h		4563			1805			1084			190	
Approach Delay, s/veh		207.6			26.4			287.1			138.3	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	31.0	90.0	18.0	11.0	12.0	109.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	27.0	86.0	14.0	7.0	11.0	102.0
Max Q Clear Time (g_c+I1), s	5.7	19.0	27.4	88.0	12.8	8.2	7.9	14.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	0.0	0.1	87.3

Intersection Summary	
HCM 2010 Ctrl Delay	174.3
HCM 2010 LOS	F

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												
Volume (veh/h)	130	3875	400	200	1075	70	310	20	420	20	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	4079	421	211	1132	74	326	21	442	21	0	91
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	160	3153	1140	161	2931	937	344	393	334	55	0	687
Arrive On Green	0.09	0.62	0.62	0.09	1.00	1.00	0.10	0.21	0.21	0.02	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	137	4079	421	211	1132	74	326	21	442	21	0	91
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	11.4	93.0	0.2	7.0	0.0	0.0	14.1	1.3	27.7	0.9	0.0	2.7
Cycle Q Clear(g_c), s	11.4	93.0	0.2	7.0	0.0	0.0	14.1	1.3	27.7	0.9	0.0	2.7
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	160	3153	1140	161	2931	937	344	393	334	55	0	687
V/C Ratio(X)	0.86	1.29	0.37	1.31	0.39	0.08	0.95	0.05	1.32	0.38	0.00	0.13
Avail Cap(c_a), veh/h	237	3153	1140	161	2931	937	344	393	334	95	0	687
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.3	28.5	8.0	68.0	0.0	0.0	67.1	47.2	45.1	73.1	0.0	29.3
Incr Delay (d2), s/veh	17.8	134.6	0.2	175.9	0.1	0.0	34.9	0.3	164.5	4.3	0.0	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	6.4	82.5	6.6	7.2	0.0	0.0	8.4	0.7	27.4	0.5	0.0	1.2
LnGrp Delay(d),s/veh	85.0	163.1	8.2	243.9	0.1	0.0	102.0	47.5	209.6	77.4	0.0	29.7
LnGrp LOS	F	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		4637			1417			789			112	
Approach Delay, s/veh		146.8			36.4			160.8			38.7	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	35.7	11.0	97.0	19.0	23.0	17.5	90.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	7.0	93.0	15.0	19.0	20.0	80.0
Max Q Clear Time (g_c+I1), s	2.9	29.7	9.0	95.0	16.1	4.7	13.4	2.0
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.2	0.2	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	124.1
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	445	0	70	470	200	0	0	230	110
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				537	0	0	495	211	0	0	242	116
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				615	323	0	1005	1440	0	0	423	196
Arrive On Green				0.17	0.00	0.00	0.95	1.00	0.00	0.00	0.18	0.18
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2442	1091
Grp Volume(v), veh/h				537	0	0	495	211	0	0	180	178
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1670
Q Serve(g_s), s				22.1	0.0	0.0	4.2	0.0	0.0	0.0	14.0	14.6
Cycle Q Clear(g_c), s				22.1	0.0	0.0	4.2	0.0	0.0	0.0	14.0	14.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				615	323	0	1005	1440	0	0	319	301
V/C Ratio(X)				0.87	0.00	0.00	0.49	0.15	0.00	0.00	0.57	0.59
Avail Cap(c_a), veh/h				1017	534	0	1005	1440	0	0	319	301
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				60.4	0.0	0.0	1.9	0.0	0.0	0.0	56.2	56.4
Incr Delay (d2), s/veh				4.8	0.0	0.0	0.4	0.2	0.0	0.0	7.1	8.3
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				11.2	0.0	0.0	1.9	0.1	0.0	0.0	7.4	7.4
LnGrp Delay(d),s/veh				65.2	0.0	0.0	2.2	0.2	0.0	0.0	63.3	64.7
LnGrp LOS				E			A	A			E	E
Approach Vol, veh/h					537			706			358	
Approach Delay, s/veh					65.2			1.6			64.0	
Approach LOS					E			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		120.0			89.0	31.0		30.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		99.0			68.0	27.0		43.0
Max Q Clear Time (g_c+I1), s		2.0			6.2	16.6		24.1
Green Ext Time (p_c), s		3.1			3.1	1.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	0	280	0	0	0	0	540	1315	120	565	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	137	0	295				0	568	1384	126	595	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	189	0	169				0	2619	1172	130	2973	0
Arrive On Green	0.11	0.00	0.11				0.00	0.98	0.98	0.15	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	137	0	295				0	568	1384	126	595	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	11.2	0.0	16.0				0.0	0.5	111.0	10.6	0.0	0.0
Cycle Q Clear(g_c), s	11.2	0.0	16.0				0.0	0.5	111.0	10.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	189	0	169				0	2619	1172	130	2973	0
V/C Ratio(X)	0.72	0.00	1.75				0.00	0.22	1.18	0.97	0.20	0.00
Avail Cap(c_a), veh/h	189	0	169				0	2619	1172	130	2973	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.62	0.62	0.80	0.80	0.00
Uniform Delay (d), s/veh	64.9	0.0	67.0				0.0	0.3	1.2	63.8	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.0	359.3				0.0	0.1	87.3	61.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	23.8				0.0	0.2	50.0	7.4	0.1	0.0
LnGrp Delay(d),s/veh	77.7	0.0	426.3				0.0	0.4	88.5	125.0	0.1	0.0
LnGrp LOS	E		F					A	F	F	A	
Approach Vol, veh/h		432						1952			721	
Approach Delay, s/veh		315.8						62.9			21.9	
Approach LOS		F						E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	15.0	115.0		20.0		130.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	11.0	111.0		16.0		126.0		
Max Q Clear Time (g_c+I1), s	12.6	113.0		18.0		2.0		
Green Ext Time (p_c), s	0.0	0.0		0.0		47.0		

Intersection Summary	
HCM 2010 Ctrl Delay	88.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	385	370	340	215	120	200	1595	190	180	1115	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	591	265	358	226	126	211	1679	200	189	1174	158
Adj No. of Lanes	1	2	1	2	2	1	2	3	0	2	3	1
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	375	685	410	411	325	145	258	2402	285	237	2619	816
Arrive On Green	0.21	0.18	0.18	0.12	0.09	0.09	0.15	1.00	1.00	0.02	0.17	0.17
Sat Flow, veh/h	1774	3725	1583	3442	3539	1583	3442	4609	547	3442	5085	1583
Grp Volume(v), veh/h	189	591	265	358	226	126	211	1234	645	189	1174	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1766	1721	1695	1583
Q Serve(g_s), s	14.1	23.1	16.3	15.3	9.3	10.2	8.9	0.0	0.0	8.2	31.1	5.8
Cycle Q Clear(g_c), s	14.1	23.1	16.3	15.3	9.3	10.2	8.9	0.0	0.0	8.2	31.1	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	375	685	410	411	325	145	258	1766	920	237	2619	816
V/C Ratio(X)	0.50	0.86	0.65	0.87	0.70	0.87	0.82	0.70	0.70	0.80	0.45	0.19
Avail Cap(c_a), veh/h	375	770	446	505	637	285	390	1766	920	298	2619	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78	0.94	0.94	0.94
Uniform Delay (d), s/veh	52.2	59.4	28.4	64.9	66.1	50.3	62.8	0.0	0.0	72.2	43.1	7.3
Incr Delay (d2), s/veh	1.1	9.2	2.9	13.1	2.7	14.2	6.3	1.8	3.5	10.6	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	7.0	12.8	7.5	8.1	4.7	5.0	4.4	0.4	0.9	4.3	14.8	2.7
LnGrp Delay(d),s/veh	53.3	68.5	31.2	78.0	68.8	64.5	69.1	1.8	3.5	82.8	43.6	7.8
LnGrp LOS	D	E	C	E	E	E	E	A	A	F	D	A
Approach Vol, veh/h		1045			710			2090			1521	
Approach Delay, s/veh		56.3			72.7			9.1			44.8	
Approach LOS		E			E			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	82.2	21.9	31.6	15.2	81.3	35.7	17.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	68.0	22.0	31.0	17.0	64.0	26.0	27.0
Max Q Clear Time (g_c+I1), s	10.2	2.0	17.3	25.1	10.9	33.1	16.1	12.2
Green Ext Time (p_c), s	0.2	51.1	0.6	2.5	0.3	27.1	1.4	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	470	50	160	340	260	1585	0	0	1170	645
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	495	53	168	358	274	1668	0	0	1232	679
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	100	317	359	297	3661	0	0	1861	833
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	0.17	0.72	0.00	0.00	0.70	0.70
Sat Flow, veh/h		0		441	1399	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		221	0	358	274	1668	0	0	1232	679
Grp Sat Flow(s),veh/h/ln				1841	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				15.8	0.0	33.9	22.8	20.5	0.0	0.0	29.2	45.0
Cycle Q Clear(g_c), s				15.8	0.0	33.9	22.8	20.5	0.0	0.0	29.2	45.0
Prop In Lane				0.24		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				417	0	359	297	3661	0	0	1861	833
V/C Ratio(X)				0.53	0.00	1.00	0.92	0.46	0.00	0.00	0.66	0.82
Avail Cap(c_a), veh/h				417	0	359	343	3661	0	0	1861	833
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.81	0.81
Uniform Delay (d), s/veh				51.0	0.0	58.0	61.5	8.8	0.0	0.0	15.1	17.5
Incr Delay (d2), s/veh				1.3	0.0	46.8	27.5	0.4	0.0	0.0	1.5	7.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.2	0.0	19.5	13.5	9.7	0.0	0.0	14.4	20.9
LnGrp Delay(d),s/veh				52.2	0.0	104.8	88.9	9.2	0.0	0.0	16.6	24.6
LnGrp LOS				D		F	F	A			B	C
Approach Vol, veh/h					579			1942			1911	
Approach Delay, s/veh					84.7			20.4			19.5	
Approach LOS					F			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.0			29.1	82.9		38.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		94.0			29.0	61.0		34.0
Max Q Clear Time (g_c+I1), s		22.5			24.8	47.0		35.9
Green Ext Time (p_c), s		58.4			0.3	13.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	460	3280	590	140	1390	120	370	70	140	130	80	650
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	484	3453	621	147	1463	126	389	74	147	137	0	740
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	909	2814	876	118	1809	563	321	354	317	260	0	570
Arrive On Green	0.26	0.55	0.55	0.07	0.36	0.36	0.09	0.20	0.20	0.07	0.00	0.18
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	484	3453	621	147	1463	126	389	74	147	137	0	740
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	18.1	83.0	29.0	10.0	39.0	8.4	14.0	5.2	12.3	5.6	0.0	27.0
Cycle Q Clear(g_c), s	18.1	83.0	29.0	10.0	39.0	8.4	14.0	5.2	12.3	5.6	0.0	27.0
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	909	2814	876	118	1809	563	321	354	317	260	0	570
V/C Ratio(X)	0.53	1.23	0.71	1.24	0.81	0.22	1.21	0.21	0.46	0.53	0.00	1.30
Avail Cap(c_a), veh/h	909	2814	876	118	2170	676	321	354	317	260	0	570
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)	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.2	33.5	11.1	70.0	43.7	33.8	68.0	50.1	52.9	67.0	0.0	61.5
Incr Delay (d2), s/veh	0.5	104.9	2.1	161.9	2.0	0.2	120.3	1.3	4.8	2.0	0.0	146.8
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	8.7	65.9	13.1	10.2	18.6	3.7	12.0	2.7	5.8	2.8	0.0	23.4
LnGrp Delay(d),s/veh	47.7	138.4	13.2	231.9	45.7	34.0	188.3	51.4	57.7	69.0	0.0	208.3
LnGrp LOS	D	F	B	F	D	C	F	D	E	E		F
Approach Vol, veh/h		4558			1736			610			877	
Approach Delay, s/veh		111.7			60.6			140.3			186.5	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	34.0	14.0	87.0	18.0	31.0	43.6	57.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	30.0	10.0	83.0	14.0	27.0	29.0	64.0
Max Q Clear Time (g_c+I1), s	7.6	14.3	12.0	85.0	16.0	29.0	20.1	41.0
Green Ext Time (p_c), s	0.7	1.1	0.0	0.0	0.0	0.0	8.9	12.3

Intersection Summary	
HCM 2010 Ctrl Delay	111.0
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	750	2820	1590	975	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	789	2968	1674	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	698	4779	1840	823		
Arrive On Green	0.79	1.00	0.52	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	789	2968	1674	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	59.0	0.0	64.6	0.0		
Cycle Q Clear(g_c), s	59.0	0.0	64.6	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	698	4779	1840	823		
V/C Ratio(X)	1.13	0.62	0.91	0.00		
Avail Cap(c_a), veh/h	698	4950	1958	876		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.46	0.00		
Uniform Delay (d), s/veh	16.0	0.0	32.8	0.0		
Incr Delay (d2), s/veh	60.8	0.0	3.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	39.3	0.0	32.2	0.0		
LnGrp Delay(d),s/veh	76.8	0.0	36.1	0.0		
LnGrp LOS	F	A	D			
Approach Vol, veh/h		3757	1674			
Approach Delay, s/veh		16.1	36.1			
Approach LOS		B	D			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				145.0			63.0	82.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			59.0	83.0
Max Q Clear Time (g_c+I1), s				2.0			61.0	66.6
Green Ext Time (p_c), s				118.1			0.0	11.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	930	0	380	620
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	979	0	400	653
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2105	489			979	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2105	489			979	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			43	
cM capacity (veh/h)	19	524			701	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	653	326	400	326	326
Volume Left	0	0	400	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	701	1700	1700
Volume to Capacity	0.38	0.19	0.57	0.19	0.19
Queue Length 95th (ft)	0	0	91	0	0
Control Delay (s)	0.0	0.0	16.7	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		6.4		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1880	730	0	1285	740	420	50	1215	440	10	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	1979	0	0	1353	779	480	0	0	471	0	189
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	162	3217	1002	0	2619	815	505	0	225	514	0	230
Arrive On Green	0.09	0.63	0.00	0.00	0.51	0.51	0.14	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	137	1979	0	0	1353	779	480	0	0	471	0	189
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	11.4	35.1	0.0	0.0	26.4	70.5	20.1	0.0	0.0	19.6	0.0	17.4
Cycle Q Clear(g_c), s	11.4	35.1	0.0	0.0	26.4	70.5	20.1	0.0	0.0	19.6	0.0	17.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	3217	1002	0	2619	815	505	0	225	514	0	230
V/C Ratio(X)	0.85	0.62	0.00	0.00	0.52	0.96	0.95	0.00	0.00	0.92	0.00	0.82
Avail Cap(c_a), veh/h	343	3594	1119	0	2619	815	505	0	225	520	0	232
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	0.00	0.00	0.40	0.40	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.2	16.6	0.0	0.0	24.0	34.7	63.8	0.0	0.0	63.2	0.0	62.3
Incr Delay (d2), s/veh	11.5	0.3	0.0	0.0	0.1	11.3	29.4	0.0	0.0	20.8	0.0	20.5
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	6.1	16.4	0.0	0.0	12.3	33.3	11.9	0.0	0.0	11.1	0.0	15.9
LnGrp Delay(d),s/veh	78.7	16.8	0.0	0.0	24.1	46.1	93.2	0.0	0.0	84.1	0.0	82.8
LnGrp LOS	E	B			C	D	F			F		F
Approach Vol, veh/h		2116			2132			480			660	
Approach Delay, s/veh		20.8			32.1			93.2			83.7	
Approach LOS		C			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		25.4		98.9		25.8	17.7	81.2
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		10.0		106.0		22.0	29.0	73.0
Max Q Clear Time (g_c+I1), s		22.1		37.1		21.6	13.4	72.5
Green Ext Time (p_c), s		0.0		57.8		0.1	0.3	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1995	245	250	870	480	520
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2100	0	263	916	505	547
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2261	704	307	2973	556	1122
Arrive On Green	0.44	0.00	0.09	0.58	0.31	0.31
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2100	0	263	916	505	547
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	30.7	0.0	5.9	7.2	21.5	11.5
Cycle Q Clear(g_c), s	30.7	0.0	5.9	7.2	21.5	11.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2261	704	307	2973	556	1122
V/C Ratio(X)	0.93	0.00	0.86	0.31	0.91	0.49
Avail Cap(c_a), veh/h	2265	705	307	2977	587	1170
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	35.3	8.3	25.9	17.4
Incr Delay (d2), s/veh	7.4	0.0	20.8	0.1	17.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.8	0.0	3.7	3.3	13.2	4.5
LnGrp Delay(d),s/veh	28.1	0.0	56.1	8.3	43.4	17.8
LnGrp LOS	C		E	A	D	B
Approach Vol, veh/h	2100			1179	1052	
Approach Delay, s/veh	28.1			19.0	30.1	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		28.6	11.0	38.9				49.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		26.0	7.0	35.0				46.0
Max Q Clear Time (g_c+I1), s		23.5	7.9	32.7				9.2
Green Ext Time (p_c), s		1.2	0.0	2.3				31.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	140	170	110	50	40	80	1030	140	30	735	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	147	179	116	53	42	84	1084	147	32	774	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	174	212	144	219	173	107	1271	172	49	1252	86
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.06	0.41	0.41	0.03	0.37	0.37
Sat Flow, veh/h	1774	766	932	1774	964	764	1774	3133	424	1774	3362	230
Grp Volume(v), veh/h	116	0	326	116	0	95	84	611	620	32	407	420
Grp Sat Flow(s),veh/h/ln	1774	0	1698	1774	0	1728	1774	1770	1788	1774	1770	1822
Q Serve(g_s), s	4.0	0.0	11.3	4.0	0.0	2.8	2.9	19.4	19.5	1.1	11.6	11.6
Cycle Q Clear(g_c), s	4.0	0.0	11.3	4.0	0.0	2.8	2.9	19.4	19.5	1.1	11.6	11.6
Prop In Lane	1.00		0.55	1.00		0.44	1.00		0.24	1.00		0.13
Lane Grp Cap(c), veh/h	144	0	386	144	0	392	107	718	725	49	659	679
V/C Ratio(X)	0.81	0.00	0.85	0.81	0.00	0.24	0.78	0.85	0.85	0.66	0.62	0.62
Avail Cap(c_a), veh/h	144	0	440	144	0	448	144	718	725	115	659	679
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	27.9	0.0	22.8	27.9	0.0	19.5	28.6	16.7	16.7	29.7	15.8	15.8
Incr Delay (d2), s/veh	27.8	0.0	12.8	27.8	0.0	0.3	18.0	12.2	12.3	14.2	4.3	4.2
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	3.0	0.0	6.6	3.0	0.0	1.4	1.9	11.8	11.9	0.7	6.4	6.6
LnGrp Delay(d),s/veh	55.7	0.0	35.6	55.7	0.0	19.8	46.6	28.9	29.0	43.9	20.1	20.0
LnGrp LOS	E		D	E		B	D	C	C	D	C	B
Approach Vol, veh/h		442			211			1315			859	
Approach Delay, s/veh		40.9			39.5			30.1			20.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	29.0	9.0	18.0	7.7	27.0	9.0	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	24.0	5.0	16.0	5.0	23.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	21.5	6.0	13.3	4.9	13.6	6.0	4.8
Green Ext Time (p_c), s	0.0	2.2	0.0	0.7	0.0	7.5	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	240	140	60	130	20	1040	110	100	50	160	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	253	147	63	137	21	1095	116	105	53	168	116
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	174	1224	46	335	53	958	559	506	118	151	104
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.54	0.62	0.62	0.07	0.15	0.15
Sat Flow, veh/h	335	746	1583	0	1436	228	1774	902	817	1774	1028	710
Grp Volume(v), veh/h	369	0	147	68	0	153	1095	0	221	53	0	284
Grp Sat Flow(s),veh/h/ln	1081	0	1583	9	0	1655	1774	0	1719	1774	0	1738
Q Serve(g_s), s	23.3	0.0	0.0	0.0	0.0	11.7	81.0	0.0	8.4	4.3	0.0	22.0
Cycle Q Clear(g_c), s	35.0	0.0	0.0	35.0	0.0	11.7	81.0	0.0	8.4	4.3	0.0	22.0
Prop In Lane	0.31		1.00	0.92		0.14	1.00		0.48	1.00		0.41
Lane Grp Cap(c), veh/h	284	0	1224	48	0	386	958	0	1066	118	0	255
V/C Ratio(X)	1.30	0.00	0.12	1.42	0.00	0.40	1.14	0.00	0.21	0.45	0.00	1.11
Avail Cap(c_a), veh/h	284	0	1224	48	0	386	958	0	1066	118	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	64.4	0.0	4.2	73.5	0.0	48.6	34.5	0.0	12.4	67.3	0.0	64.0
Incr Delay (d2), s/veh	158.7	0.0	0.0	274.1	0.0	0.7	76.9	0.0	0.4	2.6	0.0	90.6
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	24.2	0.0	1.5	5.7	0.0	5.4	59.9	0.0	4.1	2.2	0.0	17.0
LnGrp Delay(d),s/veh	223.0	0.0	4.3	347.6	0.0	49.2	111.4	0.0	12.9	70.0	0.0	154.6
LnGrp LOS	F		A	F		D	F		B	E		F
Approach Vol, veh/h		516			221			1316			337	
Approach Delay, s/veh		160.7			141.4			94.9			141.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	97.0		39.0	85.0	26.0		39.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	93.0		35.0	81.0	22.0		35.0
Max Q Clear Time (g_c+I1), s	6.3	10.4		37.0	83.0	24.0		37.0
Green Ext Time (p_c), s	1.9	1.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.9
HCM 2010 LOS	F

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												
Volume (veh/h)	10	10	370	60	20	30	1190	1130	70	30	955	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	408	63	21	32	1253	1189	74	32	1005	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	248	422	75	25	38	1331	2076	129	118	1052	12
Arrive On Green	0.00	0.00	0.13	0.08	0.08	0.08	0.65	1.00	1.00	0.07	0.29	0.29
Sat Flow, veh/h	0	1863	3167	940	313	478	3442	3385	210	1774	3586	39
Grp Volume(v), veh/h	0	0	408	116	0	0	1253	621	642	32	496	520
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1731	0	0	1721	1770	1826	1774	1770	1856
Q Serve(g_s), s	0.0	0.0	19.2	9.9	0.0	0.0	49.3	0.0	0.0	2.6	41.3	41.3
Cycle Q Clear(g_c), s	0.0	0.0	19.2	9.9	0.0	0.0	49.3	0.0	0.0	2.6	41.3	41.3
Prop In Lane	0.00		1.00	0.54		0.28	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	0	248	422	138	0	0	1331	1085	1120	118	519	544
V/C Ratio(X)	0.00	0.00	0.97	0.84	0.00	0.00	0.94	0.57	0.57	0.27	0.96	0.96
Avail Cap(c_a), veh/h	0	248	422	185	0	0	1331	1085	1120	118	519	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	64.7	68.1	0.0	0.0	25.0	0.0	0.0	66.5	52.0	52.0
Incr Delay (d2), s/veh	0.0	0.0	35.0	21.7	0.0	0.0	1.7	0.2	0.2	1.2	29.9	29.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	10.5	5.6	0.0	0.0	23.2	0.1	0.1	1.3	24.4	25.5
LnGrp Delay(d),s/veh	0.0	0.0	99.7	89.7	0.0	0.0	26.7	0.2	0.2	67.7	81.9	81.0
LnGrp LOS			F	F			C	A	A	E	F	F
Approach Vol, veh/h		408			116			2516			1048	
Approach Delay, s/veh		99.7			89.7			13.4			81.0	
Approach LOS		F			F			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	96.0		24.0	62.0	48.0		16.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	92.0		20.0	54.0	44.0		16.0
Max Q Clear Time (g_c+I1), s	4.6	2.0		21.2	51.3	43.3		11.9
Green Ext Time (p_c), s	0.9	12.7		0.0	1.5	0.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	41.5
HCM 2010 LOS	D

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												
Volume (veh/h)	140	140	675	740	200	905	390	1325	220	20	1425	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	147	147	711	875	0	1004	411	1395	232	21	1500	53
Adj No. of Lanes	1	1	1	2	0	3	1	2	0	2	2	1
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	284	298	517	852	0	1214	296	1454	239	54	1156	517
Arrive On Green	0.16	0.16	0.16	0.24	0.00	0.24	0.17	0.48	0.48	0.02	0.43	0.43
Sat Flow, veh/h	1774	1863	1583	3548	0	4750	1774	3044	500	3442	3539	1583
Grp Volume(v), veh/h	147	147	711	875	0	1004	411	804	823	21	1500	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1583	1774	1770	1775	1721	1770	1583
Q Serve(g_s), s	11.4	10.8	24.0	36.0	0.0	29.9	25.0	65.2	67.8	0.9	49.0	3.0
Cycle Q Clear(g_c), s	11.4	10.8	24.0	36.0	0.0	29.9	25.0	65.2	67.8	0.9	49.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	284	298	517	852	0	1214	296	845	848	54	1156	517
V/C Ratio(X)	0.52	0.49	1.37	1.03	0.00	0.83	1.39	0.95	0.97	0.39	1.30	0.10
Avail Cap(c_a), veh/h	284	298	517	852	0	1214	296	845	848	229	1156	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.23	0.23	0.23
Uniform Delay (d), s/veh	57.7	57.5	50.5	57.0	0.0	52.7	62.5	37.5	38.2	72.7	42.4	29.4
Incr Delay (d2), s/veh	1.7	1.3	180.5	38.1	0.0	4.9	195.0	21.0	24.7	1.1	135.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	5.7	36.3	22.1	0.0	13.6	28.3	36.6	39.0	0.4	45.6	1.3
LnGrp Delay(d),s/veh	59.4	58.7	231.0	95.1	0.0	57.6	257.5	58.5	62.8	73.8	177.8	29.5
LnGrp LOS	E	E	F	F		E	F	E	E	E	F	C
Approach Vol, veh/h		1005			1879			2038			1574	
Approach Delay, s/veh		180.7			75.0			100.4			171.4	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	75.7		28.0	29.0	53.0		40.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	64.0		24.0	25.0	49.0		36.0
Max Q Clear Time (g_c+I1), s	2.9	69.8		26.0	27.0	51.0		38.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	122.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1225	2420	40	0	630	1285	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1289	2547		0	663	1353	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2203	2310		0	1085	1559	0
Arrive On Green	0.64	0.64		0.00	0.31	0.31	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1289	2547		0	663	1353	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	32.3	96.0		0.0	24.0	37.7	0.0
Cycle Q Clear(g_c), s	32.3	96.0		0.0	24.0	37.7	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2203	2310		0	1085	1559	0
V/C Ratio(X)	0.59	1.10		0.00	0.61	0.87	0.00
Avail Cap(c_a), veh/h	2203	2310		0	1085	1559	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.5	27.0		0.0	44.4	49.1	0.0
Incr Delay (d2), s/veh	0.4	53.3		0.0	2.6	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	54.8		0.0	12.1	18.6	0.0
LnGrp Delay(d),s/veh	15.9	80.3		0.0	46.9	55.9	0.0
LnGrp LOS	B	F			D	E	
Approach Vol, veh/h	3836				663	1353	
Approach Delay, s/veh	58.7				46.9	55.9	
Approach LOS	E				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		100.0		50.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		46.0		96.0		38.0		
Max Q Clear Time (g_c+I1), s		26.0		98.0		39.7		
Green Ext Time (p_c), s		4.5		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	56.7
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2500	715	90	1775	440	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2632	753	95	1868	463	179
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2842	1224	118	4350	761	340
Arrive On Green	0.56	0.56	0.07	0.68	0.21	0.21
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2632	753	95	1868	463	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	35.5	15.4	4.0	9.9	8.8	7.5
Cycle Q Clear(g_c), s	35.5	15.4	4.0	9.9	8.8	7.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2842	1224	118	4350	761	340
V/C Ratio(X)	0.93	0.61	0.80	0.43	0.61	0.53
Avail Cap(c_a), veh/h	2848	1226	118	4357	761	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	3.7	34.5	5.5	26.6	26.1
Incr Delay (d2), s/veh	3.9	0.6	31.7	0.1	3.6	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	13.2	3.0	4.3	4.7	3.8
LnGrp Delay(d),s/veh	19.0	4.3	66.2	5.5	30.2	31.8
LnGrp LOS	B	A	E	A	C	C
Approach Vol, veh/h	3385			1963	642	
Approach Delay, s/veh	15.7			8.5	30.7	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.1	9.0	45.9				54.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	5.0	42.0				51.0
Max Q Clear Time (g_c+I1), s		10.8	6.0	37.5				11.9
Green Ext Time (p_c), s		1.2	0.0	4.4				22.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	445	290	120	1010	160	90	290	140	140	300	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	468	305	126	1063	168	95	305	147	147	316	158
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	166	748	485	160	1103	174	121	447	380	166	493	419
Arrive On Green	0.09	0.36	0.36	0.09	0.36	0.36	0.07	0.24	0.24	0.09	0.26	0.26
Sat Flow, veh/h	1774	2060	1336	1774	3064	483	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	137	402	371	126	613	618	95	305	147	147	316	158
Grp Sat Flow(s),veh/h/ln	1774	1770	1627	1774	1770	1777	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.7	14.0	14.1	5.2	25.4	25.6	4.0	11.2	5.8	6.1	11.3	6.1
Cycle Q Clear(g_c), s	5.7	14.0	14.1	5.2	25.4	25.6	4.0	11.2	5.8	6.1	11.3	6.1
Prop In Lane	1.00		0.82	1.00		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	642	590	160	637	640	121	447	380	166	493	419
V/C Ratio(X)	0.83	0.63	0.63	0.79	0.96	0.97	0.78	0.68	0.39	0.89	0.64	0.38
Avail Cap(c_a), veh/h	166	642	590	260	637	640	142	447	380	166	493	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	19.7	19.7	33.4	23.5	23.5	34.4	25.9	23.9	33.6	24.4	22.5
Incr Delay (d2), s/veh	28.0	1.9	2.1	8.2	26.5	27.1	21.2	8.2	3.0	39.7	6.3	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	4.1	7.1	6.6	2.9	17.0	17.4	2.6	6.7	2.8	4.8	6.7	3.0
LnGrp Delay(d),s/veh	61.4	21.6	21.9	41.6	50.0	50.7	55.5	34.1	26.8	73.3	30.7	25.1
LnGrp LOS	E	C	C	D	D	D	E	C	C	E	C	C
Approach Vol, veh/h		910			1357			547			621	
Approach Delay, s/veh		27.7			49.5			35.9			39.3	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	22.0	10.8	31.2	9.1	23.9	11.0	31.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	18.0	11.0	23.0	6.0	19.0	7.0	27.0
Max Q Clear Time (g_c+I1), s	8.1	13.2	7.2	16.1	6.0	13.3	7.7	27.6
Green Ext Time (p_c), s	0.0	2.1	0.1	5.7	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.7
HCM 2010 LOS	D

Notes

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

Intersection	
Int Delay, s/veh	24.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	100	100	255	390	530	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	105	268	411	558	237

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1418	397	795	0	-	0
Stage 1	676	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	128	602	822	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 74	602	822	-	-	-
Mov Cap-2 Maneuver	~ 74	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	250	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	180.7	5.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	822	-	74	602	-	-
HCM Lane V/C Ratio	0.327	-	1.422	0.175	-	-
HCM Control Delay (s)	11.5	1.1	$ 349.1	12.2	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.4	-	8.5	0.6	-	-

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	345	510	160	350	415	205
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	363	537	168	368	437	216
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	410	1048	935	418	537	845
Arrive On Green	0.23	0.56	0.26	0.26	0.30	0.30
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	363	537	168	368	437	216
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	11.8	10.5	2.2	13.3	13.6	4.4
Cycle Q Clear(g_c), s	11.8	10.5	2.2	13.3	13.6	4.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	410	1048	935	418	537	845
V/C Ratio(X)	0.88	0.51	0.18	0.88	0.81	0.26
Avail Cap(c_a), veh/h	418	1065	952	426	537	845
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	22.1	8.0	16.9	21.0	19.2	7.5
Incr Delay (d2), s/veh	19.4	0.4	0.1	18.4	12.7	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	5.5	1.1	7.9	8.5	5.4
LnGrp Delay(d),s/veh	41.5	8.4	17.0	39.4	31.9	8.2
LnGrp LOS	D	A	B	D	C	A
Approach Vol, veh/h		900	536		653	
Approach Delay, s/veh		21.7	32.4		24.1	
Approach LOS		C	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				37.5		22.0	17.8	19.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				34.0		18.0	14.0	16.0
Max Q Clear Time (g_c+I1), s				12.5		15.6	13.8	15.3
Green Ext Time (p_c), s				6.2		0.6	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	630	3475	1305	880	0	1225
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	663	3658	1267	997		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	692	4814	1974	1678		
Arrive On Green	0.39	0.95	1.00	1.00		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	663	3658	1267	997		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	54.6	20.5	0.0	0.0		
Cycle Q Clear(g_c), s	54.6	20.5	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	692	4814	1974	1678		
V/C Ratio(X)	0.96	0.76	0.64	0.59		
Avail Cap(c_a), veh/h	804	4950	1974	1678		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.09	0.09	0.88	0.88		
Uniform Delay (d), s/veh	44.5	0.8	0.0	0.0		
Incr Delay (d2), s/veh	3.3	0.1	0.6	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	27.3	8.8	0.2	0.1		
LnGrp Delay(d),s/veh	47.8	0.8	0.6	0.5		
LnGrp LOS	D	A	A	A		
Approach Vol, veh/h		4321	2264			
Approach Delay, s/veh		8.0	0.6			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				146.0			62.5	83.5
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			68.0	74.0
Max Q Clear Time (g_c+I1), s				22.5			56.6	2.0
Green Ext Time (p_c), s				119.5			1.9	71.6

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	1870	720	300	1980	360	0	0	0	1145	0	1695
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	389	1968	758	316	2084	0				1205	0	1784
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	319	1831	570	284	1729	538				1419	0	1267
Arrive On Green	0.18	0.36	0.36	0.16	0.34	0.00				0.40	0.00	0.40
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	389	1968	758	316	2084	0				1205	0	1784
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	27.0	54.0	54.0	24.0	51.0	0.0				46.3	0.0	60.0
Cycle Q Clear(g_c), s	27.0	54.0	54.0	24.0	51.0	0.0				46.3	0.0	60.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	319	1831	570	284	1729	538				1419	0	1267
V/C Ratio(X)	1.22	1.07	1.33	1.11	1.21	0.00				0.85	0.00	1.41
Avail Cap(c_a), veh/h	319	1831	570	284	1729	538				1419	0	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.63	0.63	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	61.5	48.0	48.0	63.0	49.5	0.0				40.9	0.0	45.0
Incr Delay (d2), s/veh	100.9	35.0	149.6	77.0	96.1	0.0				6.5	0.0	188.6
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	22.2	31.2	47.3	17.8	39.2	0.0				23.9	0.0	59.4
LnGrp Delay(d),s/veh	162.4	83.0	197.6	140.0	145.6	0.0				47.4	0.0	233.6
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3115			2400						2989	
Approach Delay, s/veh		120.8			144.9						158.5	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			28.0	58.0		64.0	31.0	55.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			24.0	54.0		60.0	27.0	51.0
Max Q Clear Time (g_c+I1), s			26.0	56.0		62.0	29.0	53.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	140.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	725	0	360	190	330	0	0	810	420
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				763	0	0	200	347	0	0	853	442
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				803	0	717	320	1748	0	0	1015	454
Arrive On Green				0.45	0.00	0.00	0.36	0.99	0.00	0.00	0.29	0.29
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				763	0	0	200	347	0	0	853	442
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				61.9	0.0	0.0	14.0	0.2	0.0	0.0	34.0	41.4
Cycle Q Clear(g_c), s				61.9	0.0	0.0	14.0	0.2	0.0	0.0	34.0	41.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				803	0	717	320	1748	0	0	1015	454
V/C Ratio(X)				0.95	0.00	0.00	0.62	0.20	0.00	0.00	0.84	0.97
Avail Cap(c_a), veh/h				875	0	781	320	1748	0	0	1015	454
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.71	0.71	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				39.4	0.0	0.0	43.7	0.5	0.0	0.0	50.3	52.9
Incr Delay (d2), s/veh				18.6	0.0	0.0	2.7	0.2	0.0	0.0	8.4	36.2
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				34.5	0.0	0.0	7.0	0.1	0.0	0.0	17.8	22.7
LnGrp Delay(d),s/veh				58.0	0.0	0.0	46.4	0.6	0.0	0.0	58.7	89.2
LnGrp LOS				E			D	A			E	F
Approach Vol, veh/h					763			547			1295	
Approach Delay, s/veh					58.0			17.4			69.1	
Approach LOS					E			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		78.1			31.1	47.0		71.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		68.0			21.0	43.0		74.0
Max Q Clear Time (g_c+I1), s		2.2			16.0	43.4		63.9
Green Ext Time (p_c), s		3.1			1.3	0.0		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.0
HCM 2010 LOS	D

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	270	289	646	425	0	118	92	132	93	55	400	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.90			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1670			1681	1504		3258				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1670			1681	1504		3258				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	304	680	447	0	124	100	139	98	58	421	369
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	284	984	0	0	459	212	0	281	0	0	0	524
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	57.0	57.0			25.0	25.0		18.0				34.0
Effective Green, g (s)	57.0	57.0			25.0	25.0		18.0				34.0
Actuated g/C Ratio	0.38	0.38			0.17	0.17		0.12				0.23
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	672	634			280	250		390				364
v/s Ratio Prot	0.16	c0.59			c0.27	0.14		c0.09				0.33
v/s Ratio Perm												
v/c Ratio	0.42	1.55			1.64	0.85		0.72				1.44
Uniform Delay, d1	34.3	46.5			62.5	60.7		63.6				58.0
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.67
Incremental Delay, d2	0.4	256.2			303.3	22.5		10.9				206.1
Delay (s)	34.8	302.7			365.8	83.1		74.5				245.0
Level of Service	C	F			F	F		E				F
Approach Delay (s)		242.7			276.5			74.5				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	235.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	132.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	784
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3349
Flt Permitted	0.99
Satd. Flow (perm)	3349
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	825
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1091
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	34.0
Effective Green, g (s)	34.0
Actuated g/C Ratio	0.23
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	759
v/s Ratio Prot	c0.33
v/s Ratio Perm	
v/c Ratio	1.44
Uniform Delay, d1	58.0
Progression Factor	0.67
Incremental Delay, d2	200.9
Delay (s)	239.8
Level of Service	F
Approach Delay (s)	241.5
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	3820	250	560	1025	130	240	40	750	80	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	4021	263	589	1079	137	253	42	789	84	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	183	2916	908	597	3527	1140	298	224	464	92	112	95
Arrive On Green	0.05	0.57	0.57	0.17	0.69	0.69	0.09	0.12	0.12	0.03	0.06	0.06
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	137	4021	263	589	1079	137	253	42	789	84	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.9	86.0	8.6	25.6	12.4	1.1	10.9	3.0	18.0	3.7	2.5	6.1
Cycle Q Clear(g_c), s	5.9	86.0	8.6	25.6	12.4	1.1	10.9	3.0	18.0	3.7	2.5	6.1
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	183	2916	908	597	3527	1140	298	224	464	92	112	95
V/C Ratio(X)	0.75	1.38	0.29	0.99	0.31	0.12	0.85	0.19	1.70	0.92	0.29	0.78
Avail Cap(c_a), veh/h	252	2916	908	597	3527	1140	298	224	464	92	112	95
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	32.0	7.4	61.8	8.9	2.3	67.5	59.4	42.0	72.8	67.4	54.7
Incr Delay (d2), s/veh	0.7	170.8	0.0	8.4	0.0	0.0	19.9	1.9	323.6	66.8	6.3	45.7
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	2.8	86.1	3.7	12.9	5.8	0.9	6.0	1.7	59.6	2.6	1.5	3.9
LnGrp Delay(d),s/veh	70.8	202.8	7.4	70.2	8.9	2.3	87.4	61.3	365.6	139.6	73.8	100.4
LnGrp LOS	E	F	A	E	A	A	F	E	F	F	E	F
Approach Vol, veh/h		4421			1805			1084			190	
Approach Delay, s/veh		187.1			28.4			288.9			113.2	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	30.0	90.0	17.0	13.0	12.0	108.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	26.0	86.0	13.0	9.0	11.0	101.0
Max Q Clear Time (g_c+I1), s	5.7	20.0	27.6	88.0	12.9	8.1	7.9	14.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	86.0

Intersection Summary	
HCM 2010 Ctrl Delay	161.8
HCM 2010 LOS	F

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												
Volume (veh/h)	130	3740	400	200	1075	70	310	20	420	20	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	3937	421	211	1132	74	326	21	442	21	0	91
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	160	3153	1151	161	2931	937	367	393	334	55	0	666
Arrive On Green	0.09	0.62	0.62	0.09	1.00	1.00	0.11	0.21	0.21	0.02	0.00	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	137	3937	421	211	1132	74	326	21	442	21	0	91
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	11.4	93.0	0.0	7.0	0.0	0.0	14.0	1.3	27.7	0.9	0.0	2.7
Cycle Q Clear(g_c), s	11.4	93.0	0.0	7.0	0.0	0.0	14.0	1.3	27.7	0.9	0.0	2.7
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	160	3153	1151	161	2931	937	367	393	334	55	0	666
V/C Ratio(X)	0.86	1.25	0.37	1.31	0.39	0.08	0.89	0.05	1.32	0.38	0.00	0.14
Avail Cap(c_a), veh/h	237	3153	1151	161	2931	937	367	393	334	95	0	666
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.3	28.5	7.6	68.0	0.0	0.0	66.1	47.2	45.1	73.1	0.0	29.5
Incr Delay (d2), s/veh	17.8	114.7	0.2	175.7	0.1	0.0	22.2	0.3	164.5	4.3	0.0	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	6.4	76.7	6.5	7.2	0.0	0.0	7.8	0.7	27.4	0.5	0.0	1.2
LnGrp Delay(d),s/veh	85.0	143.2	7.8	243.7	0.1	0.0	88.4	47.5	209.6	77.4	0.0	29.9
LnGrp LOS	F	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		4495			1417			789			112	
Approach Delay, s/veh		128.8			36.4			155.2			38.8	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	35.7	11.0	97.0	20.0	22.0	17.5	90.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	7.0	93.0	16.0	18.0	20.0	80.0
Max Q Clear Time (g_c+I1), s	2.9	29.7	9.0	95.0	16.0	4.7	13.4	2.0
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.2	0.2	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	111.1
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	445	0	70	470	200	0	0	230	110
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				537	0	0	495	211	0	0	242	116
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				615	323	0	1005	1440	0	0	423	196
Arrive On Green				0.17	0.00	0.00	0.95	1.00	0.00	0.00	0.18	0.18
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2442	1091
Grp Volume(v), veh/h				537	0	0	495	211	0	0	180	178
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1670
Q Serve(g_s), s				22.1	0.0	0.0	4.2	0.0	0.0	0.0	14.0	14.6
Cycle Q Clear(g_c), s				22.1	0.0	0.0	4.2	0.0	0.0	0.0	14.0	14.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				615	323	0	1005	1440	0	0	319	301
V/C Ratio(X)				0.87	0.00	0.00	0.49	0.15	0.00	0.00	0.57	0.59
Avail Cap(c_a), veh/h				1017	534	0	1005	1440	0	0	319	301
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				60.4	0.0	0.0	1.9	0.0	0.0	0.0	56.2	56.4
Incr Delay (d2), s/veh				4.8	0.0	0.0	0.4	0.2	0.0	0.0	7.1	8.3
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				11.2	0.0	0.0	1.9	0.1	0.0	0.0	7.4	7.4
LnGrp Delay(d),s/veh				65.2	0.0	0.0	2.2	0.2	0.0	0.0	63.3	64.7
LnGrp LOS				E			A	A			E	E
Approach Vol, veh/h					537			706			358	
Approach Delay, s/veh					65.2			1.6			64.0	
Approach LOS					E			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		120.0			89.0	31.0		30.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		99.0			68.0	27.0		43.0
Max Q Clear Time (g_c+I1), s		2.0			6.2	16.6		24.1
Green Ext Time (p_c), s		3.1			3.1	1.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	0	280	0	0	0	0	540	1250	120	565	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	137	0	295				0	568	1316	126	595	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	189	0	169				0	2595	1161	142	2973	0
Arrive On Green	0.11	0.00	0.11				0.00	0.98	0.98	0.16	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	137	0	295				0	568	1316	126	595	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	11.2	0.0	16.0				0.0	0.8	110.0	10.4	0.0	0.0
Cycle Q Clear(g_c), s	11.2	0.0	16.0				0.0	0.8	110.0	10.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	189	0	169				0	2595	1161	142	2973	0
V/C Ratio(X)	0.72	0.00	1.75				0.00	0.22	1.13	0.89	0.20	0.00
Avail Cap(c_a), veh/h	189	0	169				0	2595	1161	142	2973	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.64	0.64	0.80	0.80	0.00
Uniform Delay (d), s/veh	64.9	0.0	67.0				0.0	0.5	1.8	62.3	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.0	359.3				0.0	0.1	67.5	38.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	23.8				0.0	0.3	53.0	6.6	0.1	0.0
LnGrp Delay(d),s/veh	77.7	0.0	426.3				0.0	0.6	69.3	100.3	0.1	0.0
LnGrp LOS	E		F					A	F	F	A	
Approach Vol, veh/h		432						1884			721	
Approach Delay, s/veh		315.8						48.6			17.6	
Approach LOS		F						D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.0	114.0		20.0		130.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	12.0	110.0		16.0		126.0		
Max Q Clear Time (g_c+I1), s	12.4	112.0		18.0		2.0		
Green Ext Time (p_c), s	0.0	0.0		0.0		5.1		

Intersection Summary	
HCM 2010 Ctrl Delay	79.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	425	370	340	255	120	200	1530	190	180	1115	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	612	279	358	268	126	211	1611	200	189	1174	158
Adj No. of Lanes	1	2	1	2	2	1	2	3	0	2	3	1
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	376	715	423	411	353	158	260	2351	291	237	2575	802
Arrive On Green	0.21	0.19	0.19	0.12	0.10	0.10	0.15	1.00	1.00	0.02	0.17	0.17
Sat Flow, veh/h	1774	3725	1583	3442	3539	1583	3442	4585	568	3442	5085	1583
Grp Volume(v), veh/h	189	612	279	358	268	126	211	1190	621	189	1174	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1763	1721	1695	1583
Q Serve(g_s), s	14.1	23.8	17.1	15.3	11.1	10.1	8.9	0.0	0.0	8.2	31.2	6.0
Cycle Q Clear(g_c), s	14.1	23.8	17.1	15.3	11.1	10.1	8.9	0.0	0.0	8.2	31.2	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	376	715	423	411	353	158	260	1739	904	237	2575	802
V/C Ratio(X)	0.50	0.86	0.66	0.87	0.76	0.80	0.81	0.68	0.69	0.80	0.46	0.20
Avail Cap(c_a), veh/h	376	820	468	505	684	306	436	1739	904	298	2575	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79	0.94	0.94	0.94
Uniform Delay (d), s/veh	52.1	58.6	27.8	64.9	65.8	49.3	62.7	0.0	0.0	72.2	43.8	7.8
Incr Delay (d2), s/veh	1.1	8.0	3.0	13.1	3.4	8.9	4.9	1.8	3.4	10.6	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	7.0	13.0	7.8	8.1	5.6	4.8	4.4	0.4	0.8	4.3	14.8	2.7
LnGrp Delay(d),s/veh	53.2	66.6	30.8	78.0	69.2	58.2	67.5	1.8	3.4	82.8	44.4	8.3
LnGrp LOS	D	E	C	E	E	E	E	A	A	F	D	A
Approach Vol, veh/h		1080			752			2022			1521	
Approach Delay, s/veh		55.0			71.5			9.1			45.4	
Approach LOS		E			E			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	80.9	21.9	32.8	15.3	80.0	35.8	18.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	66.0	22.0	33.0	19.0	60.0	26.0	29.0
Max Q Clear Time (g_c+I1), s	10.2	2.0	17.3	25.8	10.9	33.2	16.1	13.1
Green Ext Time (p_c), s	0.2	48.7	0.6	3.0	0.4	23.6	1.4	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	470	50	160	340	260	1520	0	0	1170	645
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	495	53	168	358	274	1600	0	0	1232	679
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	100	317	359	297	3661	0	0	1861	833
Arrive On Green	0.00	0.00	0.00	0.23	0.23	0.23	0.17	0.72	0.00	0.00	0.70	0.70
Sat Flow, veh/h		0		441	1399	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		221	0	358	274	1600	0	0	1232	679
Grp Sat Flow(s),veh/h/ln				1841	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				15.8	0.0	33.9	22.8	19.3	0.0	0.0	29.2	45.0
Cycle Q Clear(g_c), s				15.8	0.0	33.9	22.8	19.3	0.0	0.0	29.2	45.0
Prop In Lane				0.24		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				417	0	359	297	3661	0	0	1861	833
V/C Ratio(X)				0.53	0.00	1.00	0.92	0.44	0.00	0.00	0.66	0.82
Avail Cap(c_a), veh/h				417	0	359	343	3661	0	0	1861	833
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				51.0	0.0	58.0	61.5	8.6	0.0	0.0	15.1	17.5
Incr Delay (d2), s/veh				1.3	0.0	46.8	27.5	0.4	0.0	0.0	1.5	7.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.2	0.0	19.5	13.5	9.0	0.0	0.0	14.4	20.9
LnGrp Delay(d),s/veh				52.2	0.0	104.8	88.9	9.0	0.0	0.0	16.6	24.5
LnGrp LOS				D		F	F	A			B	C
Approach Vol, veh/h					579			1874			1911	
Approach Delay, s/veh					84.7			20.7			19.4	
Approach LOS					F			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.0			29.1	82.9		38.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		94.0			29.0	61.0		34.0
Max Q Clear Time (g_c+I1), s		21.3			24.8	47.0		35.9
Green Ext Time (p_c), s		58.0			0.3	13.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	460	3455	590	140	1390	120	370	70	140	130	80	650
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	484	3637	621	147	1463	126	389	74	147	137	0	740
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	945	2882	897	118	1824	568	321	330	296	260	0	528
Arrive On Green	0.27	0.57	0.57	0.07	0.36	0.36	0.09	0.19	0.19	0.07	0.00	0.17
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	484	3637	621	147	1463	126	389	74	147	137	0	740
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	17.8	85.0	27.7	10.0	38.8	8.3	14.0	5.3	12.5	5.6	0.0	25.0
Cycle Q Clear(g_c), s	17.8	85.0	27.7	10.0	38.8	8.3	14.0	5.3	12.5	5.6	0.0	25.0
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	945	2882	897	118	1824	568	321	330	296	260	0	528
V/C Ratio(X)	0.51	1.26	0.69	1.24	0.80	0.22	1.21	0.22	0.50	0.53	0.00	1.40
Avail Cap(c_a), veh/h	945	2882	897	118	2238	697	321	330	296	260	0	528
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)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	32.5	10.1	70.0	43.3	33.5	68.0	51.8	54.7	67.0	0.0	62.5
Incr Delay (d2), s/veh	0.4	120.2	1.8	161.9	1.8	0.2	120.3	1.6	5.9	2.0	0.0	192.1
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	8.5	71.6	12.5	10.2	18.5	3.7	12.0	2.8	6.0	2.8	0.0	25.0
LnGrp Delay(d),s/veh	46.3	152.7	11.9	231.9	45.1	33.7	188.3	53.3	60.6	69.0	0.0	254.6
LnGrp LOS	D	F	B	F	D	C	F	D	E	E		F
Approach Vol, veh/h		4742			1736			610			877	
Approach Delay, s/veh		123.4			60.1			141.2			225.6	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	32.0	14.0	89.0	18.0	29.0	45.2	57.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	28.0	10.0	85.0	14.0	25.0	29.0	66.0
Max Q Clear Time (g_c+I1), s	7.6	14.5	12.0	87.0	16.0	27.0	19.8	40.8
Green Ext Time (p_c), s	0.7	1.0	0.0	0.0	0.0	0.0	9.2	13.0

Intersection Summary	
HCM 2010 Ctrl Delay	122.2
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	750	2860	1590	975	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	789	3011	1674	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	698	4779	1840	823		
Arrive On Green	0.79	1.00	0.52	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	789	3011	1674	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	59.0	0.0	64.6	0.0		
Cycle Q Clear(g_c), s	59.0	0.0	64.6	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	698	4779	1840	823		
V/C Ratio(X)	1.13	0.63	0.91	0.00		
Avail Cap(c_a), veh/h	698	4950	1958	876		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.46	0.00		
Uniform Delay (d), s/veh	16.0	0.0	32.8	0.0		
Incr Delay (d2), s/veh	60.8	0.0	3.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	39.3	0.0	32.2	0.0		
LnGrp Delay(d),s/veh	76.8	0.0	36.1	0.0		
LnGrp LOS	F	A	D			
Approach Vol, veh/h		3800	1674			
Approach Delay, s/veh		16.0	36.1			
Approach LOS		B	D			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				145.0			63.0	82.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			59.0	83.0
Max Q Clear Time (g_c+I1), s				2.0			61.0	66.6
Green Ext Time (p_c), s				120.1			0.0	11.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	930	0	380	620
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	979	0	400	653
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2105	489			979	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2105	489			979	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			43	
cM capacity (veh/h)	19	524			701	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	653	326	400	326	326
Volume Left	0	0	400	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	701	1700	1700
Volume to Capacity	0.38	0.19	0.57	0.19	0.19
Queue Length 95th (ft)	0	0	91	0	0
Control Delay (s)	0.0	0.0	16.7	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		6.4		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1870	730	0	1285	740	420	50	1260	440	10	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	1968	0	0	1353	779	480	0	0	471	0	189
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	161	3167	986	0	2570	800	502	0	224	553	0	247
Arrive On Green	0.09	0.62	0.00	0.00	0.51	0.51	0.14	0.00	0.00	0.16	0.00	0.16
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	137	1968	0	0	1353	779	480	0	0	471	0	189
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	11.4	35.7	0.0	0.0	26.9	71.8	20.1	0.0	0.0	19.4	0.0	17.2
Cycle Q Clear(g_c), s	11.4	35.7	0.0	0.0	26.9	71.8	20.1	0.0	0.0	19.4	0.0	17.2
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	3167	986	0	2570	800	502	0	224	553	0	247
V/C Ratio(X)	0.85	0.62	0.00	0.00	0.53	0.97	0.96	0.00	0.00	0.85	0.00	0.77
Avail Cap(c_a), veh/h	272	3424	1066	0	2570	800	502	0	224	781	0	348
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	0.00	0.00	0.40	0.40	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.2	17.4	0.0	0.0	25.0	36.1	63.9	0.0	0.0	61.6	0.0	60.7
Incr Delay (d2), s/veh	12.1	0.3	0.0	0.0	0.1	14.4	30.5	0.0	0.0	6.5	0.0	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	16.7	0.0	0.0	12.5	34.6	12.0	0.0	0.0	10.0	0.0	14.9
LnGrp Delay(d),s/veh	79.3	17.7	0.0	0.0	25.1	50.5	94.4	0.0	0.0	68.1	0.0	67.1
LnGrp LOS	E	B			C	D	F			E		E
Approach Vol, veh/h		2105			2132			480			660	
Approach Delay, s/veh		21.7			34.4			94.4			67.8	
Approach LOS		C			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		25.2		97.4		27.4	17.6	79.8
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		4.0		101.0		33.0	23.0	74.0
Max Q Clear Time (g_c+I1), s		22.1		37.7		21.4	13.4	73.8
Green Ext Time (p_c), s		0.0		55.7		2.0	0.2	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	450	120	180	660	170	200
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	474	0	189	695	179	211
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1681	523	357	2868	315	784
Arrive On Green	0.33	0.00	0.10	0.56	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	474	0	189	695	179	211
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	2.1	0.0	1.6	2.1	2.9	1.8
Cycle Q Clear(g_c), s	2.1	0.0	1.6	2.1	2.9	1.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1681	523	357	2868	315	784
V/C Ratio(X)	0.28	0.00	0.53	0.24	0.57	0.27
Avail Cap(c_a), veh/h	2632	820	557	4113	689	1371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	13.1	3.4	11.6	8.6
Incr Delay (d2), s/veh	0.1	0.0	1.2	0.0	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.8	1.0	1.5	0.7
LnGrp Delay(d),s/veh	7.7	0.0	14.3	3.4	13.3	8.8
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	474			884	390	
Approach Delay, s/veh	7.7			5.8	10.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.5	7.2	14.2				21.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		12.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		4.9	3.6	4.1				4.1
Green Ext Time (p_c), s		0.8	0.1	6.1				8.4

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	30	40	70	50	20	50	440	30	10	300	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	53	32	42	74	53	21	53	463	32	11	316	32
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	66	86	100	117	46	79	1516	104	4	1328	134
Arrive On Green	0.05	0.09	0.09	0.06	0.09	0.09	0.04	0.45	0.45	0.00	0.41	0.41
Sat Flow, veh/h	1774	732	961	1774	1271	503	1774	3360	232	1774	3248	327
Grp Volume(v), veh/h	53	0	74	74	0	74	53	243	252	11	171	177
Grp Sat Flow(s),veh/h/ln	1774	0	1693	1774	0	1774	1774	1770	1822	1774	1770	1805
Q Serve(g_s), s	1.2	0.0	1.7	1.6	0.0	1.6	1.2	3.5	3.5	0.1	2.5	2.6
Cycle Q Clear(g_c), s	1.2	0.0	1.7	1.6	0.0	1.6	1.2	3.5	3.5	0.1	2.5	2.6
Prop In Lane	1.00		0.57	1.00		0.28	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	96	0	151	100	0	163	79	798	822	4	723	738
V/C Ratio(X)	0.55	0.00	0.49	0.74	0.00	0.45	0.67	0.30	0.31	2.47	0.24	0.24
Avail Cap(c_a), veh/h	267	0	679	267	0	711	267	798	822	178	723	738
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	18.4	0.0	17.3	18.5	0.0	17.2	18.8	7.0	7.0	19.9	7.7	7.7
Incr Delay (d2), s/veh	4.9	0.0	2.4	10.4	0.0	2.0	9.4	1.0	1.0	786.8	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	105.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.9	1.1	0.0	0.8	0.8	1.9	2.0	1.0	1.4	1.4
LnGrp Delay(d),s/veh	23.4	0.0	19.7	28.9	0.0	19.2	28.2	7.9	7.9	911.7	8.5	8.5
LnGrp LOS	C		B	C		B	C	A	A	F	A	A
Approach Vol, veh/h		127			148			548			359	
Approach Delay, s/veh		21.2			24.0			9.9			36.2	
Approach LOS		C			C			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	22.0	6.2	7.6	5.8	20.3	6.1	7.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	6.0	16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	5.5	3.6	3.7	3.2	4.6	3.2	3.6
Green Ext Time (p_c), s	0.0	2.4	0.1	0.2	0.0	1.5	0.1	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	50	50	50	40	10	50	60	60	10	60	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	53	53	53	42	11	53	63	63	11	63	21
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	172	287	294	209	59	76	438	438	21	642	214
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.04	0.51	0.51	0.01	0.48	0.48
Sat Flow, veh/h	447	1245	1583	783	1514	424	1774	856	856	1774	1338	446
Grp Volume(v), veh/h	85	0	53	64	0	42	53	0	126	11	0	84
Grp Sat Flow(s),veh/h/ln	1691	0	1583	1100	0	1620	1774	0	1712	1774	0	1784
Q Serve(g_s), s	0.2	0.0	0.0	1.0	0.0	0.8	1.0	0.0	1.4	0.2	0.0	0.9
Cycle Q Clear(g_c), s	1.5	0.0	0.0	2.5	0.0	0.8	1.0	0.0	1.4	0.2	0.0	0.9
Prop In Lane	0.38		1.00	0.83		0.26	1.00		0.50	1.00		0.25
Lane Grp Cap(c), veh/h	373	0	287	338	0	224	76	0	876	21	0	856
V/C Ratio(X)	0.23	0.00	0.18	0.19	0.00	0.19	0.69	0.00	0.14	0.54	0.00	0.10
Avail Cap(c_a), veh/h	884	0	784	763	0	732	250	0	876	200	0	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	12.3	14.3	0.0	13.5	16.7	0.0	4.6	17.4	0.0	5.0
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.3	0.0	0.4	10.7	0.0	0.3	19.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.5	0.6	0.0	0.4	0.7	0.0	0.7	0.2	0.0	0.5
LnGrp Delay(d),s/veh	14.1	0.0	12.6	14.6	0.0	13.9	27.4	0.0	4.9	37.3	0.0	5.3
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		138			106			179			95	
Approach Delay, s/veh		13.5			14.3			11.6			9.0	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	22.1		8.9	5.5	21.0		8.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	5.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	3.4		3.5	3.0	2.9		4.5
Green Ext Time (p_c), s	0.0	0.7		0.9	0.0	0.3		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	10	280	90	20	30	380	520	40	10	370	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	325	95	21	32	400	547	42	11	389	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	272	462	126	28	43	681	1527	117	20	900	74
Arrive On Green	0.00	0.00	0.15	0.11	0.11	0.11	0.20	0.46	0.46	0.01	0.27	0.27
Sat Flow, veh/h	0	1863	3167	1117	247	376	3442	3332	255	1774	3313	271
Grp Volume(v), veh/h	0	0	325	148	0	0	400	290	299	11	207	214
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1740	0	0	1721	1770	1818	1774	1770	1815
Q Serve(g_s), s	0.0	0.0	5.8	4.9	0.0	0.0	6.2	6.3	6.3	0.4	5.7	5.7
Cycle Q Clear(g_c), s	0.0	0.0	5.8	4.9	0.0	0.0	6.2	6.3	6.3	0.4	5.7	5.7
Prop In Lane	0.00		1.00	0.64		0.22	1.00		0.14	1.00		0.15
Lane Grp Cap(c), veh/h	0	272	462	197	0	0	681	811	833	20	481	493
V/C Ratio(X)	0.00	0.00	0.70	0.75	0.00	0.00	0.59	0.36	0.36	0.55	0.43	0.43
Avail Cap(c_a), veh/h	0	537	914	473	0	0	876	811	833	120	481	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)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	24.0	25.3	0.0	0.0	21.4	10.3	10.3	29.0	17.7	17.7
Incr Delay (d2), s/veh	0.0	0.0	2.0	5.7	0.0	0.0	0.8	1.2	1.2	22.0	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.6	2.7	0.0	0.0	3.0	3.3	3.4	0.3	3.1	3.2
LnGrp Delay(d),s/veh	0.0	0.0	25.9	31.0	0.0	0.0	22.3	11.6	11.6	51.0	20.5	20.5
LnGrp LOS			C	C			C	B	B	D	C	C
Approach Vol, veh/h		325			148			989			432	
Approach Delay, s/veh		25.9			31.0			15.9			21.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	31.0		12.6	15.7	20.0		10.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	27.0		17.0	15.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	8.3		7.8	8.2	7.7		6.9
Green Ext Time (p_c), s	0.3	3.5		0.9	0.9	1.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	30	290	230	120	230	200	660	90	20	630	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	32	32	305	161	360	161	211	695	95	21	663	74
Adj No. of Lanes	1	1	1	1	2	1	1	2	0	2	2	1
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	99	104	401	260	546	262	350	1799	246	64	1401	627
Arrive On Green	0.06	0.06	0.06	0.15	0.15	0.15	0.20	0.57	0.57	0.02	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	1774	3725	1583	1774	3129	427	3442	3539	1583
Grp Volume(v), veh/h	32	32	305	161	360	161	211	393	397	21	663	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1787	1721	1770	1583
Q Serve(g_s), s	1.4	1.3	0.0	6.7	7.1	5.9	8.5	9.5	9.5	0.5	10.9	2.3
Cycle Q Clear(g_c), s	1.4	1.3	0.0	6.7	7.1	5.9	8.5	9.5	9.5	0.5	10.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	99	104	401	260	546	262	350	1017	1027	64	1401	627
V/C Ratio(X)	0.32	0.31	0.76	0.62	0.66	0.62	0.60	0.39	0.39	0.33	0.47	0.12
Avail Cap(c_a), veh/h	317	333	596	408	857	394	476	1017	1027	308	1401	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	35.5	27.0	31.4	31.6	30.4	28.6	9.1	9.1	37.9	17.6	15.0
Incr Delay (d2), s/veh	1.9	1.7	3.3	2.4	1.4	2.3	1.7	1.1	1.1	2.9	1.1	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	0.7	0.7	6.4	3.4	3.8	3.1	4.3	4.9	4.9	0.3	5.5	1.1
LnGrp Delay(d),s/veh	37.4	37.2	30.3	33.8	32.9	32.7	30.3	10.2	10.2	40.8	18.7	15.4
LnGrp LOS	D	D	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		369			682			1001			758	
Approach Delay, s/veh		31.5			33.1			14.4			19.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	49.0		8.4	19.5	35.0		15.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	45.0		14.0	21.0	31.0		18.0
Max Q Clear Time (g_c+I1), s	2.5	11.5		3.4	10.5	12.9		9.1
Green Ext Time (p_c), s	0.3	5.8		1.0	0.5	4.6		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	510	570	30	0	430	470	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	537	600		0	453	495	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	920	965		0	1825	1518	0
Arrive On Green	0.27	0.27		0.00	0.52	0.30	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	537	600		0	453	495	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	5.0	5.4		0.0	2.6	2.8	0.0
Cycle Q Clear(g_c), s	5.0	5.4		0.0	2.6	2.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	920	965		0	1825	1518	0
V/C Ratio(X)	0.58	0.62		0.00	0.25	0.33	0.00
Avail Cap(c_a), veh/h	1214	1274		0	1825	1518	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.7	11.9		0.0	5.0	10.0	0.0
Incr Delay (d2), s/veh	0.6	0.7		0.0	0.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.6		0.0	1.3	1.4	0.0
LnGrp Delay(d),s/veh	12.3	12.5		0.0	5.3	10.6	0.0
LnGrp LOS	B	B			A	B	
Approach Vol, veh/h	1137				453	495	
Approach Delay, s/veh	12.4				5.3	10.6	
Approach LOS	B				A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		23.0		13.8		15.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		19.0		13.0		11.0		
Max Q Clear Time (g_c+I1), s		4.6		7.4		4.8		
Green Ext Time (p_c), s		2.6		2.5		1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	750	180	50	860	220	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	789	189	53	905	232	53
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1463	1137	74	2624	1528	682
Arrive On Green	0.29	0.29	0.04	0.41	0.43	0.43
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	789	189	53	905	232	53
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	6.5	1.9	1.5	4.9	2.0	1.0
Cycle Q Clear(g_c), s	6.5	1.9	1.5	4.9	2.0	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1463	1137	74	2624	1528	682
V/C Ratio(X)	0.54	0.17	0.72	0.34	0.15	0.08
Avail Cap(c_a), veh/h	1627	1188	177	3204	1528	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	2.3	23.7	10.2	8.7	8.4
Incr Delay (d2), s/veh	0.3	0.1	12.1	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.1	1.0	2.2	1.0	0.5
LnGrp Delay(d),s/veh	15.3	2.3	35.8	10.2	8.9	8.6
LnGrp LOS	B	A	D	B	A	A
Approach Vol, veh/h	978			958	285	
Approach Delay, s/veh	12.8			11.6	8.8	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		25.5	6.1	18.4				24.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		4.0	3.5	8.5				6.9
Green Ext Time (p_c), s		0.8	0.0	5.8				11.8

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	50	60	30	60	50	30	70	30	70	110	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	53	63	32	63	53	32	74	32	74	116	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	53	186	166	53	202	153	53	777	660	99	825	701
Arrive On Green	0.03	0.11	0.11	0.03	0.11	0.11	0.03	0.42	0.42	0.06	0.44	0.44
Sat Flow, veh/h	1774	1770	1583	1774	1920	1456	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	32	53	63	32	58	58	32	74	32	74	116	42
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1606	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.7	1.1	1.5	0.7	1.2	1.4	0.7	1.0	0.5	1.7	1.5	0.6
Cycle Q Clear(g_c), s	0.7	1.1	1.5	0.7	1.2	1.4	0.7	1.0	0.5	1.7	1.5	0.6
Prop In Lane	1.00		1.00	1.00		0.91	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	186	166	53	186	169	53	777	660	99	825	701
V/C Ratio(X)	0.60	0.29	0.38	0.60	0.31	0.35	0.60	0.10	0.05	0.75	0.14	0.06
Avail Cap(c_a), veh/h	218	695	621	218	695	630	218	777	660	261	825	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	16.8	17.0	19.5	16.9	16.9	19.5	7.2	7.1	19.0	6.7	6.5
Incr Delay (d2), s/veh	10.6	0.8	1.4	10.6	0.9	1.2	10.6	0.2	0.1	10.7	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.7	0.5	0.6	0.7	0.5	0.5	0.2	1.1	0.9	0.3
LnGrp Delay(d),s/veh	30.2	17.7	18.4	30.2	17.8	18.2	30.2	7.5	7.2	29.7	7.1	6.7
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		148			148			138			232	
Approach Delay, s/veh		20.7			20.6			12.7			14.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	21.0	5.2	8.3	5.2	22.1	5.2	8.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	17.0	5.0	16.0	5.0	18.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.7	3.0	2.7	3.5	2.7	3.5	2.7	3.4
Green Ext Time (p_c), s	0.0	1.0	0.0	1.0	0.0	1.1	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	30	20	90	160	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	32	21	95	168	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	273	100	200	0	-	0
Stage 1	184	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	694	936	1370	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	683	936	1370	-	-	-
Mov Cap-2 Maneuver	683	-	-	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1370	-	683	936	-	-
HCM Lane V/C Ratio	0.015	-	0.031	0.034	-	-
HCM Control Delay (s)	7.7	0	10.4	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	30	40	80	100	150	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	42	84	105	158	42
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	54	501	445	199	898	850
Arrive On Green	0.03	0.27	0.13	0.13	0.51	0.51
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	32	42	84	105	158	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.6	0.6	0.8	2.2	1.7	0.4
Cycle Q Clear(g_c), s	0.6	0.6	0.8	2.2	1.7	0.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	54	501	445	199	898	850
V/C Ratio(X)	0.59	0.08	0.19	0.53	0.18	0.05
Avail Cap(c_a), veh/h	200	1257	1593	712	898	850
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	17.0	9.7	13.9	14.6	4.8	3.9
Incr Delay (d2), s/veh	9.9	0.1	0.2	2.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	0.4	1.1	0.9	0.6
LnGrp Delay(d),s/veh	26.9	9.8	14.1	16.7	5.2	4.0
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		74	189		200	
Approach Delay, s/veh		17.2	15.6		4.9	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				13.6		22.0	5.1	8.5
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				24.0		18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s				2.6		3.7	2.6	4.2
Green Ext Time (p_c), s				1.0		0.5	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	220	930	650	440	0	410
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	232	979	632	497		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	296	3149	1387	1179		
Arrive On Green	0.17	0.62	0.74	0.74		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	232	979	632	497		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	6.3	4.5	3.3	2.9		
Cycle Q Clear(g_c), s	6.3	4.5	3.3	2.9		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	296	3149	1387	1179		
V/C Ratio(X)	0.78	0.31	0.46	0.42		
Avail Cap(c_a), veh/h	603	4678	1863	1583		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.96	0.96	0.95	0.95		
Uniform Delay (d), s/veh	20.0	4.5	4.4	4.4		
Incr Delay (d2), s/veh	4.3	0.1	0.2	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.4	2.1	1.6	1.1		
LnGrp Delay(d),s/veh	24.3	4.5	4.7	4.6		
LnGrp LOS	C	A	A	A		
Approach Vol, veh/h		1211	1129			
Approach Delay, s/veh		8.3	4.6			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				35.0			12.3	22.6
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				46.0			17.0	25.0
Max Q Clear Time (g_c+I1), s				6.5			8.3	5.3
Green Ext Time (p_c), s				20.3			0.4	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	400	190	120	650	280	0	0	0	350	0	470
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	168	421	200	126	684	0				368	0	495
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	217	1243	387	164	1091	340				1064	0	950
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.00				0.30	0.00	0.30
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	168	421	200	126	684	0				368	0	495
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	4.6	3.4	5.5	3.5	6.1	0.0				4.1	0.0	6.5
Cycle Q Clear(g_c), s	4.6	3.4	5.5	3.5	6.1	0.0				4.1	0.0	6.5
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	217	1243	387	164	1091	340				1064	0	950
V/C Ratio(X)	0.78	0.34	0.52	0.77	0.63	0.00				0.35	0.00	0.52
Avail Cap(c_a), veh/h	390	1322	412	355	1220	380				1064	0	950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	21.3	15.6	16.3	22.2	17.8	0.0				13.7	0.0	14.5
Incr Delay (d2), s/veh	5.5	0.1	1.0	7.1	0.8	0.0				0.9	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.6	2.5	2.0	2.9	0.0				2.1	0.0	3.1
LnGrp Delay(d),s/veh	26.8	15.7	17.3	29.3	18.6	0.0				14.6	0.0	16.6
LnGrp LOS	C	B	B	C	B					B		B
Approach Vol, veh/h		789			810						863	
Approach Delay, s/veh		18.5			20.3						15.7	
Approach LOS		B			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			8.6	16.2		19.0	10.1	14.7
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			10.0	13.0		15.0	11.0	12.0
Max Q Clear Time (g_c+I1), s			5.5	7.5		8.5	6.6	8.1
Green Ext Time (p_c), s			0.1	3.5		2.1	0.2	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	330	10	140	50	110	0	10	220	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	1900	1863	1863
Adj Flow Rate, veh/h				347	11	0	53	116	0	11	232	126
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				471	15	433	268	1714	0	132	715	335
Arrive On Green				0.27	0.27	0.00	0.15	0.48	0.00	0.21	0.21	0.21
Sat Flow, veh/h				1722	55	1583	1774	3632	0	66	3376	1583
Grp Volume(v), veh/h				358	0	0	53	116	0	131	112	126
Grp Sat Flow(s),veh/h/ln				1777	0	1583	1774	1770	0	1832	1610	1583
Q Serve(g_s), s				6.1	0.0	0.0	0.9	0.6	0.0	0.0	1.9	2.3
Cycle Q Clear(g_c), s				6.1	0.0	0.0	0.9	0.6	0.0	2.0	1.9	2.3
Prop In Lane				0.97		1.00	1.00		0.00	0.08		1.00
Lane Grp Cap(c), veh/h				486	0	433	268	1714	0	506	341	335
V/C Ratio(X)				0.74	0.00	0.00	0.20	0.07	0.00	0.26	0.33	0.38
Avail Cap(c_a), veh/h				860	0	767	268	1714	0	506	341	335
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				10.9	0.0	0.0	12.3	4.5	0.0	11.0	11.0	11.1
Incr Delay (d2), s/veh				2.2	0.0	0.0	0.4	0.1	0.0	1.2	2.5	3.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	0.0	0.0	0.4	0.3	0.0	1.2	1.1	1.3
LnGrp Delay(d),s/veh				13.1	0.0	0.0	12.6	4.6	0.0	12.3	13.6	14.3
LnGrp LOS				B			B	A		B	B	B
Approach Vol, veh/h					358			169			369	
Approach Delay, s/veh					13.1			7.1			13.4	
Approach LOS					B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			9.0	11.0		13.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		16.0			5.0	7.0		16.0
Max Q Clear Time (g_c+I1), s		2.6			2.9	4.3		8.1
Green Ext Time (p_c), s		0.6			0.1	0.5		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	70	10	29	121	30	0	51	39	29	21	10	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.89			0.92	0.85		0.92			
Flt Protected	0.95		1.00			0.98	1.00		1.00			
Satd. Flow (prot)	1770		1647			1596	1504		3265			
Flt Permitted	0.95		0.49			0.98	1.00		1.00			
Satd. Flow (perm)	1770		804			1596	1504		3265			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	11	31	127	32	0	54	42	31	22	11	200
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	8	0	0	0
Lane Group Flow (vph)	74	0	169	0	0	65	63	0	56	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	17.2		17.2			3.8	3.8		18.2			
Effective Green, g (s)	17.2		17.2			3.8	3.8		18.2			
Actuated g/C Ratio	0.24		0.24			0.05	0.05		0.25			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	426		193			84	80		832			
v/s Ratio Prot	0.04					0.04	c0.04		c0.02			
v/s Ratio Perm			c0.21									
v/c Ratio	0.17		0.88			0.77	0.79		0.07			
Uniform Delay, d1	21.5		26.1			33.4	33.4		20.2			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.2		32.8			34.8	38.7		0.2			
Delay (s)	21.7		58.9			68.2	72.1		20.3			
Level of Service	C		E			E	E		C			
Approach Delay (s)			47.5			70.1			20.3			
Approach LOS			D			E			C			

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	71	299
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.99
Satd. Flow (prot)	1610	3360
Flt Permitted	0.95	0.99
Satd. Flow (perm)	1610	3360
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	75	315
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	207	383
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.2	16.2
Effective Green, g (s)	16.2	16.2
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	365	762
v/s Ratio Prot	c0.13	0.11
v/s Ratio Perm		
v/c Ratio	0.57	0.50
Uniform Delay, d1	24.5	24.1
Progression Factor	1.00	1.00
Incremental Delay, d2	6.3	2.4
Delay (s)	30.7	26.4
Level of Service	C	C
Approach Delay (s)		28.0
Approach LOS		C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	380	150	360	420	30	70	20	290	80	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	400	158	379	442	32	74	21	305	84	32	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	121	883	275	514	1464	542	187	580	729	187	580	493
Arrive On Green	0.04	0.17	0.17	0.15	0.29	0.29	0.05	0.31	0.31	0.05	0.31	0.31
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	42	400	158	379	442	32	74	21	305	84	32	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.6	3.6	4.7	5.4	3.5	0.7	1.1	0.4	1.6	1.2	0.6	1.6
Cycle Q Clear(g_c), s	0.6	3.6	4.7	5.4	3.5	0.7	1.1	0.4	1.6	1.2	0.6	1.6
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	121	883	275	514	1464	542	187	580	729	187	580	493
V/C Ratio(X)	0.35	0.45	0.57	0.74	0.30	0.06	0.40	0.04	0.42	0.45	0.06	0.19
Avail Cap(c_a), veh/h	268	1583	493	536	1979	702	268	580	729	268	580	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	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	24.2	19.0	19.5	20.9	14.3	11.3	23.5	12.3	2.6	23.5	12.4	6.8
Incr Delay (d2), s/veh	1.7	0.4	1.9	5.1	0.1	0.0	1.4	0.1	1.8	1.7	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.7	2.2	2.9	1.6	0.3	0.5	0.2	1.6	0.6	0.3	1.0
LnGrp Delay(d),s/veh	25.9	19.4	21.4	26.0	14.4	11.4	24.8	12.4	4.3	25.2	12.6	7.6
LnGrp LOS	C	B	C	C	B	B	C	B	A	C	B	A
Approach Vol, veh/h		600			853			400			211	
Approach Delay, s/veh		20.4			19.4			8.5			15.4	
Approach LOS		C			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	20.0	11.7	12.9	6.8	20.0	5.8	18.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	3.2	3.6	7.4	6.7	3.1	3.6	2.6	5.5
Green Ext Time (p_c), s	0.0	1.2	0.3	2.2	0.2	0.3	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	400	80	130	430	30	70	10	120	40	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	421	84	137	453	32	74	11	126	42	0	109
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	116	833	341	238	853	348	178	723	615	184	0	1436
Arrive On Green	0.07	0.16	0.16	0.07	0.17	0.17	0.05	0.39	0.39	0.05	0.00	0.39
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	32	421	84	137	453	32	74	11	126	42	0	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	0.8	3.7	2.2	1.9	4.0	0.0	1.0	0.2	1.6	0.6	0.0	0.2
Cycle Q Clear(g_c), s	0.8	3.7	2.2	1.9	4.0	0.0	1.0	0.2	1.6	0.6	0.0	0.2
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	116	833	341	238	853	348	178	723	615	184	0	1436
V/C Ratio(X)	0.28	0.51	0.25	0.58	0.53	0.09	0.41	0.02	0.20	0.23	0.00	0.08
Avail Cap(c_a), veh/h	181	1663	600	352	1663	600	281	723	615	290	0	1436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.8	18.7	15.9	22.1	18.6	15.2	22.5	9.2	3.8	22.3	0.0	2.0
Incr Delay (d2), s/veh	1.3	0.5	0.4	2.2	0.5	0.1	1.5	0.0	0.8	0.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	1.0	1.0	1.9	0.3	0.5	0.1	1.1	0.3	0.0	0.2
LnGrp Delay(d),s/veh	23.1	19.1	16.3	24.3	19.1	15.3	24.0	9.2	4.6	22.9	0.0	2.1
LnGrp LOS	C	B	B	C	B	B	C	A	A	C		A
Approach Vol, veh/h		537			622			211			151	
Approach Delay, s/veh		18.9			20.1			11.6			7.9	
Approach LOS		B			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	23.0	7.4	12.0	6.5	23.0	7.2	12.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	4.0	19.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	3.6	3.9	5.7	3.0	2.2	2.8	6.0
Green Ext Time (p_c), s	0.1	0.3	0.0	2.3	0.0	0.4	0.7	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	140	0	40	140	60	0	0	40	20
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				94	73	42	147	63	0	0	42	21
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				195	122	70	905	1360	0	0	328	153
Arrive On Green				0.11	0.11	0.11	0.51	0.73	0.00	0.00	0.14	0.14
Sat Flow, veh/h				1774	1111	639	1774	1863	0	0	2440	1093
Grp Volume(v), veh/h				94	0	115	147	63	0	0	31	32
Grp Sat Flow(s),veh/h/ln				1774	0	1750	1774	1863	0	0	1770	1670
Q Serve(g_s), s				2.5	0.0	3.1	2.2	0.5	0.0	0.0	0.8	0.8
Cycle Q Clear(g_c), s				2.5	0.0	3.1	2.2	0.5	0.0	0.0	0.8	0.8
Prop In Lane				1.00		0.37	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				195	0	192	905	1360	0	0	248	234
V/C Ratio(X)				0.48	0.00	0.60	0.16	0.05	0.00	0.00	0.12	0.14
Avail Cap(c_a), veh/h				639	0	630	905	1360	0	0	248	234
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.9	0.0	21.2	6.5	1.9	0.0	0.0	18.8	18.9
Incr Delay (d2), s/veh				1.8	0.0	3.0	0.1	0.1	0.0	0.0	1.0	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				1.3	0.0	1.7	1.1	0.3	0.0	0.0	0.4	0.5
LnGrp Delay(d),s/veh				22.8	0.0	24.2	6.6	1.9	0.0	0.0	19.9	20.1
LnGrp LOS				C		C	A	A			B	C
Approach Vol, veh/h					209			210			63	
Approach Delay, s/veh					23.5			5.2			20.0	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		40.5			29.5	11.0		9.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		24.0			13.0	7.0		18.0
Max Q Clear Time (g_c+I1), s		2.5			4.2	2.8		5.1
Green Ext Time (p_c), s		0.7			0.5	0.1		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	0	40	0	0	0	0	140	110	30	150	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	63	0	42				0	147	116	32	158	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	110	0	98				0	991	443	742	2754	0
Arrive On Green	0.06	0.00	0.06				0.00	0.28	0.28	0.42	0.78	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	63	0	42				0	147	116	32	158	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.7	0.0	1.3				0.0	1.6	2.8	0.5	0.5	0.0
Cycle Q Clear(g_c), s	1.7	0.0	1.3				0.0	1.6	2.8	0.5	0.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	110	0	98				0	991	443	742	2754	0
V/C Ratio(X)	0.57	0.00	0.43				0.00	0.15	0.26	0.04	0.06	0.00
Avail Cap(c_a), veh/h	639	0	570				0	991	443	742	2754	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.99	0.99	0.00
Uniform Delay (d), s/veh	22.8	0.0	22.6				0.0	13.5	14.0	8.6	1.3	0.0
Incr Delay (d2), s/veh	4.6	0.0	2.9				0.0	0.3	1.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.6				0.0	0.8	1.4	0.3	0.3	0.0
LnGrp Delay(d),s/veh	27.4	0.0	25.5				0.0	13.8	15.4	8.6	1.3	0.0
LnGrp LOS	C		C					B	B	A	A	
Approach Vol, veh/h		105						263			190	
Approach Delay, s/veh		26.7						14.5			2.6	
Approach LOS		C						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	24.9	18.0		7.1		42.9		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	6.0	14.0		18.0		24.0		
Max Q Clear Time (g_c+I1), s	2.5	4.8		3.7		2.5		
Green Ext Time (p_c), s	0.3	0.8		0.3		1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	30	70	50	40	30	90	340	60	10	230	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	42	32	74	53	42	32	95	358	63	11	242	53
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	76	163	479	151	313	140	219	1967	336	138	2167	675
Arrive On Green	0.04	0.09	0.09	0.04	0.09	0.09	0.06	0.45	0.45	0.04	0.43	0.43
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4373	748	3442	5085	1583
Grp Volume(v), veh/h	42	32	74	53	42	32	95	275	146	11	242	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1731	1721	1695	1583
Q Serve(g_s), s	1.0	0.7	0.0	0.6	0.5	0.8	1.1	2.1	2.1	0.1	1.2	0.8
Cycle Q Clear(g_c), s	1.0	0.7	0.0	0.6	0.5	0.8	1.1	2.1	2.1	0.1	1.2	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	76	163	479	151	313	140	219	1525	778	138	2167	675
V/C Ratio(X)	0.55	0.20	0.15	0.35	0.13	0.23	0.43	0.18	0.19	0.08	0.11	0.08
Avail Cap(c_a), veh/h	210	750	1476	326	1340	600	407	1525	778	326	2167	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)	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	19.8	17.9	15.6	19.6	17.8	17.9	19.0	7.0	7.0	19.5	7.3	7.2
Incr Delay (d2), s/veh	6.1	0.6	0.1	1.4	0.2	0.8	1.4	0.3	0.5	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	0.4	0.3	0.2	0.4	0.6	1.0	1.1	0.1	0.6	0.4
LnGrp Delay(d),s/veh	25.9	18.5	15.7	21.0	18.0	18.7	20.4	7.2	7.5	19.8	7.4	7.4
LnGrp LOS	C	B	B	C	B	B	C	A	A	B	A	A
Approach Vol, veh/h		148			127			516			306	
Approach Delay, s/veh		19.2			19.4			9.7			7.9	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	23.0	5.9	7.7	6.7	22.0	5.8	7.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	17.0	5.0	18.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	4.1	2.6	2.7	3.1	3.2	3.0	2.8
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.0	1.5	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	0	80	30	90	180	120	280	0	0	190	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	21	0	84	32	95	189	126	295	0	0	200	158
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	73	218	251	320	3465	0	0	1489	666
Arrive On Green	0.00	0.00	0.00	0.16	0.16	0.16	0.18	0.68	0.00	0.00	0.42	0.42
Sat Flow, veh/h		0		464	1376	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		127	0	189	126	295	0	0	200	158
Grp Sat Flow(s),veh/h/ln				1840	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				3.1	0.0	5.7	3.1	1.0	0.0	0.0	1.7	3.2
Cycle Q Clear(g_c), s				3.1	0.0	5.7	3.1	1.0	0.0	0.0	1.7	3.2
Prop In Lane				0.25		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				291	0	251	320	3465	0	0	1489	666
V/C Ratio(X)				0.44	0.00	0.75	0.39	0.09	0.00	0.00	0.13	0.24
Avail Cap(c_a), veh/h				369	0	317	320	3465	0	0	1489	666
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.0	0.0	20.1	18.0	2.7	0.0	0.0	8.9	9.3
Incr Delay (d2), s/veh				1.0	0.0	7.5	0.8	0.0	0.0	0.0	0.2	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				1.7	0.0	3.0	1.6	0.5	0.0	0.0	0.9	1.6
LnGrp Delay(d),s/veh				20.0	0.0	27.6	18.8	2.7	0.0	0.0	9.1	10.1
LnGrp LOS				C		C	B	A			A	B
Approach Vol, veh/h					316			421			358	
Approach Delay, s/veh					24.5			7.6			9.5	
Approach LOS					C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		38.0			13.0	25.0		11.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		34.0			9.0	21.0		10.0
Max Q Clear Time (g_c+I1), s		3.0			5.1	5.2		7.7
Green Ext Time (p_c), s		2.4			0.8	1.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	260	730	270	40	520	60	100	40	50	30	20	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	274	768	284	42	547	63	105	42	53	32	21	147
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	395	1924	837	116	1405	347	940	544	487	151	223	333
Arrive On Green	0.11	0.30	0.30	0.03	0.22	0.22	0.27	0.31	0.31	0.09	0.12	0.12
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	274	768	284	42	547	63	105	42	53	32	21	147
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	4.5	5.6	4.7	0.7	4.3	1.9	1.3	1.0	1.4	1.0	0.6	2.9
Cycle Q Clear(g_c), s	4.5	5.6	4.7	0.7	4.3	1.9	1.3	1.0	1.4	1.0	0.6	2.9
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	395	1924	837	116	1405	347	940	544	487	151	223	333
V/C Ratio(X)	0.69	0.40	0.34	0.36	0.39	0.18	0.11	0.08	0.11	0.21	0.09	0.44
Avail Cap(c_a), veh/h	588	2407	1047	235	1751	433	940	544	487	151	223	333
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	24.9	16.3	16.0	27.7	19.5	18.6	16.0	14.4	14.5	24.9	23.0	24.0
Incr Delay (d2), s/veh	2.2	0.1	0.2	1.9	0.2	0.2	0.2	0.3	0.5	3.2	0.8	4.2
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	2.3	2.5	1.8	0.4	1.9	0.8	0.7	0.5	0.7	0.6	0.4	1.3
LnGrp Delay(d),s/veh	27.1	16.4	16.2	29.5	19.7	18.8	16.2	14.7	15.0	28.1	23.8	28.2
LnGrp LOS	C	B	B	C	B	B	B	B	B	C	C	C
Approach Vol, veh/h		1326			652			200			200	
Approach Delay, s/veh		18.6			20.2			15.6			27.7	
Approach LOS		B			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	22.0	6.0	21.6	20.0	11.0	10.7	16.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	4.0	22.0	16.0	7.0	10.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	3.4	2.7	7.6	3.3	4.9	6.5	6.3
Green Ext Time (p_c), s	0.0	1.0	0.0	8.8	0.2	0.2	0.3	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	170	890	560	250	460	480
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	937	589	263	484	505
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	336	2321	1090	1725	2245	1251
Arrive On Green	0.10	0.36	0.17	0.17	0.45	0.45
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	179	937	589	263	484	505
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	2.1	4.6	3.6	1.7	2.5	5.2
Cycle Q Clear(g_c), s	2.1	4.6	3.6	1.7	2.5	5.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	336	2321	1090	1725	2245	1251
V/C Ratio(X)	0.53	0.40	0.54	0.15	0.22	0.40
Avail Cap(c_a), veh/h	406	2724	1362	1843	2245	1251
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	18.2	10.1	16.1	3.4	7.1	7.9
Incr Delay (d2), s/veh	1.3	0.1	0.4	0.0	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	1.6	1.4	1.2	4.8
LnGrp Delay(d),s/veh	19.5	10.2	16.5	3.4	7.3	8.8
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h		1116	852		989	
Approach Delay, s/veh		11.7	12.4		8.1	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				19.3		23.0	8.1	11.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				18.0		19.0	5.0	9.0
Max Q Clear Time (g_c+I1), s				6.6		7.2	4.1	5.6
Green Ext Time (p_c), s				5.4		3.3	0.6	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	330	10	380	250
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	347	11	400	263
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1284	179			358	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1284	179			358	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			67	
cM capacity (veh/h)	104	833			1197	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	232	126	400	132	132
Volume Left	0	0	400	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	1197	1700	1700
Volume to Capacity	0.14	0.07	0.33	0.08	0.08
Queue Length 95th (ft)	0	0	37	0	0
Control Delay (s)	0.0	0.0	9.5	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		5.7		
Approach LOS					

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	370	240	250	520	280	280	20	380	190	10	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	389	253	263	547	295	295	21	400	200	11	63
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	126	1049	619	511	1401	768	782	386	991	385	172	146
Arrive On Green	0.04	0.16	0.16	0.15	0.28	0.28	0.23	0.21	0.21	0.11	0.09	0.09
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	42	389	253	263	547	295	295	21	400	200	11	63
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	0.5	2.3	0.0	3.1	3.8	3.7	3.1	0.4	1.5	2.4	0.2	1.2
Cycle Q Clear(g_c), s	0.5	2.3	0.0	3.1	3.8	3.7	3.1	0.4	1.5	2.4	0.2	1.2
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	126	1049	619	511	1401	768	782	386	991	385	172	146
V/C Ratio(X)	0.33	0.37	0.41	0.51	0.39	0.38	0.38	0.05	0.40	0.52	0.06	0.43
Avail Cap(c_a), veh/h	317	2362	943	634	2343	1284	782	386	991	1269	687	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	16.2	9.6	17.0	12.8	12.7	14.2	13.8	2.7	18.2	18.0	10.7
Incr Delay (d2), s/veh	1.5	0.2	0.4	0.8	0.2	0.3	1.4	0.3	1.2	1.1	0.2	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	2.2	1.5	1.8	1.4	1.6	0.2	1.0	1.2	0.1	0.7
LnGrp Delay(d),s/veh	21.9	16.4	10.0	17.8	12.9	13.1	15.6	14.1	3.9	19.3	18.1	12.7
LnGrp LOS	C	B	B	B	B	B	B	B	A	B	B	B
Approach Vol, veh/h		684			1105			716			274	
Approach Delay, s/veh		14.4			14.1			9.0			17.7	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	13.0	10.4	11.1	13.9	8.0	5.6	16.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	9.0	8.0	16.0	9.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	4.4	3.5	5.1	4.3	5.1	3.2	2.5	5.8
Green Ext Time (p_c), s	0.5	1.5	1.7	2.8	1.2	0.1	0.0	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	880	190	230	670	220	290
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	926	0	242	705	232	305
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1891	589	405	2999	372	913
Arrive On Green	0.37	0.00	0.12	0.59	0.21	0.21
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	926	0	242	705	232	305
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.6	0.0	2.7	2.6	4.7	3.3
Cycle Q Clear(g_c), s	5.6	0.0	2.7	2.6	4.7	3.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1891	589	405	2999	372	913
V/C Ratio(X)	0.49	0.00	0.60	0.24	0.62	0.33
Avail Cap(c_a), veh/h	2293	714	862	4077	889	1724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	0.0	16.7	3.9	14.3	10.1
Incr Delay (d2), s/veh	0.2	0.0	1.4	0.0	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.3	1.2	2.5	1.3
LnGrp Delay(d),s/veh	9.8	0.0	18.1	3.9	16.0	10.3
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	926			947	537	
Approach Delay, s/veh	9.8			7.6	12.8	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		12.4	8.7	18.8				27.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		20.0	10.0	18.0				32.0
Max Q Clear Time (g_c+I1), s		6.7	4.7	7.6				4.6
Green Ext Time (p_c), s		1.7	0.4	7.3				13.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	70	60	70	50	30	40	500	80	20	470	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	74	63	74	53	32	42	526	84	21	495	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	127	108	97	155	93	65	1277	203	37	1326	112
Arrive On Green	0.05	0.14	0.14	0.05	0.14	0.14	0.04	0.42	0.42	0.02	0.40	0.40
Sat Flow, veh/h	1774	931	792	1774	1089	658	1774	3060	487	1774	3304	280
Grp Volume(v), veh/h	63	0	137	74	0	85	42	303	307	21	265	272
Grp Sat Flow(s),veh/h/ln	1774	0	1723	1774	0	1747	1774	1770	1777	1774	1770	1813
Q Serve(g_s), s	1.5	0.0	3.2	1.8	0.0	1.9	1.0	5.2	5.2	0.5	4.5	4.6
Cycle Q Clear(g_c), s	1.5	0.0	3.2	1.8	0.0	1.9	1.0	5.2	5.2	0.5	4.5	4.6
Prop In Lane	1.00		0.46	1.00		0.38	1.00		0.27	1.00		0.15
Lane Grp Cap(c), veh/h	87	0	235	97	0	248	65	739	742	37	710	728
V/C Ratio(X)	0.72	0.00	0.58	0.76	0.00	0.34	0.65	0.41	0.41	0.57	0.37	0.37
Avail Cap(c_a), veh/h	247	0	639	247	0	648	206	739	742	165	710	728
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	20.2	0.0	17.5	20.1	0.0	16.7	20.5	8.8	8.8	20.9	9.1	9.1
Incr Delay (d2), s/veh	10.7	0.0	2.3	11.8	0.0	0.8	10.2	1.7	1.7	13.4	1.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.7	1.2	0.0	1.0	0.7	2.9	2.9	0.4	2.5	2.6
LnGrp Delay(d),s/veh	30.9	0.0	19.7	31.9	0.0	17.5	30.7	10.5	10.5	34.3	10.6	10.6
LnGrp LOS	C		B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		200			159			652			558	
Approach Delay, s/veh		23.3			24.2			11.8			11.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	22.0	6.4	9.9	5.6	21.3	6.1	10.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	7.2	3.8	5.2	3.0	6.6	3.5	3.9
Green Ext Time (p_c), s	0.0	5.2	0.0	0.9	0.0	5.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	90	70	40	80	10	90	70	60	10	80	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	95	74	42	84	11	95	74	63	11	84	42
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	212	340	205	316	43	121	507	432	20	573	286
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.07	0.54	0.54	0.01	0.49	0.49
Sat Flow, veh/h	289	1448	1583	449	2158	292	1774	931	792	1774	1173	586
Grp Volume(v), veh/h	127	0	74	75	0	62	95	0	137	11	0	126
Grp Sat Flow(s),veh/h/ln	1736	0	1583	1256	0	1644	1774	0	1723	1774	0	1759
Q Serve(g_s), s	0.7	0.0	1.6	0.1	0.0	1.3	2.1	0.0	1.6	0.2	0.0	1.6
Cycle Q Clear(g_c), s	2.6	0.0	1.6	2.7	0.0	1.3	2.1	0.0	1.6	0.2	0.0	1.6
Prop In Lane	0.25		1.00	0.56		0.18	1.00		0.46	1.00		0.33
Lane Grp Cap(c), veh/h	366	0	340	323	0	241	121	0	939	20	0	859
V/C Ratio(X)	0.35	0.00	0.22	0.23	0.00	0.26	0.79	0.00	0.15	0.54	0.00	0.15
Avail Cap(c_a), veh/h	826	0	774	716	0	692	351	0	939	176	0	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	13.1	15.4	0.0	15.3	18.5	0.0	4.5	19.9	0.0	5.7
Incr Delay (d2), s/veh	0.6	0.0	0.3	0.4	0.0	0.6	10.7	0.0	0.3	20.3	0.0	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	1.4	0.0	0.7	0.8	0.0	0.6	1.4	0.0	0.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	16.4	0.0	13.4	15.7	0.0	15.8	29.2	0.0	4.9	40.2	0.0	6.1
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		201			137			232			137	
Approach Delay, s/veh		15.3			15.8			14.8			8.8	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.5	26.0		9.9	6.7	23.7		9.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	22.0		17.0	8.0	18.0		17.0
Max Q Clear Time (g_c+I1), s	2.2	3.6		4.6	4.1	3.6		4.7
Green Ext Time (p_c), s	0.0	1.4		1.4	0.1	1.3		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	10	350	40	10	10	350	580	50	30	570	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	410	42	11	11	368	611	53	32	600	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	298	506	55	14	14	1221	1071	93	474	812	43
Arrive On Green	0.00	0.00	0.16	0.05	0.05	0.05	0.71	0.65	0.65	0.27	0.24	0.24
Sat Flow, veh/h	0	1863	3167	1150	301	301	3442	3296	286	1774	3418	182
Grp Volume(v), veh/h	0	0	410	64	0	0	368	328	336	32	310	322
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1752	0	0	1721	1770	1812	1774	1770	1831
Q Serve(g_s), s	0.0	0.0	10.0	2.9	0.0	0.0	3.2	8.2	8.3	1.1	13.0	13.0
Cycle Q Clear(g_c), s	0.0	0.0	10.0	2.9	0.0	0.0	3.2	8.2	8.3	1.1	13.0	13.0
Prop In Lane	0.00		1.00	0.66		0.17	1.00		0.16	1.00		0.10
Lane Grp Cap(c), veh/h	0	298	506	84	0	0	1221	575	589	474	420	435
V/C Ratio(X)	0.00	0.00	0.81	0.76	0.00	0.00	0.30	0.57	0.57	0.07	0.74	0.74
Avail Cap(c_a), veh/h	0	396	673	350	0	0	1221	575	589	474	420	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	32.4	37.6	0.0	0.0	7.9	10.9	10.9	21.9	28.2	28.2
Incr Delay (d2), s/veh	0.0	0.0	5.5	13.3	0.0	0.0	0.1	3.5	3.4	0.1	11.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.7	1.7	0.0	0.0	1.4	4.4	4.5	0.5	7.6	7.8
LnGrp Delay(d),s/veh	0.0	0.0	38.0	50.9	0.0	0.0	8.1	14.4	14.3	21.9	39.3	39.0
LnGrp LOS			D	D			A	B	B	C	D	D
Approach Vol, veh/h		410			64			1032			664	
Approach Delay, s/veh		38.0			50.9			12.1			38.3	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.4	30.0		16.8	32.4	23.0		7.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	26.0		17.0	12.0	19.0		16.0
Max Q Clear Time (g_c+I1), s	3.1	10.3		12.0	5.2	15.0		4.9
Green Ext Time (p_c), s	0.3	3.7		0.8	0.8	1.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	30	440	380	120	260	210	650	70	20	890	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	53	61	463	430	221	183	221	684	74	21	937	84
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	288	303	475	573	301	285	244	1474	159	64	1198	536
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.14	0.46	0.46	0.02	0.45	0.45
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3223	348	3442	3539	1583
Grp Volume(v), veh/h	53	61	463	430	221	183	221	375	383	21	937	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1801	1721	1770	1583
Q Serve(g_s), s	2.1	2.3	13.0	9.3	9.0	8.6	9.8	11.7	11.7	0.5	18.0	2.5
Cycle Q Clear(g_c), s	2.1	2.3	13.0	9.3	9.0	8.6	9.8	11.7	11.7	0.5	18.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	288	303	475	573	301	285	244	810	824	64	1198	536
V/C Ratio(X)	0.18	0.20	0.97	0.75	0.74	0.64	0.91	0.46	0.46	0.33	0.78	0.16
Avail Cap(c_a), veh/h	288	303	475	710	373	346	244	810	824	301	1198	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	28.9	29.0	27.7	32.0	31.9	30.4	34.0	14.9	15.0	38.5	19.5	15.2
Incr Delay (d2), s/veh	0.3	0.3	34.7	3.5	5.7	2.9	33.7	1.9	1.9	2.5	4.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.2	14.6	4.8	5.1	4.0	7.1	6.1	6.2	0.3	9.4	1.2
LnGrp Delay(d),s/veh	29.2	29.3	62.4	35.5	37.7	33.3	67.7	16.9	16.8	41.0	23.8	15.8
LnGrp LOS	C	C	E	D	D	C	E	B	B	D	C	B
Approach Vol, veh/h		577			834			979			1042	
Approach Delay, s/veh		55.8			35.6			28.3			23.5	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	40.6		17.0	15.0	31.1		16.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	28.0		13.0	11.0	24.0		16.0
Max Q Clear Time (g_c+I1), s	2.5	13.7		15.0	11.8	20.0		11.3
Green Ext Time (p_c), s	0.0	9.5		0.0	0.0	3.3		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	570	1580	30	0	350	770	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	600	1663		0	368	811	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1851	1942		0	1406	2020	0
Arrive On Green	0.54	0.54		0.00	0.40	0.40	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	600	1663		0	368	811	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	12.0	48.7		0.0	8.6	14.1	0.0
Cycle Q Clear(g_c), s	12.0	48.7		0.0	8.6	14.1	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1851	1942		0	1406	2020	0
V/C Ratio(X)	0.32	0.86		0.00	0.26	0.40	0.00
Avail Cap(c_a), veh/h	2595	2722		0	1406	2020	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.0	24.4		0.0	25.0	26.7	0.0
Incr Delay (d2), s/veh	0.1	2.1		0.0	0.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	28.1		0.0	4.3	6.7	0.0
LnGrp Delay(d),s/veh	16.1	26.5		0.0	25.5	27.3	0.0
LnGrp LOS	B	C			C	C	
Approach Vol, veh/h	2263				368	811	
Approach Delay, s/veh	23.7				25.5	27.3	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		53.0		70.3		53.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		49.0		93.0		38.0		
Max Q Clear Time (g_c+I1), s		10.6		50.7		16.1		
Green Ext Time (p_c), s		10.4		15.7		8.6		

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1220	380	90	1170	270	80
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1284	400	95	1232	284	84
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1784	1181	184	3234	1403	626
Arrive On Green	0.35	0.35	0.10	0.50	0.40	0.40
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1284	400	95	1232	284	84
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	17.5	6.9	4.1	9.4	4.2	2.7
Cycle Q Clear(g_c), s	17.5	6.9	4.1	9.4	4.2	2.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1784	1181	184	3234	1403	626
V/C Ratio(X)	0.72	0.34	0.52	0.38	0.20	0.13
Avail Cap(c_a), veh/h	2098	1279	244	3845	1403	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	3.4	33.9	12.2	15.9	15.4
Incr Delay (d2), s/veh	1.0	0.2	2.2	0.1	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	7.7	2.1	4.1	2.1	1.3
LnGrp Delay(d),s/veh	23.5	3.6	36.2	12.2	16.2	15.9
LnGrp LOS	C	A	D	B	B	B
Approach Vol, veh/h	1684			1327	368	
Approach Delay, s/veh	18.8			13.9	16.1	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		35.6	12.3	32.1				44.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	11.0	33.0				48.0
Max Q Clear Time (g_c+I1), s		6.2	6.1	19.5				11.4
Green Ext Time (p_c), s		1.2	3.4	8.5				12.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	90	90	40	70	100	60	140	60	110	130	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	95	95	42	74	105	63	147	63	116	137	74
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	86	270	242	64	249	223	86	698	593	149	764	650
Arrive On Green	0.05	0.15	0.15	0.04	0.14	0.14	0.05	0.37	0.37	0.08	0.41	0.41
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	63	95	95	42	74	105	63	147	63	116	137	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.6	2.2	2.5	1.1	1.7	2.8	1.6	2.4	1.2	2.9	2.1	1.3
Cycle Q Clear(g_c), s	1.6	2.2	2.5	1.1	1.7	2.8	1.6	2.4	1.2	2.9	2.1	1.3
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	86	270	242	64	249	223	86	698	593	149	764	650
V/C Ratio(X)	0.74	0.35	0.39	0.65	0.30	0.47	0.74	0.21	0.11	0.78	0.18	0.11
Avail Cap(c_a), veh/h	156	624	558	156	624	558	235	698	593	274	764	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	17.2	17.3	21.6	17.5	18.0	21.3	9.6	9.2	20.4	8.5	8.3
Incr Delay (d2), s/veh	11.5	0.8	1.0	10.7	0.7	1.6	11.5	0.7	0.4	8.5	0.5	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	1.1	1.1	0.7	0.9	1.3	1.0	1.4	0.6	1.8	1.2	0.6
LnGrp Delay(d),s/veh	32.8	18.0	18.4	32.3	18.2	19.5	32.8	10.3	9.6	28.9	9.0	8.6
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	A	A
Approach Vol, veh/h		253			221			273			327	
Approach Delay, s/veh		21.8			21.5			15.3			16.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	21.0	5.6	10.9	6.2	22.6	6.2	10.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.9	4.4	3.1	4.5	3.6	4.1	3.6	4.8
Green Ext Time (p_c), s	0.0	1.7	0.0	1.7	0.0	1.7	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	30	30	190	230	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	32	200	242	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	426	142	284	0	-	0
Stage 1	263	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	557	880	1275	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	541	880	1275	-	-	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1275	-	541	880	-	-
HCM Lane V/C Ratio	0.025	-	0.058	0.036	-	-
HCM Control Delay (s)	7.9	0.1	12.1	9.2	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	70	140	110	150	160	80
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	74	147	116	158	168	84
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	96	593	614	275	887	877
Arrive On Green	0.05	0.32	0.17	0.17	0.50	0.50
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	74	147	116	158	168	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.8	2.6	1.2	4.0	2.3	1.1
Cycle Q Clear(g_c), s	1.8	2.6	1.2	4.0	2.3	1.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	96	593	614	275	887	877
V/C Ratio(X)	0.77	0.25	0.19	0.58	0.19	0.10
Avail Cap(c_a), veh/h	322	1270	1447	648	887	877
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	20.5	11.1	15.5	16.7	6.1	4.6
Incr Delay (d2), s/veh	12.2	0.2	0.1	1.9	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.3	0.6	1.9	1.2	0.1
LnGrp Delay(d),s/veh	32.7	11.3	15.7	18.6	6.6	4.8
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		221	274		252	
Approach Delay, s/veh		18.5	17.4		6.0	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				18.0		26.0	6.4	11.6
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				30.0		22.0	8.0	18.0
Max Q Clear Time (g_c+I1), s				4.6		4.3	3.8	6.0
Green Ext Time (p_c), s				2.1		0.7	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	690	1610	920	490	0	610
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	726	1695	1186	371		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	896	4340	1668	473		
Arrive On Green	0.50	0.85	0.60	0.60		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	726	1695	1186	371		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	27.4	5.9	11.9	14.2		
Cycle Q Clear(g_c), s	27.4	5.9	11.9	14.2		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	896	4340	1668	473		
V/C Ratio(X)	0.81	0.39	0.71	0.78		
Avail Cap(c_a), veh/h	954	4831	2026	574		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.70	0.70	0.95	0.95		
Uniform Delay (d), s/veh	16.6	1.3	13.7	14.2		
Incr Delay (d2), s/veh	3.6	0.0	0.9	5.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	14.2	2.7	6.1	6.7		
LnGrp Delay(d),s/veh	20.2	1.3	14.6	19.7		
LnGrp LOS	C	A	B	B		
Approach Vol, veh/h		2421	1557			
Approach Delay, s/veh		7.0	15.8			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				72.3			44.4	27.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			43.0	29.0
Max Q Clear Time (g_c+I1), s				7.9			29.4	16.2
Green Ext Time (p_c), s				31.7			11.0	7.7

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	420	1210	510	210	1000	340	0	0	0	500	10	540
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	442	1274	537	221	1053	0				534	0	568
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	502	1884	587	283	1257	391				887	0	792
Arrive On Green	0.28	0.37	0.37	0.16	0.25	0.00				0.25	0.00	0.25
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	442	1274	537	221	1053	0				534	0	568
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	19.0	16.8	25.8	9.6	15.7	0.0				10.6	0.0	13.1
Cycle Q Clear(g_c), s	19.0	16.8	25.8	9.6	15.7	0.0				10.6	0.0	13.1
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	502	1884	587	283	1257	391				887	0	792
V/C Ratio(X)	0.88	0.68	0.92	0.78	0.84	0.00				0.60	0.00	0.72
Avail Cap(c_a), veh/h	599	1907	594	399	1335	416				887	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	0.79	0.79	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	27.4	21.1	24.0	32.3	28.6	0.0				26.5	0.0	27.4
Incr Delay (d2), s/veh	6.4	0.4	10.2	5.1	3.7	0.0				3.0	0.0	5.5
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	10.2	7.9	12.8	5.1	7.7	0.0				5.6	0.0	6.3
LnGrp Delay(d),s/veh	33.8	21.6	34.2	37.3	32.3	0.0				29.5	0.0	33.0
LnGrp LOS	C	C	C	D	C					C		C
Approach Vol, veh/h		2253			1274						1102	
Approach Delay, s/veh		27.0			33.2						31.3	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			16.8	33.6		24.0	26.6	23.8
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			18.0	30.0		20.0	27.0	21.0
Max Q Clear Time (g_c+I1), s			11.6	27.8		15.1	21.0	17.7
Green Ext Time (p_c), s			1.3	1.8		2.1	1.2	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	100	0	230	160	230	0	10	280	150
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	1900	1863	1863
Adj Flow Rate, veh/h				105	0	0	168	242	0	11	295	158
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				141	0	126	879	2903	0	60	935	435
Arrive On Green				0.08	0.00	0.00	0.99	1.00	0.00	0.28	0.28	0.28
Sat Flow, veh/h				1774	0	1583	1774	3632	0	44	3401	1583
Grp Volume(v), veh/h				105	0	0	168	242	0	164	142	158
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	1835	1610	1583
Q Serve(g_s), s				4.6	0.0	0.0	0.1	0.0	0.0	0.0	5.6	6.4
Cycle Q Clear(g_c), s				4.6	0.0	0.0	0.1	0.0	0.0	5.6	5.6	6.4
Prop In Lane				1.00		1.00	1.00		0.00	0.07		1.00
Lane Grp Cap(c), veh/h				141	0	126	879	2903	0	553	443	435
V/C Ratio(X)				0.74	0.00	0.00	0.19	0.08	0.00	0.30	0.32	0.36
Avail Cap(c_a), veh/h				532	0	475	879	2903	0	553	443	435
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.86	0.86	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				36.0	0.0	0.0	0.2	0.0	0.0	23.1	23.1	23.4
Incr Delay (d2), s/veh				7.4	0.0	0.0	0.1	0.0	0.0	1.4	1.9	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	0.0	0.0	0.1	0.0	0.0	3.1	2.7	3.1
LnGrp Delay(d),s/veh				43.4	0.0	0.0	0.3	0.0	0.0	24.4	25.0	25.7
LnGrp LOS				D			A	A		C	C	C
Approach Vol, veh/h					105			410			464	
Approach Delay, s/veh					43.4			0.1			25.0	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		69.6			43.6	26.0		10.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		48.0			22.0	22.0		24.0
Max Q Clear Time (g_c+I1), s		2.0			2.1	8.4		6.6
Green Ext Time (p_c), s		2.2			1.9	1.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	190	10	71	49	20	0	52	78	148	222	30	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.94			0.89	0.85		0.91			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1750			1560	1504		3205			
Flt Permitted	0.95		0.46			0.99	1.00		1.00			
Satd. Flow (perm)	1770		802			1560	1504		3205			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	11	75	52	21	0	55	85	156	234	32	221
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	7	0	0	0
Lane Group Flow (vph)	200	0	138	0	0	71	90	0	415	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	16.3		16.3			7.3	7.3		22.4			
Effective Green, g (s)	16.3		16.3			7.3	7.3		22.4			
Actuated g/C Ratio	0.20		0.20			0.09	0.09		0.28			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	360		163			142	137		897			
v/s Ratio Prot	0.11					0.05	c0.06		c0.13			
v/s Ratio Perm			c0.17									
v/c Ratio	0.56		0.85			0.50	0.66		0.46			
Uniform Delay, d1	28.6		30.6			34.6	35.1		23.8			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	1.9		31.2			2.8	10.8		1.7			
Delay (s)	30.5		61.9			37.4	46.0		25.5			
Level of Service	C		E			D	D		C			
Approach Delay (s)			43.3			42.2			25.5			
Approach LOS			D			D			C			

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	89	61
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3296
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3296
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	94	64
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	230	149
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	18.0	18.0
Effective Green, g (s)	18.0	18.0
Actuated g/C Ratio	0.22	0.22
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	362	741
v/s Ratio Prot	c0.14	0.05
v/s Ratio Perm		
v/c Ratio	0.64	0.20
Uniform Delay, d1	28.0	25.2
Progression Factor	0.52	0.49
Incremental Delay, d2	8.2	0.6
Delay (s)	22.6	12.9
Level of Service	C	B
Approach Delay (s)		18.8
Approach LOS		B

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	1150	270	710	810	110	220	40	740	70	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	1211	284	747	853	116	232	42	779	74	32	105
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	167	1690	526	890	2758	916	307	377	730	125	279	237
Arrive On Green	0.05	0.33	0.33	0.26	0.54	0.54	0.09	0.20	0.20	0.04	0.15	0.15
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	105	1211	284	747	853	116	232	42	779	74	32	105
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.8	19.6	13.7	19.3	8.7	3.1	6.2	1.7	19.0	2.0	1.4	5.7
Cycle Q Clear(g_c), s	2.8	19.6	13.7	19.3	8.7	3.1	6.2	1.7	19.0	2.0	1.4	5.7
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	167	1690	526	890	2758	916	307	377	730	125	279	237
V/C Ratio(X)	0.63	0.72	0.54	0.84	0.31	0.13	0.76	0.11	1.07	0.59	0.11	0.44
Avail Cap(c_a), veh/h	293	1787	556	1759	3953	1288	403	377	730	147	279	237
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	43.8	27.5	25.5	33.0	11.8	9.0	41.8	30.6	25.3	44.6	34.6	36.4
Incr Delay (d2), s/veh	3.8	1.3	0.9	2.2	0.1	0.1	5.8	0.6	52.9	4.5	0.8	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	9.3	6.1	9.4	4.0	1.4	3.2	0.9	29.5	1.0	0.8	2.9
LnGrp Delay(d),s/veh	47.7	28.8	26.4	35.2	11.9	9.1	47.6	31.2	78.2	49.1	35.4	42.3
LnGrp LOS	D	C	C	D	B	A	D	C	F	D	D	D
Approach Vol, veh/h		1600			1716			1053			211	
Approach Delay, s/veh		29.6			21.8			69.6			43.6	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	23.0	28.3	35.2	12.4	18.0	8.6	54.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	48.0	33.0	11.0	12.0	8.0	73.0
Max Q Clear Time (g_c+I1), s	4.0	21.0	21.3	21.6	8.2	7.7	4.8	10.7
Green Ext Time (p_c), s	0.0	0.0	3.0	9.6	0.2	1.8	0.1	32.4

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

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												
Volume (veh/h)	100	1080	370	260	790	50	320	40	410	50	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	1137	389	274	832	53	337	42	432	53	79	64
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	135	1468	658	366	1621	561	438	666	566	126	496	542
Arrive On Green	0.08	0.29	0.29	0.11	0.32	0.32	0.13	0.36	0.36	0.04	0.27	0.27
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	105	1137	389	274	832	53	337	42	432	53	79	64
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.4	15.5	14.4	5.8	10.1	1.7	7.2	1.1	18.2	1.1	2.5	2.1
Cycle Q Clear(g_c), s	4.4	15.5	14.4	5.8	10.1	1.7	7.2	1.1	18.2	1.1	2.5	2.1
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	135	1468	658	366	1621	561	438	666	566	126	496	542
V/C Ratio(X)	0.78	0.77	0.59	0.75	0.51	0.09	0.77	0.06	0.76	0.42	0.16	0.12
Avail Cap(c_a), veh/h	235	1549	684	456	1621	561	593	666	566	188	496	542
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	34.2	24.6	17.1	32.8	20.9	16.3	31.9	15.9	21.4	35.6	21.2	17.0
Incr Delay (d2), s/veh	9.2	2.4	1.3	5.3	0.3	0.1	4.3	0.2	9.4	2.2	0.7	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	2.5	7.6	6.5	3.0	4.7	0.7	3.6	0.6	9.3	0.6	1.3	1.0
LnGrp Delay(d),s/veh	43.5	27.0	18.4	38.0	21.2	16.4	36.2	16.1	30.8	37.9	21.9	17.5
LnGrp LOS	D	C	B	D	C	B	D	B	C	D	C	B
Approach Vol, veh/h		1631			1159			811			196	
Approach Delay, s/veh		26.0			25.0			32.3			24.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	31.0	12.0	25.8	13.6	24.1	9.7	28.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	10.0	23.0	13.0	18.0	10.0	23.0
Max Q Clear Time (g_c+I1), s	3.1	20.2	7.8	17.5	9.2	4.5	6.4	12.1
Green Ext Time (p_c), s	0.0	1.5	0.2	4.3	0.5	2.2	0.1	9.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	370	0	10	250	140	0	0	10	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				399	0	0	263	147	0	0	11	126
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				527	276	0	956	1400	0	0	288	257
Arrive On Green				0.15	0.00	0.00	0.18	0.25	0.00	0.00	0.16	0.16
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1863	1583
Grp Volume(v), veh/h				399	0	0	263	147	0	0	11	126
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1583
Q Serve(g_s), s				8.6	0.0	0.0	10.3	4.9	0.0	0.0	0.4	5.8
Cycle Q Clear(g_c), s				8.6	0.0	0.0	10.3	4.9	0.0	0.0	0.4	5.8
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				527	276	0	956	1400	0	0	288	257
V/C Ratio(X)				0.76	0.00	0.00	0.27	0.10	0.00	0.00	0.04	0.49
Avail Cap(c_a), veh/h				1109	582	0	956	1400	0	0	288	257
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.7	0.0	0.0	19.4	9.3	0.0	0.0	28.2	30.5
Incr Delay (d2), s/veh				2.3	0.0	0.0	0.2	0.2	0.0	0.0	0.2	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				4.4	0.0	0.0	5.1	2.6	0.0	0.0	0.2	3.0
LnGrp Delay(d),s/veh				34.9	0.0	0.0	19.5	9.5	0.0	0.0	28.5	37.0
LnGrp LOS				C			B	A			C	D
Approach Vol, veh/h					399			410			137	
Approach Delay, s/veh					34.9			15.9			36.3	
Approach LOS					C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		64.1			47.1	17.0		15.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		47.0			30.0	13.0		25.0
Max Q Clear Time (g_c+I1), s		6.9			12.3	7.8		10.6
Green Ext Time (p_c), s		1.7			1.5	0.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	130	0	0	0	0	290	330	30	340	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	95	0	137				0	305	347	32	358	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	208	0	186				0	1637	732	479	2770	0
Arrive On Green	0.12	0.00	0.12				0.00	0.77	0.77	0.54	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	95	0	137				0	305	347	32	358	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	4.0	0.0	6.7				0.0	1.8	6.3	0.7	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	6.7				0.0	1.8	6.3	0.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	208	0	186				0	1637	732	479	2770	0
V/C Ratio(X)	0.46	0.00	0.74				0.00	0.19	0.47	0.07	0.13	0.00
Avail Cap(c_a), veh/h	488	0	435				0	1637	732	479	2770	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.96	0.96	0.00
Uniform Delay (d), s/veh	32.9	0.0	34.1				0.0	5.1	5.6	13.6	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	5.6				0.0	0.2	2.1	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	3.2				0.0	0.9	3.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	34.5	0.0	39.7				0.0	5.3	7.7	13.6	0.1	0.0
LnGrp LOS	C		D					A	A	B	A	
Approach Vol, veh/h		232						652			390	
Approach Delay, s/veh		37.6						6.6			1.2	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.6	41.0		13.4		66.6		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	9.0	37.0		22.0		50.0		
Max Q Clear Time (g_c+I1), s	2.7	8.3		8.7		2.0		
Green Ext Time (p_c), s	1.2	3.4		0.8		2.7		

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	180	410	110	90	40	190	560	140	50	650	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	221	189	432	116	95	42	200	589	147	53	684	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	265	289	749	190	217	97	279	1275	312	953	2585	805
Arrive On Green	0.15	0.16	0.16	0.06	0.06	0.06	0.16	0.63	0.63	0.09	0.17	0.17
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4079	998	3442	5085	1583
Grp Volume(v), veh/h	221	189	432	116	95	42	200	488	248	53	684	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1687	1721	1695	1583
Q Serve(g_s), s	9.7	7.6	7.1	2.6	2.1	1.2	4.4	6.1	6.3	1.1	9.4	8.3
Cycle Q Clear(g_c), s	9.7	7.6	7.1	2.6	2.1	1.2	4.4	6.1	6.3	1.1	9.4	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	265	289	749	190	217	97	279	1059	527	953	2585	805
V/C Ratio(X)	0.83	0.65	0.58	0.61	0.44	0.43	0.72	0.46	0.47	0.06	0.26	0.23
Avail Cap(c_a), veh/h	421	675	1405	258	708	317	387	1059	527	953	2585	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.99	0.99	0.99
Uniform Delay (d), s/veh	33.1	31.8	14.9	36.9	36.2	13.0	32.6	11.4	11.5	26.8	20.3	19.8
Incr Delay (d2), s/veh	7.8	2.5	0.7	3.1	1.4	3.0	3.6	1.4	2.9	0.0	0.2	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	5.3	4.1	3.1	1.3	1.1	0.6	2.2	2.9	3.2	0.5	4.5	3.8
LnGrp Delay(d),s/veh	40.9	34.2	15.7	40.1	37.6	16.0	36.3	12.8	14.3	26.8	20.5	20.5
LnGrp LOS	D	C	B	D	D	B	D	B	B	C	C	C
Approach Vol, veh/h		842			253			936			926	
Approach Delay, s/veh		26.5			35.2			18.2			20.9	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.1	29.0	8.4	16.4	10.5	44.7	16.0	8.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	25.0	6.0	29.0	9.0	20.0	19.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	8.3	4.6	9.6	6.4	11.4	11.7	4.1
Green Ext Time (p_c), s	0.0	4.5	0.1	2.8	0.2	3.6	0.4	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	430	30	150	270	270	550	0	0	760	400
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	453	32	158	284	284	579	0	0	800	421
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	51	250	257	327	3750	0	0	1780	796
Arrive On Green	0.00	0.00	0.00	0.16	0.16	0.16	0.18	0.74	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		311	1536	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		190	0	284	284	579	0	0	800	421
Grp Sat Flow(s),veh/h/ln				1847	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				7.7	0.0	13.0	12.4	2.7	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				7.7	0.0	13.0	12.4	2.7	0.0	0.0	0.0	0.0
Prop In Lane				0.17		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				300	0	257	327	3750	0	0	1780	796
V/C Ratio(X)				0.63	0.00	1.10	0.87	0.15	0.00	0.00	0.45	0.53
Avail Cap(c_a), veh/h				300	0	257	421	3750	0	0	1780	796
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				31.3	0.0	33.5	31.7	3.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				4.3	0.0	86.8	14.2	0.1	0.0	0.0	0.8	2.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.3	0.0	11.8	7.4	1.3	0.0	0.0	0.2	0.5
LnGrp Delay(d),s/veh				35.6	0.0	120.3	45.8	3.2	0.0	0.0	0.8	2.4
LnGrp LOS				D		F	D	A			A	A
Approach Vol, veh/h					474			863			1221	
Approach Delay, s/veh					86.3			17.2			1.3	
Approach LOS					F			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.0			18.8	44.2		17.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		48.0			19.0	25.0		13.0
Max Q Clear Time (g_c+I1), s		4.7			14.4	2.0		15.0
Green Ext Time (p_c), s		16.6			0.4	12.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	340	1060	710	150	1100	70	460	70	150	50	60	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	358	1116	747	158	1158	74	484	74	158	53	63	274
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	561	2085	907	237	1483	366	837	585	524	133	303	453
Arrive On Green	0.33	0.65	0.65	0.07	0.23	0.23	0.24	0.33	0.33	0.08	0.16	0.16
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	358	1116	747	158	1158	74	484	74	158	53	63	274
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	7.1	7.5	7.9	3.6	13.6	2.3	9.9	2.3	5.9	2.3	2.3	7.3
Cycle Q Clear(g_c), s	7.1	7.5	7.9	3.6	13.6	2.3	9.9	2.3	5.9	2.3	2.3	7.3
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	561	2085	907	237	1483	366	837	585	524	133	303	453
V/C Ratio(X)	0.64	0.54	0.82	0.67	0.78	0.20	0.58	0.13	0.30	0.40	0.21	0.61
Avail Cap(c_a), veh/h	602	2085	907	344	1602	396	837	585	524	133	303	453
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)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	10.7	3.0	36.3	28.8	14.8	26.7	18.7	19.9	35.3	29.0	31.1
Incr Delay (d2), s/veh	1.8	0.2	5.6	3.2	2.4	0.3	2.9	0.4	1.5	8.7	1.6	5.9
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	3.1	3.4	1.8	6.2	1.0	5.0	1.2	2.8	1.4	1.3	3.2
LnGrp Delay(d),s/veh	26.8	11.0	8.6	39.5	31.2	15.1	29.6	19.1	21.4	44.0	30.6	37.0
LnGrp LOS	C	B	A	D	C	B	C	B	C	D	C	D
Approach Vol, veh/h		2221			1390			716			390	
Approach Delay, s/veh		12.7			31.3			26.7			36.9	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	30.5	9.5	30.0	23.5	17.0	17.0	22.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	24.0	8.0	26.0	17.0	13.0	14.0	20.0
Max Q Clear Time (g_c+I1), s	4.3	7.9	5.6	9.9	11.9	9.3	9.1	15.6
Green Ext Time (p_c), s	0.0	3.0	0.1	11.1	1.6	0.5	4.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	810	1570	1220	670	660	1010
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	853	1653	1284	705	695	1063
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1084	3907	1569	1491	1452	809
Arrive On Green	0.42	0.81	0.24	0.24	0.29	0.29
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	853	1653	1284	705	695	1063
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	17.2	5.9	15.1	12.6	9.2	23.2
Cycle Q Clear(g_c), s	17.2	5.9	15.1	12.6	9.2	23.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1084	3907	1569	1491	1452	809
V/C Ratio(X)	0.79	0.42	0.82	0.47	0.48	1.31
Avail Cap(c_a), veh/h	1119	4005	1602	1506	1452	809
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.69	0.69	1.00	1.00
Uniform Delay (d), s/veh	20.9	3.5	28.5	11.6	23.4	28.4
Incr Delay (d2), s/veh	1.6	0.0	2.4	0.2	1.1	150.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	2.5	6.9	7.8	4.3	32.1
LnGrp Delay(d),s/veh	22.6	3.5	30.9	11.7	24.5	178.5
LnGrp LOS	C	A	C	B	C	F
Approach Vol, veh/h		2506	1989		1758	
Approach Delay, s/veh		10.0	24.1		117.6	
Approach LOS		B	C		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				52.8		27.2	29.2	23.6
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				50.0		22.0	26.0	20.0
Max Q Clear Time (g_c+I1), s				7.9		25.2	19.2	17.1
Green Ext Time (p_c), s				25.7		0.0	6.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	750	10	360	330
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	789	11	379	347
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1726	400			800	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1726	400			800	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			54	
cM capacity (veh/h)	43	600			819	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	526	274	379	174	174
Volume Left	0	0	379	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	819	1700	1700
Volume to Capacity	0.31	0.16	0.46	0.10	0.10
Queue Length 95th (ft)	0	0	62	0	0
Control Delay (s)	0.0	0.0	13.1	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.8		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1430	890	460	1240	590	530	50	590	230	10	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1505	937	484	1305	621	558	53	621	242	11	116
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	172	1442	909	473	1589	871	1202	629	1325	343	164	140
Arrive On Green	0.05	0.22	0.22	0.28	0.63	0.63	0.35	0.34	0.34	0.10	0.09	0.09
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	116	1505	937	484	1305	621	558	53	621	242	11	116
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	2.7	18.0	18.0	11.0	15.8	12.1	10.1	1.6	3.4	5.4	0.4	4.8
Cycle Q Clear(g_c), s	2.7	18.0	18.0	11.0	15.8	12.1	10.1	1.6	3.4	5.4	0.4	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	172	1442	909	473	1589	871	1202	629	1325	343	164	140
V/C Ratio(X)	0.67	1.04	1.03	1.02	0.82	0.71	0.46	0.08	0.47	0.71	0.07	0.83
Avail Cap(c_a), veh/h	172	1442	909	473	1589	871	1202	629	1325	688	396	336
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	31.0	17.0	29.0	13.3	12.6	20.2	18.0	5.0	34.9	33.4	25.0
Incr Delay (d2), s/veh	9.9	36.0	38.0	37.6	2.1	1.6	1.3	0.3	1.2	2.7	0.2	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	1.5	11.5	17.0	7.6	7.3	4.7	4.9	0.8	2.5	2.7	0.2	2.5
LnGrp Delay(d),s/veh	47.3	67.0	55.0	66.6	15.4	14.2	21.5	18.3	6.2	37.6	33.6	36.8
LnGrp LOS	D	F	F	F	B	B	C	B	A	D	C	D
Approach Vol, veh/h		2558			2410			1232			369	
Approach Delay, s/veh		61.7			25.4			13.7			37.2	
Approach LOS		E			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	31.0	15.0	22.0	31.9	11.1	8.0	29.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	19.0	11.0	18.0	18.0	17.0	4.0	25.0
Max Q Clear Time (g_c+I1), s	7.4	5.4	13.0	20.0	12.1	6.8	4.7	17.8
Green Ext Time (p_c), s	0.5	4.5	0.0	0.0	2.8	0.2	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	885	195	230	775	380	290
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	932	0	242	816	400	305
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1799	560	379	2768	523	1129
Arrive On Green	0.35	0.00	0.11	0.54	0.29	0.29
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	932	0	242	816	400	305
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	7.2	0.0	3.4	4.3	10.2	3.6
Cycle Q Clear(g_c), s	7.2	0.0	3.4	4.3	10.2	3.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1799	560	379	2768	523	1129
V/C Ratio(X)	0.52	0.00	0.64	0.29	0.76	0.27
Avail Cap(c_a), veh/h	2145	668	691	3574	1140	2098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	21.2	6.2	16.0	9.9
Incr Delay (d2), s/veh	0.2	0.0	1.8	0.1	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	1.7	2.0	5.3	1.4
LnGrp Delay(d),s/veh	13.0	0.0	23.0	6.2	18.3	10.0
LnGrp LOS	B		C	A	B	B
Approach Vol, veh/h	932			1058	705	
Approach Delay, s/veh	13.0			10.1	14.7	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.7	9.5	21.6				31.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		32.0	10.0	21.0				35.0
Max Q Clear Time (g_c+I1), s		12.2	5.4	9.2				6.3
Green Ext Time (p_c), s		2.5	0.3	8.4				15.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	70	70	70	50	30	40	660	80	20	475	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	74	74	74	53	32	42	695	84	21	500	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	119	119	93	157	95	63	1452	175	36	1458	122
Arrive On Green	0.05	0.14	0.14	0.05	0.14	0.14	0.04	0.46	0.46	0.02	0.44	0.44
Sat Flow, veh/h	1774	856	856	1774	1089	658	1774	3180	384	1774	3306	277
Grp Volume(v), veh/h	63	0	148	74	0	85	42	386	393	21	267	275
Grp Sat Flow(s),veh/h/ln	1774	0	1712	1774	0	1747	1774	1770	1795	1774	1770	1814
Q Serve(g_s), s	1.7	0.0	3.9	2.0	0.0	2.1	1.1	7.3	7.3	0.6	4.8	4.8
Cycle Q Clear(g_c), s	1.7	0.0	3.9	2.0	0.0	2.1	1.1	7.3	7.3	0.6	4.8	4.8
Prop In Lane	1.00		0.50	1.00		0.38	1.00		0.21	1.00		0.15
Lane Grp Cap(c), veh/h	84	0	238	93	0	251	63	808	819	36	781	800
V/C Ratio(X)	0.75	0.00	0.62	0.80	0.00	0.34	0.66	0.48	0.48	0.58	0.34	0.34
Avail Cap(c_a), veh/h	221	0	568	258	0	616	184	808	819	147	781	800
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	22.7	0.0	19.6	22.6	0.0	18.6	23.0	9.1	9.1	23.4	8.9	8.9
Incr Delay (d2), s/veh	12.6	0.0	2.7	14.1	0.0	0.8	11.3	2.0	2.0	14.0	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.0	1.3	0.0	1.1	0.7	4.0	4.1	0.4	2.6	2.6
LnGrp Delay(d),s/veh	35.3	0.0	22.2	36.7	0.0	19.4	34.2	11.1	11.1	37.4	10.1	10.0
LnGrp LOS	D		C	D		B	C	B	B	D	B	B
Approach Vol, veh/h		211			159			821			563	
Approach Delay, s/veh		26.1			27.4			12.3			11.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	26.0	6.5	10.7	5.7	25.3	6.3	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	7.0	16.0	5.0	21.0	6.0	17.0
Max Q Clear Time (g_c+I1), s	2.6	9.3	4.0	5.9	3.1	6.8	3.7	4.1
Green Ext Time (p_c), s	0.0	6.6	0.0	0.9	0.0	7.1	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	100	90	40	80	10	1055	70	60	10	80	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	105	95	42	84	11	1111	74	63	11	84	42
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	158	1242	81	195	27	1174	702	597	55	144	72
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.66	0.75	0.75	0.03	0.12	0.12
Sat Flow, veh/h	248	1281	1583	264	1586	222	1774	931	792	1774	1173	586
Grp Volume(v), veh/h	137	0	95	55	0	82	1111	0	137	11	0	126
Grp Sat Flow(s),veh/h/ln	1529	0	1583	416	0	1656	1774	0	1723	1774	0	1759
Q Serve(g_s), s	5.8	0.0	0.0	4.3	0.0	5.9	73.7	0.0	2.8	0.8	0.0	8.8
Cycle Q Clear(g_c), s	11.7	0.0	0.0	16.0	0.0	5.9	73.7	0.0	2.8	0.8	0.0	8.8
Prop In Lane	0.23		1.00	0.77		0.13	1.00		0.46	1.00		0.33
Lane Grp Cap(c), veh/h	222	0	1242	100	0	204	1174	0	1299	55	0	217
V/C Ratio(X)	0.62	0.00	0.08	0.55	0.00	0.40	0.95	0.00	0.11	0.20	0.00	0.58
Avail Cap(c_a), veh/h	222	0	1242	100	0	204	1174	0	1299	55	0	217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.1	0.0	3.2	60.8	0.0	52.6	19.9	0.0	4.3	61.4	0.0	53.8
Incr Delay (d2), s/veh	5.0	0.0	0.0	6.2	0.0	1.3	15.3	0.0	0.2	1.8	0.0	10.9
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	5.1	0.0	0.8	2.1	0.0	2.8	40.8	0.0	1.4	0.4	0.0	4.9
LnGrp Delay(d),s/veh	60.2	0.0	3.2	67.0	0.0	53.9	35.2	0.0	4.4	63.2	0.0	64.8
LnGrp LOS	E		A	E		D	D		A	E		E
Approach Vol, veh/h		232			137			1248			137	
Approach Delay, s/veh		36.9			59.1			31.8			64.7	
Approach LOS		D			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	102.0		20.0	90.0	20.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	98.0		16.0	86.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.8	4.8		13.7	75.7	10.8		18.0
Green Ext Time (p_c), s	0.7	0.9		0.4	3.9	0.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.2
HCM 2010 LOS	D

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												
Volume (veh/h)	30	10	370	40	10	10	1315	740	50	30	585	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	431	42	11	11	1384	779	53	32	616	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	272	463	54	14	14	1664	1889	128	216	685	36
Arrive On Green	0.00	0.00	0.15	0.05	0.05	0.05	0.81	0.94	0.94	0.12	0.20	0.20
Sat Flow, veh/h	0	1863	3167	1150	301	301	3442	3363	229	1774	3423	178
Grp Volume(v), veh/h	0	0	431	64	0	0	1384	410	422	32	318	330
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1752	0	0	1721	1770	1822	1774	1770	1831
Q Serve(g_s), s	0.0	0.0	17.5	4.7	0.0	0.0	30.7	3.1	3.1	2.1	22.8	22.8
Cycle Q Clear(g_c), s	0.0	0.0	17.5	4.7	0.0	0.0	30.7	3.1	3.1	2.1	22.8	22.8
Prop In Lane	0.00		1.00	0.66		0.17	1.00		0.13	1.00		0.10
Lane Grp Cap(c), veh/h	0	272	463	83	0	0	1664	994	1023	216	354	366
V/C Ratio(X)	0.00	0.00	0.93	0.77	0.00	0.00	0.83	0.41	0.41	0.15	0.90	0.90
Avail Cap(c_a), veh/h	0	272	463	216	0	0	1664	994	1023	216	354	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.46	0.46	0.46	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	54.9	61.2	0.0	0.0	9.4	1.9	1.9	51.0	50.7	50.7
Incr Delay (d2), s/veh	0.0	0.0	25.7	13.9	0.0	0.0	1.8	0.6	0.6	0.3	28.0	27.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	9.3	2.6	0.0	0.0	14.1	1.5	1.5	1.0	13.9	14.3
LnGrp Delay(d),s/veh	0.0	0.0	80.5	75.1	0.0	0.0	11.2	2.4	2.4	51.4	78.7	78.3
LnGrp LOS			F	E			B	A	A	D	E	E
Approach Vol, veh/h		431			64			2216			680	
Approach Delay, s/veh		80.5			75.1			7.9			77.2	
Approach LOS		F			E			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.8	77.0		23.0	66.8	30.0		10.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	73.0		19.0	53.0	26.0		16.0
Max Q Clear Time (g_c+I1), s	4.1	5.1		19.5	32.7	24.8		6.7
Green Ext Time (p_c), s	1.2	6.4		0.0	6.4	0.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

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												
Volume (veh/h)	70	30	445	380	175	960	315	1080	70	20	920	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	53	61	468	267	380	1011	332	1137	74	21	968	84
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	106	111	517	416	437	1346	474	1324	86	655	1116	499
Arrive On Green	0.06	0.06	0.06	0.23	0.23	0.23	0.27	0.39	0.39	0.38	0.63	0.63
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	3374	219	3442	3539	1583
Grp Volume(v), veh/h	53	61	468	267	380	1011	332	596	615	21	968	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1824	1721	1770	1583
Q Serve(g_s), s	3.8	4.1	2.0	17.6	25.5	10.3	21.9	40.1	40.2	0.5	29.0	2.8
Cycle Q Clear(g_c), s	3.8	4.1	2.0	17.6	25.5	10.3	21.9	40.1	40.2	0.5	29.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	106	111	517	416	437	1346	474	694	716	655	1116	499
V/C Ratio(X)	0.50	0.55	0.90	0.64	0.87	0.75	0.70	0.86	0.86	0.03	0.87	0.17
Avail Cap(c_a), veh/h	205	215	606	437	459	1382	474	694	716	655	1116	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55
Uniform Delay (d), s/veh	59.3	59.4	41.8	44.8	47.8	31.6	42.9	36.2	36.2	32.8	21.8	17.0
Incr Delay (d2), s/veh	3.6	4.2	15.6	3.0	15.8	2.3	4.5	13.0	12.8	0.0	5.4	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	2.0	2.3	3.0	8.9	15.0	4.8	11.4	22.1	22.7	0.2	14.5	1.3
LnGrp Delay(d),s/veh	62.9	63.6	57.4	47.8	63.6	33.9	47.5	49.2	49.0	32.8	27.1	17.4
LnGrp LOS	E	E	E	D	E	C	D	D	D	C	C	B
Approach Vol, veh/h		582			1658			1543			1073	
Approach Delay, s/veh		58.5			42.9			48.8			26.5	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	28.7	55.0		11.7	38.7	45.0		34.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	16.0	51.0		15.0	26.0	41.0		32.0
Max Q Clear Time (g_c+I1), s	2.5	42.2		6.1	23.9	31.0		27.5
Green Ext Time (p_c), s	0.9	5.1		1.6	0.3	4.9		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1000	1580	30	0	455	775	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1053	1663		0	479	816	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1836	1926		0	1433	2060	0
Arrive On Green	0.53	0.53		0.00	0.41	0.41	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1053	1663		0	479	816	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	26.7	51.8		0.0	12.1	14.8	0.0
Cycle Q Clear(g_c), s	26.7	51.8		0.0	12.1	14.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1836	1926		0	1433	2060	0
V/C Ratio(X)	0.57	0.86		0.00	0.33	0.40	0.00
Avail Cap(c_a), veh/h	2091	2194		0	1433	2060	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.4	26.2		0.0	26.6	27.4	0.0
Incr Delay (d2), s/veh	0.3	3.5		0.0	0.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	29.8		0.0	6.0	7.1	0.0
LnGrp Delay(d),s/veh	20.7	29.7		0.0	27.2	28.0	0.0
LnGrp LOS	C	C			C	C	
Approach Vol, veh/h	2716				479	816	
Approach Delay, s/veh	26.2				27.2	28.0	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		56.7		73.3		56.7		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		43.0		79.0		33.0		
Max Q Clear Time (g_c+I1), s		14.1		53.8		16.8		
Green Ext Time (p_c), s		10.8		15.5		8.1		

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1230	540	90	1440	275	80
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1295	568	95	1516	289	84
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1770	1130	184	3285	1297	579
Arrive On Green	0.35	0.35	0.10	0.51	0.37	0.37
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1295	568	95	1516	289	84
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	14.6	10.5	3.3	9.9	3.7	2.3
Cycle Q Clear(g_c), s	14.6	10.5	3.3	9.9	3.7	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1770	1130	184	3285	1297	579
V/C Ratio(X)	0.73	0.50	0.52	0.46	0.22	0.15
Avail Cap(c_a), veh/h	1936	1181	243	3708	1297	579
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	18.7	4.2	27.9	10.2	14.4	14.0
Incr Delay (d2), s/veh	1.3	0.3	2.2	0.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	10.2	1.8	4.3	1.9	1.1
LnGrp Delay(d),s/veh	20.0	4.5	30.1	10.3	14.8	14.5
LnGrp LOS	C	A	C	B	B	B
Approach Vol, veh/h	1863			1611	373	
Approach Delay, s/veh	15.3			11.5	14.7	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		28.0	10.8	26.9				37.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	9.0	25.0				38.0
Max Q Clear Time (g_c+I1), s		5.7	5.3	16.6				11.9
Green Ext Time (p_c), s		1.2	2.9	6.2				13.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	115	90	40	1035	100	60	145	60	110	235	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	121	95	42	1089	105	63	153	63	116	247	132
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	80	813	591	56	1311	126	80	463	394	148	534	454
Arrive On Green	0.05	0.42	0.42	0.03	0.40	0.40	0.05	0.25	0.25	0.08	0.29	0.29
Sat Flow, veh/h	1774	1958	1424	1774	3263	314	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	63	108	108	42	590	604	63	153	63	116	247	132
Grp Sat Flow(s),veh/h/ln	1774	1770	1612	1774	1770	1807	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.5	2.8	3.0	1.7	21.7	21.7	2.5	4.9	2.3	4.6	7.9	4.7
Cycle Q Clear(g_c), s	2.5	2.8	3.0	1.7	21.7	21.7	2.5	4.9	2.3	4.6	7.9	4.7
Prop In Lane	1.00		0.88	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	735	669	56	711	726	80	463	394	148	534	454
V/C Ratio(X)	0.79	0.15	0.16	0.75	0.83	0.83	0.78	0.33	0.16	0.78	0.46	0.29
Avail Cap(c_a), veh/h	123	758	690	147	782	799	172	463	394	221	534	454
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	34.2	13.2	13.3	34.8	19.4	19.5	34.2	22.3	21.3	32.5	21.2	20.1
Incr Delay (d2), s/veh	16.8	0.1	0.1	18.1	7.0	6.9	15.2	1.9	0.9	10.2	2.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.4	1.4	1.1	11.9	12.1	1.6	2.8	1.1	2.7	4.5	2.2
LnGrp Delay(d),s/veh	51.0	13.3	13.4	52.9	26.4	26.4	49.4	24.2	22.2	42.7	24.1	21.7
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		279			1236			279			495	
Approach Delay, s/veh		21.8			27.3			29.4			27.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	22.0	6.3	34.1	7.3	24.8	7.3	33.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	18.0	6.0	31.0	7.0	20.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	6.6	6.9	3.7	5.0	4.5	9.9	4.5	23.7
Green Ext Time (p_c), s	0.1	2.3	0.0	11.1	0.0	2.2	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	35	35	190	190	230	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	37	200	200	242	153

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	818	197	395	0	-	0
Stage 1	318	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	314	811	1160	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	811	1160	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	463	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	4.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1160	-	253	811	-	-
HCM Lane V/C Ratio	0.172	-	0.146	0.045	-	-
HCM Control Delay (s)	8.7	0.3	21.6	9.7	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	70	140	110	310	165	80
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	74	147	116	326	174	84
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	93	764	967	433	748	750
Arrive On Green	0.05	0.41	0.27	0.27	0.42	0.42
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	74	147	116	326	174	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.0	2.4	1.2	8.9	3.0	1.4
Cycle Q Clear(g_c), s	2.0	2.4	1.2	8.9	3.0	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	764	967	433	748	750
V/C Ratio(X)	0.79	0.19	0.12	0.75	0.23	0.11
Avail Cap(c_a), veh/h	262	1256	1566	701	748	750
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	22.2	9.0	13.0	15.8	8.8	6.9
Incr Delay (d2), s/veh	14.0	0.1	0.1	2.7	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.3	0.6	4.2	1.6	1.7
LnGrp Delay(d),s/veh	36.2	9.1	13.0	18.5	9.5	7.2
LnGrp LOS	D	A	B	B	A	A
Approach Vol, veh/h		221	442		258	
Approach Delay, s/veh		18.2	17.0		8.8	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				23.5		24.0	6.5	17.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				32.0		20.0	7.0	21.0
Max Q Clear Time (g_c+I1), s				4.4		5.0	4.0	10.9
Green Ext Time (p_c), s				2.8		0.7	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	730	1725	1190	495	0	1255
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	768	1816	1369	444		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	819	4529	2052	581		
Arrive On Green	0.46	0.89	0.37	0.37		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	768	1816	1369	444		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	26.7	4.0	13.3	16.0		
Cycle Q Clear(g_c), s	26.7	4.0	13.3	16.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	819	4529	2052	581		
V/C Ratio(X)	0.94	0.40	0.67	0.76		
Avail Cap(c_a), veh/h	901	4772	2063	585		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.69	0.69	0.91	0.91		
Uniform Delay (d), s/veh	16.6	0.6	17.2	18.1		
Incr Delay (d2), s/veh	12.2	0.0	0.7	5.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	15.6	1.7	7.0	7.8		
LnGrp Delay(d),s/veh	28.8	0.6	18.0	23.5		
LnGrp LOS	C	A	B	C		
Approach Vol, veh/h		2584	1813			
Approach Delay, s/veh		9.0	19.3			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				61.9			34.0	27.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				61.0			33.0	24.0
Max Q Clear Time (g_c+I1), s				6.0			28.7	18.0
Green Ext Time (p_c), s				47.9			1.3	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	420	1255	530	210	1860	340	0	0	0	605	10	1885
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	442	1321	558	221	1958	0				645	0	1984
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	355	1876	584	246	1565	487				1419	0	1267
Arrive On Green	0.20	0.37	0.37	0.14	0.31	0.00				0.40	0.00	0.40
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	442	1321	558	221	1958	0				645	0	1984
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	26.0	28.8	44.7	15.9	40.0	0.0				17.3	0.0	52.0
Cycle Q Clear(g_c), s	26.0	28.8	44.7	15.9	40.0	0.0				17.3	0.0	52.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	355	1876	584	246	1565	487				1419	0	1267
V/C Ratio(X)	1.25	0.70	0.96	0.90	1.25	0.00				0.45	0.00	1.57
Avail Cap(c_a), veh/h	355	1876	584	273	1565	487				1419	0	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.61	0.61	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	52.0	35.0	40.0	55.1	45.0	0.0				28.6	0.0	39.0
Incr Delay (d2), s/veh	112.9	0.1	4.5	19.1	116.5	0.0				1.1	0.0	258.7
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	23.8	13.5	20.3	9.1	35.6	0.0				8.7	0.0	68.2
LnGrp Delay(d),s/veh	164.9	35.1	44.5	74.2	161.5	0.0				29.7	0.0	297.7
LnGrp LOS	F	D	D	E	F					C		F
Approach Vol, veh/h		2321			2179						2629	
Approach Delay, s/veh		62.1			152.6						231.9	
Approach LOS		E			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			22.1	51.9		56.0	30.0	44.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			20.0	46.0		52.0	26.0	40.0
Max Q Clear Time (g_c+I1), s			17.9	46.7		54.0	28.0	42.0
Green Ext Time (p_c), s			0.1	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	152.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	635	0	285	180	230	0	10	280	150
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	1900	1863	1863
Adj Flow Rate, veh/h				668	0	0	189	242	0	11	295	158
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				728	0	650	582	1868	0	39	573	268
Arrive On Green				0.41	0.00	0.00	0.66	1.00	0.00	0.17	0.17	0.17
Sat Flow, veh/h				1774	0	1583	1774	3632	0	55	3383	1583
Grp Volume(v), veh/h				668	0	0	189	242	0	164	142	158
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	1827	1610	1583
Q Serve(g_s), s				46.3	0.0	0.0	6.1	0.0	0.0	0.0	10.5	12.0
Cycle Q Clear(g_c), s				46.3	0.0	0.0	6.1	0.0	0.0	10.4	10.5	12.0
Prop In Lane				1.00		1.00	1.00		0.00	0.07		1.00
Lane Grp Cap(c), veh/h				728	0	650	582	1868	0	339	273	268
V/C Ratio(X)				0.92	0.00	0.00	0.32	0.13	0.00	0.48	0.52	0.59
Avail Cap(c_a), veh/h				983	0	877	582	1868	0	339	273	268
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.53	0.53	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				36.2	0.0	0.0	16.1	0.0	0.0	49.2	49.2	49.8
Incr Delay (d2), s/veh				10.6	0.0	0.0	0.2	0.1	0.0	4.9	7.0	9.2
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				24.8	0.0	0.0	3.0	0.0	0.0	5.8	5.2	5.9
LnGrp Delay(d),s/veh				46.8	0.0	0.0	16.2	0.1	0.0	54.0	56.2	59.0
LnGrp LOS				D			B	A		D	E	E
Approach Vol, veh/h					668			431			464	
Approach Delay, s/veh					46.8			7.2			56.4	
Approach LOS					D			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.6			46.6	26.0		57.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		50.0			24.0	22.0		72.0
Max Q Clear Time (g_c+I1), s		2.0			8.1	14.0		48.3
Green Ext Time (p_c), s		2.2			1.9	1.5		5.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	190	10	87	733	450	0	53	77	167	238	40	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.87			1.00	0.85		0.91			
Flt Protected	0.95		1.00			0.95	1.00		1.00			
Satd. Flow (prot)	1770		1615			1683	1504		3208			
Flt Permitted	0.95		0.55			0.95	1.00		1.00			
Satd. Flow (perm)	1770		891			1683	1504		3208			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	11	92	772	474	0	56	84	176	251	42	221
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	6	0	0	0
Lane Group Flow (vph)	200	0	875	0	0	480	134	0	463	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	60.0		60.0			17.0	17.0		18.0			
Effective Green, g (s)	60.0		60.0			17.0	17.0		18.0			
Actuated g/C Ratio	0.46		0.46			0.13	0.13		0.14			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	816		411			220	196		444			
v/s Ratio Prot	0.11					c0.29	0.09		c0.14			
v/s Ratio Perm			c0.98									
v/c Ratio	0.25		2.13			2.18	0.68		1.28dr			
Uniform Delay, d1	21.2		35.0			56.5	53.9		56.0			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.2		516.2			546.5	9.5		54.3			
Delay (s)	21.4		551.2			603.0	63.4		110.3			
Level of Service	C		F			F	E		F			
Approach Delay (s)			452.6			485.2			110.3			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	327.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.8%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	73	612
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1610	3388
Flt Permitted	0.95	1.00
Satd. Flow (perm)	1610	3388
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	77	644
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	290	652
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	19.0	19.0
Effective Green, g (s)	19.0	19.0
Actuated g/C Ratio	0.15	0.15
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	235	495
v/s Ratio Prot	0.18	c0.19
v/s Ratio Perm		
v/c Ratio	1.23	1.32
Uniform Delay, d1	55.5	55.5
Progression Factor	0.75	0.75
Incremental Delay, d2	131.7	154.2
Delay (s)	173.3	196.0
Level of Service	F	F
Approach Delay (s)		189.0
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	3030	270	710	865	110	220	40	740	70	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	3189	284	747	911	116	232	42	779	74	32	105
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	154	2543	792	741	3410	1110	291	244	548	106	143	122
Arrive On Green	0.04	0.50	0.50	0.22	0.67	0.67	0.08	0.13	0.13	0.03	0.08	0.08
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	105	3189	284	747	911	116	232	42	779	74	32	105
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.9	65.0	14.2	28.0	9.3	3.1	8.6	2.6	12.8	2.8	2.1	7.5
Cycle Q Clear(g_c), s	3.9	65.0	14.2	28.0	9.3	3.1	8.6	2.6	12.8	2.8	2.1	7.5
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	154	2543	792	741	3410	1110	291	244	548	106	143	122
V/C Ratio(X)	0.68	1.25	0.36	1.01	0.27	0.10	0.80	0.17	1.42	0.70	0.22	0.86
Avail Cap(c_a), veh/h	212	2543	792	741	3410	1110	291	244	548	106	143	122
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	32.5	19.8	51.0	8.6	6.3	58.4	50.2	29.9	62.4	56.4	46.4
Incr Delay (d2), s/veh	0.5	114.7	0.0	11.8	0.0	0.0	14.3	1.5	200.1	18.3	3.6	50.8
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	57.1	6.2	14.5	4.4	1.3	4.7	1.4	36.0	1.6	1.2	5.0
LnGrp Delay(d),s/veh	61.7	147.2	19.8	62.9	8.6	6.3	72.7	51.8	230.0	80.7	59.9	97.2
LnGrp LOS	E	F	B	F	A	A	E	D	F	F	E	F
Approach Vol, veh/h		3578			1774			1053			211	
Approach Delay, s/veh		134.6			31.3			188.2			85.8	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	32.0	69.0	15.0	14.0	9.8	91.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	28.0	65.0	11.0	10.0	8.0	85.0
Max Q Clear Time (g_c+I1), s	4.8	14.8	30.0	67.0	10.6	9.5	5.9	11.3
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.2	0.0	0.0	14.9

Intersection Summary	
HCM 2010 Ctrl Delay	113.9
HCM 2010 LOS	F

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												
Volume (veh/h)	100	2960	370	260	845	50	320	40	410	50	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	3116	389	274	889	53	337	42	432	53	79	64
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	129	2895	1060	265	2916	949	344	381	324	93	244	322
Arrive On Green	0.07	0.57	0.57	0.05	0.38	0.38	0.10	0.20	0.20	0.03	0.13	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	105	3116	389	274	889	53	337	42	432	53	79	64
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.6	74.0	14.0	10.0	15.9	2.6	12.7	2.4	26.6	1.9	5.0	4.4
Cycle Q Clear(g_c), s	7.6	74.0	14.0	10.0	15.9	2.6	12.7	2.4	26.6	1.9	5.0	4.4
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	129	2895	1060	265	2916	949	344	381	324	93	244	322
V/C Ratio(X)	0.81	1.08	0.37	1.03	0.30	0.06	0.98	0.11	1.33	0.57	0.32	0.20
Avail Cap(c_a), veh/h	205	2895	1060	265	2916	949	344	381	324	109	244	322
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	28.0	9.4	61.7	22.0	15.8	58.4	42.1	51.7	62.6	51.3	43.0
Incr Delay (d2), s/veh	12.5	41.6	0.2	62.6	0.1	0.0	42.8	0.6	169.9	5.4	3.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	45.5	6.1	7.1	7.5	1.1	8.1	1.3	26.9	1.0	2.8	2.0
LnGrp Delay(d),s/veh	71.9	69.6	9.6	124.3	22.0	15.8	101.1	42.7	221.6	67.9	54.8	44.3
LnGrp LOS	E	F	A	F	C	B	F	D	F	E	D	D
Approach Vol, veh/h		3610			1216			811			196	
Approach Delay, s/veh		63.2			44.8			162.3			54.9	
Approach LOS		E			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	30.6	14.0	78.0	17.0	21.0	13.5	78.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	10.0	74.0	13.0	17.0	15.0	69.0
Max Q Clear Time (g_c+I1), s	3.9	28.6	12.0	76.0	14.7	7.0	9.6	17.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.9	0.1	49.9

Intersection Summary	
HCM 2010 Ctrl Delay	72.9
HCM 2010 LOS	E

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												
Volume (veh/h)	0	0	0	395	0	10	250	140	0	0	10	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				426	0	0	263	147	0	0	11	126
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				512	269	0	1095	1479	0	0	259	231
Arrive On Green				0.14	0.00	0.00	1.00	1.00	0.00	0.00	0.15	0.15
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1863	1583
Grp Volume(v), veh/h				426	0	0	263	147	0	0	11	126
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1583
Q Serve(g_s), s				15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	9.6
Cycle Q Clear(g_c), s				15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	9.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				512	269	0	1095	1479	0	0	259	231
V/C Ratio(X)				0.83	0.00	0.00	0.24	0.10	0.00	0.00	0.04	0.54
Avail Cap(c_a), veh/h				1283	673	0	1095	1479	0	0	259	231
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				54.1	0.0	0.0	0.0	0.0	0.0	0.0	47.7	51.5
Incr Delay (d2), s/veh				3.6	0.0	0.0	0.1	0.1	0.0	0.0	0.3	8.9
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				7.7	0.0	0.0	0.0	0.1	0.0	0.0	0.4	4.8
LnGrp Delay(d),s/veh				57.7	0.0	0.0	0.1	0.1	0.0	0.0	48.0	60.4
LnGrp LOS				E			A	A			D	E
Approach Vol, veh/h					426			410			137	
Approach Delay, s/veh					57.7			0.1			59.4	
Approach LOS					E			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		107.2			84.2	23.0		22.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		75.0			52.0	19.0		47.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	11.6		17.2
Green Ext Time (p_c), s		1.7			1.7	0.4		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	130	0	0	0	0	290	1245	30	365	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	95	0	137				0	305	1311	32	384	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	182	0	162				0	2668	1194	91	2959	0
Arrive On Green	0.10	0.00	0.10				0.00	1.00	1.00	0.07	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	95	0	137				0	305	1311	32	384	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	6.6	0.0	11.1				0.0	0.0	98.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	11.1				0.0	0.0	98.0	2.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	182	0	162				0	2668	1194	91	2959	0
V/C Ratio(X)	0.52	0.00	0.85				0.00	0.11	1.10	0.35	0.13	0.00
Avail Cap(c_a), veh/h	218	0	195				0	2668	1194	91	2959	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.81	0.81	0.96	0.96	0.00
Uniform Delay (d), s/veh	55.3	0.0	57.3				0.0	0.0	0.0	58.5	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	24.1				0.0	0.1	55.2	2.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	5.9				0.0	0.0	18.3	1.2	0.0	0.0
LnGrp Delay(d),s/veh	57.7	0.0	81.4				0.0	0.1	55.2	60.7	0.1	0.0
LnGrp LOS	E		F					A	F	E	A	
Approach Vol, veh/h		232						1616			416	
Approach Delay, s/veh		71.7						44.8			4.7	
Approach LOS		E						D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.7	102.0		17.3		112.7		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	4.0	98.0		16.0		106.0		
Max Q Clear Time (g_c+I1), s	4.2	100.0		13.1		2.0		
Green Ext Time (p_c), s	0.0	0.0		0.3		2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	180	410	110	90	40	190	1475	140	50	675	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	221	189	432	116	95	42	200	1553	147	53	711	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	255	260	675	170	159	71	254	2327	220	674	3124	973
Arrive On Green	0.14	0.14	0.14	0.05	0.04	0.04	0.15	0.98	0.98	0.39	1.00	1.00
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4727	447	3442	5085	1583
Grp Volume(v), veh/h	221	189	432	116	95	42	200	1113	587	53	711	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1784	1721	1695	1583
Q Serve(g_s), s	15.8	12.6	13.2	4.3	3.4	3.4	7.3	1.9	1.9	1.3	0.0	0.0
Cycle Q Clear(g_c), s	15.8	12.6	13.2	4.3	3.4	3.4	7.3	1.9	1.9	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	255	260	675	170	159	71	254	1669	878	674	3124	973
V/C Ratio(X)	0.87	0.73	0.64	0.68	0.60	0.59	0.79	0.67	0.67	0.08	0.23	0.19
Avail Cap(c_a), veh/h	396	530	1135	212	436	195	397	1669	878	674	3124	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84	0.98	0.98	0.98
Uniform Delay (d), s/veh	54.4	53.6	31.8	60.8	60.9	60.9	54.4	0.5	0.5	32.2	0.0	0.0
Incr Delay (d2), s/veh	11.7	3.9	1.0	6.4	3.6	7.6	4.7	1.8	3.4	0.0	0.2	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	8.6	6.8	5.9	2.2	1.8	1.6	3.6	0.7	1.1	0.6	0.0	0.1
LnGrp Delay(d),s/veh	66.1	57.4	32.8	67.2	64.5	68.5	59.1	2.3	3.9	32.2	0.2	0.4
LnGrp LOS	E	E	C	E	E	E	E	A	A	C	A	A
Approach Vol, veh/h		842			253			1900			953	
Approach Delay, s/veh		47.1			66.4			8.8			2.0	
Approach LOS		D			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.5	68.0	10.4	22.1	13.6	83.9	22.7	9.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	64.0	8.0	37.0	15.0	54.0	29.0	16.0
Max Q Clear Time (g_c+I1), s	3.3	3.9	6.3	15.2	9.3	2.0	17.8	5.4
Green Ext Time (p_c), s	0.1	20.6	0.2	2.9	0.3	7.0	0.8	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	430	30	150	270	270	1465	0	0	760	425
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	453	32	158	284	284	1542	0	0	800	447
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	62	305	314	314	3763	0	0	1884	843
Arrive On Green	0.00	0.00	0.00	0.20	0.20	0.20	0.18	0.74	0.00	0.00	0.18	0.18
Sat Flow, veh/h		0		311	1536	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		190	0	284	284	1542	0	0	800	447
Grp Sat Flow(s),veh/h/ln				1847	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				11.9	0.0	22.8	20.4	14.7	0.0	0.0	26.2	33.4
Cycle Q Clear(g_c), s				11.9	0.0	22.8	20.4	14.7	0.0	0.0	26.2	33.4
Prop In Lane				0.17		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				366	0	314	314	3763	0	0	1884	843
V/C Ratio(X)				0.52	0.00	0.90	0.91	0.41	0.00	0.00	0.42	0.53
Avail Cap(c_a), veh/h				426	0	365	437	3763	0	0	1884	843
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.96	0.96
Uniform Delay (d), s/veh				46.6	0.0	50.9	52.4	6.3	0.0	0.0	35.8	38.8
Incr Delay (d2), s/veh				1.1	0.0	22.9	17.6	0.3	0.0	0.0	0.7	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	11.9	11.5	7.0	0.0	0.0	13.0	15.2
LnGrp Delay(d),s/veh				47.7	0.0	73.8	70.0	6.6	0.0	0.0	36.5	41.1
LnGrp LOS				D		E	E	A			D	D
Approach Vol, veh/h					474			1826			1247	
Approach Delay, s/veh					63.4			16.5			38.1	
Approach LOS					E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		100.2			27.0	73.2		29.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		76.0			32.0	40.0		30.0
Max Q Clear Time (g_c+I1), s		16.7			22.4	35.4		24.8
Green Ext Time (p_c), s		38.6			0.6	4.4		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	340	2025	710	150	1125	70	460	70	150	50	60	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	358	2132	747	158	1184	74	484	74	158	53	63	274
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	706	2553	1110	211	1633	403	932	670	599	68	272	407
Arrive On Green	0.41	0.80	0.80	0.06	0.25	0.25	0.27	0.38	0.38	0.04	0.15	0.15
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	358	2132	747	158	1184	74	484	74	158	53	63	274
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	10.1	26.3	6.8	5.9	22.0	4.1	15.5	3.5	9.0	3.8	3.9	12.1
Cycle Q Clear(g_c), s	10.1	26.3	6.8	5.9	22.0	4.1	15.5	3.5	9.0	3.8	3.9	12.1
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	706	2553	1110	211	1633	403	932	670	599	68	272	407
V/C Ratio(X)	0.51	0.83	0.67	0.75	0.73	0.18	0.52	0.11	0.26	0.78	0.23	0.67
Avail Cap(c_a), veh/h	706	2760	1200	291	2218	548	932	670	599	123	272	407
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)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	10.6	1.9	60.0	44.3	28.4	40.2	26.2	27.9	61.9	49.0	52.6
Incr Delay (d2), s/veh	0.4	1.7	1.0	6.8	0.8	0.2	0.5	0.3	1.1	16.9	2.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.3	2.4	3.0	9.8	1.8	7.5	1.8	4.1	2.2	2.1	5.1
LnGrp Delay(d),s/veh	33.9	12.3	2.9	66.8	45.1	28.6	40.7	26.5	29.0	78.9	51.0	61.1
LnGrp LOS	C	B	A	E	D	C	D	C	C	E	D	E
Approach Vol, veh/h		3237			1416			716			390	
Approach Delay, s/veh		12.5			46.6			36.7			61.9	
Approach LOS		B			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	53.2	12.0	55.8	39.2	23.0	30.7	37.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	38.0	11.0	56.0	28.0	19.0	22.0	45.0
Max Q Clear Time (g_c+I1), s	5.8	11.0	7.9	28.3	17.5	14.1	12.1	24.0
Green Ext Time (p_c), s	0.0	3.4	0.1	23.5	2.5	0.6	9.3	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	810	1890	1240	675	1305	1010
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	853	1989	1305	711	1374	1063
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1043	3676	1538	1685	1825	1016
Arrive On Green	0.61	1.00	0.24	0.24	0.36	0.36
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	853	1989	1305	711	1374	1063
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	25.2	0.0	25.3	17.6	31.3	47.4
Cycle Q Clear(g_c), s	25.2	0.0	25.3	17.6	31.3	47.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1043	3676	1538	1685	1825	1016
V/C Ratio(X)	0.82	0.54	0.85	0.42	0.75	1.05
Avail Cap(c_a), veh/h	1085	3795	1577	1702	1825	1016
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	47.1	13.6	36.2	41.3
Incr Delay (d2), s/veh	2.5	0.1	3.4	0.1	2.9	41.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	0.0	11.5	12.8	14.9	35.7
LnGrp Delay(d),s/veh	25.3	0.1	50.5	13.8	39.1	82.2
LnGrp LOS	C	A	D	B	D	F
Approach Vol, veh/h		2842	2016		2437	
Approach Delay, s/veh		7.6	37.5		57.9	
Approach LOS		A	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				78.6		51.4	43.4	35.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				77.0		45.0	41.0	32.0
Max Q Clear Time (g_c+I1), s				2.0		49.4	27.2	27.3
Green Ext Time (p_c), s				44.8		0.0	12.2	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	750	10	360	330
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	789	11	379	347
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1726	400			800	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1726	400			800	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			54	
cM capacity (veh/h)	43	600			819	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	526	274	379	174	174
Volume Left	0	0	379	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	819	1700	1700
Volume to Capacity	0.31	0.16	0.46	0.10	0.10
Queue Length 95th (ft)	0	0	62	0	0
Control Delay (s)	0.0	0.0	13.1	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.8		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1535	890	460	1245	590	530	50	805	230	10	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1616	937	484	1311	621	558	53	847	242	11	116
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	166	1723	1018	527	1900	1041	1288	685	1452	300	150	128
Arrive On Green	0.05	0.27	0.27	0.31	0.75	0.75	0.37	0.37	0.37	0.09	0.08	0.08
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	116	1616	937	484	1311	621	558	53	847	242	11	116
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	4.3	32.1	18.6	17.7	17.5	13.2	15.7	2.4	6.7	9.0	0.7	8.3
Cycle Q Clear(g_c), s	4.3	32.1	18.6	17.7	17.5	13.2	15.7	2.4	6.7	9.0	0.7	8.3
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	1723	1018	527	1900	1041	1288	685	1452	300	150	128
V/C Ratio(X)	0.70	0.94	0.92	0.92	0.69	0.60	0.43	0.08	0.58	0.81	0.07	0.91
Avail Cap(c_a), veh/h	212	1725	1019	556	1900	1041	1288	685	1452	424	244	207
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.9	46.5	20.3	44.3	12.5	12.0	30.4	26.7	9.7	58.3	55.3	46.0
Incr Delay (d2), s/veh	7.0	10.4	13.1	13.3	0.6	0.6	1.1	0.2	1.7	7.6	0.2	26.2
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	2.2	15.4	11.5	9.3	7.9	5.0	7.6	1.3	6.8	4.6	0.4	4.6
LnGrp Delay(d),s/veh	67.9	56.8	33.3	57.7	13.1	12.5	31.4	27.0	11.4	65.8	55.5	72.2
LnGrp LOS	E	E	C	E	B	B	C	C	B	E	E	E
Approach Vol, veh/h		2669			2416			1458			369	
Approach Delay, s/veh		49.1			21.9			19.6			67.5	
Approach LOS		D			C			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	51.8	23.9	39.0	52.7	14.5	10.3	52.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	42.0	21.0	35.0	41.0	17.0	8.0	48.0
Max Q Clear Time (g_c+I1), s	11.0	8.7	19.7	34.1	17.7	10.3	6.3	19.5
Green Ext Time (p_c), s	0.4	7.4	0.2	0.9	6.8	0.2	0.0	18.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	885	195	230	765	365	290
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	932	0	242	805	384	305
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1870	582	380	2833	506	1103
Arrive On Green	0.37	0.00	0.11	0.56	0.29	0.29
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	932	0	242	805	384	305
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	7.2	0.0	3.4	4.2	10.0	3.8
Cycle Q Clear(g_c), s	7.2	0.0	3.4	4.2	10.0	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1870	582	380	2833	506	1103
V/C Ratio(X)	0.50	0.00	0.64	0.28	0.76	0.28
Avail Cap(c_a), veh/h	2306	718	746	3809	1189	2176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	21.6	5.9	16.5	10.4
Incr Delay (d2), s/veh	0.2	0.0	1.8	0.1	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	1.7	2.0	5.2	1.4
LnGrp Delay(d),s/veh	12.6	0.0	23.4	6.0	18.9	10.5
LnGrp LOS	B		C	A	B	B
Approach Vol, veh/h	932			1047	689	
Approach Delay, s/veh	12.6			10.0	15.2	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.5	9.6	22.6				32.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		34.0	11.0	23.0				38.0
Max Q Clear Time (g_c+I1), s		12.0	5.4	9.2				6.2
Green Ext Time (p_c), s		2.5	0.4	9.5				16.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	70	70	70	50	30	40	645	80	20	475	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	74	74	74	53	32	42	679	84	21	500	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	119	119	93	157	95	63	1447	179	36	1458	122
Arrive On Green	0.05	0.14	0.14	0.05	0.14	0.14	0.04	0.46	0.46	0.02	0.44	0.44
Sat Flow, veh/h	1774	856	856	1774	1089	658	1774	3171	392	1774	3306	277
Grp Volume(v), veh/h	63	0	148	74	0	85	42	379	384	21	267	275
Grp Sat Flow(s),veh/h/ln	1774	0	1712	1774	0	1747	1774	1770	1794	1774	1770	1814
Q Serve(g_s), s	1.7	0.0	3.9	2.0	0.0	2.1	1.1	7.1	7.1	0.6	4.8	4.8
Cycle Q Clear(g_c), s	1.7	0.0	3.9	2.0	0.0	2.1	1.1	7.1	7.1	0.6	4.8	4.8
Prop In Lane	1.00		0.50	1.00		0.38	1.00		0.22	1.00		0.15
Lane Grp Cap(c), veh/h	84	0	238	93	0	251	63	808	819	36	781	800
V/C Ratio(X)	0.75	0.00	0.62	0.80	0.00	0.34	0.66	0.47	0.47	0.58	0.34	0.34
Avail Cap(c_a), veh/h	221	0	568	258	0	616	184	808	819	147	781	800
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	22.7	0.0	19.6	22.6	0.0	18.6	23.0	9.1	9.1	23.4	8.9	8.9
Incr Delay (d2), s/veh	12.6	0.0	2.7	14.1	0.0	0.8	11.3	2.0	1.9	14.0	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.0	1.3	0.0	1.1	0.7	3.9	4.0	0.4	2.6	2.6
LnGrp Delay(d),s/veh	35.3	0.0	22.2	36.7	0.0	19.4	34.2	11.0	11.0	37.4	10.1	10.0
LnGrp LOS	D		C	D		B	C	B	B	D	B	B
Approach Vol, veh/h		211			159			805			563	
Approach Delay, s/veh		26.1			27.4			12.2			11.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	26.0	6.5	10.7	5.7	25.3	6.3	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	7.0	16.0	5.0	21.0	6.0	17.0
Max Q Clear Time (g_c+I1), s	2.6	9.1	4.0	5.9	3.1	6.8	3.7	4.1
Green Ext Time (p_c), s	0.0	6.6	0.0	0.9	0.0	7.0	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	100	90	40	80	10	945	70	60	10	80	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	105	95	42	84	11	995	74	63	11	84	42
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	196	1091	121	237	33	986	673	573	19	209	104
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.56	0.72	0.72	0.01	0.18	0.18
Sat Flow, veh/h	274	1468	1583	408	1776	248	1774	931	792	1774	1173	586
Grp Volume(v), veh/h	137	0	95	64	0	73	995	0	137	11	0	126
Grp Sat Flow(s),veh/h/ln	1743	0	1583	781	0	1651	1774	0	1723	1774	0	1759
Q Serve(g_s), s	2.8	0.0	0.0	2.7	0.0	3.6	50.0	0.0	2.2	0.6	0.0	5.7
Cycle Q Clear(g_c), s	6.5	0.0	0.0	9.2	0.0	3.6	50.0	0.0	2.2	0.6	0.0	5.7
Prop In Lane	0.23		1.00	0.66		0.15	1.00		0.46	1.00		0.33
Lane Grp Cap(c), veh/h	281	0	1091	170	0	220	986	0	1245	19	0	313
V/C Ratio(X)	0.49	0.00	0.09	0.37	0.00	0.33	1.01	0.00	0.11	0.58	0.00	0.40
Avail Cap(c_a), veh/h	357	0	1161	230	0	294	986	0	1245	79	0	313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	4.6	38.5	0.0	35.4	20.0	0.0	3.8	44.3	0.0	32.8
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.4	0.0	0.9	31.0	0.0	0.2	25.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.8	1.6	0.0	1.7	32.6	0.0	1.1	0.4	0.0	3.1
LnGrp Delay(d),s/veh	37.8	0.0	4.7	39.8	0.0	36.3	51.0	0.0	3.9	69.4	0.0	36.6
LnGrp LOS	D		A	D		D	F		A	E		D
Approach Vol, veh/h		232			137			1132			137	
Approach Delay, s/veh		24.3			37.9			45.3			39.2	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	69.1		16.0	54.0	20.0		16.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	58.0		16.0	46.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.6	4.2		8.5	52.0	7.7		11.2
Green Ext Time (p_c), s	0.0	6.0		1.1	0.0	0.3		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	41.2
HCM 2010 LOS	D

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												
Volume (veh/h)	30	10	370	40	10	10	1205	725	50	30	585	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	431	42	11	11	1268	763	53	32	616	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	261	443	55	14	14	1625	1612	112	305	616	32
Arrive On Green	0.00	0.00	0.14	0.05	0.05	0.05	0.47	0.48	0.48	0.17	0.18	0.18
Sat Flow, veh/h	0	1863	3167	1150	301	301	3442	3358	233	1774	3423	178
Grp Volume(v), veh/h	0	0	431	64	0	0	1268	402	414	32	318	330
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1752	0	0	1721	1770	1822	1774	1770	1831
Q Serve(g_s), s	0.0	0.0	13.5	3.6	0.0	0.0	30.8	15.3	15.3	1.5	18.0	18.0
Cycle Q Clear(g_c), s	0.0	0.0	13.5	3.6	0.0	0.0	30.8	15.3	15.3	1.5	18.0	18.0
Prop In Lane	0.00		1.00	0.66		0.17	1.00		0.13	1.00		0.10
Lane Grp Cap(c), veh/h	0	261	443	84	0	0	1625	849	874	305	319	330
V/C Ratio(X)	0.00	0.00	0.97	0.76	0.00	0.00	0.78	0.47	0.47	0.10	1.00	1.00
Avail Cap(c_a), veh/h	0	261	443	280	0	0	1625	849	874	305	319	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.36	0.36	0.36	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	42.8	47.0	0.0	0.0	22.1	17.5	17.5	34.9	41.0	41.0
Incr Delay (d2), s/veh	0.0	0.0	35.4	13.3	0.0	0.0	0.9	0.7	0.7	0.1	50.1	49.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	8.1	2.1	0.0	0.0	14.8	7.5	7.9	0.8	13.2	13.6
LnGrp Delay(d),s/veh	0.0	0.0	78.2	60.3	0.0	0.0	23.0	18.2	18.2	35.0	91.1	90.7
LnGrp LOS			E	E			C	B	B	D	F	F
Approach Vol, veh/h		431			64			2084			680	
Approach Delay, s/veh		78.2			60.3			21.1			88.3	
Approach LOS		E			E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.2	52.0		18.0	51.2	22.0		8.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	48.0		14.0	36.0	18.0		16.0
Max Q Clear Time (g_c+I1), s	3.5	17.3		15.5	32.8	20.0		5.6
Green Ext Time (p_c), s	1.4	5.9		0.0	1.8	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

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												
Volume (veh/h)	70	30	445	380	170	880	305	1030	70	20	920	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	53	61	468	267	364	927	321	1084	74	21	968	84
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	256	269	510	389	409	1056	315	1158	79	392	993	444
Arrive On Green	0.14	0.14	0.14	0.22	0.22	0.22	0.18	0.34	0.34	0.11	0.28	0.28
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	3362	229	3442	3539	1583
Grp Volume(v), veh/h	53	61	468	267	364	927	321	570	588	21	968	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1822	1721	1770	1583
Q Serve(g_s), s	2.4	2.6	13.0	12.4	17.1	14.6	16.0	28.1	28.1	0.5	24.4	3.6
Cycle Q Clear(g_c), s	2.4	2.6	13.0	12.4	17.1	14.6	16.0	28.1	28.1	0.5	24.4	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	256	269	510	389	409	1056	315	610	628	392	993	444
V/C Ratio(X)	0.21	0.23	0.92	0.69	0.89	0.88	1.02	0.94	0.94	0.05	0.97	0.19
Avail Cap(c_a), veh/h	256	269	510	394	414	1064	315	610	628	392	993	444
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	0.56	0.56	0.56
Uniform Delay (d), s/veh	34.0	34.1	29.3	32.3	34.1	28.3	37.0	28.5	28.5	35.5	32.1	24.6
Incr Delay (d2), s/veh	0.4	0.4	21.6	4.8	20.5	8.5	55.3	23.6	23.3	0.0	16.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.4	14.2	6.6	11.1	7.6	12.6	17.6	18.1	0.2	14.1	1.7
LnGrp Delay(d),s/veh	34.3	34.5	50.9	37.1	54.6	36.8	92.4	52.2	51.8	35.6	48.3	25.1
LnGrp LOS	C	C	D	D	D	D	F	D	D	D	D	C
Approach Vol, veh/h		582			1558			1479			1073	
Approach Delay, s/veh		47.7			41.0			60.8			46.3	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.3	35.0		17.0	20.0	29.3		23.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	31.0		13.0	16.0	25.0		20.0
Max Q Clear Time (g_c+I1), s	2.5	30.1		15.0	18.0	26.4		19.1
Green Ext Time (p_c), s	4.0	0.6		0.0	0.0	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	49.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	950	1580	30	0	445	775	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1000	1663		0	468	816	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1903	1997		0	1360	1515	0
Arrive On Green	0.55	0.55		0.00	0.38	0.30	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1000	1663		0	468	816	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	23.3	48.7		0.0	12.0	17.1	0.0
Cycle Q Clear(g_c), s	23.3	48.7		0.0	12.0	17.1	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1903	1997		0	1360	1515	0
V/C Ratio(X)	0.53	0.83		0.00	0.34	0.54	0.00
Avail Cap(c_a), veh/h	2510	2632		0	1360	1515	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.0	23.6		0.0	27.9	37.4	0.0
Incr Delay (d2), s/veh	0.2	1.9		0.0	0.7	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	28.7		0.0	6.0	8.2	0.0
LnGrp Delay(d),s/veh	18.2	25.5		0.0	28.6	38.8	0.0
LnGrp LOS	B	C			C	D	
Approach Vol, veh/h	2663				468	816	
Approach Delay, s/veh	22.7				28.6	38.8	
Approach LOS	C				C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		53.0		74.5		42.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		49.0		93.0		38.0		
Max Q Clear Time (g_c+I1), s		14.0		50.7		19.1		
Green Ext Time (p_c), s		3.5		19.8		5.6		

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1230	525	90	1410	275	80
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1295	553	95	1484	289	84
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1792	1201	191	3234	1442	643
Arrive On Green	0.35	0.35	0.11	0.50	0.41	0.41
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1295	553	95	1484	289	84
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	19.9	11.7	4.5	13.4	4.7	3.0
Cycle Q Clear(g_c), s	19.9	11.7	4.5	13.4	4.7	3.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1792	1201	191	3234	1442	643
V/C Ratio(X)	0.72	0.46	0.50	0.46	0.20	0.13
Avail Cap(c_a), veh/h	2091	1294	237	3774	1442	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	4.0	37.8	14.4	17.3	16.7
Incr Delay (d2), s/veh	1.0	0.3	2.0	0.1	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	13.8	2.3	5.9	2.4	1.4
LnGrp Delay(d),s/veh	26.3	4.3	39.8	14.5	17.6	17.2
LnGrp LOS	C	A	D	B	B	B
Approach Vol, veh/h	1848			1579	373	
Approach Delay, s/veh	19.7			16.0	17.5	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		40.6	13.7	35.7				49.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		29.0	12.0	37.0				53.0
Max Q Clear Time (g_c+I1), s		6.7	6.5	21.9				15.4
Green Ext Time (p_c), s		1.3	4.2	9.8				15.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	115	90	40	925	100	60	145	60	110	225	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	121	95	42	974	105	63	153	63	116	237	126
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	80	720	524	58	1146	124	80	509	433	148	581	493
Arrive On Green	0.04	0.37	0.37	0.03	0.36	0.36	0.04	0.27	0.27	0.08	0.31	0.31
Sat Flow, veh/h	1774	1958	1424	1774	3224	347	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	63	108	108	42	535	544	63	153	63	116	237	126
Grp Sat Flow(s),veh/h/ln	1774	1770	1612	1774	1770	1801	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.3	2.7	3.0	1.5	18.4	18.4	2.3	4.3	2.0	4.2	6.6	3.9
Cycle Q Clear(g_c), s	2.3	2.7	3.0	1.5	18.4	18.4	2.3	4.3	2.0	4.2	6.6	3.9
Prop In Lane	1.00		0.88	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	651	593	58	629	641	80	509	433	148	581	493
V/C Ratio(X)	0.79	0.17	0.18	0.73	0.85	0.85	0.79	0.30	0.15	0.78	0.41	0.26
Avail Cap(c_a), veh/h	108	651	593	135	672	684	162	509	433	189	581	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	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	14.0	14.1	31.6	19.6	19.6	31.1	19.0	18.1	29.6	17.9	17.0
Incr Delay (d2), s/veh	24.0	0.1	0.1	15.9	9.6	9.5	15.7	1.5	0.7	15.1	2.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.3	1.3	1.0	10.6	10.8	1.5	2.4	0.9	2.7	3.7	1.9
LnGrp Delay(d),s/veh	55.1	14.1	14.2	47.5	29.2	29.1	46.8	20.5	18.8	44.7	20.0	18.2
LnGrp LOS	E	B	B	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		279			1121			279			479	
Approach Delay, s/veh		23.4			29.8			26.0			25.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	22.0	6.1	28.2	7.0	24.5	7.0	27.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	18.0	5.0	24.0	6.0	19.0	4.0	25.0
Max Q Clear Time (g_c+I1), s	6.2	6.3	3.5	5.0	4.3	8.6	4.3	20.4
Green Ext Time (p_c), s	0.0	2.3	0.0	8.6	0.0	2.2	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	35	35	175	190	230	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	37	184	200	242	142

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	781	192	384	0	-	0
Stage 1	313	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	332	817	1171	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	817	1171	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	491	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	4.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1171	-	273	817	-	-
HCM Lane V/C Ratio	0.157	-	0.135	0.045	-	-
HCM Control Delay (s)	8.6	0.3	20.2	9.6	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	70	140	110	295	165	80
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	74	147	116	311	174	84
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	93	737	919	411	776	776
Arrive On Green	0.05	0.40	0.26	0.26	0.44	0.44
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	74	147	116	311	174	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.0	2.5	1.2	8.7	2.9	1.4
Cycle Q Clear(g_c), s	2.0	2.5	1.2	8.7	2.9	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	737	919	411	776	776
V/C Ratio(X)	0.79	0.20	0.13	0.76	0.22	0.11
Avail Cap(c_a), veh/h	296	1203	1401	627	776	776
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	9.5	13.6	16.4	8.4	6.6
Incr Delay (d2), s/veh	13.9	0.1	0.1	2.9	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.3	0.6	4.1	1.5	1.7
LnGrp Delay(d),s/veh	36.4	9.6	13.7	19.2	9.1	6.9
LnGrp LOS	D	A	B	B	A	A
Approach Vol, veh/h		221	427		258	
Approach Delay, s/veh		18.6	17.7		8.4	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				23.0		25.0	6.5	16.5
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				31.0		21.0	8.0	19.0
Max Q Clear Time (g_c+I1), s				4.5		4.9	4.0	10.7
Green Ext Time (p_c), s				2.8		0.7	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	730	1715	1160	495	0	1180
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	768	1805	1349	436		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	812	4471	2106	597		
Arrive On Green	0.46	0.88	0.75	0.75		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	768	1805	1349	436		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	37.3	6.0	10.3	13.6		
Cycle Q Clear(g_c), s	37.3	6.0	10.3	13.6		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	812	4471	2106	597		
V/C Ratio(X)	0.95	0.40	0.64	0.73		
Avail Cap(c_a), veh/h	926	4859	2173	616		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.69	0.69	0.91	0.91		
Uniform Delay (d), s/veh	23.3	1.0	8.2	8.6		
Incr Delay (d2), s/veh	12.8	0.0	0.6	3.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	21.0	2.7	5.1	6.2		
LnGrp Delay(d),s/veh	36.1	1.1	8.7	12.5		
LnGrp LOS	D	A	A	B		
Approach Vol, veh/h		2573	1785			
Approach Delay, s/veh		11.5	9.7			
Approach LOS		B	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				83.1			45.2	37.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				86.0			47.0	35.0
Max Q Clear Time (g_c+I1), s				8.0			39.3	15.6
Green Ext Time (p_c), s				63.8			1.9	18.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	420	1255	530	210	1760	340	0	0	0	595	10	1730
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	442	1321	558	221	1853	0				634	0	1821
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	378	1908	594	281	1627	507				1372	0	1224
Arrive On Green	0.21	0.38	0.38	0.16	0.32	0.00				0.39	0.00	0.39
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	442	1321	558	221	1853	0				634	0	1821
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	32.0	32.9	51.0	18.0	48.0	0.0				20.0	0.0	58.0
Cycle Q Clear(g_c), s	32.0	32.9	51.0	18.0	48.0	0.0				20.0	0.0	58.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	378	1908	594	281	1627	507				1372	0	1224
V/C Ratio(X)	1.17	0.69	0.94	0.79	1.14	0.00				0.46	0.00	1.49
Avail Cap(c_a), veh/h	378	1932	602	281	1627	507				1372	0	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	59.0	39.6	45.2	60.7	51.0	0.0				34.4	0.0	46.0
Incr Delay (d2), s/veh	100.4	1.1	22.7	13.9	70.5	0.0				1.1	0.0	223.6
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	26.2	15.6	26.1	9.9	33.1	0.0				10.0	0.0	63.4
LnGrp Delay(d),s/veh	159.4	40.6	67.9	74.6	121.5	0.0				35.5	0.0	269.6
LnGrp LOS	F	D	E	E	F					D		F
Approach Vol, veh/h		2321			2074						2455	
Approach Delay, s/veh		69.8			116.5						209.2	
Approach LOS		E			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			27.7	60.3		62.0	36.0	52.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			23.0	57.0		58.0	32.0	48.0
Max Q Clear Time (g_c+I1), s			20.0	53.0		60.0	34.0	50.0
Green Ext Time (p_c), s			2.7	3.3		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	133.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	575	0	280	180	230	0	10	280	150
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	1900	1863	1863
Adj Flow Rate, veh/h				605	0	0	189	242	0	11	295	158
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				705	0	629	391	1717	0	66	699	326
Arrive On Green				0.40	0.00	0.00	0.22	0.49	0.00	0.21	0.21	0.21
Sat Flow, veh/h				1774	0	1583	1774	3632	0	47	3396	1583
Grp Volume(v), veh/h				605	0	0	189	242	0	164	142	158
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	1833	1610	1583
Q Serve(g_s), s				21.2	0.0	0.0	6.3	2.6	0.0	0.0	5.2	6.0
Cycle Q Clear(g_c), s				21.2	0.0	0.0	6.3	2.6	0.0	5.2	5.2	6.0
Prop In Lane				1.00		1.00	1.00		0.00	0.07		1.00
Lane Grp Cap(c), veh/h				705	0	629	391	1717	0	434	331	326
V/C Ratio(X)				0.86	0.00	0.00	0.48	0.14	0.00	0.38	0.43	0.48
Avail Cap(c_a), veh/h				1017	0	908	391	1717	0	434	331	326
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				18.7	0.0	0.0	23.1	9.7	0.0	23.5	23.5	23.8
Incr Delay (d2), s/veh				5.2	0.0	0.0	0.9	0.2	0.0	2.5	4.0	5.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.3	0.0	0.0	3.2	1.3	0.0	3.0	2.7	3.0
LnGrp Delay(d),s/veh				24.0	0.0	0.0	24.1	9.9	0.0	26.0	27.5	28.9
LnGrp LOS				C			C	A		C	C	C
Approach Vol, veh/h					605			431			464	
Approach Delay, s/veh					24.0			16.1			27.5	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		37.0			19.0	18.0		31.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		33.0			15.0	14.0		39.0
Max Q Clear Time (g_c+I1), s		4.6			8.3	8.0		23.2
Green Ext Time (p_c), s		2.2			1.2	1.2		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	190	10	87	653	400	0	53	77	167	238	40	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.87			1.00	0.85		0.91			
Flt Protected	0.95		1.00			0.95	1.00		1.00			
Satd. Flow (prot)	1770		1619			1683	1504		3208			
Flt Permitted	0.95		0.54			0.95	1.00		1.00			
Satd. Flow (perm)	1770		869			1683	1504		3208			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	11	92	687	421	0	56	84	176	251	42	221
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	200	0	790	0	0	427	134	0	464	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	74.0		74.0			20.0	20.0		20.0			
Effective Green, g (s)	74.0		74.0			20.0	20.0		20.0			
Actuated g/C Ratio	0.49		0.49			0.13	0.13		0.13			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	873		428			224	200		427			
v/s Ratio Prot	0.11					c0.25	0.09		c0.14			
v/s Ratio Perm			c0.91									
v/c Ratio	0.23		1.85			1.91	0.67		1.33dr			
Uniform Delay, d1	21.7		38.0			65.0	61.9		65.0			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.1		389.6			424.1	8.5		68.8			
Delay (s)	21.8		427.6			489.1	70.4		133.8			
Level of Service	C		F			F	E		F			
Approach Delay (s)			345.6			389.1			133.8			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	284.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	73	552
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1610	3386
Flt Permitted	0.95	1.00
Satd. Flow (perm)	1610	3386
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	77	581
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	284	595
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	20.0	20.0
Effective Green, g (s)	20.0	20.0
Actuated g/C Ratio	0.13	0.13
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	214	451
v/s Ratio Prot	c0.18	0.18
v/s Ratio Perm		
v/c Ratio	1.33	1.32
Uniform Delay, d1	65.0	65.0
Progression Factor	1.00	1.00
Incremental Delay, d2	175.8	158.6
Delay (s)	240.8	223.6
Level of Service	F	F
Approach Delay (s)		229.2
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	2815	270	710	865	110	220	40	740	70	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	2963	284	747	911	116	232	42	779	74	32	105
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	150	2571	801	820	3560	1152	310	219	564	95	103	88
Arrive On Green	0.04	0.51	0.51	0.24	0.70	0.70	0.09	0.12	0.12	0.03	0.06	0.06
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	105	2963	284	747	911	116	232	42	779	74	32	105
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	4.3	73.0	11.0	30.5	9.5	0.8	9.5	2.9	17.0	3.1	2.4	7.2
Cycle Q Clear(g_c), s	4.3	73.0	11.0	30.5	9.5	0.8	9.5	2.9	17.0	3.1	2.4	7.2
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	150	2571	801	820	3560	1152	310	219	564	95	103	88
V/C Ratio(X)	0.70	1.15	0.35	0.91	0.26	0.10	0.75	0.19	1.38	0.78	0.31	1.20
Avail Cap(c_a), veh/h	215	2571	801	953	3663	1184	310	219	564	95	103	88
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	68.1	35.7	10.7	53.5	7.9	2.0	64.1	57.5	36.2	69.7	65.5	54.6
Incr Delay (d2), s/veh	5.7	73.5	0.3	11.6	0.0	0.0	9.7	1.9	182.9	32.2	7.6	158.4
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	2.2	51.5	5.6	15.8	4.4	0.7	4.9	1.6	49.1	1.9	1.4	7.1
LnGrp Delay(d),s/veh	73.8	109.2	11.0	65.1	8.0	2.1	73.8	59.4	219.1	101.9	73.2	213.0
LnGrp LOS	E	F	B	E	A	A	E	E	F	F	E	F
Approach Vol, veh/h		3352			1774			1053			211	
Approach Delay, s/veh		99.8			31.6			180.7			152.9	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	38.4	77.0	17.0	12.0	10.3	105.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	40.0	73.0	13.0	8.0	9.0	104.0
Max Q Clear Time (g_c+I1), s	5.1	19.0	32.5	75.0	11.5	9.2	6.3	11.5
Green Ext Time (p_c), s	0.0	0.0	1.9	0.0	0.2	0.0	0.1	87.2

Intersection Summary	
HCM 2010 Ctrl Delay	96.0
HCM 2010 LOS	F

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												
Volume (veh/h)	100	2745	370	260	845	50	320	40	410	50	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	2889	389	274	889	53	337	42	432	53	79	64
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	128	2879	1095	271	2913	947	433	400	340	90	214	296
Arrive On Green	0.07	0.57	0.57	0.08	0.57	0.57	0.13	0.21	0.21	0.03	0.11	0.11
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	105	2889	389	274	889	53	337	42	432	53	79	64
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	8.1	79.0	0.0	11.0	12.6	1.9	13.2	2.5	24.8	2.1	5.5	3.5
Cycle Q Clear(g_c), s	8.1	79.0	0.0	11.0	12.6	1.9	13.2	2.5	24.8	2.1	5.5	3.5
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	128	2879	1095	271	2913	947	433	400	340	90	214	296
V/C Ratio(X)	0.82	1.00	0.36	1.01	0.31	0.06	0.78	0.10	1.27	0.59	0.37	0.22
Avail Cap(c_a), veh/h	191	2879	1095	271	2913	947	444	400	340	102	214	296
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	63.9	30.3	8.8	64.3	15.4	11.7	59.1	44.0	37.4	67.3	57.1	28.0
Incr Delay (d2), s/veh	15.9	17.6	0.2	57.2	0.1	0.0	8.4	0.5	142.3	6.9	4.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	41.5	6.1	7.4	5.9	0.8	6.8	1.4	24.3	1.1	3.1	1.8
LnGrp Delay(d),s/veh	79.8	47.9	9.0	121.5	15.5	11.7	67.5	44.5	179.7	74.1	62.0	29.7
LnGrp LOS	E	F	A	F	B	B	E	D	F	E	E	C
Approach Vol, veh/h		3383			1216			811			196	
Approach Delay, s/veh		44.4			39.2			126.1			54.7	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	34.0	15.0	83.0	21.5	20.0	14.1	83.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	11.0	79.0	18.0	16.0	15.0	75.0
Max Q Clear Time (g_c+I1), s	4.1	26.8	13.0	81.0	15.2	7.5	10.1	14.6
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	1.0	0.3	0.1	9.7

Intersection Summary	
HCM 2010 Ctrl Delay	55.5
HCM 2010 LOS	E

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												
Volume (veh/h)	0	0	0	395	0	10	250	140	0	0	10	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				426	0	0	263	147	0	0	11	126
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				545	286	0	989	1411	0	0	275	246
Arrive On Green				0.15	0.00	0.00	0.18	0.25	0.00	0.00	0.16	0.16
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1863	1583
Grp Volume(v), veh/h				426	0	0	263	147	0	0	11	126
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1583
Q Serve(g_s), s				10.4	0.0	0.0	11.4	5.5	0.0	0.0	0.5	6.6
Cycle Q Clear(g_c), s				10.4	0.0	0.0	11.4	5.5	0.0	0.0	0.5	6.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				545	286	0	989	1411	0	0	275	246
V/C Ratio(X)				0.78	0.00	0.00	0.27	0.10	0.00	0.00	0.04	0.51
Avail Cap(c_a), veh/h				1183	621	0	989	1411	0	0	275	246
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.6	0.0	0.0	20.9	10.2	0.0	0.0	32.3	34.9
Incr Delay (d2), s/veh				2.5	0.0	0.0	0.1	0.1	0.0	0.0	0.3	7.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.3	0.0	0.0	5.7	2.9	0.0	0.0	0.3	3.4
LnGrp Delay(d),s/veh				39.1	0.0	0.0	21.1	10.4	0.0	0.0	32.6	42.3
LnGrp LOS				D			C	B			C	D
Approach Vol, veh/h					426			410			137	
Approach Delay, s/veh					39.1			17.2			41.5	
Approach LOS					D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.2			54.2	18.0		17.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		52.0			34.0	14.0		30.0
Max Q Clear Time (g_c+I1), s		7.5			13.4	8.6		12.4
Green Ext Time (p_c), s		1.7			1.6	0.3		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	130	0	0	0	0	290	1140	30	365	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	95	0	137				0	305	1200	32	384	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	198	0	176				0	2281	1020	197	2830	0
Arrive On Green	0.11	0.00	0.11				0.00	1.00	1.00	0.22	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	95	0	137				0	305	1200	32	384	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	4.5	0.0	7.6				0.0	0.0	58.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	4.5	0.0	7.6				0.0	0.0	58.0	1.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	198	0	176				0	2281	1020	197	2830	0
V/C Ratio(X)	0.48	0.00	0.78				0.00	0.13	1.18	0.16	0.14	0.00
Avail Cap(c_a), veh/h	315	0	281				0	2281	1020	197	2830	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.79	0.79	0.96	0.96	0.00
Uniform Delay (d), s/veh	37.5	0.0	38.9				0.0	0.0	0.0	31.7	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	7.2				0.0	0.1	87.7	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	3.7				0.0	0.0	24.8	0.7	0.0	0.0
LnGrp Delay(d),s/veh	39.3	0.0	46.1				0.0	0.1	87.7	32.0	0.1	0.0
LnGrp LOS	D		D					A	F	C	A	
Approach Vol, veh/h		232						1505			416	
Approach Delay, s/veh		43.3						69.9			2.6	
Approach LOS		D						E			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	62.0		14.0		76.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	4.0	58.0		16.0		66.0		
Max Q Clear Time (g_c+I1), s	3.3	60.0		9.6		2.0		
Green Ext Time (p_c), s	0.2	0.0		0.5		2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	54.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	180	410	110	90	40	190	1370	140	50	675	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	221	189	432	116	95	42	200	1442	147	53	711	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	260	277	722	189	202	91	272	1824	186	790	2743	854
Arrive On Green	0.15	0.15	0.15	0.05	0.06	0.06	0.16	0.78	0.78	0.08	0.18	0.18
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4691	478	3442	5085	1583
Grp Volume(v), veh/h	221	189	432	116	95	42	200	1042	547	53	711	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1778	1721	1695	1583
Q Serve(g_s), s	10.9	8.6	8.3	3.0	2.3	1.5	5.0	16.0	16.0	1.3	10.8	9.2
Cycle Q Clear(g_c), s	10.9	8.6	8.3	3.0	2.3	1.5	5.0	16.0	16.0	1.3	10.8	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	260	277	722	189	202	91	272	1318	692	790	2743	854
V/C Ratio(X)	0.85	0.68	0.60	0.61	0.47	0.46	0.74	0.79	0.79	0.07	0.26	0.22
Avail Cap(c_a), veh/h	375	600	1271	229	629	281	382	1318	692	790	2743	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86	0.98	0.98	0.98
Uniform Delay (d), s/veh	37.4	36.3	18.3	41.6	41.1	18.0	37.0	7.9	7.9	32.6	21.5	20.8
Incr Delay (d2), s/veh	11.9	2.9	0.8	3.4	1.7	3.7	3.8	4.2	7.8	0.0	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	4.7	3.7	1.5	1.2	0.8	2.5	7.7	8.8	0.6	5.2	4.2
LnGrp Delay(d),s/veh	49.3	39.2	19.1	45.0	42.8	21.7	40.8	12.1	15.7	32.7	21.7	21.4
LnGrp LOS	D	D	B	D	D	C	D	B	B	C	C	C
Approach Vol, veh/h		842			253			1789			953	
Approach Delay, s/veh		31.5			40.3			16.4			22.3	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.7	39.0	8.9	17.4	11.1	52.5	17.2	9.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	6.0	29.0	10.0	29.0	19.0	16.0
Max Q Clear Time (g_c+I1), s	3.3	18.0	5.0	10.6	7.0	12.8	12.9	4.3
Green Ext Time (p_c), s	0.0	10.3	0.1	2.8	0.2	5.3	0.3	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	430	30	150	270	270	1360	0	0	760	425
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	453	32	158	284	284	1432	0	0	800	447
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	62	304	314	322	3626	0	0	1723	771
Arrive On Green	0.00	0.00	0.00	0.20	0.20	0.20	0.18	0.71	0.00	0.00	0.49	0.49
Sat Flow, veh/h		0		311	1536	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		190	0	284	284	1432	0	0	800	447
Grp Sat Flow(s),veh/h/ln				1847	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				8.3	0.0	15.8	14.0	10.1	0.0	0.0	13.5	18.2
Cycle Q Clear(g_c), s				8.3	0.0	15.8	14.0	10.1	0.0	0.0	13.5	18.2
Prop In Lane				0.17		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				366	0	314	322	3626	0	0	1723	771
V/C Ratio(X)				0.52	0.00	0.91	0.88	0.39	0.00	0.00	0.46	0.58
Avail Cap(c_a), veh/h				369	0	317	394	3626	0	0	1723	771
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				32.3	0.0	35.3	35.9	5.2	0.0	0.0	15.3	16.5
Incr Delay (d2), s/veh				1.3	0.0	27.8	17.5	0.3	0.0	0.0	0.9	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				4.4	0.0	9.3	8.4	4.7	0.0	0.0	6.8	8.5
LnGrp Delay(d),s/veh				33.5	0.0	63.1	53.4	5.5	0.0	0.0	16.2	19.5
LnGrp LOS				C		E	D	A			B	B
Approach Vol, veh/h					474			1716			1247	
Approach Delay, s/veh					51.2			13.4			17.4	
Approach LOS					D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		68.2			20.3	47.8		21.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		53.0			20.0	29.0		18.0
Max Q Clear Time (g_c+I1), s		12.1			16.0	20.2		17.8
Green Ext Time (p_c), s		28.6			0.3	7.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	340	1915	710	150	1125	70	460	70	150	50	60	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	358	2016	747	158	1184	74	484	74	158	53	63	274
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	647	2434	1058	230	1656	409	834	597	534	68	248	372
Arrive On Green	0.25	0.51	0.51	0.07	0.26	0.26	0.24	0.34	0.34	0.04	0.13	0.13
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	358	2016	747	158	1184	74	484	74	158	53	63	274
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	8.1	24.1	8.6	4.0	15.1	2.7	11.2	2.6	6.6	2.7	2.7	8.5
Cycle Q Clear(g_c), s	8.1	24.1	8.6	4.0	15.1	2.7	11.2	2.6	6.6	2.7	2.7	8.5
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	647	2434	1058	230	1656	409	834	597	534	68	248	372
V/C Ratio(X)	0.55	0.83	0.71	0.69	0.71	0.18	0.58	0.12	0.30	0.78	0.25	0.74
Avail Cap(c_a), veh/h	647	2492	1084	306	1994	493	834	597	534	118	248	372
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	19.8	4.0	41.1	30.4	17.8	30.1	20.6	21.9	42.9	35.0	37.5
Incr Delay (d2), s/veh	0.8	1.8	1.5	4.1	1.0	0.2	1.0	0.4	1.4	17.6	2.4	12.3
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	3.9	10.9	3.5	2.0	6.8	1.2	5.4	1.3	3.1	1.6	1.6	3.9
LnGrp Delay(d),s/veh	31.2	21.6	5.5	45.1	31.3	18.0	31.1	21.0	23.3	60.5	37.4	49.8
LnGrp LOS	C	C	A	D	C	B	C	C	C	E	D	D
Approach Vol, veh/h		3121			1416			716			390	
Approach Delay, s/veh		18.8			32.2			28.3			49.3	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	34.4	10.0	38.2	25.8	16.0	20.9	27.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	25.0	8.0	35.0	19.0	12.0	15.0	28.0
Max Q Clear Time (g_c+I1), s	4.7	8.6	6.0	26.1	13.2	10.5	10.1	17.1
Green Ext Time (p_c), s	0.0	3.0	0.1	8.1	1.7	0.2	4.6	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	810	1855	1240	675	1230	1010
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	853	1953	1305	711	1295	1063
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1053	3788	1542	1562	1601	892
Arrive On Green	0.41	0.79	0.24	0.24	0.32	0.32
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	853	1953	1305	711	1295	1063
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	19.7	9.9	17.5	13.5	21.4	28.8
Cycle Q Clear(g_c), s	19.7	9.9	17.5	13.5	21.4	28.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1053	3788	1542	1562	1601	892
V/C Ratio(X)	0.81	0.52	0.85	0.46	0.81	1.19
Avail Cap(c_a), veh/h	1071	3845	1566	1573	1601	892
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.75	0.75	1.00	1.00
Uniform Delay (d), s/veh	24.4	5.0	32.6	11.7	28.1	30.6
Incr Delay (d2), s/veh	2.1	0.1	3.4	0.2	4.5	97.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	8.1	8.8	10.5	30.7
LnGrp Delay(d),s/veh	26.5	5.0	36.0	11.8	32.6	128.1
LnGrp LOS	C	A	D	B	C	F
Approach Vol, veh/h		2806	2016		2358	
Approach Delay, s/veh		11.6	27.5		75.7	
Approach LOS		B	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				57.2		32.8	31.5	25.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				54.0		28.0	28.0	22.0
Max Q Clear Time (g_c+I1), s				11.9		30.8	21.7	19.5
Green Ext Time (p_c), s				30.3		0.0	5.8	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	750	10	360	330
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	789	11	379	347
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1726	400			800	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1726	400			800	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			54	
cM capacity (veh/h)	43	600			819	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	526	274	379	174	174
Volume Left	0	0	379	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	819	1700	1700
Volume to Capacity	0.31	0.16	0.46	0.10	0.10
Queue Length 95th (ft)	0	0	62	0	0
Control Delay (s)	0.0	0.0	13.1	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.8		
Approach LOS					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1525	890	460	1245	590	530	50	780	230	10	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1605	937	484	1311	621	558	53	821	242	11	116
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	181	1638	920	535	1823	999	1119	587	1311	331	160	136
Arrive On Green	0.05	0.26	0.26	0.31	0.72	0.72	0.33	0.32	0.32	0.10	0.09	0.09
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	116	1605	937	484	1311	621	558	53	821	242	11	116
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	3.0	22.4	23.0	12.1	13.5	10.2	11.8	1.8	5.3	6.2	0.5	5.5
Cycle Q Clear(g_c), s	3.0	22.4	23.0	12.1	13.5	10.2	11.8	1.8	5.3	6.2	0.5	5.5
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	181	1638	920	535	1823	999	1119	587	1311	331	160	136
V/C Ratio(X)	0.64	0.98	1.02	0.90	0.72	0.62	0.50	0.09	0.63	0.73	0.07	0.85
Avail Cap(c_a), veh/h	229	1638	920	535	1823	999	1119	587	1311	612	352	299
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	33.3	18.9	30.4	10.1	9.6	24.5	21.7	7.0	39.6	37.8	29.0
Incr Delay (d2), s/veh	3.9	17.7	34.5	12.1	0.8	0.7	1.6	0.3	2.3	3.1	0.2	13.7
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	1.5	11.9	18.4	6.5	6.2	3.8	5.8	1.0	4.6	3.1	0.3	2.9
LnGrp Delay(d),s/veh	45.7	50.9	53.4	42.5	10.9	10.3	26.0	22.0	9.3	42.7	38.0	42.7
LnGrp LOS	D	D	F	D	B	B	C	C	A	D	D	D
Approach Vol, veh/h		2658			2416			1432			369	
Approach Delay, s/veh		51.6			17.1			16.3			42.6	
Approach LOS		D			B			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	32.4	18.0	27.0	33.3	11.7	8.7	36.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	21.0	14.0	23.0	20.0	17.0	6.0	31.0
Max Q Clear Time (g_c+I1), s	8.2	7.3	14.1	25.0	13.8	7.5	5.0	15.5
Green Ext Time (p_c), s	0.5	5.4	0.0	0.0	3.3	0.2	0.0	11.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	310	70	140	450	80	130
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	326	0	147	474	84	137
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1551	483	349	2863	220	628
Arrive On Green	0.31	0.00	0.10	0.56	0.12	0.12
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	326	0	147	474	84	137
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.2	0.0	1.0	1.1	1.1	1.0
Cycle Q Clear(g_c), s	1.2	0.0	1.0	1.1	1.1	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1551	483	349	2863	220	628
V/C Ratio(X)	0.21	0.00	0.42	0.17	0.38	0.22
Avail Cap(c_a), veh/h	3383	1053	943	5572	625	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.6	0.0	10.8	2.7	10.3	8.1
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.0	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.5	0.5	0.6	0.4
LnGrp Delay(d),s/veh	6.7	0.0	11.6	2.7	11.4	8.2
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	326			621	221	
Approach Delay, s/veh	6.7			4.8	9.4	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.2	6.6	11.8				18.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		9.0	7.0	17.0				28.0
Max Q Clear Time (g_c+I1), s		3.1	3.0	3.2				3.1
Green Ext Time (p_c), s		0.4	0.1	4.6				5.9

Intersection Summary	
HCM 2010 Ctrl Delay	6.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	30	60	50	10	30	210	40	10	180	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	42	32	63	53	11	32	221	42	11	189	32
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	85	65	90	134	28	53	1349	252	12	1306	217
Arrive On Green	0.05	0.09	0.09	0.05	0.09	0.09	0.03	0.45	0.45	0.01	0.43	0.43
Sat Flow, veh/h	1774	982	748	1774	1497	311	1774	2978	556	1774	3037	506
Grp Volume(v), veh/h	42	0	74	63	0	64	32	130	133	11	109	112
Grp Sat Flow(s),veh/h/ln	1774	0	1731	1774	0	1808	1774	1770	1765	1774	1770	1774
Q Serve(g_s), s	0.9	0.0	1.6	1.4	0.0	1.3	0.7	1.7	1.8	0.2	1.5	1.5
Cycle Q Clear(g_c), s	0.9	0.0	1.6	1.4	0.0	1.3	0.7	1.7	1.8	0.2	1.5	1.5
Prop In Lane	1.00		0.43	1.00		0.17	1.00		0.32	1.00		0.29
Lane Grp Cap(c), veh/h	84	0	150	90	0	162	53	802	800	12	761	762
V/C Ratio(X)	0.50	0.00	0.49	0.70	0.00	0.39	0.60	0.16	0.17	0.93	0.14	0.15
Avail Cap(c_a), veh/h	223	0	697	268	0	774	223	802	800	179	761	762
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	18.5	0.0	17.3	18.6	0.0	17.1	19.0	6.4	6.4	19.7	6.9	6.9
Incr Delay (d2), s/veh	4.5	0.0	2.5	9.6	0.0	1.6	10.5	0.4	0.4	102.1	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	0.5	0.0	0.9	0.9	0.0	0.7	0.5	0.9	1.0	0.5	0.8	0.8
LnGrp Delay(d),s/veh	22.9	0.0	19.8	28.2	0.0	18.6	29.5	6.8	6.9	121.8	7.3	7.3
LnGrp LOS	C		B	C		B	C	A	A	F	A	A
Approach Vol, veh/h		116			127			295			232	
Approach Delay, s/veh		20.9			23.4			9.3			12.7	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	22.0	6.0	7.5	5.2	21.1	5.9	7.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	2.2	3.8	3.4	3.6	2.7	3.5	2.9	3.3
Green Ext Time (p_c), s	0.0	1.2	0.1	0.2	0.0	1.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	70	90	20	50	10	90	50	30	10	40	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	74	95	21	53	11	95	53	32	11	42	21
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	179	320	199	299	64	122	559	337	21	535	267
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.07	0.51	0.51	0.01	0.46	0.46
Sat Flow, veh/h	374	1340	1583	390	2240	478	1774	1089	658	1774	1173	586
Grp Volume(v), veh/h	106	0	95	48	0	37	95	0	85	11	0	63
Grp Sat Flow(s),veh/h/ln	1714	0	1583	1497	0	1611	1774	0	1747	1774	0	1759
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.7	1.8	0.0	0.9	0.2	0.0	0.7
Cycle Q Clear(g_c), s	1.9	0.0	0.0	1.9	0.0	0.7	1.8	0.0	0.9	0.2	0.0	0.7
Prop In Lane	0.30		1.00	0.44		0.30	1.00		0.38	1.00		0.33
Lane Grp Cap(c), veh/h	362	0	320	347	0	215	122	0	896	21	0	802
V/C Ratio(X)	0.29	0.00	0.30	0.14	0.00	0.17	0.78	0.00	0.09	0.53	0.00	0.08
Avail Cap(c_a), veh/h	899	0	831	834	0	734	303	0	896	202	0	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	11.9	13.5	0.0	13.5	16.1	0.0	4.4	17.2	0.0	5.4
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.2	0.0	0.4	10.2	0.0	0.2	19.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.8	0.4	0.0	0.3	1.2	0.0	0.5	0.2	0.0	0.4
LnGrp Delay(d),s/veh	14.4	0.0	12.4	13.7	0.0	13.9	26.3	0.0	4.6	37.1	0.0	5.6
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		201			85			180			74	
Approach Delay, s/veh		13.5			13.8			16.0			10.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	22.0		8.7	6.4	20.0		8.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	2.9		3.9	3.8	2.7		3.9
Green Ext Time (p_c), s	0.0	0.6		1.1	0.1	0.2		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	180	50	0	0	260	300	30	10	230	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	208	53	0	0	274	316	32	11	242	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	194	329	76	0	0	419	1511	152	59	1299	59
Arrive On Green	0.00	0.00	0.10	0.04	0.00	0.00	0.12	0.47	0.47	0.03	0.38	0.38
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	3248	327	1774	3449	156
Grp Volume(v), veh/h	0	0	208	53	0	0	274	171	177	11	124	129
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1805	1774	1770	1835
Q Serve(g_s), s	0.0	0.0	2.8	1.3	0.0	0.0	3.4	2.6	2.6	0.3	2.1	2.1
Cycle Q Clear(g_c), s	0.0	0.0	2.8	1.3	0.0	0.0	3.4	2.6	2.6	0.3	2.1	2.1
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.18	1.00		0.09
Lane Grp Cap(c), veh/h	0	194	329	76	0	0	419	823	840	59	667	691
V/C Ratio(X)	0.00	0.00	0.63	0.69	0.00	0.00	0.65	0.21	0.21	0.19	0.19	0.19
Avail Cap(c_a), veh/h	0	330	561	629	0	0	610	823	840	157	667	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	19.4	21.3	0.0	0.0	18.9	7.1	7.2	21.2	9.4	9.4
Incr Delay (d2), s/veh	0.0	0.0	2.0	10.7	0.0	0.0	1.7	0.6	0.6	1.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.3	0.9	0.0	0.0	1.7	1.4	1.4	0.2	1.1	1.2
LnGrp Delay(d),s/veh	0.0	0.0	21.4	32.0	0.0	0.0	20.6	7.7	7.7	22.7	10.0	10.0
LnGrp LOS			C	C			C	A	A	C	B	B
Approach Vol, veh/h		208			53			622			264	
Approach Delay, s/veh		21.4			32.0			13.4			10.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	25.0		8.7	9.5	21.0		5.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	21.0		8.0	8.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	4.6		4.8	5.4	4.1		3.3
Green Ext Time (p_c), s	0.2	1.8		0.2	0.3	1.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	30	160	190	80	170	130	380	130	20	380	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	37	39	168	228	135	119	137	400	137	21	400	53
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	104	109	381	440	231	227	323	1459	494	66	1413	632
Arrive On Green	0.06	0.06	0.06	0.12	0.12	0.12	0.18	0.56	0.56	0.02	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	2598	880	3442	3539	1583
Grp Volume(v), veh/h	37	39	168	228	135	119	137	271	266	21	400	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1708	1721	1770	1583
Q Serve(g_s), s	1.4	1.4	0.0	4.1	4.6	3.4	4.6	5.4	5.5	0.4	5.2	1.4
Cycle Q Clear(g_c), s	1.4	1.4	0.0	4.1	4.6	3.4	4.6	5.4	5.5	0.4	5.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	104	109	381	440	231	227	323	994	959	66	1413	632
V/C Ratio(X)	0.36	0.36	0.44	0.52	0.58	0.52	0.42	0.27	0.28	0.32	0.28	0.08
Avail Cap(c_a), veh/h	367	386	616	1154	606	545	551	994	959	509	1413	632
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	30.6	30.6	21.8	27.7	28.0	26.8	24.5	7.7	7.7	32.7	13.8	12.6
Incr Delay (d2), s/veh	2.1	2.0	0.8	0.9	2.3	1.9	0.9	0.7	0.7	2.7	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.8	2.7	2.1	2.5	2.0	2.3	2.7	2.7	0.2	2.6	0.7
LnGrp Delay(d),s/veh	32.7	32.6	22.6	28.7	30.3	28.7	25.4	8.3	8.4	35.4	14.3	12.9
LnGrp LOS	C	C	C	C	C	C	C	A	A	D	B	B
Approach Vol, veh/h		244			482			674			474	
Approach Delay, s/veh		25.8			29.2			11.8			15.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	42.0		8.0	16.3	31.0		12.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	38.0		14.0	21.0	27.0		22.0
Max Q Clear Time (g_c+I1), s	2.4	7.5		3.4	6.6	7.2		6.6
Green Ext Time (p_c), s	0.2	3.6		0.6	0.3	2.7		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	340	580	50	0	290	330	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	358	611		0	305	347	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	903	947		0	1837	1250	0
Arrive On Green	0.26	0.26		0.00	0.52	0.25	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	358	611		0	305	347	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	3.1	5.5		0.0	1.7	2.0	0.0
Cycle Q Clear(g_c), s	3.1	5.5		0.0	1.7	2.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	903	947		0	1837	1250	0
V/C Ratio(X)	0.40	0.65		0.00	0.17	0.28	0.00
Avail Cap(c_a), veh/h	1222	1282		0	1837	1250	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.1	12.0		0.0	4.6	11.2	0.0
Incr Delay (d2), s/veh	0.3	0.7		0.0	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.6		0.0	0.9	1.0	0.0
LnGrp Delay(d),s/veh	11.4	12.7		0.0	4.8	11.7	0.0
LnGrp LOS	B	B			A	B	
Approach Vol, veh/h	969				305	347	
Approach Delay, s/veh	12.2				4.8	11.7	
Approach LOS	B				A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		23.0		13.6		13.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		19.0		13.0		9.0		
Max Q Clear Time (g_c+I1), s		3.7		7.5		4.0		
Green Ext Time (p_c), s		1.7		2.1		1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	470	210	30	590	170	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	495	221	32	621	179	53
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1351	1090	53	2494	1500	670
Arrive On Green	0.27	0.27	0.03	0.39	0.42	0.42
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	495	221	32	621	179	53
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	3.4	2.2	0.8	2.8	1.3	0.9
Cycle Q Clear(g_c), s	3.4	2.2	0.8	2.8	1.3	0.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1351	1090	53	2494	1500	670
V/C Ratio(X)	0.37	0.20	0.61	0.25	0.12	0.08
Avail Cap(c_a), veh/h	1911	1265	167	3613	1500	670
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	12.7	2.4	20.4	8.8	7.5	7.3
Incr Delay (d2), s/veh	0.2	0.1	10.9	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.2	0.5	1.2	0.7	0.4
LnGrp Delay(d),s/veh	12.9	2.5	31.3	8.8	7.6	7.6
LnGrp LOS	B	A	C	A	A	A
Approach Vol, veh/h	716			653	232	
Approach Delay, s/veh	9.7			9.9	7.6	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		22.0	5.3	15.3				20.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		18.0	4.0	16.0				24.0
Max Q Clear Time (g_c+I1), s		3.3	2.8	5.4				4.8
Green Ext Time (p_c), s		0.6	0.0	5.9				8.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	60	40	40	50	70	40	50	40	80	60	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	63	42	42	53	74	42	53	42	84	63	32
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	37	207	126	66	202	181	66	774	658	107	817	694
Arrive On Green	0.02	0.10	0.10	0.04	0.11	0.11	0.04	0.42	0.42	0.06	0.44	0.44
Sat Flow, veh/h	1774	2112	1293	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	21	52	53	42	53	74	42	53	42	84	63	32
Grp Sat Flow(s),veh/h/ln	1774	1770	1635	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.5	1.1	1.2	1.0	1.1	1.8	1.0	0.7	0.7	1.9	0.8	0.5
Cycle Q Clear(g_c), s	0.5	1.1	1.2	1.0	1.1	1.8	1.0	0.7	0.7	1.9	0.8	0.5
Prop In Lane	1.00		0.79	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	173	160	66	202	181	66	774	658	107	817	694
V/C Ratio(X)	0.57	0.30	0.33	0.64	0.26	0.41	0.64	0.07	0.06	0.79	0.08	0.05
Avail Cap(c_a), veh/h	173	690	637	216	733	656	216	774	658	302	817	694
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	19.9	17.2	17.3	19.5	16.6	16.9	19.5	7.2	7.2	19.0	6.7	6.6
Incr Delay (d2), s/veh	13.1	1.0	1.2	9.8	0.7	1.5	9.8	0.2	0.2	12.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.6	0.6	0.6	0.9	0.6	0.4	0.3	1.3	0.4	0.2
LnGrp Delay(d),s/veh	33.1	18.2	18.5	29.3	17.3	18.4	29.3	7.4	7.4	31.1	6.9	6.7
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		126			169			137			179	
Approach Delay, s/veh		20.8			20.8			14.1			18.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	21.1	5.5	8.0	5.5	22.0	4.9	8.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	5.0	16.0	5.0	18.0	4.0	17.0
Max Q Clear Time (g_c+I1), s	3.9	2.7	3.0	3.2	3.0	2.8	2.5	3.8
Green Ext Time (p_c), s	0.0	0.6	0.0	1.0	0.0	0.7	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	20	20	90	120	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	21	21	95	126	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	226	74	147	0	-	0
Stage 1	137	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	742	973	1432	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	731	973	1432	-	-	-
Mov Cap-2 Maneuver	731	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1432	-	731	973	-	-
HCM Lane V/C Ratio	0.015	-	0.029	0.022	-	-
HCM Control Delay (s)	7.6	0	10.1	8.8	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	40	50	90	110	30
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	42	53	95	116	32
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	37	461	391	175	924	858
Arrive On Green	0.02	0.25	0.11	0.11	0.52	0.52
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	21	42	53	95	116	32
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.4	0.6	0.5	2.0	1.2	0.3
Cycle Q Clear(g_c), s	0.4	0.6	0.5	2.0	1.2	0.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	37	461	391	175	924	858
V/C Ratio(X)	0.56	0.09	0.14	0.54	0.13	0.04
Avail Cap(c_a), veh/h	205	1294	1639	733	924	858
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	16.8	10.0	13.9	14.5	4.2	3.7
Incr Delay (d2), s/veh	12.4	0.1	0.2	2.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.2	1.0	0.6	0.5
LnGrp Delay(d),s/veh	29.2	10.1	14.0	17.1	4.5	3.8
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		63	148		148	
Approach Delay, s/veh		16.5	16.0		4.4	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				12.5		22.0	4.7	7.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				24.0		18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s				2.6		3.2	2.4	4.0
Green Ext Time (p_c), s				0.8		0.3	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	160	690	480	270	0	320
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	168	726	635	197		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	226	4293	3134	888		
Arrive On Green	0.13	0.84	0.56	0.56		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	168	726	635	197		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	2.3	0.7	1.4	1.6		
Cycle Q Clear(g_c), s	2.3	0.7	1.4	1.6		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	226	4293	3134	888		
V/C Ratio(X)	0.74	0.17	0.20	0.22		
Avail Cap(c_a), veh/h	1175	9116	5444	1543		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.8	0.4	2.8	2.8		
Incr Delay (d2), s/veh	4.8	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	0.3	0.7	0.7		
LnGrp Delay(d),s/veh	15.6	0.4	2.8	3.0		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		894	832			
Approach Delay, s/veh		3.2	2.9			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				25.7			7.3	18.4
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				46.0			17.0	25.0
Max Q Clear Time (g_c+I1), s				2.7			4.3	3.6
Green Ext Time (p_c), s				14.4			0.3	10.8

Intersection Summary	
HCM 2010 Ctrl Delay	3.1
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	280	120	110	490	220	0	0	0	260	0	430
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	158	295	126	116	516	0				274	0	453
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	209	1219	380	152	1057	329				1523	0	1359
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.00				0.43	0.00	0.43
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	158	295	126	116	516	0				274	0	453
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	4.2	2.3	3.2	3.1	4.4	0.0				2.3	0.0	4.7
Cycle Q Clear(g_c), s	4.2	2.3	3.2	3.1	4.4	0.0				2.3	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	209	1219	380	152	1057	329				1523	0	1359
V/C Ratio(X)	0.76	0.24	0.33	0.76	0.49	0.00				0.18	0.00	0.33
Avail Cap(c_a), veh/h	617	1975	615	471	1559	485				1523	0	1359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	15.0	15.4	21.9	17.1	0.0				8.6	0.0	9.3
Incr Delay (d2), s/veh	5.6	0.1	0.5	7.7	0.4	0.0				0.3	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	2.4	1.1	1.5	1.8	2.1	0.0				1.2	0.0	2.1
LnGrp Delay(d),s/veh	26.5	15.1	15.9	29.6	17.4	0.0				8.9	0.0	10.0
LnGrp LOS	C	B	B	C	B					A		A
Approach Vol, veh/h		579			632						727	
Approach Delay, s/veh		18.4			19.7						9.6	
Approach LOS		B			B						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			8.2	15.7		25.0	9.7	14.2
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			13.0	19.0		21.0	17.0	15.0
Max Q Clear Time (g_c+I1), s			5.1	5.2		6.7	6.2	6.4
Green Ext Time (p_c), s			0.2	5.1		2.6	0.3	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	330	0	90	50	70	0	0	210	100
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				347	0	0	53	74	0	0	221	105
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				474	0	423	271	1729	0	0	756	338
Arrive On Green				0.27	0.00	0.00	0.15	0.49	0.00	0.00	0.21	0.21
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				347	0	0	53	74	0	0	221	105
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.8	0.0	0.0	0.9	0.4	0.0	0.0	1.7	1.8
Cycle Q Clear(g_c), s				5.8	0.0	0.0	0.9	0.4	0.0	0.0	1.7	1.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				474	0	423	271	1729	0	0	756	338
V/C Ratio(X)				0.73	0.00	0.00	0.20	0.04	0.00	0.00	0.29	0.31
Avail Cap(c_a), veh/h				867	0	773	271	1729	0	0	756	338
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				10.9	0.0	0.0	12.1	4.4	0.0	0.0	10.8	10.8
Incr Delay (d2), s/veh				2.2	0.0	0.0	0.3	0.0	0.0	0.0	1.0	2.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.1	0.0	0.0	0.4	0.2	0.0	0.0	0.9	1.0
LnGrp Delay(d),s/veh				13.1	0.0	0.0	12.5	4.4	0.0	0.0	11.8	13.2
LnGrp LOS				B			B	A			B	B
Approach Vol, veh/h					347			127			326	
Approach Delay, s/veh					13.1			7.8			12.2	
Approach LOS					B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			9.0	11.0		12.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		16.0			5.0	7.0		16.0
Max Q Clear Time (g_c+I1), s		2.4			2.9	3.8		7.8
Green Ext Time (p_c), s		0.4			0.1	0.5		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	50	27	103	20	0	51	29	19	11	10	150	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.88			0.91	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.98	1.00		1.00				0.95
Satd. Flow (prot)	1770	1641			1577	1504		3255				1610
Flt Permitted	0.95	1.00			0.98	1.00		1.00				0.95
Satd. Flow (perm)	1770	1641			1577	1504		3255				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	28	108	21	0	54	32	20	12	11	158	77
RTOR Reduction (vph)	0	0	0	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	53	136	0	0	54	53	0	35	0	0	0	181
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	9.0	9.0			5.1	5.1		19.7				17.7
Effective Green, g (s)	9.0	9.0			5.1	5.1		19.7				17.7
Actuated g/C Ratio	0.13	0.13			0.08	0.08		0.29				0.26
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	236	218			119	113		949				422
v/s Ratio Prot	0.03	c0.08			0.03	c0.04		c0.01				c0.11
v/s Ratio Perm												
v/c Ratio	0.22	0.62			0.45	0.47		0.04				0.43
Uniform Delay, d1	26.1	27.6			29.9	29.9		17.1				20.7
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.5	5.5			2.7	3.1		0.1				3.2
Delay (s)	26.6	33.1			32.6	33.0		17.2				23.9
Level of Service	C	C			C	C		B				C
Approach Delay (s)		31.3			32.8			17.2				
Approach LOS		C			C			B				

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	307
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3366
Flt Permitted	0.99
Satd. Flow (perm)	3366
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	323
RTOR Reduction (vph)	0
Lane Group Flow (vph)	377
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	17.7
Effective Green, g (s)	17.7
Actuated g/C Ratio	0.26
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	882
v/s Ratio Prot	0.11
v/s Ratio Perm	
v/c Ratio	0.43
Uniform Delay, d1	20.7
Progression Factor	1.00
Incremental Delay, d2	1.5
Delay (s)	22.2
Level of Service	C
Approach Delay (s)	22.7
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	330	80	280	350	40	60	10	210	50	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	347	84	295	368	42	63	11	221	53	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	100	737	229	474	1290	469	156	632	755	146	626	532
Arrive On Green	0.03	0.14	0.14	0.14	0.25	0.25	0.05	0.34	0.34	0.04	0.34	0.34
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	32	347	84	295	368	42	63	11	221	53	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.4	3.0	2.3	3.8	2.8	0.9	0.8	0.2	1.0	0.7	0.6	1.1
Cycle Q Clear(g_c), s	0.4	3.0	2.3	3.8	2.8	0.9	0.8	0.2	1.0	0.7	0.6	1.1
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	100	737	229	474	1290	469	156	632	755	146	626	532
V/C Ratio(X)	0.32	0.47	0.37	0.62	0.29	0.09	0.40	0.02	0.29	0.36	0.05	0.14
Avail Cap(c_a), veh/h	289	1709	532	578	2136	732	289	632	755	289	626	532
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	22.7	18.7	18.4	19.4	14.3	12.1	22.1	10.5	1.9	22.2	10.7	5.4
Incr Delay (d2), s/veh	1.8	0.5	1.0	1.4	0.1	0.1	1.7	0.1	1.0	1.5	0.2	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	0.2	1.4	1.1	1.9	1.3	0.4	0.4	0.1	1.0	0.4	0.3	0.7
LnGrp Delay(d),s/veh	24.5	19.1	19.4	20.8	14.4	12.2	23.8	10.5	2.9	23.7	10.8	6.0
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	A
Approach Vol, veh/h		463			705			295			159	
Approach Delay, s/veh		19.6			17.0			7.6			12.9	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	20.1	10.6	10.9	6.2	20.0	5.4	16.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	2.7	3.0	5.8	5.0	2.8	3.1	2.4	4.8
Green Ext Time (p_c), s	0.0	0.8	0.8	1.9	0.0	0.2	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	340	60	100	350	30	60	10	80	30	20	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	358	63	105	368	32	63	11	84	32	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	109	755	310	218	763	313	164	749	637	169	749	734
Arrive On Green	0.06	0.15	0.15	0.06	0.15	0.15	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	21	358	63	105	368	32	63	11	84	32	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.5	3.0	1.6	1.4	3.1	0.0	0.8	0.2	1.0	0.4	1.1	0.2
Cycle Q Clear(g_c), s	0.5	3.0	1.6	1.4	3.1	0.0	0.8	0.2	1.0	0.4	1.1	0.2
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	109	755	310	218	763	313	164	749	637	169	749	734
V/C Ratio(X)	0.19	0.47	0.20	0.48	0.48	0.10	0.38	0.01	0.13	0.19	0.09	0.07
Avail Cap(c_a), veh/h	150	1722	612	364	1829	645	291	749	637	300	749	734
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	21.1	18.4	15.9	21.4	18.4	15.5	21.8	8.5	3.3	21.6	8.8	1.8
Incr Delay (d2), s/veh	0.8	0.5	0.3	1.6	0.5	0.1	1.5	0.0	0.4	0.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	0.7	0.7	1.5	0.3	0.4	0.1	0.7	0.2	0.6	0.2
LnGrp Delay(d),s/veh	21.9	18.9	16.2	23.0	18.9	15.7	23.3	8.5	3.8	22.2	9.0	2.0
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		442			505			158			152	
Approach Delay, s/veh		18.7			19.5			11.9			9.4	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	23.0	7.0	11.0	6.3	23.0	6.9	11.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	4.0	19.0	4.0	17.0
Max Q Clear Time (g_c+I1), s	2.4	3.0	3.4	5.0	2.8	3.1	2.5	5.1
Green Ext Time (p_c), s	0.1	0.2	0.0	2.0	0.0	0.5	0.4	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	90	0	40	110	60	0	0	40	20
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				68	37	42	116	63	0	0	42	21
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				140	63	71	954	1468	0	0	430	200
Arrive On Green				0.08	0.08	0.08	0.54	0.79	0.00	0.00	0.18	0.18
Sat Flow, veh/h				1774	798	905	1774	1863	0	0	2440	1093
Grp Volume(v), veh/h				68	0	79	116	63	0	0	31	32
Grp Sat Flow(s),veh/h/ln				1774	0	1703	1774	1863	0	0	1770	1670
Q Serve(g_s), s				2.2	0.0	2.7	1.9	0.4	0.0	0.0	0.9	1.0
Cycle Q Clear(g_c), s				2.2	0.0	2.7	1.9	0.4	0.0	0.0	0.9	1.0
Prop In Lane				1.00		0.53	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				140	0	134	954	1468	0	0	324	306
V/C Ratio(X)				0.49	0.00	0.59	0.12	0.04	0.00	0.00	0.10	0.10
Avail Cap(c_a), veh/h				591	0	568	954	1468	0	0	324	306
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.5	0.0	26.7	6.9	1.4	0.0	0.0	20.4	20.4
Incr Delay (d2), s/veh				2.6	0.0	4.1	0.1	0.1	0.0	0.0	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
%ile BackOfQ(50%),veh/ln				1.2	0.0	1.4	0.9	0.2	0.0	0.0	0.5	0.5
LnGrp Delay(d),s/veh				29.1	0.0	30.8	6.9	1.5	0.0	0.0	20.9	21.1
LnGrp LOS				C		C	A	A			C	C
Approach Vol, veh/h					147			179			63	
Approach Delay, s/veh					30.0			5.0			21.0	
Approach LOS					C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		51.3			36.3	15.0		8.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		32.0			17.0	11.0		20.0
Max Q Clear Time (g_c+I1), s		2.4			3.9	3.0		4.7
Green Ext Time (p_c), s		0.7			0.5	0.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	30	0	0	0	0	110	110	20	100	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	53	0	32				0	116	116	21	105	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	90	0	80				0	1180	528	738	2888	0
Arrive On Green	0.05	0.00	0.05				0.00	0.33	0.33	0.42	0.82	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	53	0	32				0	116	116	21	105	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.8	0.0	1.2				0.0	1.4	3.2	0.4	0.3	0.0
Cycle Q Clear(g_c), s	1.8	0.0	1.2				0.0	1.4	3.2	0.4	0.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	90	0	80				0	1180	528	738	2888	0
V/C Ratio(X)	0.59	0.00	0.40				0.00	0.10	0.22	0.03	0.04	0.00
Avail Cap(c_a), veh/h	591	0	528				0	1180	528	738	2888	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	0.0	27.6				0.0	13.8	14.4	10.4	1.0	0.0
Incr Delay (d2), s/veh	6.0	0.0	3.2				0.0	0.2	1.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.6				0.0	0.7	1.5	0.2	0.2	0.0
LnGrp Delay(d),s/veh	33.9	0.0	30.8				0.0	14.0	15.3	10.4	1.1	0.0
LnGrp LOS	C		C					B	B	B	A	
Approach Vol, veh/h		85						232			126	
Approach Delay, s/veh		32.7						14.6			2.6	
Approach LOS		C						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	29.0	24.0		7.0		53.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	8.0	20.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	2.4	5.2		3.8		2.3		
Green Ext Time (p_c), s	0.2	0.9		0.3		0.7		

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	80	20	50	10	80	250	40	10	200	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	21	32	84	21	53	11	84	263	42	11	211	42
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	35	120	1204	68	228	102	1088	1481	229	1088	1695	528
Arrive On Green	0.02	0.06	0.06	0.02	0.06	0.06	0.32	0.33	0.33	0.32	0.33	0.33
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4444	688	3442	5085	1583
Grp Volume(v), veh/h	21	32	84	21	53	11	84	199	106	11	211	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1741	1721	1695	1583
Q Serve(g_s), s	0.7	1.0	0.1	0.4	0.9	0.2	1.0	2.5	2.6	0.1	1.7	0.8
Cycle Q Clear(g_c), s	0.7	1.0	0.1	0.4	0.9	0.2	1.0	2.5	2.6	0.1	1.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	35	120	1204	68	228	102	1088	1130	580	1088	1695	528
V/C Ratio(X)	0.60	0.27	0.07	0.31	0.23	0.11	0.08	0.18	0.18	0.01	0.12	0.08
Avail Cap(c_a), veh/h	118	497	1845	229	944	422	1088	1130	580	1088	1695	528
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	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	26.7	5.2	29.0	26.7	7.1	14.4	14.2	14.2	14.1	13.9	8.1
Incr Delay (d2), s/veh	15.5	1.2	0.0	2.6	0.5	0.5	0.0	0.3	0.7	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.5	0.3	0.2	0.4	0.1	0.5	1.2	1.4	0.1	0.8	0.4
LnGrp Delay(d),s/veh	44.6	27.9	5.2	31.6	27.2	7.6	14.4	14.5	14.9	14.1	14.1	8.4
LnGrp LOS	D	C	A	C	C	A	B	B	B	B	B	A
Approach Vol, veh/h		137			85			389			264	
Approach Delay, s/veh		16.5			25.7			14.6			13.2	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	24.0	5.2	7.9	23.0	24.0	5.2	7.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	4.0	16.0	4.0	20.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	4.6	2.4	3.0	3.0	3.7	2.7	2.9
Green Ext Time (p_c), s	0.0	1.6	0.0	0.6	0.0	1.3	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	70	20	60	110	90	250	0	0	180	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	11	0	74	21	63	116	95	263	0	0	189	126
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	47	142	163	587	3885	0	0	1298	581
Arrive On Green	0.00	0.00	0.00	0.10	0.10	0.10	0.33	0.76	0.00	0.00	0.73	0.73
Sat Flow, veh/h		0		460	1380	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		84	0	116	95	263	0	0	189	126
Grp Sat Flow(s),veh/h/ln				1840	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				2.6	0.0	4.3	2.3	0.8	0.0	0.0	1.0	1.5
Cycle Q Clear(g_c), s				2.6	0.0	4.3	2.3	0.8	0.0	0.0	1.0	1.5
Prop In Lane				0.25		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				189	0	163	587	3885	0	0	1298	581
V/C Ratio(X)				0.44	0.00	0.71	0.16	0.07	0.00	0.00	0.15	0.22
Avail Cap(c_a), veh/h				245	0	211	587	3885	0	0	1298	581
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.3	0.0	26.1	14.2	1.8	0.0	0.0	5.2	5.3
Incr Delay (d2), s/veh				1.6	0.0	7.7	0.1	0.0	0.0	0.0	0.2	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
%ile BackOfQ(50%),veh/ln				1.4	0.0	2.2	1.1	0.4	0.0	0.0	0.5	0.8
LnGrp Delay(d),s/veh				27.0	0.0	33.7	14.3	1.8	0.0	0.0	5.4	6.1
LnGrp LOS				C		C	B	A			A	A
Approach Vol, veh/h					200			358			315	
Approach Delay, s/veh					30.9			5.1			5.7	
Approach LOS					C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		49.8			23.8	26.0		10.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		36.0			10.0	22.0		8.0
Max Q Clear Time (g_c+I1), s		2.8			4.3	3.5		6.3
Green Ext Time (p_c), s		2.1			1.0	1.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	330	310	40	450	40	110	20	20	10	30	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	347	326	42	474	42	116	21	21	11	32	84
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	290	1228	534	116	903	223	1405	539	468	369	186	279
Arrive On Green	0.08	0.19	0.19	0.03	0.14	0.14	0.41	0.30	0.30	0.21	0.10	0.10
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1798	1559	1774	1863	2787
Grp Volume(v), veh/h	168	347	326	42	474	42	116	21	21	11	32	84
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1588	1774	1863	1393
Q Serve(g_s), s	2.8	2.8	2.1	0.7	4.1	1.4	1.2	0.5	0.6	0.3	0.9	1.7
Cycle Q Clear(g_c), s	2.8	2.8	2.1	0.7	4.1	1.4	1.2	0.5	0.6	0.3	0.9	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	290	1228	534	116	903	223	1405	531	476	369	186	279
V/C Ratio(X)	0.58	0.28	0.61	0.36	0.52	0.19	0.08	0.04	0.04	0.03	0.17	0.30
Avail Cap(c_a), veh/h	344	1922	836	229	1709	422	1405	531	476	369	186	279
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)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	20.7	2.4	28.4	23.9	22.7	10.9	14.9	14.9	18.9	24.7	25.1
Incr Delay (d2), s/veh	1.8	0.1	1.1	1.9	0.5	0.4	0.1	0.1	0.2	0.1	2.0	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	1.4	1.2	0.9	0.4	1.8	0.6	0.6	0.3	0.3	0.2	0.6	0.7
LnGrp Delay(d),s/veh	28.2	20.8	3.5	30.3	24.4	23.1	11.0	15.0	15.1	19.1	26.7	27.8
LnGrp LOS	C	C	A	C	C	C	B	B	B	B	C	C
Approach Vol, veh/h		841			558			158			127	
Approach Delay, s/veh		15.6			24.7			12.1			26.8	
Approach LOS		B			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	22.0	6.0	15.5	28.5	10.0	9.1	12.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	4.0	18.0	16.0	6.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	2.6	2.7	4.8	3.2	3.7	4.8	6.1
Green Ext Time (p_c), s	0.1	0.1	0.0	3.6	0.3	0.1	0.6	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	130	580	480	170	280	350
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	611	505	179	295	368
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	227	2013	1163	2046	2764	1540
Arrive On Green	0.13	0.63	0.18	0.18	0.55	0.55
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	137	611	505	179	295	368
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	2.3	2.6	4.2	1.1	1.7	4.1
Cycle Q Clear(g_c), s	2.3	2.6	4.2	1.1	1.7	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	227	2013	1163	2046	2764	1540
V/C Ratio(X)	0.60	0.30	0.43	0.09	0.11	0.24
Avail Cap(c_a), veh/h	516	2884	1495	2190	2764	1540
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	25.3	8.1	21.8	2.3	6.4	6.9
Incr Delay (d2), s/veh	2.5	0.1	0.2	0.0	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	1.9	1.3	0.8	4.5
LnGrp Delay(d),s/veh	27.8	8.2	22.1	2.3	6.5	7.3
LnGrp LOS	C	A	C	A	A	A
Approach Vol, veh/h		748	684		663	
Approach Delay, s/veh		11.8	16.9		6.9	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.8		37.2	8.0	14.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				27.0		25.0	9.0	14.0
Max Q Clear Time (g_c+I1), s				4.6		6.1	4.3	6.2
Green Ext Time (p_c), s				9.1		2.5	0.2	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	290	0	250	210
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	305	0	263	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	942	153			305	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	942	153			305	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			79	
cM capacity (veh/h)	206	866			1252	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	204	102	263	111	111
Volume Left	0	0	263	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1252	1700	1700
Volume to Capacity	0.12	0.06	0.21	0.07	0.07
Queue Length 95th (ft)	0	0	20	0	0
Control Delay (s)	0.0	0.0	8.6	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	240	190	230	360	240	160	20	270	150	0	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	253	200	242	379	253	168	21	284	158	0	74
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	223	839	339	353	857	470	287	155	518	1434	776	660
Arrive On Green	0.06	0.13	0.13	0.03	0.06	0.06	0.08	0.08	0.08	0.42	0.00	0.42
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	42	253	200	242	379	253	168	21	284	158	0	74
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	0.7	2.1	4.2	4.2	4.3	5.3	2.8	0.6	0.0	1.7	0.0	1.1
Cycle Q Clear(g_c), s	0.7	2.1	4.2	4.2	4.3	5.3	2.8	0.6	0.0	1.7	0.0	1.1
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	223	839	339	353	857	470	287	155	518	1434	776	660
V/C Ratio(X)	0.19	0.30	0.59	0.69	0.44	0.54	0.59	0.14	0.55	0.11	0.00	0.11
Avail Cap(c_a), veh/h	229	1709	554	402	1610	882	287	155	518	1434	776	660
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	23.6	9.0	28.0	25.6	26.1	26.5	25.5	22.1	10.7	0.0	4.7
Incr Delay (d2), s/veh	0.4	0.2	1.6	3.9	0.3	0.9	8.5	1.8	4.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	2.0	2.2	2.1	2.1	1.7	0.4	2.4	0.8	0.0	0.5
LnGrp Delay(d),s/veh	27.0	23.8	10.6	31.9	25.9	27.0	35.0	27.3	26.3	10.7	0.0	4.7
LnGrp LOS	C	C	B	C	C	C	C	C	C	B		A
Approach Vol, veh/h		495			874			473			232	
Approach Delay, s/veh		18.7			27.9			29.4			8.8	
Approach LOS		B			C			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	9.0	10.2	11.9	9.0	29.0	7.9	14.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	5.0	7.0	16.0	5.0	16.0	4.0	19.0
Max Q Clear Time (g_c+I1), s	3.7	2.6	6.2	6.2	4.8	3.1	2.7	7.3
Green Ext Time (p_c), s	0.6	0.3	0.1	1.7	0.0	0.6	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	770	170	180	610	170	220
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	811	0	189	642	179	232
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2006	625	336	3061	316	768
Arrive On Green	0.39	0.00	0.10	0.60	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	811	0	189	642	179	232
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	4.2	0.0	1.9	2.1	3.4	2.4
Cycle Q Clear(g_c), s	4.2	0.0	1.9	2.1	3.4	2.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2006	625	336	3061	316	768
V/C Ratio(X)	0.40	0.00	0.56	0.21	0.57	0.30
Avail Cap(c_a), veh/h	2795	870	851	4612	926	1727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	15.7	3.3	13.7	10.4
Incr Delay (d2), s/veh	0.1	0.0	1.5	0.0	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.0	1.0	1.8	0.9
LnGrp Delay(d),s/veh	8.1	0.0	17.2	3.3	15.3	10.6
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	811			831	411	
Approach Delay, s/veh	8.1			6.5	12.6	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.5	7.5	18.4				25.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	9.0	20.0				33.0
Max Q Clear Time (g_c+I1), s		5.4	3.9	6.2				4.1
Green Ext Time (p_c), s		1.2	0.3	8.2				12.4

Intersection Summary	
HCM 2010 Ctrl Delay	8.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	50	50	60	50	20	30	400	80	20	390	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	53	53	63	53	21	32	421	84	21	411	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	100	100	88	141	56	53	1269	251	37	1368	139
Arrive On Green	0.06	0.12	0.12	0.05	0.11	0.11	0.03	0.43	0.43	0.02	0.42	0.42
Sat Flow, veh/h	1774	856	856	1774	1271	503	1774	2946	583	1774	3244	330
Grp Volume(v), veh/h	74	0	106	63	0	74	32	252	253	21	223	230
Grp Sat Flow(s),veh/h/ln	1774	0	1712	1774	0	1774	1774	1770	1760	1774	1770	1805
Q Serve(g_s), s	1.7	0.0	2.4	1.5	0.0	1.6	0.7	3.9	4.0	0.5	3.5	3.5
Cycle Q Clear(g_c), s	1.7	0.0	2.4	1.5	0.0	1.6	0.7	3.9	4.0	0.5	3.5	3.5
Prop In Lane	1.00		0.50	1.00		0.28	1.00		0.33	1.00		0.18
Lane Grp Cap(c), veh/h	98	0	199	88	0	197	53	762	758	37	746	761
V/C Ratio(X)	0.76	0.00	0.53	0.72	0.00	0.38	0.61	0.33	0.33	0.57	0.30	0.30
Avail Cap(c_a), veh/h	255	0	655	255	0	679	212	762	758	170	746	761
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	19.5	0.0	17.4	19.6	0.0	17.2	20.0	7.9	7.9	20.3	8.0	8.0
Incr Delay (d2), s/veh	11.2	0.0	2.2	10.3	0.0	1.2	10.8	1.2	1.2	13.2	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.3	1.0	0.0	0.8	0.5	2.1	2.2	0.4	1.9	1.9
LnGrp Delay(d),s/veh	30.7	0.0	19.6	29.8	0.0	18.4	30.8	9.1	9.1	33.5	9.0	9.0
LnGrp LOS	C		B	C		B	C	A	A	C	A	A
Approach Vol, veh/h		180			137			537			474	
Approach Delay, s/veh		24.1			23.7			10.4			10.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	22.0	6.1	8.9	5.2	21.6	6.3	8.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	6.0	3.5	4.4	2.7	5.5	3.7	3.6
Green Ext Time (p_c), s	0.0	4.6	0.0	0.7	0.0	4.5	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	90	80	30	70	10	80	60	50	10	50	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	95	84	32	74	11	84	63	53	11	53	53
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	215	312	191	308	47	108	516	434	20	430	430
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.06	0.55	0.55	0.01	0.50	0.50
Sat Flow, veh/h	199	1580	1583	415	2256	345	1774	936	788	1774	856	856
Grp Volume(v), veh/h	116	0	84	65	0	52	84	0	116	11	0	106
Grp Sat Flow(s),veh/h/ln	1778	0	1583	1382	0	1634	1774	0	1724	1774	0	1712
Q Serve(g_s), s	0.3	0.0	1.8	0.0	0.0	1.1	1.9	0.0	1.3	0.2	0.0	1.3
Cycle Q Clear(g_c), s	2.3	0.0	1.8	2.3	0.0	1.1	1.9	0.0	1.3	0.2	0.0	1.3
Prop In Lane	0.18		1.00	0.49		0.21	1.00		0.46	1.00		0.50
Lane Grp Cap(c), veh/h	349	0	312	323	0	223	108	0	950	20	0	860
V/C Ratio(X)	0.33	0.00	0.27	0.20	0.00	0.23	0.78	0.00	0.12	0.54	0.00	0.12
Avail Cap(c_a), veh/h	850	0	771	747	0	696	356	0	950	178	0	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	13.6	15.4	0.0	15.4	18.5	0.0	4.3	19.6	0.0	5.3
Incr Delay (d2), s/veh	0.6	0.0	0.5	0.3	0.0	0.5	11.4	0.0	0.3	20.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.8	0.7	0.0	0.5	1.2	0.0	0.7	0.2	0.0	0.7
LnGrp Delay(d),s/veh	16.4	0.0	14.0	15.7	0.0	15.9	29.9	0.0	4.6	39.9	0.0	5.6
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		200			117			200			117	
Approach Delay, s/veh		15.4			15.8			15.2			8.8	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.5	26.0		9.4	6.4	24.0		9.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	22.0		17.0	8.0	18.0		17.0
Max Q Clear Time (g_c+I1), s	2.2	3.3		4.3	3.9	3.3		4.3
Green Ext Time (p_c), s	0.0	1.2		1.3	0.1	1.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	10	280	30	10	10	280	490	30	10	480	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	325	32	11	11	295	516	32	11	505	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	248	422	41	14	14	1340	1143	71	513	823	34
Arrive On Green	0.00	0.00	0.13	0.04	0.04	0.04	0.78	0.68	0.68	0.29	0.24	0.24
Sat Flow, veh/h	0	1863	3167	1036	356	356	3442	3386	210	1774	3463	144
Grp Volume(v), veh/h	0	0	325	54	0	0	295	269	279	11	258	268
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1748	0	0	1721	1770	1826	1774	1770	1837
Q Serve(g_s), s	0.0	0.0	7.9	2.4	0.0	0.0	1.8	5.7	5.7	0.4	10.4	10.4
Cycle Q Clear(g_c), s	0.0	0.0	7.9	2.4	0.0	0.0	1.8	5.7	5.7	0.4	10.4	10.4
Prop In Lane	0.00		1.00	0.59		0.20	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	0	248	422	70	0	0	1340	597	616	513	420	436
V/C Ratio(X)	0.00	0.00	0.77	0.77	0.00	0.00	0.22	0.45	0.45	0.02	0.61	0.61
Avail Cap(c_a), veh/h	0	396	673	350	0	0	1340	597	616	513	420	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	33.5	38.0	0.0	0.0	5.6	9.5	9.5	20.3	27.2	27.2
Incr Delay (d2), s/veh	0.0	0.0	3.0	16.3	0.0	0.0	0.1	2.2	2.2	0.0	6.5	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.6	1.5	0.0	0.0	0.8	3.1	3.2	0.2	5.8	6.1
LnGrp Delay(d),s/veh	0.0	0.0	36.5	54.4	0.0	0.0	5.7	11.8	11.7	20.4	33.8	33.6
LnGrp LOS			D	D			A	B	B	C	C	C
Approach Vol, veh/h		325			54			843			537	
Approach Delay, s/veh		36.5			54.4			9.6			33.4	
Approach LOS		D			D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.1	31.0		14.7	35.1	23.0		7.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	27.0		17.0	12.0	19.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	7.7		9.9	3.8	12.4		4.4
Green Ext Time (p_c), s	0.2	3.2		0.7	0.7	1.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	30	340	340	90	170	230	570	50	10	720	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	54	358	371	167	119	242	600	53	11	758	84
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	266	279	488	511	268	245	281	1630	144	37	1230	550
Arrive On Green	0.15	0.15	0.15	0.14	0.14	0.14	0.16	0.50	0.50	0.02	0.70	0.70
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3291	290	3442	3539	1583
Grp Volume(v), veh/h	48	54	358	371	167	119	242	322	331	11	758	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1812	1721	1770	1583
Q Serve(g_s), s	1.9	2.0	12.0	8.0	6.7	5.5	10.6	9.0	9.0	0.3	9.1	1.4
Cycle Q Clear(g_c), s	1.9	2.0	12.0	8.0	6.7	5.5	10.6	9.0	9.0	0.3	9.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	266	279	488	511	268	245	281	876	897	37	1230	550
V/C Ratio(X)	0.18	0.19	0.73	0.73	0.62	0.49	0.86	0.37	0.37	0.29	0.62	0.15
Avail Cap(c_a), veh/h	266	279	488	710	373	334	310	876	897	258	1230	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	29.7	29.8	24.7	32.7	32.2	30.9	32.8	12.5	12.5	38.8	9.3	8.2
Incr Delay (d2), s/veh	0.3	0.3	5.6	2.3	2.4	1.5	19.7	1.2	1.2	4.0	2.1	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	0.9	1.1	7.8	4.1	3.7	2.5	6.7	4.7	4.8	0.1	4.6	0.7
LnGrp Delay(d),s/veh	30.0	30.1	30.3	35.1	34.6	32.4	52.5	13.6	13.6	42.8	11.5	8.7
LnGrp LOS	C	C	C	D	C	C	D	B	B	D	B	A
Approach Vol, veh/h		460			657			895			853	
Approach Delay, s/veh		30.3			34.4			24.2			11.6	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	43.6		16.0	16.7	31.8		15.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	30.0		12.0	14.0	22.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	11.0		14.0	12.6	11.1		10.0
Green Ext Time (p_c), s	0.0	9.6		0.0	0.1	6.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	460	1490	20	0	350	710	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	484	1568		0	368	747	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1763	1850		0	1479	2126	0
Arrive On Green	0.51	0.51		0.00	0.42	0.42	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	484	1568		0	368	747	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	9.2	43.0		0.0	7.8	11.5	0.0
Cycle Q Clear(g_c), s	9.2	43.0		0.0	7.8	11.5	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1763	1850		0	1479	2126	0
V/C Ratio(X)	0.27	0.85		0.00	0.25	0.35	0.00
Avail Cap(c_a), veh/h	2817	2955		0	1479	2126	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.9	24.1		0.0	21.7	22.8	0.0
Incr Delay (d2), s/veh	0.1	1.4		0.0	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	24.9		0.0	3.9	5.5	0.0
LnGrp Delay(d),s/veh	16.0	25.5		0.0	22.1	23.3	0.0
LnGrp LOS	B	C			C	C	
Approach Vol, veh/h	2052				368	747	
Approach Delay, s/veh	23.3				22.1	23.3	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		62.8		52.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		48.0		94.0		37.0		
Max Q Clear Time (g_c+I1), s		9.8		45.0		13.5		
Green Ext Time (p_c), s		9.7		13.8		8.4		

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1070	360	70	1040	250	80
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1126	379	74	1095	263	84
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1623	1199	165	2961	1554	693
Arrive On Green	0.32	0.32	0.09	0.46	0.44	0.44
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1126	379	74	1095	263	84
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	15.5	6.1	3.2	8.9	3.6	2.5
Cycle Q Clear(g_c), s	15.5	6.1	3.2	8.9	3.6	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1623	1199	165	2961	1554	693
V/C Ratio(X)	0.69	0.32	0.45	0.37	0.17	0.12
Avail Cap(c_a), veh/h	2034	1327	266	3845	1554	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	3.1	34.3	14.0	13.6	13.3
Incr Delay (d2), s/veh	0.7	0.1	1.9	0.1	0.2	0.4
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	7.5	1.6	3.9	1.8	1.2
LnGrp Delay(d),s/veh	24.5	3.2	36.3	14.0	13.9	13.7
LnGrp LOS	C	A	D	B	B	B
Approach Vol, veh/h	1505			1169	347	
Approach Delay, s/veh	19.2			15.4	13.8	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		39.0	11.4	29.5				41.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	12.0	32.0				48.0
Max Q Clear Time (g_c+I1), s		5.6	5.2	17.5				10.9
Green Ext Time (p_c), s		1.1	4.1	8.0				10.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	60	60	40	60	60	60	130	50	120	120	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	63	63	42	63	63	63	137	53	126	126	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	87	209	185	65	187	166	87	724	616	162	803	683
Arrive On Green	0.05	0.12	0.12	0.04	0.11	0.11	0.05	0.39	0.39	0.09	0.43	0.43
Sat Flow, veh/h	1774	1777	1577	1774	1777	1577	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	63	63	63	42	63	63	63	137	53	126	126	63
Grp Sat Flow(s),veh/h/ln	1774	1770	1584	1774	1770	1584	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.5	1.4	1.6	1.0	1.4	1.6	1.5	2.1	0.9	3.0	1.8	1.0
Cycle Q Clear(g_c), s	1.5	1.4	1.6	1.0	1.4	1.6	1.5	2.1	0.9	3.0	1.8	1.0
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	87	208	186	65	186	166	87	724	616	162	803	683
V/C Ratio(X)	0.73	0.30	0.34	0.65	0.34	0.38	0.73	0.19	0.09	0.78	0.16	0.09
Avail Cap(c_a), veh/h	162	648	580	162	648	580	243	724	616	284	803	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	17.7	17.7	20.8	18.2	18.2	20.5	8.8	8.4	19.4	7.6	7.4
Incr Delay (d2), s/veh	10.9	0.8	1.1	10.3	1.1	1.4	10.9	0.6	0.3	7.8	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	0.8	0.7	0.8	0.8	1.0	1.2	0.4	1.8	1.0	0.5
LnGrp Delay(d),s/veh	31.4	18.5	18.8	31.1	19.2	19.7	31.4	9.4	8.7	27.3	8.0	7.6
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		189			168			253			315	
Approach Delay, s/veh		22.9			22.4			14.7			15.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	5.6	9.1	6.1	22.8	6.1	8.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.0	4.1	3.0	3.6	3.5	3.8	3.5	3.6
Green Ext Time (p_c), s	0.1	1.5	0.0	1.1	0.0	1.6	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	30	30	180	180	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	32	189	189	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	358	105	211	0	-	0
Stage 1	200	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	614	929	1357	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	598	929	1357	-	-	-
Mov Cap-2 Maneuver	598	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1357	-	598	929	-	-
HCM Lane V/C Ratio	0.023	-	0.053	0.034	-	-
HCM Control Delay (s)	7.7	0.1	11.4	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	90	120	120	120	180	50
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	126	126	126	189	53
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	122	589	543	243	878	892
Arrive On Green	0.07	0.32	0.15	0.15	0.50	0.50
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	95	126	126	126	189	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.2	2.1	1.3	3.1	2.6	0.6
Cycle Q Clear(g_c), s	2.2	2.1	1.3	3.1	2.6	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	122	589	543	243	878	892
V/C Ratio(X)	0.78	0.21	0.23	0.52	0.22	0.06
Avail Cap(c_a), veh/h	418	1361	1418	634	878	892
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	19.4	10.6	15.8	16.5	6.1	4.2
Incr Delay (d2), s/veh	10.3	0.2	0.2	1.7	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.1	0.7	1.5	1.3	0.9
LnGrp Delay(d),s/veh	29.7	10.8	16.0	18.2	6.6	4.3
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		221	252		242	
Approach Delay, s/veh		18.9	17.1		6.1	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.4		25.0	6.9	10.5
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				31.0		21.0	10.0	17.0
Max Q Clear Time (g_c+I1), s				4.1		4.6	4.2	5.1
Green Ext Time (p_c), s				2.0		0.6	0.1	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	710	1430	860	440	0	560
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	747	1505	1086	342		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	905	4272	1565	443		
Arrive On Green	0.51	0.84	0.56	0.56		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	747	1505	1086	342		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	28.5	5.4	11.2	13.4		
Cycle Q Clear(g_c), s	28.5	5.4	11.2	13.4		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	905	4272	1565	443		
V/C Ratio(X)	0.83	0.35	0.69	0.77		
Avail Cap(c_a), veh/h	976	4831	1956	554		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.77	0.77	0.96	0.96		
Uniform Delay (d), s/veh	16.6	1.5	15.1	15.6		
Incr Delay (d2), s/veh	4.3	0.0	0.7	5.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	14.8	2.4	5.7	6.3		
LnGrp Delay(d),s/veh	20.9	1.5	15.9	20.6		
LnGrp LOS	C	A	B	C		
Approach Vol, veh/h		2252	1428			
Approach Delay, s/veh		7.9	17.0			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				71.2			44.8	26.4
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			44.0	28.0
Max Q Clear Time (g_c+I1), s				7.4			30.5	15.4
Green Ext Time (p_c), s				26.8			10.3	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	400	1160	470	190	930	320	0	0	0	420	0	410
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	421	1221	495	200	979	0				442	0	432
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	510	1907	594	258	1184	369				887	0	792
Arrive On Green	0.29	0.37	0.37	0.15	0.23	0.00				0.25	0.00	0.25
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	421	1221	495	200	979	0				442	0	432
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	17.7	15.8	22.7	8.7	14.6	0.0				8.5	0.0	9.5
Cycle Q Clear(g_c), s	17.7	15.8	22.7	8.7	14.6	0.0				8.5	0.0	9.5
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	510	1907	594	258	1184	369				887	0	792
V/C Ratio(X)	0.83	0.64	0.83	0.78	0.83	0.00				0.50	0.00	0.55
Avail Cap(c_a), veh/h	621	2034	633	355	1271	396				887	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.81	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	20.6	22.7	32.9	29.2	0.0				25.7	0.0	26.1
Incr Delay (d2), s/veh	4.1	0.3	4.9	5.9	3.6	0.0				2.0	0.0	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
%ile BackOfQ(50%),veh/ln	9.2	7.4	10.7	4.6	7.2	0.0				4.4	0.0	4.4
LnGrp Delay(d),s/veh	30.7	20.9	27.6	38.8	32.8	0.0				27.7	0.0	28.7
LnGrp LOS	C	C	C	D	C					C		C
Approach Vol, veh/h		2137			1179						874	
Approach Delay, s/veh		24.4			33.8						28.2	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			15.6	34.0		24.0	27.0	22.6
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			16.0	32.0		20.0	28.0	20.0
Max Q Clear Time (g_c+I1), s			10.7	24.7		11.5	19.7	16.6
Green Ext Time (p_c), s			1.1	5.3		2.4	1.4	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	40	0	220	140	260	0	0	220	130
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				42	0	0	147	274	0	0	232	137
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				54	0	48	988	3077	0	0	929	416
Arrive On Green				0.03	0.00	0.00	1.00	1.00	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				42	0	0	147	274	0	0	232	137
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				1.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1	5.6
Cycle Q Clear(g_c), s				1.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1	5.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				54	0	48	988	3077	0	0	929	416
V/C Ratio(X)				0.78	0.00	0.00	0.15	0.09	0.00	0.00	0.25	0.33
Avail Cap(c_a), veh/h				577	0	515	988	3077	0	0	929	416
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.84	0.84	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.5	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.8
Incr Delay (d2), s/veh				20.7	0.0	0.0	0.1	0.0	0.0	0.0	0.6	2.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.2	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.7
LnGrp Delay(d),s/veh				59.2	0.0	0.0	0.1	0.0	0.0	0.0	23.9	25.9
LnGrp LOS				E			A	A			C	C
Approach Vol, veh/h					42			421			369	
Approach Delay, s/veh					59.2			0.1			24.7	
Approach LOS					E			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		73.6			48.6	25.0		6.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		46.0			21.0	21.0		26.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	7.6		3.9
Green Ext Time (p_c), s		2.3			2.1	1.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	170	10	108	32	10	0	56	84	174	266	40	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.97			0.88	0.85		0.90			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1797			1537	1504		3201			
Flt Permitted	0.95		0.47			0.99	1.00		1.00			
Satd. Flow (perm)	1770		853			1537	1504		3201			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	11	114	34	11	0	59	91	183	280	42	179
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	8	0	0	0
Lane Group Flow (vph)	179	0	159	0	0	64	97	0	497	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	17.5		17.5			6.9	6.9		23.6			
Effective Green, g (s)	17.5		17.5			6.9	6.9		23.6			
Actuated g/C Ratio	0.22		0.22			0.09	0.09		0.30			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	387		186			132	129		944			
v/s Ratio Prot	0.10					0.04	c0.06		c0.16			
v/s Ratio Perm			c0.19									
v/c Ratio	0.46		0.85			0.48	0.75		0.53			
Uniform Delay, d1	27.2		30.0			34.9	35.7		23.5			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.9		29.8			2.8	21.6		2.1			
Delay (s)	28.0		59.8			37.6	57.3		25.6			
Level of Service	C		E			D	E		C			
Approach Delay (s)			43.0			49.5			25.6			
Approach LOS			D			D			C			

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	62	18
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.96
Satd. Flow (prot)	1610	3267
Flt Permitted	0.95	0.96
Satd. Flow (perm)	1610	3267
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	65	19
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	185	78
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.20	0.20
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	322	653
v/s Ratio Prot	c0.11	0.02
v/s Ratio Perm		
v/c Ratio	0.57	0.12
Uniform Delay, d1	28.9	26.2
Progression Factor	0.62	0.56
Incremental Delay, d2	7.3	0.4
Delay (s)	25.3	15.0
Level of Service	C	B
Approach Delay (s)		22.2
Approach LOS		C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1040	310	670	660	100	250	20	720	90	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1095	326	705	695	105	263	21	758	95	32	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	183	1610	501	852	2599	880	346	395	728	155	292	248
Arrive On Green	0.05	0.32	0.32	0.25	0.51	0.51	0.10	0.21	0.21	0.04	0.16	0.16
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	116	1095	326	705	695	105	263	21	758	95	32	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.0	16.8	15.9	17.4	6.9	2.8	6.7	0.8	19.0	2.4	1.3	4.8
Cycle Q Clear(g_c), s	3.0	16.8	15.9	17.4	6.9	2.8	6.7	0.8	19.0	2.4	1.3	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	183	1610	501	852	2599	880	346	395	728	155	292	248
V/C Ratio(X)	0.63	0.68	0.65	0.83	0.27	0.12	0.76	0.05	1.04	0.61	0.11	0.38
Avail Cap(c_a), veh/h	308	1761	548	1884	4090	1344	500	395	728	192	292	248
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	41.5	26.6	26.3	31.9	12.4	9.5	39.2	28.1	24.2	42.0	32.4	33.9
Incr Delay (d2), s/veh	3.6	1.0	2.4	2.1	0.1	0.1	4.1	0.3	44.6	3.9	0.8	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.0	7.2	8.5	3.2	1.2	3.4	0.4	26.9	1.2	0.7	2.4
LnGrp Delay(d),s/veh	45.1	27.6	28.7	34.0	12.5	9.5	43.3	28.4	68.8	45.9	33.2	38.3
LnGrp LOS	D	C	C	C	B	A	D	C	F	D	C	D
Approach Vol, veh/h		1537			1505			1042			222	
Approach Delay, s/veh		29.2			22.3			61.5			40.8	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	23.0	26.2	32.3	13.0	18.0	8.8	49.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	49.0	31.0	13.0	11.0	8.0	72.0
Max Q Clear Time (g_c+I1), s	4.4	21.0	19.4	18.8	8.7	6.8	5.0	8.9
Green Ext Time (p_c), s	0.0	0.0	2.8	9.6	0.4	1.6	0.1	26.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

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												
Volume (veh/h)	110	930	340	210	740	60	330	30	470	40	20	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	979	358	221	779	63	347	32	495	42	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	149	1330	621	312	1364	474	449	749	637	111	564	612
Arrive On Green	0.08	0.26	0.26	0.09	0.27	0.27	0.13	0.40	0.40	0.03	0.30	0.30
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	116	979	358	221	779	63	347	32	495	42	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.8	13.1	13.3	4.7	9.9	2.2	7.3	0.8	20.3	0.9	2.0	1.6
Cycle Q Clear(g_c), s	4.8	13.1	13.3	4.7	9.9	2.2	7.3	0.8	20.3	0.9	2.0	1.6
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	149	1330	621	312	1364	474	449	749	637	111	564	612
V/C Ratio(X)	0.78	0.74	0.58	0.71	0.57	0.13	0.77	0.04	0.78	0.38	0.12	0.08
Avail Cap(c_a), veh/h	262	1432	652	415	1364	474	600	749	637	190	564	612
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	33.5	25.2	17.8	33.0	23.6	19.1	31.4	13.6	19.4	35.4	18.8	14.5
Incr Delay (d2), s/veh	8.5	1.9	1.2	3.7	0.6	0.1	4.4	0.1	9.0	2.1	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.3	5.9	2.4	4.7	1.0	3.7	0.4	10.3	0.5	1.1	0.7
LnGrp Delay(d),s/veh	42.0	27.1	19.0	36.6	24.2	19.2	35.8	13.7	28.4	37.6	19.2	14.8
LnGrp LOS	D	C	B	D	C	B	D	B	C	D	B	B
Approach Vol, veh/h		1453			1063			874			162	
Approach Delay, s/veh		26.3			26.4			30.8			22.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	34.0	10.8	23.5	13.7	26.6	10.3	24.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	9.0	21.0	13.0	21.0	11.0	19.0
Max Q Clear Time (g_c+I1), s	2.9	22.3	6.7	15.3	9.3	4.0	6.8	11.9
Green Ext Time (p_c), s	0.0	1.7	0.2	4.3	0.5	2.5	0.1	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	240	0	40	240	100	0	0	170	80
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				292	0	0	253	105	0	0	179	84
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				407	214	0	927	1463	0	0	505	227
Arrive On Green				0.11	0.00	0.00	0.17	0.26	0.00	0.00	0.21	0.21
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2467	1069
Grp Volume(v), veh/h				292	0	0	253	105	0	0	132	131
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1674
Q Serve(g_s), s				6.4	0.0	0.0	9.9	3.4	0.0	0.0	5.1	5.4
Cycle Q Clear(g_c), s				6.4	0.0	0.0	9.9	3.4	0.0	0.0	5.1	5.4
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.64
Lane Grp Cap(c), veh/h				407	214	0	927	1463	0	0	376	356
V/C Ratio(X)				0.72	0.00	0.00	0.27	0.07	0.00	0.00	0.35	0.37
Avail Cap(c_a), veh/h				976	512	0	927	1463	0	0	376	356
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	0.0	19.9	7.6	0.0	0.0	26.8	26.9
Incr Delay (d2), s/veh				2.4	0.0	0.0	0.2	0.1	0.0	0.0	2.6	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
%ile BackOfQ(50%),veh/ln				3.3	0.0	0.0	4.9	1.8	0.0	0.0	2.7	2.8
LnGrp Delay(d),s/veh				36.5	0.0	0.0	20.1	7.7	0.0	0.0	29.3	29.9
LnGrp LOS				D			C	A			C	C
Approach Vol, veh/h					292			358			263	
Approach Delay, s/veh					36.5			16.4			29.6	
Approach LOS					D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		66.8			45.8	21.0		13.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		50.0			29.0	17.0		22.0
Max Q Clear Time (g_c+I1), s		5.4			11.9	7.4		8.4
Green Ext Time (p_c), s		1.4			1.2	1.0		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	0	80	0	0	0	0	260	300	120	290	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	74	0	84				0	274	316	126	305	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	142	0	127				0	1327	594	700	2901	0
Arrive On Green	0.08	0.00	0.08				0.00	0.63	0.63	0.79	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	74	0	84				0	274	316	126	305	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	3.2	0.0	4.1				0.0	2.7	9.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	4.1				0.0	2.7	9.0	1.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	142	0	127				0	1327	594	700	2901	0
V/C Ratio(X)	0.52	0.00	0.66				0.00	0.21	0.53	0.18	0.11	0.00
Avail Cap(c_a), veh/h	444	0	396				0	1327	594	700	2901	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.96	0.96	0.96	0.96	0.00
Uniform Delay (d), s/veh	35.3	0.0	35.7				0.0	9.8	11.0	5.2	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	5.8				0.0	0.3	3.2	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	2.0				0.0	1.3	4.3	0.6	0.0	0.0
LnGrp Delay(d),s/veh	38.2	0.0	41.5				0.0	10.2	14.3	5.4	0.1	0.0
LnGrp LOS	D		D					B	B	A	A	
Approach Vol, veh/h		158						590			431	
Approach Delay, s/veh		40.0						12.4			1.6	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	35.6	34.0		10.4		69.6		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	18.0	30.0		20.0		52.0		
Max Q Clear Time (g_c+I1), s	3.4	11.0		6.1		2.0		
Green Ext Time (p_c), s	2.0	2.8		0.5		2.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	170	410	100	70	40	160	600	100	30	570	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	179	432	105	74	42	168	632	105	32	600	126
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	231	280	703	173	248	111	248	1486	244	902	2684	836
Arrive On Green	0.13	0.15	0.15	0.05	0.07	0.07	0.14	0.68	0.68	0.09	0.17	0.17
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4403	722	3442	5085	1583
Grp Volume(v), veh/h	189	179	432	105	74	42	168	485	252	32	600	126
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1735	1721	1695	1583
Q Serve(g_s), s	8.3	7.2	7.3	2.4	1.6	1.2	3.7	5.2	5.3	0.7	8.1	5.4
Cycle Q Clear(g_c), s	8.3	7.2	7.3	2.4	1.6	1.2	3.7	5.2	5.3	0.7	8.1	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	231	280	703	173	248	111	248	1144	586	902	2684	836
V/C Ratio(X)	0.82	0.64	0.61	0.61	0.30	0.38	0.68	0.42	0.43	0.04	0.22	0.15
Avail Cap(c_a), veh/h	377	652	1336	215	708	317	430	1144	586	902	2684	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	0.99	0.99	0.99
Uniform Delay (d), s/veh	33.9	32.0	15.9	37.2	35.3	13.2	33.4	9.5	9.5	27.3	18.9	17.8
Incr Delay (d2), s/veh	7.1	2.4	0.9	3.4	0.7	2.1	3.1	1.1	2.2	0.0	0.2	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	4.5	3.9	3.3	1.2	0.8	0.6	1.8	2.5	2.7	0.3	3.9	2.5
LnGrp Delay(d),s/veh	40.9	34.4	16.8	40.6	36.0	15.3	36.5	10.6	11.7	27.3	19.1	18.2
LnGrp LOS	D	C	B	D	D	B	D	B	B	C	B	B
Approach Vol, veh/h		800			221			905			758	
Approach Delay, s/veh		26.4			34.3			15.7			19.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	31.0	8.0	16.0	9.8	46.2	14.4	9.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	5.0	28.0	10.0	21.0	17.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	7.3	4.4	9.3	5.7	10.1	10.3	3.6
Green Ext Time (p_c), s	0.0	4.8	0.1	2.7	0.2	3.5	0.3	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	0	460	30	140	220	230	570	0	0	710	370
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	74	0	484	32	147	232	242	600	0	0	747	389
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	33	152	158	887	4068	0	0	885	396
Arrive On Green	0.00	0.00	0.00	0.10	0.10	0.10	0.50	0.80	0.00	0.00	0.50	0.50
Sat Flow, veh/h		0		330	1516	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		179	0	232	242	600	0	0	747	389
Grp Sat Flow(s),veh/h/ln				1846	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				7.7	0.0	8.0	6.3	2.1	0.0	0.0	14.6	19.3
Cycle Q Clear(g_c), s				7.7	0.0	8.0	6.3	2.1	0.0	0.0	14.6	19.3
Prop In Lane				0.18		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				185	0	158	887	4068	0	0	885	396
V/C Ratio(X)				0.97	0.00	1.47	0.27	0.15	0.00	0.00	0.84	0.98
Avail Cap(c_a), veh/h				185	0	158	887	4068	0	0	885	396
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.96	0.96
Uniform Delay (d), s/veh				35.9	0.0	36.0	11.6	1.8	0.0	0.0	18.7	19.8
Incr Delay (d2), s/veh				57.2	0.0	240.5	0.2	0.1	0.0	0.0	9.4	40.3
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				6.9	0.0	14.1	3.1	1.0	0.0	0.0	8.0	12.6
LnGrp Delay(d),s/veh				93.0	0.0	276.5	11.7	1.9	0.0	0.0	28.0	60.1
LnGrp LOS				F		F	B	A			C	E
Approach Vol, veh/h					411			842			1136	
Approach Delay, s/veh					196.6			4.7			39.0	
Approach LOS					F			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		68.0			44.0	24.0		12.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		36.0			12.0	20.0		8.0
Max Q Clear Time (g_c+I1), s		4.1			8.3	21.3		10.0
Green Ext Time (p_c), s		5.4			1.7	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	1220	550	100	1090	60	480	50	140	40	30	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	1284	579	105	1147	63	505	53	147	42	32	263
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	287	1876	816	183	1683	416	960	671	600	133	326	488
Arrive On Green	0.03	0.10	0.10	0.05	0.26	0.26	0.28	0.38	0.38	0.08	0.17	0.17
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	200	1284	579	105	1147	63	505	53	147	42	32	263
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	4.6	15.5	16.1	2.4	12.9	2.4	9.9	1.5	5.1	1.8	1.2	5.3
Cycle Q Clear(g_c), s	4.6	15.5	16.1	2.4	12.9	2.4	9.9	1.5	5.1	1.8	1.2	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	287	1876	816	183	1683	416	960	671	600	133	326	488
V/C Ratio(X)	0.70	0.68	0.71	0.57	0.68	0.15	0.53	0.08	0.25	0.32	0.10	0.54
Avail Cap(c_a), veh/h	387	2002	871	215	1683	416	960	671	600	133	326	488
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	32.6	32.8	37.0	26.5	22.6	24.4	15.9	17.0	35.1	27.7	18.2
Incr Delay (d2), s/veh	3.1	0.8	2.3	2.8	1.1	0.2	2.1	0.2	1.0	6.1	0.6	4.2
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	2.3	7.0	6.5	1.2	5.8	1.1	5.0	0.8	2.4	1.1	0.6	2.3
LnGrp Delay(d),s/veh	41.0	33.4	35.1	39.8	27.6	22.8	26.4	16.1	18.0	41.2	28.3	22.4
LnGrp LOS	D	C	D	D	C	C	C	B	B	D	C	C
Approach Vol, veh/h		2063			1315			705			337	
Approach Delay, s/veh		34.6			28.4			23.9			25.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	34.3	8.3	27.4	26.3	18.0	10.7	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	28.0	5.0	25.0	20.0	14.0	9.0	21.0
Max Q Clear Time (g_c+I1), s	3.8	7.1	4.4	18.1	11.9	7.3	6.6	14.9
Green Ext Time (p_c), s	0.0	3.1	0.3	5.3	2.1	0.7	0.1	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	730	1450	1190	650	640	920
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	768	1526	1253	684	674	968
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1023	3842	1617	1541	1503	837
Arrive On Green	0.40	0.80	0.25	0.25	0.30	0.30
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	768	1526	1253	684	674	968
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	15.4	5.6	14.5	11.6	8.7	24.0
Cycle Q Clear(g_c), s	15.4	5.6	14.5	11.6	8.7	24.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1023	3842	1617	1541	1503	837
V/C Ratio(X)	0.75	0.40	0.77	0.44	0.45	1.16
Avail Cap(c_a), veh/h	1076	4005	1682	1569	1503	837
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	21.6	3.8	27.8	10.6	22.6	28.0
Incr Delay (d2), s/veh	2.0	0.0	1.7	0.1	1.0	83.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	2.4	6.6	7.5	4.1	25.4
LnGrp Delay(d),s/veh	23.6	3.9	29.5	10.7	23.6	111.6
LnGrp LOS	C	A	C	B	C	F
Approach Vol, veh/h		2294	1937		1642	
Approach Delay, s/veh		10.5	22.9		75.5	
Approach LOS		B	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				52.0		28.0	27.8	24.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				50.0		22.0	25.0	21.0
Max Q Clear Time (g_c+I1), s				7.6		26.0	17.4	16.5
Green Ext Time (p_c), s				22.9		0.0	6.4	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	740	0	330	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	779	0	347	337
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1642	389			779	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1642	389			779	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			58	
cM capacity (veh/h)	53	609			834	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	519	260	347	168	168
Volume Left	0	0	347	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	834	1700	1700
Volume to Capacity	0.31	0.15	0.42	0.10	0.10
Queue Length 95th (ft)	0	0	52	0	0
Control Delay (s)	0.0	0.0	12.4	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.3		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1380	890	420	1180	560	390	40	460	230	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	1453	937	442	1242	589	411	42	484	242	11	84
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	172	1442	732	430	1526	836	817	466	1045	688	396	336
Arrive On Green	0.05	0.22	0.22	0.25	0.60	0.60	0.24	0.25	0.25	0.20	0.21	0.21
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	137	1453	937	442	1242	589	411	42	484	242	11	84
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	3.2	18.0	18.0	10.0	15.3	6.7	8.3	1.4	0.5	4.8	0.4	3.5
Cycle Q Clear(g_c), s	3.2	18.0	18.0	10.0	15.3	6.7	8.3	1.4	0.5	4.8	0.4	3.5
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	172	1442	732	430	1526	836	817	466	1045	688	396	336
V/C Ratio(X)	0.80	1.01	1.28	1.03	0.81	0.70	0.50	0.09	0.46	0.35	0.03	0.25
Avail Cap(c_a), veh/h	172	1442	732	430	1526	836	817	466	1045	688	396	336
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	31.0	7.4	30.0	14.3	4.4	26.4	23.0	18.9	27.5	25.0	26.2
Incr Delay (d2), s/veh	22.3	25.6	136.2	42.2	2.3	1.8	2.2	0.4	1.5	0.3	0.0	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	2.0	10.5	35.4	7.2	7.2	2.5	4.2	0.8	0.4	2.3	0.2	1.6
LnGrp Delay(d),s/veh	59.9	56.6	143.6	72.2	16.6	6.2	28.6	23.4	20.4	27.8	25.0	26.6
LnGrp LOS	E	F	F	F	B	A	C	C	C	C	C	C
Approach Vol, veh/h		2527			2273			937			337	
Approach Delay, s/veh		89.1			24.7			24.1			27.4	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	24.0	14.0	22.0	23.0	21.0	8.0	28.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	20.0	10.0	18.0	19.0	17.0	4.0	24.0
Max Q Clear Time (g_c+I1), s	6.8	3.4	12.0	20.0	10.3	5.5	5.2	17.3
Green Ext Time (p_c), s	0.8	2.1	0.0	0.0	1.0	0.9	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	51.5
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	310	70	140	485	135	130
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	326	0	147	511	142	137
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1628	507	334	2845	277	706
Arrive On Green	0.32	0.00	0.10	0.56	0.16	0.16
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	326	0	147	511	142	137
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.3	0.0	1.1	1.4	2.1	1.1
Cycle Q Clear(g_c), s	1.3	0.0	1.1	1.4	2.1	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1628	507	334	2845	277	706
V/C Ratio(X)	0.20	0.00	0.44	0.18	0.51	0.19
Avail Cap(c_a), veh/h	4159	1295	1836	7594	1577	2748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	12.0	3.0	10.9	8.2
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.0	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.6	0.6	1.1	0.4
LnGrp Delay(d),s/veh	7.0	0.0	12.9	3.1	12.4	8.4
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	326			658	279	
Approach Delay, s/veh	7.0			5.3	10.4	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.4	6.7	13.0				19.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	15.0	23.0				42.0
Max Q Clear Time (g_c+I1), s		4.1	3.1	3.3				3.4
Green Ext Time (p_c), s		0.9	0.3	5.7				6.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	30	60	50	10	30	265	40	10	180	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	42	32	63	53	11	32	279	42	11	189	32
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	85	65	86	148	31	52	1527	227	20	1446	241
Arrive On Green	0.04	0.09	0.09	0.05	0.10	0.10	0.03	0.49	0.49	0.01	0.48	0.48
Sat Flow, veh/h	1774	982	748	1774	1497	311	1774	3091	460	1774	3037	506
Grp Volume(v), veh/h	42	0	74	63	0	64	32	158	163	11	109	112
Grp Sat Flow(s),veh/h/ln	1774	0	1731	1774	0	1808	1774	1770	1782	1774	1770	1774
Q Serve(g_s), s	1.0	0.0	1.8	1.6	0.0	1.5	0.8	2.2	2.3	0.3	1.5	1.6
Cycle Q Clear(g_c), s	1.0	0.0	1.8	1.6	0.0	1.5	0.8	2.2	2.3	0.3	1.5	1.6
Prop In Lane	1.00		0.43	1.00		0.17	1.00		0.26	1.00		0.29
Lane Grp Cap(c), veh/h	65	0	150	86	0	178	52	874	880	20	843	845
V/C Ratio(X)	0.65	0.00	0.49	0.73	0.00	0.36	0.61	0.18	0.18	0.54	0.13	0.13
Avail Cap(c_a), veh/h	239	0	622	279	0	690	239	874	880	159	843	845
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	21.2	0.0	19.4	20.9	0.0	18.7	21.4	6.3	6.3	21.9	6.5	6.5
Incr Delay (d2), s/veh	10.5	0.0	2.5	11.2	0.0	1.2	11.2	0.5	0.5	20.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.0	1.0	0.0	0.8	0.5	1.2	1.2	0.2	0.8	0.8
LnGrp Delay(d),s/veh	31.7	0.0	21.9	32.1	0.0	20.0	32.5	6.7	6.7	42.6	6.8	6.8
LnGrp LOS	C		C	C		B	C	A	A	D	A	A
Approach Vol, veh/h		116			127			353			232	
Approach Delay, s/veh		25.5			26.0			9.1			8.5	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	26.0	6.2	7.8	5.3	25.2	5.6	8.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	7.0	16.0	6.0	20.0	6.0	17.0
Max Q Clear Time (g_c+I1), s	2.3	4.3	3.6	3.8	2.8	3.6	3.0	3.5
Green Ext Time (p_c), s	0.0	3.0	0.0	0.5	0.0	2.9	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	70	90	20	50	10	415	50	30	10	40	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	74	95	21	53	11	437	53	32	11	42	21
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	125	1084	79	172	37	1041	853	515	18	243	121
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.59	0.78	0.78	0.01	0.21	0.21
Sat Flow, veh/h	365	1279	1583	290	1753	380	1774	1089	658	1774	1173	586
Grp Volume(v), veh/h	106	0	95	38	0	47	437	0	85	11	0	63
Grp Sat Flow(s),veh/h/ln	1644	0	1583	794	0	1628	1774	0	1747	1774	0	1759
Q Serve(g_s), s	4.0	0.0	0.0	0.8	0.0	3.0	15.0	0.0	1.2	0.7	0.0	3.3
Cycle Q Clear(g_c), s	7.0	0.0	0.0	7.7	0.0	3.0	15.0	0.0	1.2	0.7	0.0	3.3
Prop In Lane	0.30		1.00	0.56		0.23	1.00		0.38	1.00		0.33
Lane Grp Cap(c), veh/h	203	0	1084	128	0	159	1041	0	1369	18	0	364
V/C Ratio(X)	0.52	0.00	0.09	0.30	0.00	0.30	0.42	0.00	0.06	0.60	0.00	0.17
Avail Cap(c_a), veh/h	415	0	1286	311	0	367	1119	0	1369	96	0	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.3	0.0	5.9	47.4	0.0	46.5	12.6	0.0	2.7	54.7	0.0	36.2
Incr Delay (d2), s/veh	2.1	0.0	0.0	1.3	0.0	1.0	0.3	0.0	0.1	27.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.0	1.2	0.0	1.4	7.4	0.0	0.6	0.5	0.0	1.7
LnGrp Delay(d),s/veh	50.3	0.0	5.9	48.7	0.0	47.5	12.8	0.0	2.8	82.0	0.0	37.2
LnGrp LOS	D		A	D		D	B		A	F		D
Approach Vol, veh/h		201			85			522			74	
Approach Delay, s/veh		29.3			48.1			11.2			43.9	
Approach LOS		C			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	91.0		14.9	69.2	27.0		14.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	87.0		25.0	70.0	23.0		25.0
Max Q Clear Time (g_c+I1), s	2.7	3.2		9.0	17.0	5.3		9.7
Green Ext Time (p_c), s	0.5	0.5		1.2	1.5	0.2		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

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												
Volume (veh/h)	10	10	180	50	0	0	585	355	30	10	230	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	208	53	0	0	616	374	32	11	242	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	170	289	68	0	0	1421	1273	108	454	788	36
Arrive On Green	0.00	0.00	0.09	0.04	0.00	0.00	0.69	0.64	0.64	0.26	0.23	0.23
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	3302	281	1774	3449	156
Grp Volume(v), veh/h	0	0	208	53	0	0	616	200	206	11	124	129
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1813	1774	1770	1835
Q Serve(g_s), s	0.0	0.0	4.5	2.1	0.0	0.0	5.5	3.5	3.5	0.3	4.1	4.1
Cycle Q Clear(g_c), s	0.0	0.0	4.5	2.1	0.0	0.0	5.5	3.5	3.5	0.3	4.1	4.1
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.16	1.00		0.09
Lane Grp Cap(c), veh/h	0	170	289	68	0	0	1421	683	699	454	404	419
V/C Ratio(X)	0.00	0.00	0.72	0.77	0.00	0.00	0.43	0.29	0.30	0.02	0.31	0.31
Avail Cap(c_a), veh/h	0	186	317	405	0	0	1421	683	699	454	404	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	30.9	33.3	0.0	0.0	7.2	8.3	8.3	19.5	22.4	22.4
Incr Delay (d2), s/veh	0.0	0.0	7.0	16.7	0.0	0.0	0.2	1.0	1.0	0.0	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.2	1.3	0.0	0.0	2.6	1.8	1.9	0.2	2.2	2.3
LnGrp Delay(d),s/veh	0.0	0.0	37.9	50.1	0.0	0.0	7.4	9.2	9.2	19.5	24.3	24.3
LnGrp LOS			D	D			A	A	A	B	C	C
Approach Vol, veh/h		208			53			1022			264	
Approach Delay, s/veh		37.9			50.1			8.1			24.1	
Approach LOS		D			D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.9	31.0		10.4	32.9	20.0		6.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	27.0		7.0	15.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	5.5		6.5	7.5	6.1		4.1
Green Ext Time (p_c), s	0.5	2.4		0.0	1.5	0.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 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												
Volume (veh/h)	40	30	160	190	100	405	165	525	130	20	380	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	37	39	168	133	183	436	174	553	137	21	400	53
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	100	106	553	268	281	1133	519	1005	248	711	961	430
Arrive On Green	0.06	0.06	0.06	0.15	0.15	0.15	0.29	0.36	0.36	0.41	0.54	0.54
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	2815	695	3442	3539	1583
Grp Volume(v), veh/h	37	39	168	133	183	436	174	347	343	21	400	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1740	1721	1770	1583
Q Serve(g_s), s	1.4	1.4	0.0	4.8	6.5	0.0	5.4	11.0	11.1	0.3	4.7	1.1
Cycle Q Clear(g_c), s	1.4	1.4	0.0	4.8	6.5	0.0	5.4	11.0	11.1	0.3	4.7	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	100	106	553	268	281	1133	519	632	621	711	961	430
V/C Ratio(X)	0.37	0.37	0.30	0.50	0.65	0.38	0.34	0.55	0.55	0.03	0.42	0.12
Avail Cap(c_a), veh/h	152	160	599	405	426	1378	519	632	621	711	961	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	31.8	31.8	16.6	27.3	28.0	16.7	19.4	18.0	18.0	16.4	12.7	11.9
Incr Delay (d2), s/veh	2.2	2.1	0.3	1.4	2.5	0.2	0.4	3.4	3.5	0.0	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.8	2.4	2.5	3.5	3.1	2.7	5.9	5.8	0.1	2.4	0.6
LnGrp Delay(d),s/veh	34.0	34.0	16.9	28.7	30.5	17.0	19.8	21.4	21.5	16.4	14.0	12.5
LnGrp LOS	C	C	B	C	C	B	B	C	C	B	B	B
Approach Vol, veh/h		244			752			864			474	
Approach Delay, s/veh		22.2			22.3			21.1			13.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.5	29.0		8.0	24.5	23.0		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	25.0		6.0	13.0	19.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	13.1		3.4	7.4	6.7		8.5
Green Ext Time (p_c), s	0.2	3.4		0.2	0.3	2.2		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	485	580	50	0	325	330	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	511	611		0	342	347	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	798	837		0	2425	3484	0
Arrive On Green	0.23	0.23		0.00	0.69	0.69	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	511	611		0	342	347	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	12.9	15.1		0.0	3.2	2.2	0.0
Cycle Q Clear(g_c), s	12.9	15.1		0.0	3.2	2.2	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	798	837		0	2425	3484	0
V/C Ratio(X)	0.64	0.73		0.00	0.14	0.10	0.00
Avail Cap(c_a), veh/h	2715	2848		0	2425	3484	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.4	34.2		0.0	5.3	5.1	0.0
Incr Delay (d2), s/veh	0.9	1.2		0.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	9.7		0.0	1.6	1.0	0.0
LnGrp Delay(d),s/veh	34.2	35.5		0.0	5.4	5.2	0.0
LnGrp LOS	C	D			A	A	
Approach Vol, veh/h	1122				342	347	
Approach Delay, s/veh	34.9				5.4	5.2	
Approach LOS	C				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		26.3		70.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		66.0		76.0		38.0		
Max Q Clear Time (g_c+I1), s		5.2		17.1		4.2		
Green Ext Time (p_c), s		5.5		5.3		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	470	265	30	680	170	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	495	279	32	716	179	53
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1059	1133	73	2117	1800	803
Arrive On Green	0.21	0.21	0.04	0.33	0.51	0.51
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	495	279	32	716	179	53
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	4.2	3.0	0.9	4.2	1.3	0.8
Cycle Q Clear(g_c), s	4.2	3.0	0.9	4.2	1.3	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1059	1133	73	2117	1800	803
V/C Ratio(X)	0.47	0.25	0.44	0.34	0.10	0.07
Avail Cap(c_a), veh/h	2373	1542	360	4811	1800	803
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	17.1	2.4	23.1	12.4	6.3	6.2
Incr Delay (d2), s/veh	0.3	0.1	4.1	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.7	0.5	1.9	0.6	0.4
LnGrp Delay(d),s/veh	17.4	2.5	27.2	12.5	6.4	6.3
LnGrp LOS	B	A	C	B	A	A
Approach Vol, veh/h	774			748	232	
Approach Delay, s/veh	12.1			13.2	6.4	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		29.0	6.0	14.3				20.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	10.0	23.0				37.0
Max Q Clear Time (g_c+I1), s		3.3	2.9	6.2				6.2
Green Ext Time (p_c), s		0.7	2.8	4.1				5.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	60	40	40	375	70	40	50	40	80	95	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	63	42	42	395	74	42	53	42	84	100	53
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	35	408	250	60	618	115	60	813	691	109	864	735
Arrive On Green	0.02	0.19	0.19	0.03	0.21	0.21	0.03	0.44	0.44	0.06	0.46	0.46
Sat Flow, veh/h	1774	2112	1293	1774	2981	554	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	21	52	53	42	233	236	42	53	42	84	100	53
Grp Sat Flow(s),veh/h/ln	1774	1770	1635	1774	1770	1765	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.7	1.4	1.6	1.4	7.0	7.1	1.4	1.0	0.9	2.7	1.8	1.1
Cycle Q Clear(g_c), s	0.7	1.4	1.6	1.4	7.0	7.1	1.4	1.0	0.9	2.7	1.8	1.1
Prop In Lane	1.00		0.79	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	342	316	60	367	366	60	813	691	109	864	735
V/C Ratio(X)	0.60	0.15	0.17	0.70	0.64	0.64	0.70	0.07	0.06	0.77	0.12	0.07
Avail Cap(c_a), veh/h	183	639	590	244	700	698	244	813	691	396	864	735
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	28.3	19.5	19.6	27.8	21.1	21.1	27.8	9.5	9.5	26.9	8.8	8.6
Incr Delay (d2), s/veh	15.2	0.2	0.2	13.6	1.8	1.9	13.6	0.2	0.2	10.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.7	0.9	3.6	3.7	0.9	0.5	0.4	1.7	1.0	0.5
LnGrp Delay(d),s/veh	43.5	19.7	19.8	41.5	22.9	23.0	41.5	9.7	9.7	37.8	9.1	8.8
LnGrp LOS	D	B	B	D	C	C	D	A	A	D	A	A
Approach Vol, veh/h		126			511			137			237	
Approach Delay, s/veh		23.7			24.5			19.4			19.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	29.4	6.0	15.2	6.0	31.0	5.2	16.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	22.0	8.0	21.0	8.0	27.0	6.0	23.0
Max Q Clear Time (g_c+I1), s	4.7	3.0	3.4	3.6	3.4	3.8	2.7	9.1
Green Ext Time (p_c), s	0.1	1.0	0.0	3.2	0.0	1.1	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	20	75	90	120	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	21	79	95	126	58

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	360	92	184	0	-	0
Stage 1	155	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	612	947	1388	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	575	947	1388	-	-	-
Mov Cap-2 Maneuver	575	-	-	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	3.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1388	-	575	947	-	-
HCM Lane V/C Ratio	0.057	-	0.037	0.022	-	-
HCM Control Delay (s)	7.8	0.1	11.5	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	40	50	145	110	30
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	42	53	153	116	32
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	37	493	528	236	968	897
Arrive On Green	0.02	0.26	0.15	0.15	0.55	0.55
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	21	42	53	153	116	32
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.5	0.7	0.5	3.8	1.3	0.4
Cycle Q Clear(g_c), s	0.5	0.7	0.5	3.8	1.3	0.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	37	493	528	236	968	897
V/C Ratio(X)	0.57	0.09	0.10	0.65	0.12	0.04
Avail Cap(c_a), veh/h	252	1281	1595	714	968	897
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	20.5	11.7	15.5	16.9	4.7	4.0
Incr Delay (d2), s/veh	13.3	0.1	0.1	3.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.3	1.9	0.7	0.6
LnGrp Delay(d),s/veh	33.7	11.7	15.6	19.9	4.9	4.1
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		63	206		148	
Approach Delay, s/veh		19.1	18.8		4.7	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				15.2		27.0	4.9	10.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				29.0		23.0	6.0	19.0
Max Q Clear Time (g_c+I1), s				2.7		3.3	2.5	5.8
Green Ext Time (p_c), s				1.0		0.4	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	160	725	570	270	0	535
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	168	763	694	221		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	229	4372	3301	935		
Arrive On Green	0.13	0.86	0.59	0.59		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	168	763	694	221		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	2.6	0.7	1.7	1.9		
Cycle Q Clear(g_c), s	2.6	0.7	1.7	1.9		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	229	4372	3301	935		
V/C Ratio(X)	0.73	0.17	0.21	0.24		
Avail Cap(c_a), veh/h	1368	9979	5875	1665		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.0	0.3	2.7	2.8		
Incr Delay (d2), s/veh	4.5	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	0.3	0.8	0.8		
LnGrp Delay(d),s/veh	16.5	0.3	2.8	2.9		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		931	915			
Approach Delay, s/veh		3.3	2.8			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				28.5			7.7	20.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			22.0	30.0
Max Q Clear Time (g_c+I1), s				2.7			4.6	3.9
Green Ext Time (p_c), s				16.9			0.4	13.0

Intersection Summary	
HCM 2010 Ctrl Delay	3.0
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	280	120	110	780	220	0	0	0	295	0	880
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	158	295	126	116	821	0				311	0	926
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	225	1360	423	146	1131	352				1918	0	1712
Arrive On Green	0.13	0.27	0.27	0.08	0.22	0.00				0.54	0.00	0.54
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	158	295	126	116	821	0				311	0	926
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	9.3	4.9	6.9	7.0	16.3	0.0				4.8	0.0	20.7
Cycle Q Clear(g_c), s	9.3	4.9	6.9	7.0	16.3	0.0				4.8	0.0	20.7
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	225	1360	423	146	1131	352				1918	0	1712
V/C Ratio(X)	0.70	0.22	0.30	0.80	0.73	0.00				0.16	0.00	0.54
Avail Cap(c_a), veh/h	471	2143	667	374	1864	580				1918	0	1712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	45.7	31.1	31.8	49.2	39.3	0.0				12.6	0.0	16.3
Incr Delay (d2), s/veh	3.9	0.1	0.4	9.5	0.9	0.0				0.2	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	4.8	2.3	3.1	3.8	7.8	0.0				2.4	0.0	9.3
LnGrp Delay(d),s/veh	49.6	31.2	32.2	58.7	40.2	0.0				12.8	0.0	17.5
LnGrp LOS	D	C	C	E	D					B		B
Approach Vol, veh/h		579			937						1237	
Approach Delay, s/veh		36.4			42.5						16.3	
Approach LOS		D			D						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			13.0	33.2		63.0	17.9	28.3
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			23.0	46.0		59.0	29.0	40.0
Max Q Clear Time (g_c+I1), s			9.0	8.9		22.7	11.3	18.3
Green Ext Time (p_c), s			0.2	3.0		6.1	2.7	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	510	0	110	50	70	0	0	210	100
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				537	0	0	53	74	0	0	221	105
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				661	0	590	264	1753	0	0	993	444
Arrive On Green				0.37	0.00	0.00	0.15	0.50	0.00	0.00	0.28	0.28
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				537	0	0	53	74	0	0	221	105
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				16.5	0.0	0.0	1.6	0.7	0.0	0.0	2.9	3.1
Cycle Q Clear(g_c), s				16.5	0.0	0.0	1.6	0.7	0.0	0.0	2.9	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				661	0	590	264	1753	0	0	993	444
V/C Ratio(X)				0.81	0.00	0.00	0.20	0.04	0.00	0.00	0.22	0.24
Avail Cap(c_a), veh/h				1523	0	1359	264	1753	0	0	993	444
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.1	0.0	0.0	22.6	7.9	0.0	0.0	16.7	16.8
Incr Delay (d2), s/veh				2.5	0.0	0.0	0.4	0.0	0.0	0.0	0.5	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				8.5	0.0	0.0	0.8	0.3	0.0	0.0	1.5	1.5
LnGrp Delay(d),s/veh				19.6	0.0	0.0	23.0	7.9	0.0	0.0	17.2	18.0
LnGrp LOS				B			C	A			B	B
Approach Vol, veh/h					537			127			326	
Approach Delay, s/veh					19.6			14.2			17.5	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		34.0			13.0	21.0		26.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		30.0			9.0	17.0		52.0
Max Q Clear Time (g_c+I1), s		2.7			3.6	5.1		18.5
Green Ext Time (p_c), s		0.5			0.2	1.3		4.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	50	40	325	165	0	51	29	19	11	10	150	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.87			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1614			1681	1504		3255				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1614			1681	1504		3255				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	42	342	174	0	54	32	20	12	11	158	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	53	384	0	0	179	81	0	34	0	0	0	215
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	34.5	34.5			18.2	18.2		18.3				34.6
Effective Green, g (s)	34.5	34.5			18.2	18.2		18.3				34.6
Actuated g/C Ratio	0.28	0.28			0.15	0.15		0.15				0.28
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	502	457			251	225		489				458
v/s Ratio Prot	0.03	c0.24			c0.11	0.05		c0.01				0.13
v/s Ratio Perm												
v/c Ratio	0.11	0.84			0.71	0.36		0.07				0.47
Uniform Delay, d1	32.2	41.0			49.2	46.5		44.3				35.9
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.1	13.0			9.2	1.0		0.3				3.4
Delay (s)	32.3	54.0			58.4	47.5		44.6				39.3
Level of Service	C	D			E	D		D				D
Approach Delay (s)		51.4			55.0			44.6				
Approach LOS		D			E			D				

Intersection Summary			
HCM 2000 Control Delay	45.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	121.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	500
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	1.00
Satd. Flow (prot)	3388
Flt Permitted	1.00
Satd. Flow (perm)	3388
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	526
RTOR Reduction (vph)	0
Lane Group Flow (vph)	532
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	34.6
Effective Green, g (s)	34.6
Actuated g/C Ratio	0.28
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	964
v/s Ratio Prot	c0.16
v/s Ratio Perm	
v/c Ratio	0.55
Uniform Delay, d1	36.9
Progression Factor	1.00
Incremental Delay, d2	2.3
Delay (s)	39.2
Level of Service	D
Approach Delay (s)	39.2
Approach LOS	D

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	960	80	280	350	40	60	10	210	50	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	1011	84	295	368	42	63	11	221	53	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	88	1627	507	532	2283	767	165	529	694	121	505	429
Arrive On Green	0.03	0.32	0.32	0.15	0.45	0.45	0.05	0.28	0.28	0.04	0.27	0.27
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	32	1011	84	295	368	42	63	11	221	53	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.7	13.1	3.0	6.1	3.3	1.1	1.4	0.3	1.1	1.2	1.0	2.3
Cycle Q Clear(g_c), s	0.7	13.1	3.0	6.1	3.3	1.1	1.4	0.3	1.1	1.2	1.0	2.3
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	88	1627	507	532	2283	767	165	529	694	121	505	429
V/C Ratio(X)	0.36	0.62	0.17	0.55	0.16	0.05	0.38	0.02	0.32	0.44	0.06	0.17
Avail Cap(c_a), veh/h	400	4264	1328	1554	5969	1914	577	529	694	533	505	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	22.4	18.9	30.3	12.7	10.6	35.8	20.0	6.6	36.7	21.0	14.7
Incr Delay (d2), s/veh	2.5	0.4	0.2	0.9	0.0	0.0	1.4	0.1	1.2	2.5	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.1	1.3	3.0	1.6	0.5	0.7	0.2	2.3	0.6	0.5	1.3
LnGrp Delay(d),s/veh	39.6	22.8	19.1	31.2	12.7	10.6	37.2	20.1	7.8	39.1	21.2	15.5
LnGrp LOS	D	C	B	C	B	B	D	C	A	D	C	B
Approach Vol, veh/h		1127			705			295			159	
Approach Delay, s/veh		23.0			20.3			14.5			24.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	26.0	16.0	28.8	7.7	25.0	6.0	38.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	22.0	35.0	65.0	13.0	21.0	9.0	91.0
Max Q Clear Time (g_c+I1), s	3.2	3.1	8.1	15.1	3.4	4.3	2.7	5.3
Green Ext Time (p_c), s	0.1	0.9	3.9	9.7	0.7	0.3	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

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												
Volume (veh/h)	20	970	60	100	350	30	60	10	80	30	20	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	1021	63	105	368	32	63	11	84	32	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	32	1822	624	176	1989	659	124	710	603	88	689	614
Arrive On Green	0.02	0.36	0.36	0.05	0.39	0.39	0.04	0.38	0.38	0.02	0.37	0.37
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	21	1021	63	105	368	32	63	11	84	32	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.0	14.0	2.2	2.6	4.1	1.0	1.6	0.3	3.0	0.8	2.1	1.8
Cycle Q Clear(g_c), s	1.0	14.0	2.2	2.6	4.1	1.0	1.6	0.3	3.0	0.8	2.1	1.8
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	32	1822	624	176	1989	659	124	710	603	88	689	614
V/C Ratio(X)	0.65	0.56	0.10	0.60	0.18	0.05	0.51	0.02	0.14	0.36	0.10	0.08
Avail Cap(c_a), veh/h	287	4227	1373	755	4521	1447	556	710	603	410	689	614
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	42.2	22.3	16.5	40.2	17.3	15.1	41.0	16.7	17.5	41.6	17.9	16.8
Incr Delay (d2), s/veh	19.5	0.3	0.1	3.2	0.0	0.0	3.2	0.0	0.5	2.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.6	1.0	1.3	1.9	0.5	0.8	0.2	1.4	0.4	1.1	0.8
LnGrp Delay(d),s/veh	61.7	22.6	16.6	43.4	17.3	15.1	44.2	16.7	18.0	44.1	18.1	17.0
LnGrp LOS	E	C	B	D	B	B	D	B	B	D	B	B
Approach Vol, veh/h		1105			505			158			152	
Approach Delay, s/veh		23.0			22.6			28.4			23.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	37.0	8.4	35.0	7.1	36.0	5.6	37.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	33.0	19.0	72.0	14.0	29.0	14.0	77.0
Max Q Clear Time (g_c+I1), s	2.8	5.0	4.6	16.0	3.6	4.1	3.0	6.1
Green Ext Time (p_c), s	0.0	0.9	0.2	15.1	0.1	0.8	0.0	15.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

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												
Volume (veh/h)	0	0	0	90	0	40	110	60	0	0	40	20
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				68	37	42	116	63	0	0	42	21
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				135	61	69	1005	1508	0	0	436	203
Arrive On Green				0.08	0.08	0.08	0.57	0.81	0.00	0.00	0.19	0.19
Sat Flow, veh/h				1774	798	905	1774	1863	0	0	2440	1093
Grp Volume(v), veh/h				68	0	79	116	63	0	0	31	32
Grp Sat Flow(s),veh/h/ln				1774	0	1703	1774	1863	0	0	1770	1670
Q Serve(g_s), s				2.6	0.0	3.1	2.1	0.5	0.0	0.0	1.0	1.1
Cycle Q Clear(g_c), s				2.6	0.0	3.1	2.1	0.5	0.0	0.0	1.0	1.1
Prop In Lane				1.00		0.53	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				135	0	130	1005	1508	0	0	329	310
V/C Ratio(X)				0.50	0.00	0.61	0.12	0.04	0.00	0.00	0.09	0.10
Avail Cap(c_a), veh/h				583	0	560	1005	1508	0	0	329	310
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.1	0.0	31.3	7.0	1.3	0.0	0.0	23.6	23.7
Incr Delay (d2), s/veh				2.9	0.0	4.5	0.1	0.1	0.0	0.0	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
%ile BackOfQ(50%),veh/ln				1.4	0.0	1.6	1.0	0.2	0.0	0.0	0.5	0.6
LnGrp Delay(d),s/veh				33.9	0.0	35.9	7.1	1.4	0.0	0.0	24.2	24.3
LnGrp LOS				C		D	A	A			C	C
Approach Vol, veh/h					147			179			63	
Approach Delay, s/veh					35.0			5.1			24.3	
Approach LOS					C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		60.7			43.7	17.0		9.3
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		39.0			22.0	13.0		23.0
Max Q Clear Time (g_c+I1), s		2.5			4.1	3.1		5.1
Green Ext Time (p_c), s		0.7			0.6	0.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	30	0	0	0	0	110	415	20	100	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	53	0	32				0	116	437	21	105	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	88	0	78				0	2690	1203	34	2960	0
Arrive On Green	0.05	0.00	0.05				0.00	0.76	0.76	0.02	0.84	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	53	0	32				0	116	437	21	105	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	2.0	0.0	1.4				0.0	0.6	6.4	0.8	0.4	0.0
Cycle Q Clear(g_c), s	2.0	0.0	1.4				0.0	0.6	6.4	0.8	0.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	88	0	78				0	2690	1203	34	2960	0
V/C Ratio(X)	0.60	0.00	0.41				0.00	0.04	0.36	0.62	0.04	0.00
Avail Cap(c_a), veh/h	456	0	407				0	2690	1203	152	2960	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.99	0.99	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.6	0.0	32.3				0.0	2.1	2.8	34.1	1.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	3.4				0.0	0.0	0.8	16.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.7				0.0	0.3	3.0	0.6	0.2	0.0
LnGrp Delay(d),s/veh	39.1	0.0	35.7				0.0	2.1	3.6	50.9	1.0	0.0
LnGrp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		85						553			126	
Approach Delay, s/veh		37.8						3.3			9.3	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	5.3	57.2		7.5		62.5		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	6.0	34.0		18.0		44.0		
Max Q Clear Time (g_c+I1), s	2.8	8.4		4.0		2.4		
Green Ext Time (p_c), s	0.0	3.1		0.2		3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	80	20	50	10	80	555	40	10	200	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	21	32	84	21	53	11	84	584	42	11	211	42
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	34	112	336	66	213	95	158	1800	128	1104	3286	1023
Arrive On Green	0.02	0.06	0.06	0.02	0.06	0.06	0.09	0.74	0.74	0.32	0.65	0.65
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4846	346	3442	5085	1583
Grp Volume(v), veh/h	21	32	84	21	53	11	84	407	219	11	211	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1802	1721	1695	1583
Q Serve(g_s), s	0.8	1.1	1.7	0.4	1.0	0.2	1.6	2.8	2.9	0.2	1.1	0.7
Cycle Q Clear(g_c), s	0.8	1.1	1.7	0.4	1.0	0.2	1.6	2.8	2.9	0.2	1.1	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	34	112	336	66	213	95	158	1259	669	1104	3286	1023
V/C Ratio(X)	0.62	0.29	0.25	0.32	0.25	0.12	0.53	0.32	0.33	0.01	0.06	0.04
Avail Cap(c_a), veh/h	152	426	869	295	809	362	393	1259	669	1104	3286	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	31.5	28.7	33.9	31.4	9.0	31.1	6.0	6.0	16.2	4.6	4.5
Incr Delay (d2), s/veh	16.9	1.4	0.4	2.7	0.6	0.5	2.7	0.7	1.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.8	0.2	0.5	0.1	0.8	1.4	1.6	0.1	0.5	0.3
LnGrp Delay(d),s/veh	50.9	32.8	29.1	36.6	32.0	9.5	33.8	6.7	7.3	16.2	4.6	4.6
LnGrp LOS	D	C	C	D	C	A	C	A	A	B	A	A
Approach Vol, veh/h		137			85			710			264	
Approach Delay, s/veh		33.3			30.2			10.1			5.1	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.5	30.0	5.3	8.2	7.2	49.2	5.3	8.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	6.0	16.0	8.0	24.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.2	4.9	2.4	3.7	3.6	3.1	2.8	3.0
Green Ext Time (p_c), s	0.5	4.1	0.0	0.6	0.1	1.5	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	70	20	60	110	90	555	0	0	180	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	11	0	74	21	63	116	95	584	0	0	189	126
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	47	142	163	124	3982	0	0	2322	1039
Arrive On Green	0.00	0.00	0.00	0.10	0.10	0.10	0.07	0.78	0.00	0.00	0.22	0.22
Sat Flow, veh/h		0		460	1380	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		84	0	116	95	584	0	0	189	126
Grp Sat Flow(s),veh/h/ln				1840	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				3.0	0.0	5.0	3.7	2.0	0.0	0.0	3.0	4.5
Cycle Q Clear(g_c), s				3.0	0.0	5.0	3.7	2.0	0.0	0.0	3.0	4.5
Prop In Lane				0.25		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				189	0	163	124	3982	0	0	2322	1039
V/C Ratio(X)				0.44	0.00	0.71	0.77	0.15	0.00	0.00	0.08	0.12
Avail Cap(c_a), veh/h				342	0	294	329	3982	0	0	2322	1039
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.5	0.0	30.4	32.0	1.9	0.0	0.0	10.6	11.2
Incr Delay (d2), s/veh				1.6	0.0	5.7	9.6	0.1	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.6	0.0	2.4	2.1	0.9	0.0	0.0	1.5	2.0
LnGrp Delay(d),s/veh				31.2	0.0	36.1	41.6	1.9	0.0	0.0	10.7	11.4
LnGrp LOS				C		D	D	A			B	B
Approach Vol, veh/h					200			679			315	
Approach Delay, s/veh					34.0			7.5			11.0	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		58.8			8.9	49.9		11.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		39.0			13.0	22.0		13.0
Max Q Clear Time (g_c+I1), s		4.0			5.7	6.5		7.0
Green Ext Time (p_c), s		6.6			0.1	5.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	655	310	40	450	40	110	20	20	10	30	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	689	326	42	474	42	116	21	21	11	32	84
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	264	1371	596	110	1084	268	924	925	802	20	479	717
Arrive On Green	0.03	0.07	0.07	0.03	0.17	0.17	0.27	0.51	0.51	0.01	0.26	0.26
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1798	1559	1774	1863	2787
Grp Volume(v), veh/h	168	689	326	42	474	42	116	21	21	11	32	84
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1588	1774	1863	1393
Q Serve(g_s), s	3.4	7.3	7.9	0.8	4.6	1.6	1.8	0.4	0.5	0.4	0.9	1.2
Cycle Q Clear(g_c), s	3.4	7.3	7.9	0.8	4.6	1.6	1.8	0.4	0.5	0.4	0.9	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	264	1371	596	110	1084	268	924	910	817	20	479	717
V/C Ratio(X)	0.64	0.50	0.55	0.38	0.44	0.16	0.13	0.02	0.03	0.56	0.07	0.12
Avail Cap(c_a), veh/h	492	2105	916	295	1739	430	924	910	817	152	479	717
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	28.9	29.2	33.2	26.1	24.8	19.4	8.3	8.4	34.4	19.7	11.0
Incr Delay (d2), s/veh	2.5	0.3	0.8	2.2	0.3	0.3	0.1	0.0	0.1	23.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.3	3.1	0.4	2.1	0.7	0.9	0.2	0.2	0.3	0.5	0.5
LnGrp Delay(d),s/veh	35.6	29.2	30.0	35.4	26.4	25.1	19.4	8.4	8.4	57.5	19.9	11.3
LnGrp LOS	D	C	C	D	C	C	B	A	A	E	B	B
Approach Vol, veh/h		1183			558			158			127	
Approach Delay, s/veh		30.3			27.0			16.5			17.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	40.0	6.2	19.0	22.8	22.0	9.4	15.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	19.0	6.0	23.0	7.0	18.0	10.0	19.0
Max Q Clear Time (g_c+I1), s	2.4	2.5	2.8	9.9	3.8	3.2	5.4	6.6
Green Ext Time (p_c), s	0.0	0.5	1.1	5.1	0.1	0.3	0.2	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	130	690	480	170	495	350
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	726	505	179	521	368
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	341	1985	983	2032	2881	1605
Arrive On Green	0.10	0.31	0.15	0.15	0.58	0.58
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	137	726	505	179	521	368
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	2.6	6.2	5.1	1.3	3.5	4.5
Cycle Q Clear(g_c), s	2.6	6.2	5.1	1.3	3.5	4.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	341	1985	983	2032	2881	1605
V/C Ratio(X)	0.40	0.37	0.51	0.09	0.18	0.23
Avail Cap(c_a), veh/h	541	3387	2014	2481	2881	1605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	29.6	18.8	27.2	2.7	7.0	7.3
Incr Delay (d2), s/veh	0.7	0.1	0.4	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	2.3	1.6	1.6	5.1
LnGrp Delay(d),s/veh	30.3	18.9	27.6	2.8	7.2	7.6
LnGrp LOS	C	B	C	A	A	A
Approach Vol, veh/h		863	684		889	
Approach Delay, s/veh		20.7	21.1		7.3	
Approach LOS		C	C		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.7		44.3	10.9	14.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				37.0		25.0	11.0	22.0
Max Q Clear Time (g_c+I1), s				8.2		6.5	4.6	7.1
Green Ext Time (p_c), s				6.2		3.5	2.9	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	290	0	250	210
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	305	0	263	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	942	153			305	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	942	153			305	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			79	
cM capacity (veh/h)	206	866			1252	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	204	102	263	111	111
Volume Left	0	0	263	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1252	1700	1700
Volume to Capacity	0.12	0.06	0.21	0.07	0.07
Queue Length 95th (ft)	0	0	20	0	0
Control Delay (s)	0.0	0.0	8.6	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	275	190	230	360	240	160	20	340	150	0	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	289	200	242	379	253	168	21	358	158	0	74
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	112	703	835	552	1208	662	1438	759	1582	280	132	112
Arrive On Green	0.03	0.11	0.11	0.16	0.24	0.24	0.42	0.41	0.41	0.08	0.00	0.07
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	42	289	200	242	379	253	168	21	358	158	0	74
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	0.8	2.8	0.0	4.2	4.1	5.0	2.0	0.4	1.4	2.9	0.0	2.5
Cycle Q Clear(g_c), s	0.8	2.8	0.0	4.2	4.1	5.0	2.0	0.4	1.4	2.9	0.0	2.5
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	112	703	835	552	1208	662	1438	759	1582	280	132	112
V/C Ratio(X)	0.38	0.41	0.24	0.44	0.31	0.38	0.12	0.03	0.23	0.56	0.00	0.66
Avail Cap(c_a), veh/h	519	2319	1235	1453	3221	1765	1438	759	1582	1298	702	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	27.5	8.5	25.1	20.8	21.2	11.8	11.8	1.9	29.3	0.0	20.9
Incr Delay (d2), s/veh	2.1	0.4	0.1	0.5	0.1	0.4	0.2	0.1	0.3	1.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	2.0	2.0	1.9	2.0	1.0	0.2	0.9	1.5	0.0	1.3
LnGrp Delay(d),s/veh	33.5	27.9	8.6	25.7	21.0	21.6	12.0	11.8	2.2	31.1	0.0	27.4
LnGrp LOS	C	C	A	C	C	C	B	B	A	C		C
Approach Vol, veh/h		531			874			547			232	
Approach Delay, s/veh		21.1			22.4			5.6			29.9	
Approach LOS		C			C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	31.0	14.6	11.3	31.7	8.7	6.2	19.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	27.0	28.0	24.0	27.0	25.0	10.0	42.0
Max Q Clear Time (g_c+I1), s	4.9	3.4	6.2	4.8	4.0	4.5	2.8	7.0
Green Ext Time (p_c), s	0.5	2.2	4.6	2.5	2.2	0.2	0.0	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	945	435	180	615	175	220
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	995	0	189	647	184	232
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2345	730	324	3288	303	739
Arrive On Green	0.46	0.00	0.09	0.65	0.17	0.17
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	995	0	189	647	184	232
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.7	0.0	2.3	2.3	4.2	2.9
Cycle Q Clear(g_c), s	5.7	0.0	2.3	2.3	4.2	2.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2345	730	324	3288	303	739
V/C Ratio(X)	0.42	0.00	0.58	0.20	0.61	0.31
Avail Cap(c_a), veh/h	3480	1083	785	5103	931	1724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	19.0	3.1	16.8	12.9
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	1.2	1.0	2.2	1.1
LnGrp Delay(d),s/veh	8.0	0.0	20.7	3.2	18.8	13.2
LnGrp LOS	A		C	A	B	B
Approach Vol, veh/h	995			836	416	
Approach Delay, s/veh	8.0			7.1	15.6	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.5	8.1	24.2				32.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		23.0	10.0	30.0				44.0
Max Q Clear Time (g_c+I1), s		6.2	4.3	7.7				4.3
Green Ext Time (p_c), s		1.3	0.3	12.5				16.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	50	580	60	50	20	30	405	80	20	655	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	53	611	63	53	21	32	426	84	21	689	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	52	600	79	506	201	49	792	155	35	883	54
Arrive On Green	0.05	0.41	0.41	0.04	0.40	0.40	0.03	0.27	0.27	0.02	0.26	0.26
Sat Flow, veh/h	1774	128	1475	1774	1271	503	1774	2953	578	1774	3389	206
Grp Volume(v), veh/h	74	0	664	63	0	74	32	254	256	21	360	371
Grp Sat Flow(s),veh/h/ln	1774	0	1603	1774	0	1774	1774	1770	1761	1774	1770	1826
Q Serve(g_s), s	2.5	0.0	25.0	2.2	0.0	1.6	1.1	7.5	7.6	0.7	11.6	11.6
Cycle Q Clear(g_c), s	2.5	0.0	25.0	2.2	0.0	1.6	1.1	7.5	7.6	0.7	11.6	11.6
Prop In Lane	1.00		0.92	1.00		0.28	1.00		0.33	1.00		0.11
Lane Grp Cap(c), veh/h	94	0	652	79	0	707	49	475	472	35	461	476
V/C Ratio(X)	0.78	0.00	1.02	0.80	0.00	0.10	0.66	0.54	0.54	0.60	0.78	0.78
Avail Cap(c_a), veh/h	202	0	652	116	0	707	116	475	472	116	461	476
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	18.2	29.1	0.0	11.6	29.6	19.2	19.2	29.9	21.1	21.1
Incr Delay (d2), s/veh	13.1	0.0	39.8	20.8	0.0	0.1	14.1	4.3	4.4	15.6	12.3	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	18.1	1.5	0.0	0.8	0.7	4.2	4.3	0.5	7.2	7.4
LnGrp Delay(d),s/veh	41.9	0.0	58.1	49.8	0.0	11.7	43.7	23.5	23.7	45.5	33.4	33.1
LnGrp LOS	D		F	D		B	D	C	C	D	C	C
Approach Vol, veh/h		738			137			542			752	
Approach Delay, s/veh		56.4			29.2			24.8			33.6	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	20.5	6.7	29.0	5.7	20.0	7.3	28.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	25.0	4.0	16.0	7.0	22.0
Max Q Clear Time (g_c+I1), s	2.7	9.6	4.2	27.0	3.1	13.6	4.5	3.6
Green Ext Time (p_c), s	0.0	3.8	0.0	0.0	0.0	1.6	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	620	1135	30	70	10	110	60	50	10	50	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	653	1195	32	74	11	116	63	53	11	53	53
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	774	1288	73	616	92	686	453	381	17	91	91
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.39	0.48	0.48	0.01	0.11	0.11
Sat Flow, veh/h	33	1815	1583	57	1443	214	1774	936	788	1774	856	856
Grp Volume(v), veh/h	674	0	1195	32	0	85	116	0	116	11	0	106
Grp Sat Flow(s),veh/h/ln	1849	0	1583	57	0	1657	1774	0	1724	1774	0	1712
Q Serve(g_s), s	22.5	0.0	28.2	14.8	0.0	4.6	6.4	0.0	5.6	0.9	0.0	8.8
Cycle Q Clear(g_c), s	49.2	0.0	28.2	64.0	0.0	4.6	6.4	0.0	5.6	0.9	0.0	8.8
Prop In Lane	0.03		1.00	1.00		0.13	1.00		0.46	1.00		0.50
Lane Grp Cap(c), veh/h	813	0	1288	73	0	707	686	0	833	17	0	183
V/C Ratio(X)	0.83	0.00	0.93	0.44	0.00	0.12	0.17	0.00	0.14	0.63	0.00	0.58
Avail Cap(c_a), veh/h	813	0	1288	73	0	707	686	0	833	47	0	183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	10.7	69.3	0.0	26.0	30.2	0.0	21.4	74.0	0.0	63.8
Incr Delay (d2), s/veh	7.2	0.0	11.7	4.2	0.0	0.1	0.1	0.0	0.3	32.2	0.0	12.8
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	26.7	0.0	15.5	1.4	0.0	2.1	3.2	0.0	2.8	0.6	0.0	4.8
LnGrp Delay(d),s/veh	45.8	0.0	22.4	73.5	0.0	26.1	30.3	0.0	21.8	106.2	0.0	76.6
LnGrp LOS	D		C	E		C	C		C	F		E
Approach Vol, veh/h		1869			117			232			117	
Approach Delay, s/veh		30.8			39.0			26.1			79.4	
Approach LOS		C			D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	76.5		68.0	62.0	20.0		68.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	70.0		64.0	58.0	16.0		64.0
Max Q Clear Time (g_c+I1), s	2.9	7.6		51.2	8.4	10.8		66.0
Green Ext Time (p_c), s	0.0	1.1		9.4	1.1	0.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.2
HCM 2010 LOS	C

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												
Volume (veh/h)	20	10	1335	30	10	10	310	495	30	10	1275	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	1435	32	11	11	326	521	32	11	1342	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	720	1224	41	14	14	252	1548	95	17	1403	22
Arrive On Green	0.00	0.00	0.39	0.04	0.04	0.04	0.15	0.91	0.91	0.01	0.39	0.39
Sat Flow, veh/h	0	1863	3167	1036	356	356	3442	3388	208	1774	3567	56
Grp Volume(v), veh/h	0	0	1435	54	0	0	326	272	281	11	666	697
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1748	0	0	1721	1770	1826	1774	1770	1853
Q Serve(g_s), s	0.0	0.0	58.0	4.6	0.0	0.0	11.0	2.9	2.9	0.9	54.9	54.9
Cycle Q Clear(g_c), s	0.0	0.0	58.0	4.6	0.0	0.0	11.0	2.9	2.9	0.9	54.9	54.9
Prop In Lane	0.00		1.00	0.59		0.20	1.00		0.11	1.00		0.03
Lane Grp Cap(c), veh/h	0	720	1224	70	0	0	252	809	834	17	696	729
V/C Ratio(X)	0.00	0.00	1.17	0.77	0.00	0.00	1.29	0.34	0.34	0.63	0.96	0.96
Avail Cap(c_a), veh/h	0	720	1224	186	0	0	252	809	834	47	696	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	46.0	71.3	0.0	0.0	64.0	3.6	3.6	74.0	44.2	44.3
Incr Delay (d2), s/veh	0.0	0.0	86.4	16.4	0.0	0.0	156.5	1.1	1.0	32.2	24.9	24.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	40.0	2.5	0.0	0.0	10.7	1.4	1.5	0.6	31.6	33.0
LnGrp Delay(d),s/veh	0.0	0.0	132.4	87.7	0.0	0.0	220.5	4.7	4.7	106.2	69.1	68.6
LnGrp LOS			F	F			F	A	A	F	E	E
Approach Vol, veh/h		1435			54			879			1374	
Approach Delay, s/veh		132.4			87.7			84.7			69.1	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	72.5		62.0	15.0	63.0		10.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	56.0		58.0	11.0	49.0		16.0
Max Q Clear Time (g_c+I1), s	2.9	4.9		60.0	13.0	56.9		6.6
Green Ext Time (p_c), s	0.0	21.6		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	97.3
HCM 2010 LOS	F

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												
Volume (veh/h)	60	30	605	340	90	195	235	585	50	10	2570	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	54	637	374	175	137	247	616	53	11	2705	84
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	296	310	401	378	199	184	154	2013	173	34	1888	844
Arrive On Green	0.17	0.17	0.17	0.11	0.11	0.11	0.09	0.61	0.61	0.01	0.71	0.71
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3299	283	3442	3539	1583
Grp Volume(v), veh/h	48	54	637	374	175	137	247	330	339	11	2705	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1813	1721	1770	1583
Q Serve(g_s), s	3.5	3.7	25.0	15.8	13.9	12.6	13.0	13.4	13.4	0.5	80.0	2.5
Cycle Q Clear(g_c), s	3.5	3.7	25.0	15.8	13.9	12.6	13.0	13.4	13.4	0.5	80.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	296	310	401	378	199	184	154	1080	1106	34	1888	844
V/C Ratio(X)	0.16	0.17	1.59	0.99	0.88	0.74	1.61	0.31	0.31	0.33	1.43	0.10
Avail Cap(c_a), veh/h	296	310	401	378	199	184	154	1080	1106	229	1888	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	53.5	53.6	56.0	66.9	66.1	64.1	68.5	14.0	14.0	73.5	21.8	10.5
Incr Delay (d2), s/veh	0.3	0.3	276.2	43.0	33.5	14.9	301.0	0.7	0.7	0.5	195.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.9	47.4	10.0	9.0	6.3	19.2	6.7	6.9	0.2	89.4	1.1
LnGrp Delay(d),s/veh	53.8	53.9	332.2	109.9	99.6	79.0	369.5	14.7	14.7	74.0	217.0	10.6
LnGrp LOS	D	D	F	F	F	E	F	B	B	E	F	B
Approach Vol, veh/h		739			686			916			2800	
Approach Delay, s/veh		293.8			101.1			110.4			210.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	95.5		29.0	17.0	84.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	83.0		25.0	13.0	80.0		16.0
Max Q Clear Time (g_c+I1), s	2.5	15.4		27.0	15.0	82.0		17.8
Green Ext Time (p_c), s	0.0	61.7		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	189.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	475	1490	20	0	355	885	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	500	1568		0	374	932	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1678	1760		0	1625	2335	0
Arrive On Green	0.49	0.49		0.00	0.46	0.46	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	500	1568		0	374	932	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	13.1	59.0		0.0	9.6	18.2	0.0
Cycle Q Clear(g_c), s	13.1	59.0		0.0	9.6	18.2	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1678	1760		0	1625	2335	0
V/C Ratio(X)	0.30	0.89		0.00	0.23	0.40	0.00
Avail Cap(c_a), veh/h	2065	2166		0	1625	2335	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.1	34.8		0.0	24.5	26.9	0.0
Incr Delay (d2), s/veh	0.1	4.4		0.0	0.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	33.5		0.0	4.7	8.7	0.0
LnGrp Delay(d),s/veh	23.2	39.2		0.0	24.9	27.4	0.0
LnGrp LOS	C	D			C	C	
Approach Vol, veh/h	2068				374	932	
Approach Delay, s/veh	35.3				24.9	27.4	
Approach LOS	D				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		72.9		77.1		72.9		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		52.0		90.0		42.0		
Max Q Clear Time (g_c+I1), s		11.6		61.0		20.2		
Green Ext Time (p_c), s		12.2		12.1		9.7		

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1510	365	70	1050	515	80
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1589	384	74	1105	542	84
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2182	1245	95	3435	1268	566
Arrive On Green	0.43	0.43	0.05	0.54	0.36	0.36
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1589	384	74	1105	542	84
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	19.5	5.1	3.1	7.3	8.7	2.7
Cycle Q Clear(g_c), s	19.5	5.1	3.1	7.3	8.7	2.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2182	1245	95	3435	1268	566
V/C Ratio(X)	0.73	0.31	0.78	0.32	0.43	0.15
Avail Cap(c_a), veh/h	2238	1262	189	3845	1268	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	2.3	35.0	9.8	18.3	16.4
Incr Delay (d2), s/veh	1.1	0.1	12.6	0.1	1.1	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	9.2	6.0	1.9	3.2	4.4	1.3
LnGrp Delay(d),s/veh	18.9	2.4	47.7	9.8	19.3	16.9
LnGrp LOS	B	A	D	A	B	B
Approach Vol, veh/h	1973			1179	626	
Approach Delay, s/veh	15.7			12.2	19.0	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		30.8	8.0	36.2				44.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		22.0	8.0	33.0				45.0
Max Q Clear Time (g_c+I1), s		10.7	5.1	21.5				9.3
Green Ext Time (p_c), s		1.9	0.0	10.7				29.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	1645	60	40	90	60	60	305	50	120	125	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	158	1732	63	42	95	63	63	321	53	126	132	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	197	1689	61	54	852	524	81	380	323	136	438	372
Arrive On Green	0.11	0.48	0.48	0.03	0.40	0.40	0.05	0.20	0.20	0.08	0.24	0.24
Sat Flow, veh/h	1774	3484	126	1774	2107	1296	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	158	876	919	42	79	79	63	321	53	126	132	63
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1774	1770	1634	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.8	38.0	38.0	1.8	2.2	2.4	2.8	13.0	2.2	5.5	4.6	2.5
Cycle Q Clear(g_c), s	6.8	38.0	38.0	1.8	2.2	2.4	2.8	13.0	2.2	5.5	4.6	2.5
Prop In Lane	1.00		0.07	1.00		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	858	892	54	715	661	81	380	323	136	438	372
V/C Ratio(X)	0.80	1.02	1.03	0.77	0.11	0.12	0.78	0.84	0.16	0.93	0.30	0.17
Avail Cap(c_a), veh/h	317	858	892	91	715	661	136	380	323	136	438	372
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	34.0	20.2	20.2	37.7	14.6	14.6	37.0	30.0	25.7	36.0	24.7	23.9
Incr Delay (d2), s/veh	7.4	36.2	38.1	20.5	0.1	0.1	15.1	20.0	1.1	55.7	1.8	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	3.7	27.0	28.5	1.2	1.1	1.1	1.7	8.8	1.0	4.8	2.6	1.2
LnGrp Delay(d),s/veh	41.4	56.4	58.3	58.2	14.6	14.7	52.1	50.0	26.8	91.7	26.4	24.9
LnGrp LOS	D	F	F	E	B	B	D	D	C	F	C	C
Approach Vol, veh/h		1953			200			437			321	
Approach Delay, s/veh		56.1			23.8			47.5			51.8	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	20.0	6.4	42.0	7.6	22.4	12.7	35.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	4.0	38.0	6.0	16.0	14.0	28.0
Max Q Clear Time (g_c+I1), s	7.5	15.0	3.8	40.0	4.8	6.6	8.8	4.4
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	2.2	0.2	16.3

Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	205	295	35	180	180	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	311	37	189	189	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	371	108	216	0	-	0
Stage 1	203	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	603	925	1351	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	584	925	1351	-	-	-
Mov Cap-2 Maneuver	584	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1351	-	584	925	-	-
HCM Lane V/C Ratio	0.027	-	0.37	0.336	-	-
HCM Control Delay (s)	7.7	0.1	14.7	10.8	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.7	1.5	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	90	120	120	125	445	50
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	126	126	132	468	53
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	121	561	525	235	939	946
Arrive On Green	0.07	0.30	0.15	0.15	0.53	0.53
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	95	126	126	132	468	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.5	2.4	1.5	3.7	8.0	0.7
Cycle Q Clear(g_c), s	2.5	2.4	1.5	3.7	8.0	0.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	121	561	525	235	939	946
V/C Ratio(X)	0.78	0.22	0.24	0.56	0.50	0.06
Avail Cap(c_a), veh/h	263	1065	1199	536	939	946
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	21.7	12.4	17.8	18.7	7.1	4.0
Incr Delay (d2), s/veh	10.5	0.2	0.2	2.1	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.3	0.7	1.7	4.3	1.0
LnGrp Delay(d),s/veh	32.1	12.6	18.0	20.8	9.0	4.1
LnGrp LOS	C	B	B	C	A	A
Approach Vol, veh/h		221	258		521	
Approach Delay, s/veh		21.0	19.4		8.5	
Approach LOS		C	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				18.2		29.0	7.2	11.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				27.0		25.0	7.0	16.0
Max Q Clear Time (g_c+I1), s				4.4		10.0	4.5	5.7
Green Ext Time (p_c), s				1.9		1.5	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2915	1875	870	615	0	580
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	3068	1974	867	680		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1301	4950	795	676		
Arrive On Green	0.73	0.97	0.07	0.07		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	3068	1974	867	680		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	110.0	2.5	32.0	32.0		
Cycle Q Clear(g_c), s	110.0	2.5	32.0	32.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	1301	4950	795	676		
V/C Ratio(X)	2.36	0.40	1.09	1.01		
Avail Cap(c_a), veh/h	1301	4950	795	676		
HCM Platoon Ratio	1.00	1.00	0.33	0.33		
Upstream Filter(I)	0.09	0.09	0.94	0.94		
Uniform Delay (d), s/veh	20.0	0.1	69.7	69.7		
Incr Delay (d2), s/veh	611.4	0.0	58.7	35.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	274.1	0.9	23.0	17.3		
LnGrp Delay(d),s/veh	631.4	0.1	128.4	104.9		
LnGrp LOS	F	A	F	F		
Approach Vol, veh/h		5042	1547			
Approach Delay, s/veh		384.3	118.1			
Approach LOS		F	F			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				150.0			114.0	36.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			110.0	32.0
Max Q Clear Time (g_c+I1), s				4.5			112.0	34.0
Green Ext Time (p_c), s				140.0			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	321.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	400	3805	1525	190	960	320	0	0	0	425	0	455
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	421	4005	1605	200	1011	0				447	0	479
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	449	3560	1108	166	2746	855				449	0	401
Arrive On Green	0.25	0.70	0.70	0.09	0.54	0.00				0.13	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	421	4005	1605	200	1011	0				447	0	479
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	34.9	105.0	105.0	14.0	17.1	0.0				18.9	0.0	19.0
Cycle Q Clear(g_c), s	34.9	105.0	105.0	14.0	17.1	0.0				18.9	0.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	449	3560	1108	166	2746	855				449	0	401
V/C Ratio(X)	0.94	1.13	1.45	1.21	0.37	0.00				0.99	0.00	1.19
Avail Cap(c_a), veh/h	591	3560	1108	166	2746	855				449	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	54.8	22.5	22.5	68.0	19.8	0.0				65.4	0.0	65.5
Incr Delay (d2), s/veh	11.9	58.5	204.3	98.9	0.0	0.0				41.1	0.0	109.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.6	67.7	108.2	11.4	8.0	0.0				11.8	0.0	14.4
LnGrp Delay(d),s/veh	66.7	81.0	226.8	166.9	19.8	0.0				106.6	0.0	174.9
LnGrp LOS	E	F	F	F	B					F		F
Approach Vol, veh/h		6031			1211						926	
Approach Delay, s/veh		118.8			44.1						141.9	
Approach LOS		F			D						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			18.0	109.0		23.0	42.0	85.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			14.0	105.0		19.0	50.0	69.0
Max Q Clear Time (g_c+I1), s			16.0	107.0		21.0	36.9	19.1
Green Ext Time (p_c), s			0.0	0.0		0.0	1.1	10.2

Intersection Summary	
HCM 2010 Ctrl Delay	110.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	60	0	220	1285	260	0	0	310	130
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				63	0	0	1353	274	0	0	326	137
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				81	0	72	1385	3189	0	0	330	148
Arrive On Green				0.05	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				63	0	0	1353	274	0	0	326	137
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.3	0.0	0.0	0.0	0.0	0.0	0.0	13.8	12.9
Cycle Q Clear(g_c), s				5.3	0.0	0.0	0.0	0.0	0.0	0.0	13.8	12.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				81	0	72	1385	3189	0	0	330	148
V/C Ratio(X)				0.78	0.00	0.00	0.98	0.09	0.00	0.00	0.99	0.93
Avail Cap(c_a), veh/h				189	0	169	1385	3189	0	0	330	148
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				70.8	0.0	0.0	0.0	0.0	0.0	0.0	67.9	67.5
Incr Delay (d2), s/veh				14.5	0.0	0.0	3.5	0.0	0.0	0.0	46.3	56.7
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				2.9	0.0	0.0	1.4	0.0	0.0	0.0	8.9	8.0
LnGrp Delay(d),s/veh				85.3	0.0	0.0	3.5	0.0	0.0	0.0	114.2	124.2
LnGrp LOS				F			A	A			F	F
Approach Vol, veh/h					63			1627			463	
Approach Delay, s/veh					85.3			2.9			117.2	
Approach LOS					F			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		139.1			121.1	18.0		10.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		126.0			108.0	14.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	15.8		7.3
Green Ext Time (p_c), s		14.7			14.7	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	170	10	105	60	25	0	74	66	1301	1164	745	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.95			0.89	0.85		0.91			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1762			1559	1504		3223			
Flt Permitted	0.95		0.43			0.99	1.00		1.00			
Satd. Flow (perm)	1770		761			1559	1504		3223			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	11	111	63	26	0	78	72	1369	1225	784	274
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	179	0	185	0	0	89	87	0	3359	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	25.0		25.0			6.0	6.0		83.0			
Effective Green, g (s)	25.0		25.0			6.0	6.0		83.0			
Actuated g/C Ratio	0.17		0.17			0.04	0.04		0.55			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	295		126			62	60		1783			
v/s Ratio Prot	0.10					0.06	c0.06		c1.04			
v/s Ratio Perm			c0.24									
v/c Ratio	0.61		1.47			1.44	1.45		2.21dr			
Uniform Delay, d1	57.9		62.5			72.0	72.0		33.5			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	3.5		248.7			266.4	274.0		400.0			
Delay (s)	61.5		311.2			338.4	346.0		433.5			
Level of Service	E		F			F	F		F			
Approach Delay (s)			188.4			342.1			433.5			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	382.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	141.3%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	65	35
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3288
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3288
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	68	37
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	281	98
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	20.0	20.0
Effective Green, g (s)	20.0	20.0
Actuated g/C Ratio	0.13	0.13
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	214	438
v/s Ratio Prot	c0.17	0.03
v/s Ratio Perm		
v/c Ratio	1.31	0.22
Uniform Delay, d1	65.0	58.1
Progression Factor	0.13	0.04
Incremental Delay, d2	163.5	0.9
Delay (s)	171.9	3.1
Level of Service	F	A
Approach Delay (s)		128.2
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1105	310	670	3745	100	250	20	720	90	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1163	326	705	3942	105	263	21	758	95	32	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	115	1441	449	1640	3695	1193	298	199	924	92	87	74
Arrive On Green	0.03	0.28	0.28	0.48	0.73	0.73	0.09	0.11	0.11	0.03	0.05	0.05
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	116	1163	326	705	3942	105	263	21	758	95	32	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.0	31.9	27.9	20.2	109.0	2.6	11.3	1.5	7.3	4.0	2.5	6.4
Cycle Q Clear(g_c), s	5.0	31.9	27.9	20.2	109.0	2.6	11.3	1.5	7.3	4.0	2.5	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	115	1441	449	1640	3695	1193	298	199	924	92	87	74
V/C Ratio(X)	1.01	0.81	0.73	0.43	1.07	0.09	0.88	0.11	0.82	1.04	0.37	1.29
Avail Cap(c_a), veh/h	115	1695	528	1640	3695	1193	298	199	924	92	87	74
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)	0.82	0.82	0.82	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.5	49.9	48.5	25.8	20.5	4.9	67.7	60.5	14.2	73.0	69.4	59.1
Incr Delay (d2), s/veh	78.9	2.1	3.4	0.2	35.8	0.0	25.0	1.1	8.1	103.8	11.6	199.3
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	15.3	12.6	9.6	62.6	1.1	6.4	0.8	20.6	3.2	1.6	6.9
LnGrp Delay(d),s/veh	151.5	52.1	51.9	26.0	56.3	4.9	92.7	61.6	22.4	177.4	80.9	258.4
LnGrp LOS	F	D	D	C	F	A	F	E	C	F	F	F
Approach Vol, veh/h		1605			4752			1042			222	
Approach Delay, s/veh		59.2			50.7			40.9			198.2	
Approach LOS		E			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	75.5	46.5	17.0	11.0	9.0	113.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	64.0	50.0	13.0	7.0	5.0	109.0
Max Q Clear Time (g_c+I1), s	6.0	9.3	22.2	33.9	13.3	8.4	7.0	111.0
Green Ext Time (p_c), s	0.0	2.6	41.6	8.6	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.4
HCM 2010 LOS	E

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												
Volume (veh/h)	110	995	340	210	3825	60	330	30	470	40	20	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1047	358	221	4026	63	347	32	495	42	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	83	3096	1091	268	3255	1048	275	344	292	78	236	274
Arrive On Green	0.05	0.61	0.61	0.10	0.85	0.85	0.08	0.18	0.18	0.02	0.13	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	116	1047	358	221	4026	63	347	32	495	42	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.0	15.2	13.6	9.4	96.0	0.6	12.0	2.1	27.7	1.8	5.0	0.5
Cycle Q Clear(g_c), s	7.0	15.2	13.6	9.4	96.0	0.6	12.0	2.1	27.7	1.8	5.0	0.5
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	83	3096	1091	268	3255	1048	275	344	292	78	236	274
V/C Ratio(X)	1.40	0.34	0.33	0.82	1.24	0.06	1.26	0.09	1.69	0.54	0.29	0.19
Avail Cap(c_a), veh/h	83	3096	1091	344	3255	1048	275	344	292	95	236	274
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	14.5	9.4	66.2	11.2	1.6	69.0	50.7	61.2	72.6	59.4	35.3
Incr Delay (d2), s/veh	238.1	0.1	0.2	1.2	106.9	0.0	143.1	0.5	326.3	5.6	3.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	7.1	6.0	4.5	75.0	0.2	11.2	1.2	38.6	0.9	2.8	1.6
LnGrp Delay(d),s/veh	309.6	14.5	9.6	67.5	118.1	1.6	212.1	51.3	387.5	78.2	62.4	36.9
LnGrp LOS	F	B	A	E	F	A	F	D	F	E	E	D
Approach Vol, veh/h		1521			4310			874			162	
Approach Delay, s/veh		35.9			113.8			305.5			58.3	
Approach LOS		D			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	31.7	15.7	95.3	16.0	23.0	11.0	100.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	15.0	88.0	12.0	19.0	7.0	96.0
Max Q Clear Time (g_c+I1), s	3.8	29.7	11.4	17.2	14.0	7.0	9.0	98.0
Green Ext Time (p_c), s	0.0	0.0	0.2	13.2	0.0	2.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.6
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	1740	0	40	240	100	0	0	170	80
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				1871	0	0	253	105	0	0	179	84
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				2002	1051	0	466	712	0	0	222	100
Arrive On Green				0.56	0.00	0.00	0.44	0.64	0.00	0.00	0.09	0.09
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2467	1069
Grp Volume(v), veh/h				1871	0	0	253	105	0	0	132	131
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1674
Q Serve(g_s), s				72.9	0.0	0.0	15.8	3.4	0.0	0.0	10.9	11.6
Cycle Q Clear(g_c), s				72.9	0.0	0.0	15.8	3.4	0.0	0.0	10.9	11.6
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.64
Lane Grp Cap(c), veh/h				2002	1051	0	466	712	0	0	165	156
V/C Ratio(X)				0.93	0.00	0.00	0.54	0.15	0.00	0.00	0.80	0.84
Avail Cap(c_a), veh/h				2271	1192	0	466	712	0	0	165	156
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.1	0.0	0.0	35.5	17.3	0.0	0.0	66.6	66.9
Incr Delay (d2), s/veh				7.4	0.0	0.0	1.3	0.4	0.0	0.0	31.7	39.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				37.7	0.0	0.0	7.9	1.8	0.0	0.0	6.8	7.1
LnGrp Delay(d),s/veh				37.5	0.0	0.0	36.8	17.8	0.0	0.0	98.3	106.3
LnGrp LOS				D			D	B			F	F
Approach Vol, veh/h					1871			358			263	
Approach Delay, s/veh					37.5			31.2			102.3	
Approach LOS					D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.4			43.4	18.0		88.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		46.0			28.0	14.0		96.0
Max Q Clear Time (g_c+I1), s		5.4			17.8	13.6		74.9
Green Ext Time (p_c), s		1.4			1.0	0.1		9.7

Intersection Summary	
HCM 2010 Ctrl Delay	43.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	0	80	0	0	0	0	260	330	120	1790	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	74	0	84				0	274	347	126	1884	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	121	0	108				0	2218	992	399	3109	0
Arrive On Green	0.07	0.00	0.07				0.00	1.00	1.00	0.45	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	74	0	84				0	274	347	126	1884	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	6.1	0.0	7.8				0.0	0.0	0.0	6.8	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	7.8				0.0	0.0	0.0	6.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	121	0	108				0	2218	992	399	3109	0
V/C Ratio(X)	0.61	0.00	0.78				0.00	0.12	0.35	0.32	0.61	0.00
Avail Cap(c_a), veh/h	237	0	211				0	2218	992	399	3109	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.95	0.95	0.43	0.43	0.00
Uniform Delay (d), s/veh	68.0	0.0	68.8				0.0	0.0	0.0	33.8	0.0	0.0
Incr Delay (d2), s/veh	4.9	0.0	11.4				0.0	0.1	0.9	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	3.8				0.0	0.0	0.3	3.3	0.2	0.0
LnGrp Delay(d),s/veh	72.9	0.0	80.1				0.0	0.1	0.9	34.0	0.4	0.0
LnGrp LOS	E		F					A	A	C	A	
Approach Vol, veh/h		158						621			2010	
Approach Delay, s/veh		76.7						0.6			2.5	
Approach LOS		E						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	37.8	98.0		14.2		135.8		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	24.0	94.0		20.0		122.0		
Max Q Clear Time (g_c+I1), s	8.8	2.0		9.8		2.0		
Green Ext Time (p_c), s	12.0	3.3		0.4		37.7		

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	170	410	100	70	40	160	630	100	30	2070	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	179	432	105	74	42	168	663	105	32	2179	126
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	248	1003	149	199	89	632	3093	484	68	2712	844
Arrive On Green	0.12	0.13	0.13	0.04	0.06	0.06	0.12	0.47	0.47	0.01	0.18	0.18
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4436	695	3442	5085	1583
Grp Volume(v), veh/h	189	179	432	105	74	42	168	505	263	32	2179	126
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1740	1721	1695	1583
Q Serve(g_s), s	15.7	13.8	1.7	4.5	3.0	3.9	6.6	13.2	13.4	1.4	61.7	6.3
Cycle Q Clear(g_c), s	15.7	13.8	1.7	4.5	3.0	3.9	6.6	13.2	13.4	1.4	61.7	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	213	248	1003	149	199	89	632	2364	1213	68	2712	844
V/C Ratio(X)	0.89	0.72	0.43	0.71	0.37	0.47	0.27	0.21	0.22	0.47	0.80	0.15
Avail Cap(c_a), veh/h	296	397	1257	206	378	169	632	2364	1213	92	2712	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.76	0.76	0.76
Uniform Delay (d), s/veh	65.0	62.4	27.7	70.8	68.2	68.6	56.6	15.6	15.7	73.7	54.3	13.0
Incr Delay (d2), s/veh	20.5	3.9	0.3	6.3	1.1	3.8	0.2	0.2	0.4	3.9	2.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	7.4	5.9	2.3	1.5	1.8	3.2	6.3	6.6	0.7	29.5	2.9
LnGrp Delay(d),s/veh	85.5	66.3	28.0	77.1	69.4	72.4	56.8	15.8	16.1	77.6	56.3	13.3
LnGrp LOS	F	E	C	E	E	E	E	B	B	E	E	B
Approach Vol, veh/h		800			221			936			2337	
Approach Delay, s/veh		50.1			73.6			23.2			54.2	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	108.6	10.5	24.0	31.5	84.0	22.0	12.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	89.0	9.0	32.0	13.0	80.0	25.0	16.0
Max Q Clear Time (g_c+I1), s	3.4	15.4	6.5	15.8	8.6	63.7	17.7	5.9
Green Ext Time (p_c), s	0.0	6.9	0.1	3.2	2.2	13.6	0.3	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
21: Qualcomm Way & I-8 WB Ramps

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	0	460	30	140	220	230	600	0	0	800	1780
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	74	0	484	32	147	232	242	632	0	0	842	1874
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	22	101	106	248	4475	0	0	2525	1129
Arrive On Green	0.00	0.00	0.00	0.07	0.07	0.07	0.14	0.88	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		330	1516	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		179	0	232	242	632	0	0	842	1874
Grp Sat Flow(s),veh/h/ln				1846	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				10.0	0.0	10.0	20.4	2.6	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				10.0	0.0	10.0	20.4	2.6	0.0	0.0	0.0	0.0
Prop In Lane				0.18		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				123	0	106	248	4475	0	0	2525	1129
V/C Ratio(X)				1.45	0.00	2.20	0.97	0.14	0.00	0.00	0.33	1.66
Avail Cap(c_a), veh/h				123	0	106	248	4475	0	0	2525	1129
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.67	0.67
Uniform Delay (d), s/veh				70.0	0.0	70.0	64.2	1.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				243.7	0.0	568.7	49.8	0.1	0.0	0.0	0.2	299.3
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				13.4	0.0	21.0	13.4	1.2	0.0	0.0	0.1	93.9
LnGrp Delay(d),s/veh				313.7	0.0	638.7	114.0	1.3	0.0	0.0	0.2	299.3
LnGrp LOS				F		F	F	A			A	F
Approach Vol, veh/h					411			874			2716	
Approach Delay, s/veh					497.2			32.5			206.6	
Approach LOS					F			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		136.0			25.0	111.0		14.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		124.0			13.0	107.0		10.0
Max Q Clear Time (g_c+I1), s		4.6			22.4	2.0		12.0
Green Ext Time (p_c), s		6.0			0.0	89.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	198.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	1250	550	100	2675	60	480	50	140	40	30	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	1316	579	105	2816	63	505	53	147	42	32	263
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	245	3420	1487	149	3242	801	565	506	453	54	283	424
Arrive On Green	0.14	1.00	1.00	0.04	0.51	0.51	0.16	0.29	0.29	0.03	0.15	0.15
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	200	1316	579	105	2816	63	505	53	147	42	32	263
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	8.5	0.0	0.0	4.5	58.1	3.1	21.6	3.3	11.0	3.5	2.2	13.3
Cycle Q Clear(g_c), s	8.5	0.0	0.0	4.5	58.1	3.1	21.6	3.3	11.0	3.5	2.2	13.3
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	245	3420	1487	149	3242	801	565	506	453	54	283	424
V/C Ratio(X)	0.82	0.38	0.39	0.71	0.87	0.08	0.89	0.10	0.32	0.78	0.11	0.62
Avail Cap(c_a), veh/h	321	3460	1505	206	3247	802	688	506	453	106	283	424
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)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.4	0.0	0.0	70.8	32.7	19.1	61.4	39.4	42.2	72.2	54.9	59.6
Incr Delay (d2), s/veh	10.7	0.1	0.1	6.3	2.8	0.0	12.3	0.4	1.9	20.6	0.8	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.0	2.3	26.2	1.4	11.2	1.7	5.1	2.0	1.2	5.5
LnGrp Delay(d),s/veh	74.0	0.1	0.1	77.1	35.4	19.1	73.7	39.9	44.1	92.8	55.7	66.2
LnGrp LOS	E	A	A	E	D	B	E	D	D	F	E	E
Approach Vol, veh/h		2095			2984			705			337	
Approach Delay, s/veh		7.1			36.6			65.0			68.6	
Approach LOS		A			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	46.9	10.5	84.1	28.6	26.8	14.7	79.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	35.0	9.0	81.0	30.0	14.0	14.0	76.0
Max Q Clear Time (g_c+I1), s	5.5	13.0	6.5	2.0	23.6	15.3	10.5	60.1
Green Ext Time (p_c), s	0.0	2.5	0.1	76.6	1.1	0.0	0.2	15.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	730	1460	2425	1000	660	920
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	768	1537	2553	1053	695	968
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	780	4357	2563	1709	1067	594
Arrive On Green	0.23	0.68	0.40	0.40	0.21	0.21
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	768	1537	2553	1053	695	968
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	16.7	7.6	29.8	17.6	9.5	16.0
Cycle Q Clear(g_c), s	16.7	7.6	29.8	17.6	9.5	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	780	4357	2563	1709	1067	594
V/C Ratio(X)	0.98	0.35	1.00	0.62	0.65	1.63
Avail Cap(c_a), veh/h	780	4357	2563	1709	1067	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.45	0.45	1.00	1.00
Uniform Delay (d), s/veh	28.9	5.1	22.4	9.0	27.0	29.5
Incr Delay (d2), s/veh	20.6	0.0	11.0	0.3	3.1	290.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	3.3	15.1	10.5	4.7	35.0
LnGrp Delay(d),s/veh	49.4	5.1	33.4	9.3	30.0	319.9
LnGrp LOS	D	A	C	A	C	F
Approach Vol, veh/h		2305	3606		1663	
Approach Delay, s/veh		19.9	26.4		198.7	
Approach LOS		B	C		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				55.0		20.0	21.0	34.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				51.0		16.0	17.0	30.0
Max Q Clear Time (g_c+I1), s				9.6		18.0	18.7	31.8
Green Ext Time (p_c), s				22.8		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.2
HCM 2010 LOS	E

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	740	0	330	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	779	0	347	337
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1642	389			779	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1642	389			779	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			58	
cM capacity (veh/h)	53	609			834	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	519	260	347	168	168
Volume Left	0	0	347	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	834	1700	1700
Volume to Capacity	0.31	0.15	0.42	0.10	0.10
Queue Length 95th (ft)	0	0	52	0	0
Control Delay (s)	0.0	0.0	12.4	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.3		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1385	890	420	1355	560	390	40	465	230	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	1458	937	442	1426	589	411	42	489	242	11	84
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	193	1626	1013	533	1792	982	1330	672	1436	310	120	102
Arrive On Green	0.06	0.25	0.25	0.15	0.35	0.35	0.39	0.36	0.36	0.09	0.06	0.06
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	137	1458	937	442	1426	589	411	42	489	242	11	84
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	4.4	25.0	15.4	14.2	28.7	19.7	9.5	1.7	3.0	7.8	0.6	5.2
Cycle Q Clear(g_c), s	4.4	25.0	15.4	14.2	28.7	19.7	9.5	1.7	3.0	7.8	0.6	5.2
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	193	1626	1013	533	1792	982	1330	672	1436	310	120	102
V/C Ratio(X)	0.71	0.90	0.92	0.83	0.80	0.60	0.31	0.06	0.34	0.78	0.09	0.82
Avail Cap(c_a), veh/h	212	1635	1016	545	1792	982	1330	672	1436	484	295	251
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	41.0	18.0	46.6	33.1	30.2	24.3	23.8	6.8	50.6	50.0	39.3
Incr Delay (d2), s/veh	9.4	6.9	13.6	10.2	2.6	1.0	0.6	0.2	0.6	4.3	0.3	15.0
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	11.8	25.7	7.5	13.9	7.7	4.6	0.9	2.8	3.9	0.3	2.9
LnGrp Delay(d),s/veh	62.2	47.9	31.7	56.8	35.7	31.2	24.9	23.9	7.5	54.9	50.4	54.2
LnGrp LOS	E	D	C	E	D	C	C	C	A	D	D	D
Approach Vol, veh/h		2532			2457			942			337	
Approach Delay, s/veh		42.7			38.4			15.8			54.6	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	45.0	21.6	32.8	47.9	11.3	10.4	44.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	41.0	18.0	29.0	39.0	18.0	7.0	40.0
Max Q Clear Time (g_c+I1), s	9.8	5.0	16.2	27.0	11.5	7.2	6.4	30.7
Green Ext Time (p_c), s	0.4	4.1	1.4	1.9	4.0	0.2	0.0	7.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	310	70	140	480	125	130
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	326	0	147	505	132	137
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1519	473	345	2805	254	678
Arrive On Green	0.30	0.00	0.10	0.55	0.14	0.14
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	326	0	147	505	132	137
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.3	0.0	1.1	1.3	1.8	1.0
Cycle Q Clear(g_c), s	1.3	0.0	1.1	1.3	1.8	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1519	473	345	2805	254	678
V/C Ratio(X)	0.21	0.00	0.43	0.18	0.52	0.20
Avail Cap(c_a), veh/h	3105	967	657	4852	812	1556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	11.1	2.9	10.4	7.9
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.0	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.5	0.6	1.0	0.4
LnGrp Delay(d),s/veh	7.0	0.0	11.9	3.0	12.0	8.0
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	326			652	269	
Approach Delay, s/veh	7.0			5.0	10.0	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.7	6.6	11.8				18.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		12.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		3.8	3.1	3.3				3.3
Green Ext Time (p_c), s		0.6	0.1	4.6				5.9

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	30	60	50	10	30	255	40	10	180	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	42	32	63	53	11	32	268	42	11	189	32
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	88	67	89	153	32	53	1381	214	20	1309	218
Arrive On Green	0.04	0.09	0.09	0.05	0.10	0.10	0.03	0.45	0.45	0.01	0.43	0.43
Sat Flow, veh/h	1774	982	748	1774	1497	311	1774	3073	476	1774	3037	506
Grp Volume(v), veh/h	42	0	74	63	0	64	32	153	157	11	109	112
Grp Sat Flow(s),veh/h/ln	1774	0	1731	1774	0	1808	1774	1770	1779	1774	1770	1774
Q Serve(g_s), s	0.9	0.0	1.6	1.4	0.0	1.3	0.7	2.1	2.1	0.2	1.5	1.5
Cycle Q Clear(g_c), s	0.9	0.0	1.6	1.4	0.0	1.3	0.7	2.1	2.1	0.2	1.5	1.5
Prop In Lane	1.00		0.43	1.00		0.17	1.00		0.27	1.00		0.29
Lane Grp Cap(c), veh/h	66	0	154	89	0	185	53	795	799	20	763	764
V/C Ratio(X)	0.64	0.00	0.48	0.71	0.00	0.35	0.60	0.19	0.20	0.54	0.14	0.15
Avail Cap(c_a), veh/h	221	0	691	266	0	767	221	795	799	177	763	764
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	19.0	0.0	17.4	18.7	0.0	16.7	19.2	6.6	6.7	19.7	6.9	6.9
Incr Delay (d2), s/veh	9.7	0.0	2.3	9.7	0.0	1.1	10.5	0.5	0.5	20.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.9	0.9	0.0	0.7	0.5	1.1	1.2	0.2	0.8	0.8
LnGrp Delay(d),s/veh	28.7	0.0	19.6	28.5	0.0	17.8	29.7	7.2	7.2	40.0	7.3	7.3
LnGrp LOS	C		B	C		B	C	A	A	D	A	A
Approach Vol, veh/h		116			127			342			232	
Approach Delay, s/veh		22.9			23.1			9.3			8.9	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	22.0	6.0	7.6	5.2	21.3	5.5	8.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	2.2	4.1	3.4	3.6	2.7	3.5	2.9	3.3
Green Ext Time (p_c), s	0.0	2.6	0.0	0.5	0.0	2.6	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	70	90	20	50	10	375	50	30	10	40	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	74	95	21	53	11	395	53	32	11	42	21
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	135	923	103	200	42	855	792	478	19	300	150
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.48	0.73	0.73	0.01	0.26	0.26
Sat Flow, veh/h	376	1338	1583	309	1986	419	1774	1089	658	1774	1173	586
Grp Volume(v), veh/h	106	0	95	42	0	43	395	0	85	11	0	63
Grp Sat Flow(s),veh/h/ln	1713	0	1583	1093	0	1621	1774	0	1747	1774	0	1759
Q Serve(g_s), s	2.4	0.0	0.0	0.1	0.0	1.8	11.0	0.0	1.0	0.5	0.0	2.1
Cycle Q Clear(g_c), s	4.3	0.0	0.0	4.4	0.0	1.8	11.0	0.0	1.0	0.5	0.0	2.1
Prop In Lane	0.30		1.00	0.49		0.26	1.00		0.38	1.00		0.33
Lane Grp Cap(c), veh/h	236	0	923	182	0	163	855	0	1270	19	0	450
V/C Ratio(X)	0.45	0.00	0.10	0.23	0.00	0.26	0.46	0.00	0.07	0.57	0.00	0.14
Avail Cap(c_a), veh/h	516	0	1190	430	0	436	931	0	1270	96	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	6.9	30.8	0.0	30.9	12.8	0.0	2.9	36.6	0.0	21.3
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.6	0.0	0.8	0.4	0.0	0.1	23.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.9	0.8	0.0	0.8	5.5	0.0	0.5	0.3	0.0	1.1
LnGrp Delay(d),s/veh	33.3	0.0	6.9	31.4	0.0	31.7	13.2	0.0	3.0	60.0	0.0	22.0
LnGrp LOS	C		A	C		C	B		A	E		C
Approach Vol, veh/h		201			85			480			74	
Approach Delay, s/veh		20.8			31.6			11.4			27.6	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	58.0		11.5	39.8	23.0		11.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	54.0		20.0	39.0	19.0		20.0
Max Q Clear Time (g_c+I1), s	2.5	3.0		6.3	13.0	4.1		6.4
Green Ext Time (p_c), s	0.0	1.8		1.1	1.7	0.2		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 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												
Volume (veh/h)	10	10	180	50	0	0	545	345	30	10	230	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	208	53	0	0	574	363	32	11	242	11
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	180	305	69	0	0	1204	2098	184	19	1028	47
Arrive On Green	0.00	0.00	0.10	0.04	0.00	0.00	0.35	0.64	0.64	0.01	0.30	0.30
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	3293	289	1774	3449	156
Grp Volume(v), veh/h	0	0	208	53	0	0	574	194	201	11	124	129
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1812	1774	1770	1835
Q Serve(g_s), s	0.0	0.0	4.7	2.2	0.0	0.0	9.6	3.3	3.3	0.5	3.9	3.9
Cycle Q Clear(g_c), s	0.0	0.0	4.7	2.2	0.0	0.0	9.6	3.3	3.3	0.5	3.9	3.9
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.16	1.00		0.09
Lane Grp Cap(c), veh/h	0	180	305	69	0	0	1204	1127	1154	19	528	547
V/C Ratio(X)	0.00	0.00	0.68	0.77	0.00	0.00	0.48	0.17	0.17	0.57	0.23	0.24
Avail Cap(c_a), veh/h	0	429	730	385	0	0	1353	1127	1154	96	528	547
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)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	32.2	35.1	0.0	0.0	18.7	5.5	5.5	36.3	19.5	19.5
Incr Delay (d2), s/veh	0.0	0.0	2.7	16.5	0.0	0.0	0.3	0.3	0.3	23.4	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.2	1.4	0.0	0.0	4.6	1.7	1.8	0.3	2.0	2.1
LnGrp Delay(d),s/veh	0.0	0.0	34.9	51.7	0.0	0.0	19.0	5.8	5.8	59.7	20.6	20.6
LnGrp LOS			C	D			B	A	A	E	C	C
Approach Vol, veh/h		208			53			969			264	
Approach Delay, s/veh		34.9			51.7			13.6			22.2	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	51.0		11.1	29.8	26.0		6.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	47.0		17.0	29.0	22.0		16.0
Max Q Clear Time (g_c+I1), s	2.5	5.3		6.7	11.6	5.9		4.2
Green Ext Time (p_c), s	0.4	2.6		0.5	2.0	1.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 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												
Volume (veh/h)	40	30	160	190	95	375	160	505	130	20	380	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	37	39	168	133	176	407	168	532	137	21	400	53
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	212	223	381	306	321	587	214	1250	320	44	1204	538
Arrive On Green	0.12	0.12	0.12	0.17	0.17	0.17	0.12	0.45	0.45	0.01	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	2790	716	3442	3539	1583
Grp Volume(v), veh/h	37	39	168	133	176	407	168	337	332	21	400	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1736	1721	1770	1583
Q Serve(g_s), s	1.2	1.2	5.8	4.3	5.6	6.9	6.0	8.4	8.5	0.4	5.4	1.5
Cycle Q Clear(g_c), s	1.2	1.2	5.8	4.3	5.6	6.9	6.0	8.4	8.5	0.4	5.4	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	212	223	381	306	321	587	214	793	778	44	1204	538
V/C Ratio(X)	0.17	0.17	0.44	0.44	0.55	0.69	0.78	0.42	0.43	0.47	0.33	0.10
Avail Cap(c_a), veh/h	219	230	387	493	518	921	438	793	778	478	1204	538
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	25.6	25.6	20.9	24.0	24.5	24.7	27.6	12.2	12.2	31.7	15.9	14.6
Incr Delay (d2), s/veh	0.4	0.4	0.8	1.0	1.5	1.5	6.2	1.7	1.7	7.6	0.7	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	0.6	0.7	2.6	2.2	3.0	3.1	3.3	4.4	4.4	0.2	2.8	0.7
LnGrp Delay(d),s/veh	26.0	26.0	21.7	25.0	26.0	26.1	33.9	13.9	13.9	39.3	16.6	15.0
LnGrp LOS	C	C	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		244			716			837			474	
Approach Delay, s/veh		23.0			25.9			17.9			17.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	33.0		11.8	11.8	26.0		15.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	9.0	29.0		8.0	16.0	22.0		18.0
Max Q Clear Time (g_c+I1), s	2.4	10.5		7.8	8.0	7.4		8.9
Green Ext Time (p_c), s	1.1	4.1		0.0	0.3	2.5		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	465	580	50	0	320	330	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	489	611		0	337	347	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	937	983		0	2003	1439	0
Arrive On Green	0.27	0.27		0.00	0.57	0.28	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	489	611		0	337	347	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	6.0	7.3		0.0	2.3	2.6	0.0
Cycle Q Clear(g_c), s	6.0	7.3		0.0	2.3	2.6	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	937	983		0	2003	1439	0
V/C Ratio(X)	0.52	0.62		0.00	0.17	0.24	0.00
Avail Cap(c_a), veh/h	1670	1751		0	2003	1439	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.3	15.8		0.0	5.2	13.6	0.0
Incr Delay (d2), s/veh	0.5	0.6		0.0	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.9		0.0	1.1	1.3	0.0
LnGrp Delay(d),s/veh	15.7	16.4		0.0	5.3	14.0	0.0
LnGrp LOS	B	B			A	B	
Approach Vol, veh/h	1100				337	347	
Approach Delay, s/veh	16.1				5.3	14.0	
Approach LOS	B				A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		32.0		17.5		18.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		28.0		24.0		14.0		
Max Q Clear Time (g_c+I1), s		4.3		9.3		4.6		
Green Ext Time (p_c), s		2.2		4.1		1.5		

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	470	255	30	670	170	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	495	268	32	705	179	53
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	958	1158	51	1904	1926	860
Arrive On Green	0.19	0.19	0.03	0.30	0.54	0.54
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	495	268	32	705	179	53
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	4.4	2.7	0.9	4.3	1.2	0.8
Cycle Q Clear(g_c), s	4.4	2.7	0.9	4.3	1.2	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	1158	51	1904	1926	860
V/C Ratio(X)	0.52	0.23	0.63	0.37	0.09	0.06
Avail Cap(c_a), veh/h	1627	1366	142	3076	1926	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	2.2	24.0	13.9	5.5	5.4
Incr Delay (d2), s/veh	0.4	0.1	12.0	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.6	0.6	1.9	0.6	0.4
LnGrp Delay(d),s/veh	18.7	2.3	36.1	14.0	5.6	5.5
LnGrp LOS	B	A	D	B	A	A
Approach Vol, veh/h	763			737	232	
Approach Delay, s/veh	12.9			15.0	5.6	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		31.1	5.4	13.4				18.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		18.0	4.0	16.0				24.0
Max Q Clear Time (g_c+I1), s		3.2	2.9	6.4				6.3
Green Ext Time (p_c), s		0.6	0.6	3.0				4.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	60	40	40	335	70	40	50	40	80	90	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	63	42	42	353	74	42	53	42	84	95	47
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	36	397	243	64	594	123	64	685	583	106	730	620
Arrive On Green	0.02	0.19	0.19	0.04	0.20	0.20	0.04	0.37	0.37	0.06	0.39	0.39
Sat Flow, veh/h	1774	2112	1293	1774	2920	605	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	21	52	53	42	212	215	42	53	42	84	95	47
Grp Sat Flow(s),veh/h/ln	1774	1770	1635	1774	1770	1756	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.5	1.1	1.3	1.1	5.0	5.1	1.1	0.9	0.8	2.1	1.5	0.9
Cycle Q Clear(g_c), s	0.5	1.1	1.3	1.1	5.0	5.1	1.1	0.9	0.8	2.1	1.5	0.9
Prop In Lane	1.00		0.79	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	332	307	64	360	357	64	685	583	106	730	620
V/C Ratio(X)	0.58	0.16	0.17	0.66	0.59	0.60	0.66	0.08	0.07	0.79	0.13	0.08
Avail Cap(c_a), veh/h	154	616	569	193	655	650	193	685	583	270	730	620
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	22.3	15.6	15.7	21.9	16.6	16.6	21.9	9.4	9.4	21.3	9.0	8.8
Incr Delay (d2), s/veh	13.7	0.2	0.3	10.8	1.5	1.6	10.8	0.2	0.2	12.2	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.6	0.7	2.6	2.6	0.7	0.5	0.4	1.4	0.8	0.4
LnGrp Delay(d),s/veh	36.0	15.8	15.9	32.7	18.1	18.2	32.7	9.7	9.7	33.5	9.3	9.0
LnGrp LOS	D	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		126			469			137			226	
Approach Delay, s/veh		19.2			19.5			16.7			18.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	20.9	5.7	12.6	5.7	22.0	4.9	13.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	5.0	16.0	5.0	18.0	4.0	17.0
Max Q Clear Time (g_c+I1), s	4.1	2.9	3.1	3.3	3.1	3.5	2.5	7.1
Green Ext Time (p_c), s	0.0	0.8	0.0	2.6	0.0	0.9	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	20	65	90	120	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	21	68	95	126	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	337	89	179	0	-	0
Stage 1	153	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	633	951	1394	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	601	951	1394	-	-	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	3.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1394	-	601	951	-	-
HCM Lane V/C Ratio	0.049	-	0.035	0.022	-	-
HCM Control Delay (s)	7.7	0.1	11.2	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	40	50	135	110	30
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	42	53	142	116	32
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	37	516	512	229	888	826
Arrive On Green	0.02	0.28	0.14	0.14	0.50	0.50
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	21	42	53	142	116	32
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.4	0.6	0.5	3.0	1.3	0.4
Cycle Q Clear(g_c), s	0.4	0.6	0.5	3.0	1.3	0.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	37	516	512	229	888	826
V/C Ratio(X)	0.56	0.08	0.10	0.62	0.13	0.04
Avail Cap(c_a), veh/h	197	1243	1575	705	888	826
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	9.6	13.4	14.5	4.8	4.2
Incr Delay (d2), s/veh	12.6	0.1	0.1	2.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.2	1.5	0.7	0.5
LnGrp Delay(d),s/veh	30.0	9.7	13.4	17.2	5.1	4.3
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		63	195		148	
Approach Delay, s/veh		16.5	16.2		4.9	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				14.0		22.0	4.8	9.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				24.0		18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s				2.6		3.3	2.4	5.0
Green Ext Time (p_c), s				0.9		0.3	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	160	720	560	270	0	510
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	168	758	688	218		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	220	2929	2078	589		
Arrive On Green	0.12	0.58	0.12	0.12		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	168	758	688	218		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	4.6	3.7	5.6	6.3		
Cycle Q Clear(g_c), s	4.6	3.7	5.6	6.3		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	220	2929	2078	589		
V/C Ratio(X)	0.76	0.26	0.33	0.37		
Avail Cap(c_a), veh/h	568	4678	2906	823		
HCM Platoon Ratio	1.00	1.00	0.33	0.33		
Upstream Filter(I)	0.98	0.98	0.95	0.95		
Uniform Delay (d), s/veh	21.2	5.3	16.2	16.6		
Incr Delay (d2), s/veh	5.3	0.0	0.1	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.6	1.7	2.9	2.8		
LnGrp Delay(d),s/veh	26.5	5.3	16.3	16.9		
LnGrp LOS	C	A	B	B		
Approach Vol, veh/h		926	906			
Approach Delay, s/veh		9.2	16.5			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				32.8			10.2	22.6
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				46.0			16.0	26.0
Max Q Clear Time (g_c+I1), s				5.7			6.6	8.3
Green Ext Time (p_c), s				15.4			0.3	10.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	280	120	110	740	220	0	0	0	290	0	825
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	158	295	126	116	779	0				305	0	868
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	230	1306	407	150	1074	334				1135	0	1013
Arrive On Green	0.13	0.26	0.26	0.08	0.21	0.00				0.32	0.00	0.32
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	158	295	126	116	779	0				305	0	868
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	4.3	2.3	3.2	3.2	7.1	0.0				3.2	0.0	12.8
Cycle Q Clear(g_c), s	4.3	2.3	3.2	3.2	7.1	0.0				3.2	0.0	12.8
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	230	1306	407	150	1074	334				1135	0	1013
V/C Ratio(X)	0.69	0.23	0.31	0.78	0.73	0.00				0.27	0.00	0.86
Avail Cap(c_a), veh/h	355	1424	443	284	1220	380				1135	0	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	14.7	15.0	22.4	18.4	0.0				12.6	0.0	15.9
Incr Delay (d2), s/veh	3.0	0.1	0.4	8.2	1.9	0.0				0.6	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.1	1.4	1.9	3.5	0.0				1.7	0.0	6.9
LnGrp Delay(d),s/veh	23.7	14.7	15.4	30.6	20.2	0.0				13.2	0.0	25.2
LnGrp LOS	C	B	B	C	C					B		C
Approach Vol, veh/h		579			895						1173	
Approach Delay, s/veh		17.3			21.6						22.1	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			8.2	16.8		20.0	10.5	14.6
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			8.0	14.0		16.0	10.0	12.0
Max Q Clear Time (g_c+I1), s			5.2	5.2		14.8	6.3	9.1
Green Ext Time (p_c), s			0.1	1.9		0.7	1.1	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	485	0	105	50	70	0	0	210	100
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				511	0	0	53	74	0	0	221	105
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				653	0	583	232	1619	0	0	848	379
Arrive On Green				0.37	0.00	0.00	0.13	0.46	0.00	0.00	0.24	0.24
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				511	0	0	53	74	0	0	221	105
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				11.7	0.0	0.0	1.2	0.5	0.0	0.0	2.3	2.5
Cycle Q Clear(g_c), s				11.7	0.0	0.0	1.2	0.5	0.0	0.0	2.3	2.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				653	0	583	232	1619	0	0	848	379
V/C Ratio(X)				0.78	0.00	0.00	0.23	0.05	0.00	0.00	0.26	0.28
Avail Cap(c_a), veh/h				1198	0	1069	232	1619	0	0	848	379
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				12.9	0.0	0.0	17.9	6.9	0.0	0.0	14.1	14.2
Incr Delay (d2), s/veh				2.1	0.0	0.0	0.5	0.1	0.0	0.0	0.7	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				6.1	0.0	0.0	0.6	0.3	0.0	0.0	1.2	1.3
LnGrp Delay(d),s/veh				15.0	0.0	0.0	18.4	6.9	0.0	0.0	14.9	16.0
LnGrp LOS				B			B	A			B	B
Approach Vol, veh/h					511			127			326	
Approach Delay, s/veh					15.0			11.7			15.3	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		25.0			10.0	15.0		20.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		21.0			6.0	11.0		31.0
Max Q Clear Time (g_c+I1), s		2.5			3.2	4.5		13.7
Green Ext Time (p_c), s		0.5			0.1	0.9		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	50	39	296	145	0	51	29	19	11	10	150	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.87			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1616			1680	1504		3255				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1616			1680	1504		3255				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	41	312	153	0	54	32	20	12	11	158	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	53	353	0	0	158	81	0	34	0	0	0	216
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	27.8	27.8			14.5	14.5		19.2				26.3
Effective Green, g (s)	27.8	27.8			14.5	14.5		19.2				26.3
Actuated g/C Ratio	0.27	0.27			0.14	0.14		0.18				0.25
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	474	432			234	210		602				407
v/s Ratio Prot	0.03	c0.22			c0.09	0.05		c0.01				0.13
v/s Ratio Perm												
v/c Ratio	0.11	0.82			0.68	0.39		0.06				0.53
Uniform Delay, d1	28.7	35.6			42.4	40.6		34.8				33.4
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.1	11.4			7.5	1.2		0.2				4.9
Delay (s)	28.8	47.0			49.9	41.8		35.0				38.3
Level of Service	C	D			D	D		D				D
Approach Delay (s)		44.6			47.1			35.0				
Approach LOS		D			D			D				

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	474
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	1.00
Satd. Flow (prot)	3388
Flt Permitted	1.00
Satd. Flow (perm)	3388
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	499
RTOR Reduction (vph)	0
Lane Group Flow (vph)	505
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	26.3
Effective Green, g (s)	26.3
Actuated g/C Ratio	0.25
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	858
v/s Ratio Prot	c0.15
v/s Ratio Perm	
v/c Ratio	0.59
Uniform Delay, d1	34.0
Progression Factor	1.00
Incremental Delay, d2	3.0
Delay (s)	37.0
Level of Service	D
Approach Delay (s)	37.4
Approach LOS	D

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	880	80	280	350	40	60	10	210	50	30	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	926	84	295	368	42	63	11	221	53	32	74
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	86	1688	526	409	2165	728	199	603	700	117	558	474
Arrive On Green	0.03	0.33	0.33	0.12	0.43	0.43	0.06	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	32	926	84	295	368	42	63	11	221	53	32	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.8	12.4	2.4	6.9	3.7	0.2	1.5	0.3	5.1	1.3	1.0	2.4
Cycle Q Clear(g_c), s	0.8	12.4	2.4	6.9	3.7	0.2	1.5	0.3	5.1	1.3	1.0	2.4
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	86	1688	526	409	2165	728	199	603	700	117	558	474
V/C Ratio(X)	0.37	0.55	0.16	0.72	0.17	0.06	0.32	0.02	0.32	0.45	0.06	0.16
Avail Cap(c_a), veh/h	330	3717	1157	1485	5423	1742	495	603	700	412	558	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	22.8	11.7	35.4	14.8	6.1	37.7	19.2	7.3	39.6	20.8	14.7
Incr Delay (d2), s/veh	2.6	0.3	0.1	2.4	0.0	0.0	0.9	0.1	1.2	2.7	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.9	1.3	3.4	1.7	0.4	0.7	0.2	2.6	0.6	0.6	1.3
LnGrp Delay(d),s/veh	42.7	23.0	11.8	37.9	14.9	6.2	38.6	19.3	8.5	42.3	21.0	15.4
LnGrp LOS	D	C	B	D	B	A	D	B	A	D	C	B
Approach Vol, veh/h		1042			705			295			159	
Approach Delay, s/veh		22.7			24.0			15.3			25.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	31.0	13.9	31.7	8.8	29.0	6.1	39.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	27.0	36.0	61.0	12.0	25.0	8.0	89.0
Max Q Clear Time (g_c+I1), s	3.3	7.1	8.9	14.4	3.5	4.4	2.8	5.7
Green Ext Time (p_c), s	0.2	0.7	1.0	13.3	0.2	0.3	0.0	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

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												
Volume (veh/h)	20	890	60	100	350	30	60	10	80	30	20	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	937	63	105	368	32	63	11	84	32	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	33	1509	573	265	1805	603	224	730	620	91	657	588
Arrive On Green	0.02	0.30	0.30	0.08	0.35	0.35	0.06	0.39	0.39	0.03	0.35	0.35
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	21	937	63	105	368	32	63	11	84	32	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.9	12.2	0.0	2.2	3.9	1.0	1.3	0.3	1.8	0.7	1.9	1.1
Cycle Q Clear(g_c), s	0.9	12.2	0.0	2.2	3.9	1.0	1.3	0.3	1.8	0.7	1.9	1.1
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	33	1509	573	265	1805	603	224	730	620	91	657	588
V/C Ratio(X)	0.63	0.62	0.11	0.40	0.20	0.05	0.28	0.02	0.14	0.35	0.10	0.09
Avail Cap(c_a), veh/h	324	3850	1302	764	4050	1302	539	730	620	417	657	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	23.2	16.3	33.7	17.2	15.0	34.1	14.3	7.4	36.7	16.7	7.1
Incr Delay (d2), s/veh	17.8	0.4	0.1	1.0	0.1	0.0	0.7	0.0	0.5	2.3	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.7	0.9	1.1	1.8	0.4	0.7	0.1	1.2	0.4	1.0	0.6
LnGrp Delay(d),s/veh	55.2	23.6	16.3	34.6	17.2	15.0	34.8	14.3	7.8	38.9	17.0	7.4
LnGrp LOS	E	C	B	C	B	B	C	B	A	D	B	A
Approach Vol, veh/h		1021			505			158			152	
Approach Delay, s/veh		23.8			20.7			19.0			18.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	34.0	9.9	26.7	9.0	31.0	5.4	31.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	30.0	17.0	58.0	12.0	27.0	14.0	61.0
Max Q Clear Time (g_c+I1), s	2.7	3.8	4.2	14.2	3.3	3.9	2.9	5.9
Green Ext Time (p_c), s	0.0	0.5	2.4	8.6	0.3	0.5	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

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												
Volume (veh/h)	0	0	0	90	0	40	110	60	0	0	40	20
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				68	37	42	116	63	0	0	42	21
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				177	79	90	399	1118	0	0	528	246
Arrive On Green				0.10	0.10	0.10	0.23	0.60	0.00	0.00	0.23	0.23
Sat Flow, veh/h				1774	798	905	1774	1863	0	0	2440	1093
Grp Volume(v), veh/h				68	0	79	116	63	0	0	31	32
Grp Sat Flow(s),veh/h/ln				1774	0	1703	1774	1863	0	0	1770	1670
Q Serve(g_s), s				1.0	0.0	1.2	1.4	0.4	0.0	0.0	0.4	0.4
Cycle Q Clear(g_c), s				1.0	0.0	1.2	1.4	0.4	0.0	0.0	0.4	0.4
Prop In Lane				1.00		0.53	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				177	0	170	399	1118	0	0	398	376
V/C Ratio(X)				0.39	0.00	0.47	0.29	0.06	0.00	0.00	0.08	0.09
Avail Cap(c_a), veh/h				1065	0	1022	399	1118	0	0	398	376
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.2	0.0	11.3	8.6	2.2	0.0	0.0	8.1	8.2
Incr Delay (d2), s/veh				1.4	0.0	2.0	0.4	0.1	0.0	0.0	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
%ile BackOfQ(50%),veh/ln				0.5	0.0	0.6	0.8	0.2	0.0	0.0	0.2	0.2
LnGrp Delay(d),s/veh				12.6	0.0	13.3	9.0	2.3	0.0	0.0	8.5	8.6
LnGrp LOS				B		B	A	A			A	A
Approach Vol, veh/h					147			179			63	
Approach Delay, s/veh					13.0			6.6			8.6	
Approach LOS					B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			10.0	10.0		6.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		16.0			6.0	6.0		16.0
Max Q Clear Time (g_c+I1), s		2.4			3.4	2.4		3.2
Green Ext Time (p_c), s		0.5			0.1	0.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	30	0	0	0	0	110	375	20	100	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	53	0	32				0	116	395	21	105	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	89	0	79				0	2386	1068	163	2929	0
Arrive On Green	0.05	0.00	0.05				0.00	0.67	0.67	0.09	0.83	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	53	0	32				0	116	395	21	105	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	1.9	0.0	1.3				0.0	0.7	7.1	0.7	0.3	0.0
Cycle Q Clear(g_c), s	1.9	0.0	1.3				0.0	0.7	7.1	0.7	0.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	89	0	79				0	2386	1068	163	2929	0
V/C Ratio(X)	0.60	0.00	0.41				0.00	0.05	0.37	0.13	0.04	0.00
Avail Cap(c_a), veh/h	489	0	437				0	2386	1068	163	2929	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.4	0.0	30.1				0.0	3.6	4.6	27.2	1.0	0.0
Incr Delay (d2), s/veh	6.3	0.0	3.3				0.0	0.0	1.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.6				0.0	0.4	3.4	0.4	0.2	0.0
LnGrp Delay(d),s/veh	36.7	0.0	33.4				0.0	3.6	5.6	27.6	1.0	0.0
LnGrp LOS	D		C					A	A	C	A	
Approach Vol, veh/h		85						511			126	
Approach Delay, s/veh		35.4						5.1			5.4	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.0	48.0		7.3		58.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	6.0	44.0		18.0		54.0		
Max Q Clear Time (g_c+I1), s	2.7	9.1		3.9		2.3		
Green Ext Time (p_c), s	0.2	2.3		0.2		0.8		

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	80	20	50	10	80	515	40	10	200	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	21	32	84	21	53	11	84	542	42	11	211	42
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	36	146	427	70	278	124	194	2645	203	49	2577	802
Arrive On Green	0.02	0.08	0.08	0.02	0.08	0.08	0.06	0.55	0.55	0.01	0.51	0.51
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4818	370	3442	5085	1583
Grp Volume(v), veh/h	21	32	84	21	53	11	84	380	204	11	211	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1797	1721	1695	1583
Q Serve(g_s), s	0.6	0.8	0.8	0.3	0.7	0.2	1.1	2.7	2.7	0.1	1.0	0.6
Cycle Q Clear(g_c), s	0.6	0.8	0.8	0.3	0.7	0.2	1.1	2.7	2.7	0.1	1.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	36	146	427	70	278	124	194	1861	987	49	2577	802
V/C Ratio(X)	0.58	0.22	0.20	0.30	0.19	0.09	0.43	0.20	0.21	0.22	0.08	0.05
Avail Cap(c_a), veh/h	225	629	1249	436	1196	535	581	1861	987	436	2577	802
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	23.0	20.5	8.8	22.9	20.4	13.0	21.6	5.4	5.4	23.1	6.0	5.9
Incr Delay (d2), s/veh	13.9	0.7	0.2	2.3	0.3	0.3	1.5	0.2	0.5	2.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.4	0.2	0.3	0.1	0.6	1.3	1.5	0.1	0.5	0.3
LnGrp Delay(d),s/veh	36.9	21.2	9.0	25.2	20.7	13.3	23.1	5.7	5.9	25.4	6.1	6.0
LnGrp LOS	D	C	A	C	C	B	C	A	A	C	A	A
Approach Vol, veh/h		137			85			668			264	
Approach Delay, s/veh		16.1			20.9			7.9			6.9	
Approach LOS		B			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	30.0	5.0	7.7	6.7	28.0	5.0	7.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	6.0	16.0	8.0	24.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	4.7	2.3	2.8	3.1	3.0	2.6	2.7
Green Ext Time (p_c), s	0.5	3.8	0.1	0.3	0.1	1.5	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	70	20	60	110	90	515	0	0	180	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	11	0	74	21	63	116	95	542	0	0	189	126
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	49	148	170	123	3714	0	0	2053	918
Arrive On Green	0.00	0.00	0.00	0.11	0.11	0.11	0.07	0.73	0.00	0.00	0.58	0.58
Sat Flow, veh/h		0		460	1380	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		84	0	116	95	542	0	0	189	126
Grp Sat Flow(s),veh/h/ln				1840	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				2.1	0.0	3.5	2.6	1.6	0.0	0.0	1.2	1.8
Cycle Q Clear(g_c), s				2.1	0.0	3.5	2.6	1.6	0.0	0.0	1.2	1.8
Prop In Lane				0.25		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				198	0	170	123	3714	0	0	2053	918
V/C Ratio(X)				0.43	0.00	0.68	0.78	0.15	0.00	0.00	0.09	0.14
Avail Cap(c_a), veh/h				299	0	257	360	3714	0	0	2053	918
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.6	0.0	21.2	22.6	2.0	0.0	0.0	4.6	4.7
Incr Delay (d2), s/veh				1.4	0.0	4.8	10.0	0.1	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.2	0.0	1.7	1.6	0.7	0.0	0.0	0.6	0.8
LnGrp Delay(d),s/veh				22.0	0.0	25.9	32.5	2.1	0.0	0.0	4.7	5.0
LnGrp LOS				C		C	C	A			A	A
Approach Vol, veh/h					200			637			315	
Approach Delay, s/veh					24.3			6.6			4.8	
Approach LOS					C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		40.0			7.4	32.6		9.3
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		36.0			10.0	22.0		8.0
Max Q Clear Time (g_c+I1), s		3.6			4.6	3.8		5.5
Green Ext Time (p_c), s		6.1			0.1	5.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	615	310	40	450	40	110	20	20	10	30	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	647	326	42	474	42	116	21	21	11	32	84
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	369	1470	639	122	1011	250	221	717	621	20	644	963
Arrive On Green	0.11	0.23	0.23	0.04	0.16	0.16	0.06	0.40	0.40	0.01	0.35	0.35
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1798	1559	1774	1863	2787
Grp Volume(v), veh/h	168	647	326	42	474	42	116	21	21	11	32	84
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1588	1774	1863	1393
Q Serve(g_s), s	2.3	4.3	3.5	0.6	3.3	0.9	1.6	0.3	0.4	0.3	0.6	1.0
Cycle Q Clear(g_c), s	2.3	4.3	3.5	0.6	3.3	0.9	1.6	0.3	0.4	0.3	0.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	369	1470	639	122	1011	250	221	705	633	20	644	963
V/C Ratio(X)	0.46	0.44	0.51	0.34	0.47	0.17	0.52	0.03	0.03	0.55	0.05	0.09
Avail Cap(c_a), veh/h	420	2345	1020	280	2084	515	350	705	633	144	644	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	16.2	8.2	23.2	18.8	11.3	22.3	9.0	9.0	24.2	10.7	10.9
Incr Delay (d2), s/veh	0.9	0.2	0.6	1.7	0.3	0.3	1.9	0.1	0.1	21.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.9	1.7	0.3	1.5	0.5	0.8	0.2	0.2	0.3	0.3	0.4
LnGrp Delay(d),s/veh	21.5	16.5	8.9	24.8	19.2	11.6	24.2	9.1	9.1	45.3	10.9	11.0
LnGrp LOS	C	B	A	C	B	B	C	A	A	D	B	B
Approach Vol, veh/h		1141			558			158			127	
Approach Delay, s/veh		15.0			19.0			20.2			14.0	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	23.6	5.7	15.3	7.2	21.0	9.3	11.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	4.0	18.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	2.4	2.6	6.3	3.6	3.0	4.3	5.3
Green Ext Time (p_c), s	0.0	0.5	0.0	5.0	0.1	0.3	1.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	130	675	480	170	470	350
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	711	505	179	495	368
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	362	2230	1049	1833	2471	1376
Arrive On Green	0.11	0.35	0.16	0.16	0.49	0.49
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	137	711	505	179	495	368
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	1.9	4.1	3.6	1.2	2.8	3.9
Cycle Q Clear(g_c), s	1.9	4.1	3.6	1.2	2.8	3.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	362	2230	1049	1833	2471	1376
V/C Ratio(X)	0.38	0.32	0.48	0.10	0.20	0.27
Avail Cap(c_a), veh/h	612	3418	1772	2147	2471	1376
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	21.1	12.1	19.2	3.2	7.2	7.5
Incr Delay (d2), s/veh	0.7	0.1	0.3	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.8	1.6	1.1	1.3	4.0
LnGrp Delay(d),s/veh	21.7	12.2	19.6	3.2	7.4	7.9
LnGrp LOS	C	B	B	A	A	A
Approach Vol, veh/h		848	684		863	
Approach Delay, s/veh		13.7	15.3		7.6	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				21.6		29.0	9.3	12.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				27.0		25.0	9.0	14.0
Max Q Clear Time (g_c+I1), s				6.1		5.9	3.9	5.6
Green Ext Time (p_c), s				5.5		3.4	2.4	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	290	0	250	210
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	305	0	263	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	942	153			305	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	942	153			305	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			79	
cM capacity (veh/h)	206	866			1252	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	204	102	263	111	111
Volume Left	0	0	263	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1252	1700	1700
Volume to Capacity	0.12	0.06	0.21	0.07	0.07
Queue Length 95th (ft)	0	0	20	0	0
Control Delay (s)	0.0	0.0	8.6	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	270	190	230	360	240	160	20	335	150	0	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	284	200	242	379	253	168	21	353	158	0	74
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	122	791	692	549	1259	690	1079	564	1288	315	150	128
Arrive On Green	0.04	0.12	0.12	0.16	0.25	0.25	0.31	0.30	0.30	0.09	0.00	0.08
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	42	284	200	242	379	253	168	21	353	158	0	74
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	0.6	2.0	0.0	3.2	3.0	3.7	1.7	0.4	1.2	2.2	0.0	1.8
Cycle Q Clear(g_c), s	0.6	2.0	0.0	3.2	3.0	3.7	1.7	0.4	1.2	2.2	0.0	1.8
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	122	791	692	549	1259	690	1079	564	1288	315	150	128
V/C Ratio(X)	0.34	0.36	0.29	0.44	0.30	0.37	0.16	0.04	0.27	0.50	0.00	0.58
Avail Cap(c_a), veh/h	347	2198	1040	972	2668	1462	1079	564	1288	1250	789	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	19.9	9.0	18.8	15.2	15.4	12.3	12.2	2.0	21.4	0.0	13.6
Incr Delay (d2), s/veh	1.7	0.3	0.2	0.6	0.1	0.3	0.3	0.1	0.5	1.2	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	1.7	1.5	1.4	1.4	0.9	0.2	0.8	1.1	0.0	0.9
LnGrp Delay(d),s/veh	25.0	20.2	9.2	19.4	15.3	15.8	12.6	12.3	2.6	22.7	0.0	17.7
LnGrp LOS	C	C	A	B	B	B	B	B	A	C		B
Approach Vol, veh/h		526			874			542			232	
Approach Delay, s/veh		16.4			16.6			6.0			21.1	
Approach LOS		B			B			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	19.0	11.9	10.1	19.5	8.0	5.8	16.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	15.0	14.0	17.0	12.0	21.0	5.0	26.0
Max Q Clear Time (g_c+I1), s	4.2	3.2	5.2	4.0	3.7	3.8	2.6	5.7
Green Ext Time (p_c), s	0.4	1.7	3.0	2.1	1.5	0.2	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	925	405	180	615	175	220
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	974	0	189	647	184	232
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1962	611	331	3034	309	754
Arrive On Green	0.39	0.00	0.10	0.60	0.17	0.17
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	974	0	189	647	184	232
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	5.1	0.0	1.8	2.1	3.3	2.3
Cycle Q Clear(g_c), s	5.1	0.0	1.8	2.1	3.3	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1962	611	331	3034	309	754
V/C Ratio(X)	0.50	0.00	0.57	0.21	0.60	0.31
Avail Cap(c_a), veh/h	2331	726	493	3641	610	1226
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	15.1	3.3	13.3	10.1
Incr Delay (d2), s/veh	0.2	0.0	1.5	0.0	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.9	1.0	1.8	0.9
LnGrp Delay(d),s/veh	8.3	0.0	16.6	3.3	15.1	10.4
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	974			836	416	
Approach Delay, s/veh	8.3			6.3	12.5	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.1	7.4	17.5				24.8
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		12.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		5.3	3.8	7.1				4.1
Green Ext Time (p_c), s		0.9	0.1	6.4				11.9

Intersection Summary	
HCM 2010 Ctrl Delay	8.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	50	515	60	50	20	30	405	80	20	625	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	53	542	63	53	21	32	426	84	21	658	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	51	521	79	443	175	50	866	170	35	964	61
Arrive On Green	0.05	0.36	0.36	0.04	0.35	0.35	0.03	0.29	0.29	0.02	0.29	0.29
Sat Flow, veh/h	1774	143	1462	1774	1271	503	1774	2953	578	1774	3379	215
Grp Volume(v), veh/h	74	0	595	63	0	74	32	254	256	21	344	356
Grp Sat Flow(s),veh/h/ln	1774	0	1605	1774	0	1774	1774	1770	1761	1774	1770	1825
Q Serve(g_s), s	2.3	0.0	20.0	2.0	0.0	1.6	1.0	6.6	6.7	0.7	9.7	9.7
Cycle Q Clear(g_c), s	2.3	0.0	20.0	2.0	0.0	1.6	1.0	6.6	6.7	0.7	9.7	9.7
Prop In Lane	1.00		0.91	1.00		0.28	1.00		0.33	1.00		0.12
Lane Grp Cap(c), veh/h	94	0	572	79	0	618	50	519	517	35	505	521
V/C Ratio(X)	0.79	0.00	1.04	0.80	0.00	0.12	0.64	0.49	0.50	0.59	0.68	0.68
Avail Cap(c_a), veh/h	190	0	572	127	0	618	127	519	517	127	505	521
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	26.2	0.0	18.0	26.5	0.0	12.4	27.0	16.3	16.4	27.3	17.8	17.8
Incr Delay (d2), s/veh	13.6	0.0	48.2	16.3	0.0	0.1	13.1	3.3	3.4	14.9	7.3	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	16.4	1.3	0.0	0.8	0.7	3.7	3.8	0.5	5.7	5.9
LnGrp Delay(d),s/veh	39.8	0.0	66.3	42.8	0.0	12.5	40.1	19.6	19.7	42.2	25.1	24.9
LnGrp LOS	D		F	D		B	D	B	B	D	C	C
Approach Vol, veh/h		669			137			542			721	
Approach Delay, s/veh		63.4			26.5			20.9			25.5	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	20.5	6.5	24.0	5.6	20.0	7.0	23.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	20.0	4.0	16.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	8.7	4.0	22.0	3.0	11.7	4.3	3.6
Green Ext Time (p_c), s	0.0	4.1	0.0	0.0	0.0	2.7	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	555	1010	30	70	10	110	60	50	10	50	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	584	1063	32	74	11	116	63	53	11	53	53
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	733	1055	117	581	86	468	420	353	19	167	167
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.26	0.45	0.45	0.01	0.20	0.20
Sat Flow, veh/h	30	1820	1583	85	1443	214	1774	936	788	1774	856	856
Grp Volume(v), veh/h	605	0	1063	32	0	85	116	0	116	11	0	106
Grp Sat Flow(s),veh/h/ln	1850	0	1583	85	0	1657	1774	0	1724	1774	0	1712
Q Serve(g_s), s	6.8	0.0	35.0	9.1	0.0	2.8	4.5	0.0	3.5	0.5	0.0	4.6
Cycle Q Clear(g_c), s	25.1	0.0	35.0	34.2	0.0	2.8	4.5	0.0	3.5	0.5	0.0	4.6
Prop In Lane	0.03		1.00	1.00		0.13	1.00		0.46	1.00		0.50
Lane Grp Cap(c), veh/h	788	0	1055	117	0	667	468	0	773	19	0	335
V/C Ratio(X)	0.77	0.00	1.01	0.27	0.00	0.13	0.25	0.00	0.15	0.58	0.00	0.32
Avail Cap(c_a), veh/h	788	0	1055	117	0	667	531	0	773	82	0	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	14.5	38.2	0.0	16.4	25.2	0.0	14.2	42.8	0.0	30.0
Incr Delay (d2), s/veh	4.6	0.0	29.5	1.2	0.0	0.1	0.3	0.0	0.4	24.7	0.0	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	13.8	0.0	23.5	0.8	0.0	1.3	2.2	0.0	1.7	0.4	0.0	2.4
LnGrp Delay(d),s/veh	27.6	0.0	44.0	39.4	0.0	16.4	25.5	0.0	14.6	67.5	0.0	32.5
LnGrp LOS	C		F	D		B	C		B	E		C
Approach Vol, veh/h		1668			117			232			117	
Approach Delay, s/veh		38.1			22.7			20.0			35.8	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	43.0		39.0	26.9	21.0		39.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	39.0		35.0	26.0	17.0		35.0
Max Q Clear Time (g_c+I1), s	2.5	5.5		37.0	6.5	6.6		36.2
Green Ext Time (p_c), s	0.0	1.0		0.0	0.9	0.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

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												
Volume (veh/h)	20	10	1210	30	10	10	310	495	30	10	1180	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	1304	32	11	11	326	521	32	11	1242	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	720	1224	41	14	14	252	1548	95	17	1401	24
Arrive On Green	0.00	0.00	0.39	0.04	0.04	0.04	0.02	0.15	0.15	0.01	0.39	0.39
Sat Flow, veh/h	0	1863	3167	1036	356	356	3442	3388	208	1774	3562	60
Grp Volume(v), veh/h	0	0	1304	54	0	0	326	272	281	11	617	646
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1748	0	0	1721	1770	1826	1774	1770	1852
Q Serve(g_s), s	0.0	0.0	58.0	4.6	0.0	0.0	11.0	20.6	20.7	0.9	48.7	48.7
Cycle Q Clear(g_c), s	0.0	0.0	58.0	4.6	0.0	0.0	11.0	20.6	20.7	0.9	48.7	48.7
Prop In Lane	0.00		1.00	0.59		0.20	1.00		0.11	1.00		0.03
Lane Grp Cap(c), veh/h	0	720	1224	70	0	0	252	809	834	17	696	729
V/C Ratio(X)	0.00	0.00	1.06	0.77	0.00	0.00	1.29	0.34	0.34	0.63	0.89	0.89
Avail Cap(c_a), veh/h	0	720	1224	186	0	0	252	809	834	47	696	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	46.0	71.3	0.0	0.0	73.2	43.3	43.4	74.0	42.4	42.4
Incr Delay (d2), s/veh	0.0	0.0	44.9	16.4	0.0	0.0	156.4	1.1	1.0	32.2	15.5	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	33.0	2.5	0.0	0.0	10.7	10.4	10.7	0.6	26.8	28.0
LnGrp Delay(d),s/veh	0.0	0.0	90.9	87.7	0.0	0.0	229.6	44.4	44.4	106.2	57.8	57.3
LnGrp LOS			F	F			F	D	D	F	E	E
Approach Vol, veh/h		1304			54			879			1274	
Approach Delay, s/veh		90.9			87.7			113.1			58.0	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	72.5		62.0	15.0	63.0		10.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	56.0		58.0	11.0	49.0		16.0
Max Q Clear Time (g_c+I1), s	2.9	22.7		60.0	13.0	50.7		6.6
Green Ext Time (p_c), s	0.0	16.5		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	84.5
HCM 2010 LOS	F

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												
Volume (veh/h)	60	30	575	340	90	195	235	585	50	10	2350	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	54	605	374	175	137	247	616	53	11	2474	84
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	284	298	412	378	199	285	177	1825	157	252	1864	834
Arrive On Green	0.16	0.16	0.16	0.11	0.11	0.11	0.10	0.55	0.55	0.07	0.53	0.53
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3299	283	3442	3539	1583
Grp Volume(v), veh/h	48	54	605	374	175	137	247	330	339	11	2474	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1813	1721	1770	1583
Q Serve(g_s), s	3.5	3.8	24.0	15.8	13.9	0.7	15.0	15.4	15.4	0.4	79.0	4.0
Cycle Q Clear(g_c), s	3.5	3.8	24.0	15.8	13.9	0.7	15.0	15.4	15.4	0.4	79.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	284	298	412	378	199	285	177	979	1003	252	1864	834
V/C Ratio(X)	0.17	0.18	1.47	0.99	0.88	0.48	1.39	0.34	0.34	0.04	1.33	0.10
Avail Cap(c_a), veh/h	284	298	412	378	199	285	177	979	1003	252	1864	834
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	0.09	0.09	0.09
Uniform Delay (d), s/veh	54.4	54.5	55.5	66.9	66.1	55.2	67.5	18.4	18.4	64.6	35.5	17.7
Incr Delay (d2), s/veh	0.3	0.3	224.2	43.0	33.5	1.3	207.2	0.9	0.9	0.0	147.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.0	42.7	10.0	9.0	0.4	17.6	7.8	8.0	0.2	76.5	1.7
LnGrp Delay(d),s/veh	54.7	54.8	279.7	109.9	99.6	56.5	274.7	19.3	19.3	64.6	183.1	17.8
LnGrp LOS	D	D	F	F	F	E	F	B	B	E	F	B
Approach Vol, veh/h		707			686			916			2569	
Approach Delay, s/veh		247.3			96.6			88.2			177.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	87.0		28.0	19.0	83.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	11.0	83.0		24.0	15.0	79.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	17.4		26.0	17.0	81.0		17.8
Green Ext Time (p_c), s	8.1	4.8		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	159.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	475	1490	20	0	355	865	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	500	1568		0	374	911	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1702	1785		0	1412	2028	0
Arrive On Green	0.49	0.49		0.00	0.40	0.40	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	500	1568		0	374	911	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	6.4	29.1		0.0	5.3	9.8	0.0
Cycle Q Clear(g_c), s	6.4	29.1		0.0	5.3	9.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1702	1785		0	1412	2028	0
V/C Ratio(X)	0.29	0.88		0.00	0.26	0.45	0.00
Avail Cap(c_a), veh/h	1836	1925		0	1412	2028	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.2	16.9		0.0	15.2	16.5	0.0
Incr Delay (d2), s/veh	0.1	4.8		0.0	0.5	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	17.0		0.0	2.7	4.7	0.0
LnGrp Delay(d),s/veh	11.3	21.7		0.0	15.6	17.2	0.0
LnGrp LOS	B	C			B	B	
Approach Vol, veh/h	2068				374	911	
Approach Delay, s/veh	19.2				15.6	17.2	
Approach LOS	B				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		33.9		41.1		33.9		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		27.0		40.0		19.0		
Max Q Clear Time (g_c+I1), s		7.3		31.1		11.8		
Green Ext Time (p_c), s		9.0		6.0		4.5		

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1460	365	70	1050	485	80
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1537	384	74	1105	511	84
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1861	1106	93	3212	1180	526
Arrive On Green	0.37	0.37	0.05	0.50	0.33	0.33
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1537	384	74	1105	511	84
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	13.2	4.6	2.0	5.0	5.4	1.8
Cycle Q Clear(g_c), s	13.2	4.6	2.0	5.0	5.4	1.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1861	1106	93	3212	1180	526
V/C Ratio(X)	0.83	0.35	0.80	0.34	0.43	0.16
Avail Cap(c_a), veh/h	1902	1119	147	3462	1180	526
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	13.9	2.9	22.6	7.2	12.5	11.3
Incr Delay (d2), s/veh	3.1	0.2	14.6	0.1	1.2	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	6.7	4.3	1.3	2.2	2.8	0.9
LnGrp Delay(d),s/veh	17.0	3.1	37.1	7.3	13.7	12.0
LnGrp LOS	B	A	D	A	B	B
Approach Vol, veh/h	1921			1179	595	
Approach Delay, s/veh	14.2			9.2	13.4	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.0	6.5	21.6				28.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	4.0	18.0				26.0
Max Q Clear Time (g_c+I1), s		7.4	4.0	15.2				7.0
Green Ext Time (p_c), s		1.5	0.0	2.4				8.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
8: Rancho Mission Rd & San Diego Mission Rd

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	1460	60	40	90	60	60	285	50	120	125	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	1537	63	42	95	63	63	300	53	126	132	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	722	1591	65	54	174	107	81	428	364	136	486	413
Arrive On Green	0.41	0.46	0.46	0.03	0.08	0.08	0.05	0.23	0.23	0.08	0.26	0.26
Sat Flow, veh/h	1774	3466	142	1774	2107	1296	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	147	783	817	42	79	79	63	300	53	126	132	63
Grp Sat Flow(s),veh/h/ln	1774	1770	1838	1774	1770	1634	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.2	33.6	34.0	1.8	3.3	3.7	2.8	11.6	2.1	5.5	4.4	0.7
Cycle Q Clear(g_c), s	4.2	33.6	34.0	1.8	3.3	3.7	2.8	11.6	2.1	5.5	4.4	0.7
Prop In Lane	1.00		0.08	1.00		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	722	813	844	54	146	135	81	428	364	136	486	413
V/C Ratio(X)	0.20	0.96	0.97	0.77	0.54	0.59	0.78	0.70	0.15	0.93	0.27	0.15
Avail Cap(c_a), veh/h	722	813	844	91	610	563	136	428	364	136	486	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	20.6	20.6	37.7	34.5	34.7	37.0	27.7	24.1	36.0	23.1	2.2
Incr Delay (d2), s/veh	0.1	22.9	23.5	20.5	3.0	4.0	15.1	9.2	0.8	55.7	1.4	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	2.1	21.5	22.5	1.2	1.8	1.8	1.7	7.0	1.0	4.8	2.5	1.1
LnGrp Delay(d),s/veh	15.2	43.5	44.1	58.2	37.6	38.7	52.1	37.0	24.9	91.7	24.4	2.9
LnGrp LOS	B	D	D	E	D	D	D	D	C	F	C	A
Approach Vol, veh/h		1747			200			416			321	
Approach Delay, s/veh		41.4			42.3			37.7			46.6	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	22.0	6.4	40.0	7.6	24.4	35.9	10.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	18.0	4.0	36.0	6.0	18.0	13.0	27.0
Max Q Clear Time (g_c+I1), s	7.5	13.6	3.8	36.0	4.8	6.4	6.2	5.7
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	2.3	5.3	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	41.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	185	265	35	180	180	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	195	279	37	189	189	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	371	108	216	0	-	0
Stage 1	203	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	603	925	1351	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	584	925	1351	-	-	-
Mov Cap-2 Maneuver	584	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1351	-	584	925	-	-
HCM Lane V/C Ratio	0.027	-	0.333	0.302	-	-
HCM Control Delay (s)	7.7	0.1	14.2	10.6	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.5	1.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	90	120	120	125	415	50
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	126	126	132	437	53
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	119	618	574	257	821	838
Arrive On Green	0.07	0.33	0.16	0.16	0.46	0.46
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	95	126	126	132	437	53
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.1	1.9	1.2	3.0	6.8	0.6
Cycle Q Clear(g_c), s	2.1	1.9	1.2	3.0	6.8	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	119	618	574	257	821	838
V/C Ratio(X)	0.80	0.20	0.22	0.51	0.53	0.06
Avail Cap(c_a), veh/h	182	1149	1455	651	821	838
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	17.9	9.3	14.2	14.9	7.5	4.5
Incr Delay (d2), s/veh	13.2	0.2	0.2	1.6	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.0	0.6	1.4	3.8	0.9
LnGrp Delay(d),s/veh	31.1	9.5	14.4	16.5	9.9	4.6
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		221	258		490	
Approach Delay, s/veh		18.8	15.4		9.3	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				16.9		22.0	6.6	10.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				24.0		18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s				3.9		8.8	4.1	5.0
Green Ext Time (p_c), s				1.9		1.2	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2655	1820	870	595	0	580
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	2795	1916	851	669		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1313	4950	770	654		
Arrive On Green	0.74	0.97	0.21	0.21		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	2795	1916	851	669		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	111.0	2.4	31.0	31.0		
Cycle Q Clear(g_c), s	111.0	2.4	31.0	31.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	1313	4950	770	654		
V/C Ratio(X)	2.13	0.39	1.11	1.02		
Avail Cap(c_a), veh/h	1313	4950	770	654		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.93	0.93		
Uniform Delay (d), s/veh	19.5	0.1	59.5	59.5		
Incr Delay (d2), s/veh	508.3	0.0	64.2	39.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	239.0	0.9	22.8	17.2		
LnGrp Delay(d),s/veh	527.8	0.1	123.7	99.2		
LnGrp LOS	F	A	F	F		
Approach Vol, veh/h		4711	1520			
Approach Delay, s/veh		313.2	112.9			
Approach LOS		F	F			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				150.0			115.0	35.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			111.0	31.0
Max Q Clear Time (g_c+I1), s				4.4			113.0	33.0
Green Ext Time (p_c), s				140.3			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	264.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	400	3490	1400	190	960	320	0	0	0	425	0	455
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	421	3674	1474	200	1011	0				447	0	479
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	939	3526	1098	166	1309	407				473	0	422
Arrive On Green	0.53	0.69	0.69	0.09	0.26	0.00				0.13	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	421	3674	1474	200	1011	0				447	0	479
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	22.0	104.0	104.0	14.0	27.6	0.0				18.7	0.0	20.0
Cycle Q Clear(g_c), s	22.0	104.0	104.0	14.0	27.6	0.0				18.7	0.0	20.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	939	3526	1098	166	1309	407				473	0	422
V/C Ratio(X)	0.45	1.04	1.34	1.21	0.77	0.00				0.94	0.00	1.13
Avail Cap(c_a), veh/h	939	3526	1098	166	2305	718				473	0	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	21.8	23.0	23.0	68.0	51.6	0.0				64.5	0.0	65.0
Incr Delay (d2), s/veh	0.2	24.4	157.7	98.9	0.1	0.0				29.7	0.0	85.9
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	10.8	56.0	92.9	11.4	12.9	0.0				11.1	0.0	13.8
LnGrp Delay(d),s/veh	22.0	47.4	180.7	166.9	51.7	0.0				94.1	0.0	150.9
LnGrp LOS	C	F	F	F	D					F		F
Approach Vol, veh/h		5569			1211						926	
Approach Delay, s/veh		80.8			70.8						123.5	
Approach LOS		F			E						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			18.0	108.0		24.0	83.4	42.6
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			14.0	104.0		20.0	50.0	68.0
Max Q Clear Time (g_c+I1), s			16.0	106.0		22.0	24.0	29.6
Green Ext Time (p_c), s			0.0	0.0		0.0	2.0	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	60	0	220	1150	260	0	0	300	130
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				63	0	0	1211	274	0	0	316	137
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				81	0	72	1202	3189	0	0	696	312
Arrive On Green				0.05	0.00	0.00	0.90	1.00	0.00	0.00	0.20	0.20
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				63	0	0	1211	274	0	0	316	137
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.3	0.0	0.0	101.6	0.0	0.0	0.0	11.8	11.4
Cycle Q Clear(g_c), s				5.3	0.0	0.0	101.6	0.0	0.0	0.0	11.8	11.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				81	0	72	1202	3189	0	0	696	312
V/C Ratio(X)				0.78	0.00	0.00	1.01	0.09	0.00	0.00	0.45	0.44
Avail Cap(c_a), veh/h				189	0	169	1265	3189	0	0	696	312
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				70.8	0.0	0.0	7.4	0.0	0.0	0.0	53.1	53.0
Incr Delay (d2), s/veh				14.5	0.0	0.0	9.4	0.0	0.0	0.0	2.1	4.5
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				2.9	0.0	0.0	48.8	0.0	0.0	0.0	6.0	5.4
LnGrp Delay(d),s/veh				85.3	0.0	0.0	16.9	0.0	0.0	0.0	55.3	57.4
LnGrp LOS				F			F	A			E	E
Approach Vol, veh/h					63			1485			453	
Approach Delay, s/veh					85.3			13.8			55.9	
Approach LOS					F			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		139.1			107.6	31.5		10.9
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		126.0			107.0	15.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			103.6	13.8		7.3
Green Ext Time (p_c), s		5.0			2.0	0.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	170	10	105	60	25	0	73	67	1167	1058	660	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.95			0.89	0.85		0.91			
Flt Protected	0.95		1.00			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1762			1559	1504		3223			
Flt Permitted	0.95		0.43			0.99	1.00		1.00			
Satd. Flow (perm)	1770		761			1559	1504		3223			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	11	111	63	26	0	77	73	1228	1114	695	263
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	18	0	0	0
Lane Group Flow (vph)	179	0	185	0	0	89	87	0	3019	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	25.0		25.0			6.0	6.0		84.0			
Effective Green, g (s)	25.0		25.0			6.0	6.0		84.0			
Actuated g/C Ratio	0.17		0.17			0.04	0.04		0.56			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	295		126			62	60		1804			
v/s Ratio Prot	0.10					0.06	c0.06		c0.94			
v/s Ratio Perm			c0.24									
v/c Ratio	0.61		1.47			1.44	1.45		1.97dr			
Uniform Delay, d1	57.9		62.5			72.0	72.0		33.0			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	3.5		248.7			266.4	274.0		305.4			
Delay (s)	61.5		311.2			338.4	346.0		338.4			
Level of Service	E		F			F	F		F			
Approach Delay (s)			188.4			342.1			338.4			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	306.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	65	35
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3288
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3288
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	68	37
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	270	98
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	19.0	19.0
Effective Green, g (s)	19.0	19.0
Actuated g/C Ratio	0.13	0.13
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	203	416
v/s Ratio Prot	c0.17	0.03
v/s Ratio Perm		
v/c Ratio	1.33	0.24
Uniform Delay, d1	65.5	59.0
Progression Factor	0.37	0.35
Incremental Delay, d2	169.1	0.9
Delay (s)	193.1	21.6
Level of Service	F	C
Approach Delay (s)		147.4
Approach LOS		F

Intersection Summary

HCM 2010 Signalized Intersection Summary
16: Northside Dr & Friars Rd

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1105	310	670	3380	100	250	20	720	90	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1163	326	705	3558	105	263	21	758	95	32	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	132	1456	453	1503	3481	1133	318	229	887	106	115	97
Arrive On Green	0.04	0.29	0.29	0.44	0.68	0.68	0.09	0.12	0.12	0.03	0.06	0.06
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	116	1163	326	705	3558	105	263	21	758	95	32	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	4.4	27.5	24.1	18.9	89.0	2.6	9.8	1.3	7.3	3.6	2.1	7.0
Cycle Q Clear(g_c), s	4.4	27.5	24.1	18.9	89.0	2.6	9.8	1.3	7.3	3.6	2.1	7.0
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	132	1456	453	1503	3481	1133	318	229	887	106	115	97
V/C Ratio(X)	0.88	0.80	0.72	0.47	1.02	0.09	0.83	0.09	0.86	0.90	0.28	0.97
Avail Cap(c_a), veh/h	132	1682	524	1503	3481	1133	318	229	887	106	115	97
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)	0.49	0.49	0.49	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	42.9	41.7	25.9	20.5	5.6	58.0	50.6	13.0	62.8	58.2	48.6
Incr Delay (d2), s/veh	26.0	1.2	2.0	0.1	18.4	0.0	16.4	0.8	10.3	56.2	6.0	84.6
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	2.6	13.1	10.7	8.9	46.9	1.1	5.4	0.7	19.0	2.5	1.3	5.3
LnGrp Delay(d),s/veh	88.2	44.2	43.7	26.1	38.9	5.7	74.4	51.3	23.3	119.0	64.2	133.2
LnGrp LOS	F	D	D	C	F	A	E	D	C	F	E	F
Approach Vol, veh/h		1605			4368			1042			222	
Approach Delay, s/veh		47.2			36.0			36.8			117.2	
Approach LOS		D			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	60.8	41.2	16.0	12.0	9.0	93.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	51.0	43.0	12.0	8.0	5.0	89.0
Max Q Clear Time (g_c+I1), s	5.6	9.3	20.9	29.5	11.8	9.0	6.4	91.0
Green Ext Time (p_c), s	0.0	2.6	29.8	7.7	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.1
HCM 2010 LOS	D

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												
Volume (veh/h)	110	995	340	210	3460	60	330	30	470	40	20	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1047	358	221	3642	63	347	32	495	42	68	52
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	83	1430	593	1349	3187	1027	321	369	313	78	236	274
Arrive On Green	0.05	0.28	0.28	0.39	0.63	0.63	0.09	0.20	0.20	0.02	0.13	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	116	1047	358	221	3642	63	347	32	495	42	68	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.0	28.0	11.1	6.3	94.0	1.4	14.0	2.1	13.2	1.8	5.0	0.6
Cycle Q Clear(g_c), s	7.0	28.0	11.1	6.3	94.0	1.4	14.0	2.1	13.2	1.8	5.0	0.6
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	83	1430	593	1349	3187	1027	321	369	313	78	236	274
V/C Ratio(X)	1.40	0.73	0.60	0.16	1.14	0.06	1.08	0.09	1.58	0.54	0.29	0.19
Avail Cap(c_a), veh/h	83	2916	1056	1349	3187	1027	321	369	313	95	236	274
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	0.19	0.19	0.19	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	48.8	22.2	29.6	28.0	4.4	68.0	49.1	11.9	72.6	59.4	34.2
Incr Delay (d2), s/veh	238.1	0.7	1.0	0.0	65.1	0.0	73.3	0.5	275.5	5.6	3.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	13.2	4.9	3.0	62.9	0.6	9.9	1.1	29.7	0.9	2.8	1.6
LnGrp Delay(d),s/veh	309.6	49.5	23.2	29.6	93.1	4.4	141.3	49.6	287.4	78.2	62.4	35.7
LnGrp LOS	F	D	C	C	F	A	F	D	F	E	E	D
Approach Vol, veh/h		1521			3926			874			162	
Approach Delay, s/veh		63.2			88.1			220.7			58.0	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	33.7	62.8	46.2	18.0	23.0	11.0	98.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	29.0	15.0	86.0	14.0	19.0	7.0	94.0
Max Q Clear Time (g_c+I1), s	3.8	15.2	8.3	30.0	16.0	7.0	9.0	96.0
Green Ext Time (p_c), s	0.0	2.3	0.6	12.2	0.0	2.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	99.4
HCM 2010 LOS	F

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												
Volume (veh/h)	0	0	0	1560	0	40	240	100	0	0	170	80
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				1681	0	0	253	105	0	0	179	84
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				1813	952	0	525	812	0	0	269	121
Arrive On Green				0.51	0.00	0.00	0.10	0.14	0.00	0.00	0.11	0.11
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2467	1069
Grp Volume(v), veh/h				1681	0	0	253	105	0	0	132	131
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1674
Q Serve(g_s), s				66.0	0.0	0.0	20.3	7.4	0.0	0.0	10.7	11.3
Cycle Q Clear(g_c), s				66.0	0.0	0.0	20.3	7.4	0.0	0.0	10.7	11.3
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.64
Lane Grp Cap(c), veh/h				1813	952	0	525	812	0	0	201	190
V/C Ratio(X)				0.93	0.00	0.00	0.48	0.13	0.00	0.00	0.66	0.69
Avail Cap(c_a), veh/h				2153	1130	0	525	812	0	0	201	190
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.1	0.0	0.0	56.8	39.4	0.0	0.0	63.7	64.0
Incr Delay (d2), s/veh				6.9	0.0	0.0	0.7	0.3	0.0	0.0	15.5	18.9
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				33.9	0.0	0.0	10.1	3.9	0.0	0.0	6.1	6.3
LnGrp Delay(d),s/veh				40.9	0.0	0.0	57.5	39.7	0.0	0.0	79.2	82.8
LnGrp LOS				D			E	D			E	F
Approach Vol, veh/h					1681			358			263	
Approach Delay, s/veh					40.9			52.3			81.0	
Approach LOS					D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		69.3			48.3	21.0		80.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		51.0			30.0	17.0		91.0
Max Q Clear Time (g_c+I1), s		9.4			22.3	13.3		68.0
Green Ext Time (p_c), s		1.4			0.8	0.5		8.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	0	80	0	0	0	0	260	330	120	1610	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	74	0	84				0	274	347	126	1695	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	121	0	108				0	2716	1215	149	3109	0
Arrive On Green	0.07	0.00	0.07				0.00	1.00	1.00	0.11	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	74	0	84				0	274	347	126	1695	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	6.1	0.0	7.8				0.0	0.0	0.0	10.4	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	7.8				0.0	0.0	0.0	10.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	121	0	108				0	2716	1215	149	3109	0
V/C Ratio(X)	0.61	0.00	0.78				0.00	0.10	0.29	0.84	0.55	0.00
Avail Cap(c_a), veh/h	248	0	222				0	2716	1215	308	3109	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.95	0.95	0.54	0.54	0.00
Uniform Delay (d), s/veh	67.9	0.0	68.7				0.0	0.0	0.0	65.6	0.0	0.0
Incr Delay (d2), s/veh	4.9	0.0	11.2				0.0	0.1	0.6	6.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	3.8				0.0	0.0	0.2	5.4	0.2	0.0
LnGrp Delay(d),s/veh	72.8	0.0	80.0				0.0	0.1	0.6	72.6	0.4	0.0
LnGrp LOS	E		E					A	A	E	A	
Approach Vol, veh/h		158						621			1821	
Approach Delay, s/veh		76.6						0.3			5.4	
Approach LOS		E						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.6	119.1		14.2		135.8		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	26.0	91.0		21.0		121.0		
Max Q Clear Time (g_c+I1), s	12.4	2.0		9.8		2.0		
Green Ext Time (p_c), s	0.2	38.7		0.4		42.0		

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	170	410	100	70	40	160	630	100	30	1890	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	189	179	432	105	74	42	168	663	105	32	1989	126
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	214	256	632	152	217	97	214	2573	403	453	3304	1029
Arrive On Green	0.12	0.14	0.14	0.04	0.06	0.06	0.12	1.00	1.00	0.26	1.00	1.00
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4436	695	3442	5085	1583
Grp Volume(v), veh/h	189	179	432	105	74	42	168	505	263	32	1989	126
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1740	1721	1695	1583
Q Serve(g_s), s	15.7	13.8	16.0	4.5	3.0	3.1	7.1	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	15.7	13.8	16.0	4.5	3.0	3.1	7.1	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	214	256	632	152	217	97	214	1966	1009	453	3304	1029
V/C Ratio(X)	0.88	0.70	0.68	0.69	0.34	0.43	0.79	0.26	0.26	0.07	0.60	0.12
Avail Cap(c_a), veh/h	319	422	914	206	378	169	321	1966	1009	453	3304	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.82	0.82	0.82
Uniform Delay (d), s/veh	64.9	61.7	40.2	70.7	67.5	43.8	64.7	0.0	0.0	48.4	0.0	0.0
Incr Delay (d2), s/veh	17.4	3.4	1.3	5.8	0.9	3.0	6.8	0.3	0.6	0.1	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	7.4	7.1	2.3	1.5	1.4	3.6	0.1	0.2	0.5	0.2	0.1
LnGrp Delay(d),s/veh	82.4	65.2	41.5	76.5	68.4	46.8	71.5	0.3	0.6	48.4	0.7	0.2
LnGrp LOS	F	E	D	E	E	D	E	A	A	D	A	A
Approach Vol, veh/h		800			221			936			2147	
Approach Delay, s/veh		56.4			68.1			13.2			1.4	
Approach LOS		E			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.8	91.0	10.6	24.6	13.3	101.4	22.1	13.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	87.0	9.0	34.0	14.0	77.0	27.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	2.0	6.5	18.0	9.1	2.0	17.7	5.1
Green Ext Time (p_c), s	0.0	6.1	0.2	2.6	0.2	33.8	0.3	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
21: Qualcomm Way & I-8 WB Ramps

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	0	460	30	140	220	230	600	0	0	790	1615
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	74	0	484	32	147	232	242	632	0	0	832	1700
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	22	101	106	166	4475	0	0	2690	1203
Arrive On Green	0.00	0.00	0.00	0.07	0.07	0.07	0.09	0.88	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		330	1516	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		179	0	232	242	632	0	0	832	1700
Grp Sat Flow(s),veh/h/ln				1846	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				10.0	0.0	10.0	14.0	2.6	0.0	0.0	0.0	114.0
Cycle Q Clear(g_c), s				10.0	0.0	10.0	14.0	2.6	0.0	0.0	0.0	114.0
Prop In Lane				0.18		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				123	0	106	166	4475	0	0	2690	1203
V/C Ratio(X)				1.45	0.00	2.20	1.46	0.14	0.00	0.00	0.31	1.41
Avail Cap(c_a), veh/h				123	0	106	166	4475	0	0	2690	1203
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.74	0.74
Uniform Delay (d), s/veh				70.0	0.0	70.0	68.0	1.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				243.7	0.0	568.7	237.8	0.1	0.0	0.0	0.2	189.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.4	0.0	21.0	17.8	1.2	0.0	0.0	0.1	63.3
LnGrp Delay(d),s/veh				313.7	0.0	638.7	305.8	1.3	0.0	0.0	0.2	189.4
LnGrp LOS				F		F	F	A			A	F
Approach Vol, veh/h					411			874			2532	
Approach Delay, s/veh					497.2			85.6			127.3	
Approach LOS					F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		136.0			18.0	118.0		14.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		124.0			14.0	106.0		10.0
Max Q Clear Time (g_c+I1), s		4.6			16.0	116.0		12.0
Green Ext Time (p_c), s		91.5			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	157.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	1250	550	100	2490	60	480	50	140	40	30	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	1316	579	105	2621	63	505	53	147	42	32	263
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	229	2919	1270	174	2815	696	645	401	359	96	174	260
Arrive On Green	0.13	0.91	0.91	0.05	0.44	0.44	0.19	0.23	0.23	0.05	0.09	0.09
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	200	1316	579	105	2621	63	505	53	147	42	32	263
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	4.3	2.3	1.1	2.2	29.1	1.7	10.5	1.8	5.9	1.7	1.2	7.0
Cycle Q Clear(g_c), s	4.3	2.3	1.1	2.2	29.1	1.7	10.5	1.8	5.9	1.7	1.2	7.0
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	229	2919	1270	174	2815	696	645	401	359	96	174	260
V/C Ratio(X)	0.87	0.45	0.46	0.61	0.93	0.09	0.78	0.13	0.41	0.44	0.18	1.01
Avail Cap(c_a), veh/h	229	2919	1270	229	2819	697	645	401	359	96	174	260
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)	0.90	0.90	0.90	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	1.9	0.4	34.9	19.9	12.3	29.0	23.1	24.7	34.4	31.4	34.0
Incr Delay (d2), s/veh	26.3	0.1	0.2	3.4	6.4	0.1	6.3	0.7	3.4	3.1	2.3	58.7
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	0.1
%ile BackOfQ(50%),veh/ln	2.9	0.8	0.3	1.1	14.0	0.8	5.5	0.9	2.9	0.9	0.7	4.8
LnGrp Delay(d),s/veh	58.5	2.0	0.6	38.2	26.3	12.3	35.3	23.8	28.2	37.5	33.7	92.8
LnGrp LOS	E	A	A	D	C	B	D	C	C	D	C	F
Approach Vol, veh/h		2095			2789			705			337	
Approach Delay, s/veh		7.0			26.5			32.9			80.3	
Approach LOS		A			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	21.0	7.8	38.2	18.1	11.0	9.0	36.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	5.0	33.0	14.0	7.0	5.0	33.0
Max Q Clear Time (g_c+I1), s	3.7	7.9	4.2	4.3	12.5	9.0	6.3	31.1
Green Ext Time (p_c), s	0.1	0.7	0.0	16.3	0.4	0.0	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	730	1460	2280	960	660	920
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	768	1537	2400	1011	695	968
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	780	4272	2478	1709	1134	632
Arrive On Green	0.45	1.00	0.39	0.39	0.23	0.23
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	768	1537	2400	1011	695	968
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	16.5	0.0	27.5	16.5	9.4	17.0
Cycle Q Clear(g_c), s	16.5	0.0	27.5	16.5	9.4	17.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	780	4272	2478	1709	1134	632
V/C Ratio(X)	0.98	0.36	0.97	0.59	0.61	1.53
Avail Cap(c_a), veh/h	780	4272	2478	1709	1134	632
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.37	0.37	1.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	22.6	8.8	26.0	29.0
Incr Delay (d2), s/veh	21.3	0.0	5.6	0.2	2.5	247.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	0.0	13.0	10.0	4.6	33.3
LnGrp Delay(d),s/veh	41.6	0.0	28.1	9.0	28.5	276.6
LnGrp LOS	D	A	C	A	C	F
Approach Vol, veh/h		2305	3411		1663	
Approach Delay, s/veh		13.9	22.5		172.9	
Approach LOS		B	C		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				54.0		21.0	21.0	33.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				50.0		17.0	17.0	29.0
Max Q Clear Time (g_c+I1), s				2.0		19.0	18.5	29.5
Green Ext Time (p_c), s				24.6		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.7
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	740	0	330	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	779	0	347	337
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1642	389			779	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1642	389			779	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			58	
cM capacity (veh/h)	53	609			834	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	519	260	347	168	168
Volume Left	0	0	347	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	834	1700	1700
Volume to Capacity	0.31	0.15	0.42	0.10	0.10
Queue Length 95th (ft)	0	0	52	0	0
Control Delay (s)	0.0	0.0	12.4	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.3		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1385	890	420	1335	560	390	40	465	230	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	1458	937	442	1405	589	411	42	489	242	11	84
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	183	1648	1088	500	1776	973	1480	757	1538	291	113	96
Arrive On Green	0.05	0.26	0.26	0.29	0.70	0.70	0.43	0.41	0.41	0.08	0.06	0.06
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	137	1458	937	442	1405	589	411	42	489	242	11	84
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	5.9	32.8	3.5	18.4	27.9	16.6	11.6	2.1	3.5	10.4	0.8	7.0
Cycle Q Clear(g_c), s	5.9	32.8	3.5	18.4	27.9	16.6	11.6	2.1	3.5	10.4	0.8	7.0
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	183	1648	1088	500	1776	973	1480	757	1538	291	113	96
V/C Ratio(X)	0.75	0.88	0.86	0.88	0.79	0.61	0.28	0.06	0.32	0.83	0.10	0.87
Avail Cap(c_a), veh/h	252	1666	1093	551	1776	973	1480	757	1538	367	211	179
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.26	0.26	0.26	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	53.6	18.0	52.0	18.9	17.2	27.7	27.0	8.4	67.6	66.5	54.9
Incr Delay (d2), s/veh	7.8	6.0	7.2	4.5	0.7	0.3	0.5	0.1	0.5	12.4	0.4	20.2
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	3.0	15.3	3.3	9.0	12.8	6.2	5.6	1.1	3.6	5.4	0.4	3.6
LnGrp Delay(d),s/veh	77.8	59.6	25.1	56.5	19.6	17.5	28.1	27.2	9.0	80.0	66.9	75.1
LnGrp LOS	E	E	C	E	B	B	C	C	A	E	E	E
Approach Vol, veh/h		2532			2436			942			337	
Approach Delay, s/veh		47.8			25.8			18.2			78.3	
Approach LOS		D			C			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	65.0	25.8	42.6	68.5	13.1	12.0	56.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	55.0	24.0	39.0	54.0	17.0	11.0	52.0
Max Q Clear Time (g_c+I1), s	12.4	5.5	20.4	34.8	13.6	9.0	7.9	29.9
Green Ext Time (p_c), s	0.3	4.2	1.4	3.8	4.2	0.1	0.1	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Notes

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

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APPENDIX E

2035 NO PROJECT AND PROJECT BUILD OUT INTERSECTION ANALYSIS WORKSHEETS

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	620	200	300	2090	300	190
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	653	0	316	2200	316	200
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1856	578	454	3001	396	990
Arrive On Green	0.37	0.00	0.13	0.59	0.22	0.22
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	653	0	316	2200	316	200
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	4.0	0.0	3.8	13.4	7.2	2.1
Cycle Q Clear(g_c), s	4.0	0.0	3.8	13.4	7.2	2.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1856	578	454	3001	396	990
V/C Ratio(X)	0.35	0.00	0.70	0.73	0.80	0.20
Avail Cap(c_a), veh/h	1896	590	481	3081	455	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	0.0	17.8	6.4	15.7	9.6
Incr Delay (d2), s/veh	0.1	0.0	4.1	0.9	8.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	2.0	6.4	4.4	0.8
LnGrp Delay(d),s/veh	10.0	0.0	21.9	7.3	24.3	9.7
LnGrp LOS	B		C	A	C	A
Approach Vol, veh/h	653			2516	516	
Approach Delay, s/veh	10.0			9.1	18.6	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.6	9.7	19.7				29.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		11.0	6.0	16.0				26.0
Max Q Clear Time (g_c+I1), s		9.2	5.8	6.0				15.4
Green Ext Time (p_c), s		0.4	0.0	9.4				9.9

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	140	150	190	30	130	900	110	30	500	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	53	147	158	200	32	137	947	116	32	526	74
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	77	213	199	382	61	174	1281	157	49	1039	146
Arrive On Green	0.04	0.18	0.18	0.11	0.24	0.24	0.10	0.40	0.40	0.03	0.33	0.33
Sat Flow, veh/h	1774	437	1212	1774	1568	251	1774	3175	389	1774	3118	437
Grp Volume(v), veh/h	63	0	200	158	0	232	137	528	535	32	298	302
Grp Sat Flow(s),veh/h/ln	1774	0	1649	1774	0	1818	1774	1770	1794	1774	1770	1786
Q Serve(g_s), s	2.0	0.0	6.5	5.0	0.0	6.3	4.3	14.5	14.5	1.0	7.7	7.7
Cycle Q Clear(g_c), s	2.0	0.0	6.5	5.0	0.0	6.3	4.3	14.5	14.5	1.0	7.7	7.7
Prop In Lane	1.00		0.74	1.00		0.14	1.00		0.22	1.00		0.24
Lane Grp Cap(c), veh/h	79	0	290	199	0	443	174	714	724	49	590	595
V/C Ratio(X)	0.80	0.00	0.69	0.80	0.00	0.52	0.79	0.74	0.74	0.65	0.50	0.51
Avail Cap(c_a), veh/h	187	0	463	218	0	542	218	714	724	124	590	595
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	27.0	0.0	22.0	24.7	0.0	18.7	25.1	14.5	14.5	27.4	15.2	15.3
Incr Delay (d2), s/veh	16.4	0.0	2.9	17.0	0.0	1.0	13.9	6.7	6.7	13.3	3.1	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	1.3	0.0	3.2	3.3	0.0	3.3	2.8	8.4	8.5	0.7	4.2	4.3
LnGrp Delay(d),s/veh	43.4	0.0	24.9	41.6	0.0	19.7	39.0	21.2	21.1	40.7	18.3	18.3
LnGrp LOS	D		C	D		B	D	C	C	D	B	B
Approach Vol, veh/h		263			390			1200			632	
Approach Delay, s/veh		29.4			28.6			23.2			19.5	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	27.0	10.4	14.0	9.6	23.0	6.5	17.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	7.0	16.0	7.0	19.0	6.0	17.0
Max Q Clear Time (g_c+I1), s	3.0	16.5	7.0	8.5	6.3	9.7	4.0	8.3
Green Ext Time (p_c), s	0.0	4.2	0.0	1.6	0.0	6.4	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	120	110	70	270	40	160	210	70	20	110	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	126	116	74	284	42	168	221	74	21	116	211
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	262	620	175	598	93	212	523	175	135	206	375
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.39	0.39	0.08	0.35	0.35
Sat Flow, veh/h	357	964	1583	251	2200	344	1774	1336	447	1774	593	1079
Grp Volume(v), veh/h	210	0	116	200	0	200	168	0	295	21	0	327
Grp Sat Flow(s),veh/h/ln	1321	0	1583	1160	0	1634	1774	0	1784	1774	0	1672
Q Serve(g_s), s	2.2	0.0	2.2	1.6	0.0	4.7	4.2	0.0	5.6	0.5	0.0	7.3
Cycle Q Clear(g_c), s	6.9	0.0	2.2	8.4	0.0	4.7	4.2	0.0	5.6	0.5	0.0	7.3
Prop In Lane	0.40		1.00	0.37		0.21	1.00		0.25	1.00		0.65
Lane Grp Cap(c), veh/h	469	0	620	423	0	444	212	0	698	135	0	581
V/C Ratio(X)	0.45	0.00	0.19	0.47	0.00	0.45	0.79	0.00	0.42	0.16	0.00	0.56
Avail Cap(c_a), veh/h	576	0	740	537	0	568	231	0	698	154	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	9.2	14.5	0.0	13.9	19.7	0.0	10.2	19.9	0.0	12.2
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.8	0.0	0.7	15.7	0.0	1.9	0.5	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.0	2.4	0.0	2.2	3.0	0.0	3.1	0.3	0.0	4.0
LnGrp Delay(d),s/veh	15.0	0.0	9.3	15.3	0.0	14.6	35.4	0.0	12.1	20.4	0.0	16.1
LnGrp LOS	B		A	B		B	D		B	C		B
Approach Vol, veh/h		326			400			463			348	
Approach Delay, s/veh		13.0			15.0			20.6			16.3	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	22.0		16.5	9.5	20.0		16.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.5	7.6		8.9	6.2	9.3		10.4
Green Ext Time (p_c), s	0.3	1.2		2.5	0.0	1.1		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	560	320	120	110	670	1210	110	30	620	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	633	337	126	116	705	1274	116	32	653	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	357	607	297	111	102	688	1184	107	40	630	31
Arrive On Green	0.00	0.00	0.19	0.29	0.29	0.29	0.20	0.36	0.36	0.02	0.18	0.18
Sat Flow, veh/h	0	1863	3167	1019	381	351	3442	3282	298	1774	3434	168
Grp Volume(v), veh/h	0	0	633	579	0	0	705	685	705	32	336	349
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1750	0	0	1721	1770	1810	1774	1770	1833
Q Serve(g_s), s	0.0	0.0	23.0	35.0	0.0	0.0	24.0	43.3	43.3	2.2	22.0	22.0
Cycle Q Clear(g_c), s	0.0	0.0	23.0	35.0	0.0	0.0	24.0	43.3	43.3	2.2	22.0	22.0
Prop In Lane	0.00		1.00	0.58		0.20	1.00		0.16	1.00		0.09
Lane Grp Cap(c), veh/h	0	357	607	510	0	0	688	638	653	40	324	336
V/C Ratio(X)	0.00	0.00	1.04	1.13	0.00	0.00	1.02	1.07	1.08	0.79	1.04	1.04
Avail Cap(c_a), veh/h	0	357	607	510	0	0	688	638	653	59	324	336
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)	0.00	0.00	1.00	1.00	0.00	0.00	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	48.5	42.5	0.0	0.0	48.0	38.4	38.4	58.4	49.0	49.0
Incr Delay (d2), s/veh	0.0	0.0	48.2	82.3	0.0	0.0	18.1	37.2	39.5	35.1	59.7	59.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	14.1	28.5	0.0	0.0	13.1	27.7	28.7	1.5	16.1	16.6
LnGrp Delay(d),s/veh	0.0	0.0	96.7	124.8	0.0	0.0	66.1	75.6	77.8	93.5	108.7	108.2
LnGrp LOS			F	F			F	F	F	F	F	F
Approach Vol, veh/h		633			579			2095			717	
Approach Delay, s/veh		96.7			124.8			73.2			107.8	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.7	47.3		27.0	28.0	26.0		39.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	42.0		23.0	24.0	22.0		35.0
Max Q Clear Time (g_c+I1), s	4.2	45.3		25.0	26.0	24.0		37.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	90.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	290	60	420	560	510	330	490	1380	380	60	1300	310
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	350	0	442	393	985	231	516	1453	400	63	1368	326
Adj No. of Lanes	2	0	1	1	2	1	1	2	0	2	2	1
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	296	0	488	370	776	379	399	1507	400	106	1239	554
Arrive On Green	0.08	0.00	0.08	0.21	0.21	0.21	0.22	0.54	0.54	0.01	0.12	0.12
Sat Flow, veh/h	3548	0	1583	1774	3725	1583	1774	2768	734	3442	3539	1583
Grp Volume(v), veh/h	350	0	442	393	985	231	516	909	944	63	1368	326
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1774	1863	1583	1774	1770	1733	1721	1770	1583
Q Serve(g_s), s	10.0	0.0	10.0	25.0	25.0	15.6	27.0	57.8	65.3	2.2	42.0	23.4
Cycle Q Clear(g_c), s	10.0	0.0	10.0	25.0	25.0	15.6	27.0	57.8	65.3	2.2	42.0	23.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	296	0	488	370	776	379	399	963	943	106	1239	554
V/C Ratio(X)	1.18	0.00	0.91	1.06	1.27	0.61	1.29	0.94	1.00	0.60	1.10	0.59
Avail Cap(c_a), veh/h	296	0	488	370	776	379	399	963	943	172	1239	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	55.0	0.0	39.8	47.5	47.5	40.7	46.5	25.6	27.3	58.6	53.1	44.9
Incr Delay (d2), s/veh	111.7	0.0	20.3	64.6	131.2	2.8	149.3	18.2	29.5	0.5	48.3	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	9.5	0.0	16.8	18.8	27.0	7.1	29.7	32.9	38.6	1.1	28.9	10.4
LnGrp Delay(d),s/veh	166.7	0.0	60.2	112.1	178.7	43.5	195.8	43.9	56.8	59.1	101.4	45.3
LnGrp LOS	F		E	F	F	D	F	D	F	E	F	D
Approach Vol, veh/h		792			1609			2369			1757	
Approach Delay, s/veh		107.2			143.0			82.1			89.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	69.3		14.0	31.0	46.0		29.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	63.0		10.0	27.0	42.0		25.0
Max Q Clear Time (g_c+I1), s	4.2	67.3		12.0	29.0	44.0		27.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	102.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1080	1000	140	0	1030	870	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1137	1053		0	1084	916	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1362	1429		0	1666	2394	0
Arrive On Green	0.40	0.40		0.00	0.47	0.47	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1137	1053		0	1084	916	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	17.9	14.9		0.0	14.0	7.0	0.0
Cycle Q Clear(g_c), s	17.9	14.9		0.0	14.0	7.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1362	1429		0	1666	2394	0
V/C Ratio(X)	0.83	0.74		0.00	0.65	0.38	0.00
Avail Cap(c_a), veh/h	1434	1504		0	1666	2394	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.4	15.5		0.0	12.1	10.2	0.0
Incr Delay (d2), s/veh	4.3	1.8		0.0	2.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	9.5		0.0	7.2	3.3	0.0
LnGrp Delay(d),s/veh	20.6	17.3		0.0	14.1	10.7	0.0
LnGrp LOS	C	B			B	B	
Approach Vol, veh/h	2190				1084	916	
Approach Delay, s/veh	19.0				14.1	10.7	
Approach LOS	B				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		32.3		27.7		32.3		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		27.0		25.0		15.0		
Max Q Clear Time (g_c+I1), s		16.0		19.9		9.0		
Green Ext Time (p_c), s		8.7		3.9		5.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1270	370	120	2620	520	70
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1337	389	126	2758	547	74
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2050	1122	162	3596	1084	484
Arrive On Green	0.40	0.40	0.09	0.56	0.31	0.31
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1337	389	126	2758	547	74
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	12.8	5.7	4.2	19.9	7.6	2.0
Cycle Q Clear(g_c), s	12.8	5.7	4.2	19.9	7.6	2.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2050	1122	162	3596	1084	484
V/C Ratio(X)	0.65	0.35	0.78	0.77	0.50	0.15
Avail Cap(c_a), veh/h	2050	1122	266	3738	1084	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	3.4	26.7	10.1	17.1	15.2
Incr Delay (d2), s/veh	0.7	0.2	7.8	1.0	1.7	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	6.1	5.1	2.4	8.9	4.0	1.0
LnGrp Delay(d),s/veh	15.2	3.5	34.5	11.1	18.8	15.8
LnGrp LOS	B	A	C	B	B	B
Approach Vol, veh/h	1726			2884	621	
Approach Delay, s/veh	12.6			12.1	18.4	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		22.3	9.5	28.2				37.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	9.0	22.0				35.0
Max Q Clear Time (g_c+I1), s		9.6	6.2	14.8				21.9
Green Ext Time (p_c), s		1.5	0.1	7.2				11.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	90	90	200	270	200	190	170	70	160	310	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	53	95	95	211	284	211	200	179	74	168	326	84
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	71	257	230	248	482	348	246	590	502	210	553	470
Arrive On Green	0.04	0.15	0.15	0.14	0.25	0.25	0.14	0.32	0.32	0.12	0.30	0.30
Sat Flow, veh/h	1774	1770	1583	1774	1965	1417	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	53	95	95	211	255	240	200	179	74	168	326	84
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1613	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.7	2.8	3.1	6.6	7.3	7.6	6.3	4.2	1.9	5.3	8.5	2.3
Cycle Q Clear(g_c), s	1.7	2.8	3.1	6.6	7.3	7.6	6.3	4.2	1.9	5.3	8.5	2.3
Prop In Lane	1.00		1.00	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	257	230	248	434	396	246	590	502	210	553	470
V/C Ratio(X)	0.75	0.37	0.41	0.85	0.59	0.61	0.81	0.30	0.15	0.80	0.59	0.18
Avail Cap(c_a), veh/h	186	495	442	248	556	507	248	590	502	217	553	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	22.1	22.2	24.0	19.0	19.2	24.0	14.8	14.0	24.6	17.2	14.9
Incr Delay (d2), s/veh	14.7	0.9	1.2	23.6	1.3	1.5	18.4	1.3	0.6	18.4	4.6	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	1.1	1.4	1.4	4.8	3.7	3.5	4.3	2.4	0.9	3.6	5.0	1.1
LnGrp Delay(d),s/veh	41.9	23.0	23.4	47.6	20.3	20.7	42.3	16.1	14.6	43.0	21.7	15.8
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		243			706			453			578	
Approach Delay, s/veh		27.3			28.6			27.4			27.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	22.1	12.0	12.3	11.9	21.0	6.3	18.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	18.0	8.0	16.0	8.0	17.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	7.3	6.2	8.6	5.1	8.3	10.5	3.7	9.6
Green Ext Time (p_c), s	0.0	2.8	0.0	3.2	0.0	2.0	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	80	30	300	390	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	84	32	316	411	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	647	221	442	0	-	0
Stage 1	426	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	404	783	1114	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	390	783	1114	-	-	-
Mov Cap-2 Maneuver	390	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1114	-	390	783	-	-
HCM Lane V/C Ratio	0.028	-	0.108	0.108	-	-
HCM Control Delay (s)	8.3	0.1	15.3	10.2	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.4	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	120	220	640	280	260	220
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	232	674	295	274	232
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	161	875	1029	460	627	703
Arrive On Green	0.09	0.47	0.29	0.29	0.35	0.35
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	126	232	674	295	274	232
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	3.1	3.4	7.6	7.4	5.3	4.3
Cycle Q Clear(g_c), s	3.1	3.4	7.6	7.4	5.3	4.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	161	875	1029	460	627	703
V/C Ratio(X)	0.78	0.27	0.66	0.64	0.44	0.33
Avail Cap(c_a), veh/h	235	1070	1251	560	627	703
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	20.1	7.3	14.1	14.0	11.2	8.2
Incr Delay (d2), s/veh	9.9	0.2	0.9	1.8	2.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.8	3.8	3.4	3.0	4.8
LnGrp Delay(d),s/veh	30.1	7.4	15.0	15.8	13.4	9.4
LnGrp LOS	C	A	B	B	B	A
Approach Vol, veh/h		358	969		506	
Approach Delay, s/veh		15.4	15.2		11.6	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.3		20.0	8.1	17.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				5.4		7.3	5.1	9.6
Green Ext Time (p_c), s				7.3		1.2	0.0	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	400	1640	2220	930	0	700
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	421	1726	2562	829		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	451	4740	3601	1020		
Arrive On Green	0.25	0.93	1.00	1.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	421	1726	2562	829		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	27.8	4.2	0.0	0.0		
Cycle Q Clear(g_c), s	27.8	4.2	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	451	4740	3601	1020		
V/C Ratio(X)	0.93	0.36	0.71	0.81		
Avail Cap(c_a), veh/h	517	4916	3601	1020		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.67	0.67	0.64	0.64		
Uniform Delay (d), s/veh	43.7	0.4	0.0	0.0		
Incr Delay (d2), s/veh	17.0	0.0	0.4	3.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	15.8	1.8	0.1	0.9		
LnGrp Delay(d),s/veh	60.7	0.5	0.4	3.3		
LnGrp LOS	E	A	A	A		
Approach Vol, veh/h		2147	3391			
Approach Delay, s/veh		12.3	1.1			
Approach LOS		B	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				115.9			34.5	81.3
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				116.0			35.0	77.0
Max Q Clear Time (g_c+I1), s				6.2			29.8	2.0
Green Ext Time (p_c), s				105.7			0.7	73.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	240	610	280	350	1930	640	0	0	0	810	0	600
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	253	642	295	368	2032	0				853	0	632
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	246	1219	380	530	2034	633				983	0	877
Arrive On Green	0.14	0.24	0.24	0.30	0.40	0.00				0.28	0.00	0.28
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	253	642	295	368	2032	0				853	0	632
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	9.0	7.1	11.3	11.9	26.0	0.0				14.9	0.0	11.7
Cycle Q Clear(g_c), s	9.0	7.1	11.3	11.9	26.0	0.0				14.9	0.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	246	1219	380	530	2034	633				983	0	877
V/C Ratio(X)	1.03	0.53	0.78	0.69	1.00	0.00				0.87	0.00	0.72
Avail Cap(c_a), veh/h	246	1408	438	530	2034	633				983	0	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	21.5	23.1	20.2	19.5	0.0				22.4	0.0	21.2
Incr Delay (d2), s/veh	65.4	0.4	7.5	3.9	19.7	0.0				10.3	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	3.4	5.7	6.4	15.8	0.0				8.6	0.0	5.7
LnGrp Delay(d),s/veh	93.5	21.9	30.6	24.1	39.2	0.0				32.7	0.0	26.3
LnGrp LOS	F	C	C	C	D					C		C
Approach Vol, veh/h		1190			2400						1485	
Approach Delay, s/veh		39.2			36.9						30.0	
Approach LOS		D			D						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			23.4	19.6		22.0	13.0	30.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			17.0	18.0		18.0	9.0	26.0
Max Q Clear Time (g_c+I1), s			13.9	13.3		16.9	11.0	28.0
Green Ext Time (p_c), s			0.7	2.3		0.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	80	0	320	150	330	0	0	330	230
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				84	0	0	158	347	0	0	347	242
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				113	0	101	833	2842	0	0	944	422
Arrive On Green				0.06	0.00	0.00	0.94	1.00	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				84	0	0	158	347	0	0	347	242
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				2.8	0.0	0.0	0.4	0.0	0.0	0.0	4.8	7.9
Cycle Q Clear(g_c), s				2.8	0.0	0.0	0.4	0.0	0.0	0.0	4.8	7.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				113	0	101	833	2842	0	0	944	422
V/C Ratio(X)				0.74	0.00	0.00	0.19	0.12	0.00	0.00	0.37	0.57
Avail Cap(c_a), veh/h				562	0	501	833	2842	0	0	944	422
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.71	0.71	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.6	0.0	0.0	1.0	0.0	0.0	0.0	17.9	19.0
Incr Delay (d2), s/veh				9.2	0.0	0.0	0.1	0.1	0.0	0.0	1.1	5.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.6	0.0	0.0	0.2	0.0	0.0	0.0	2.5	4.1
LnGrp Delay(d),s/veh				36.8	0.0	0.0	1.1	0.1	0.0	0.0	19.0	24.6
LnGrp LOS				D			A	A			B	C
Approach Vol, veh/h					84			505			589	
Approach Delay, s/veh					36.8			0.4			21.3	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		52.2			32.2	20.0		7.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		33.0			13.0	16.0		19.0
Max Q Clear Time (g_c+I1), s		2.0			2.4	9.9		4.8
Green Ext Time (p_c), s		2.9			2.0	1.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	150	72	38	30	0	306	84	24	6	20	260	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.95			0.87	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (prot)	1770	1766			1531	1504		3264				1610
Flt Permitted	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (perm)	1770	1766			1531	1504		3264				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	76	40	32	0	322	91	25	6	21	274	103
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	158	116	0	0	225	220	0	36	0	0	0	284
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	15.4	15.4			23.0	23.0		30.6				35.0
Effective Green, g (s)	15.4	15.4			23.0	23.0		30.6				35.0
Actuated g/C Ratio	0.13	0.13			0.19	0.19		0.26				0.29
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	227	226			293	288		832				469
v/s Ratio Prot	c0.09	0.07			c0.15	0.15		c0.01				c0.18
v/s Ratio Perm												
v/c Ratio	0.70	0.51			0.77	0.76		0.04				0.61
Uniform Delay, d1	50.1	48.8			46.0	45.9		33.7				36.6
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.79
Incremental Delay, d2	8.9	2.0			11.4	11.4		0.1				5.7
Delay (s)	59.0	50.8			57.4	57.3		33.8				34.5
Level of Service	E	D			E	E		C				C
Approach Delay (s)		55.5			57.4			33.8				
Approach LOS		E			E			C				

Intersection Summary			
HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	52
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.97
Satd. Flow (prot)	3287
Flt Permitted	0.97
Satd. Flow (perm)	3287
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	55
RTOR Reduction (vph)	0
Lane Group Flow (vph)	148
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	35.0
Effective Green, g (s)	35.0
Actuated g/C Ratio	0.29
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	958
v/s Ratio Prot	0.05
v/s Ratio Perm	
v/c Ratio	0.15
Uniform Delay, d1	31.5
Progression Factor	0.79
Incremental Delay, d2	0.3
Delay (s)	25.1
Level of Service	C
Approach Delay (s)	31.3
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	630	210	460	1510	50	90	30	180	190	50	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	663	221	484	1589	53	95	32	189	200	53	168
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	116	1188	370	459	1695	633	401	558	686	229	466	396
Arrive On Green	0.03	0.23	0.23	0.13	0.33	0.33	0.12	0.30	0.30	0.07	0.25	0.25
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	42	663	221	484	1589	53	95	32	189	200	53	168
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.7	6.9	5.0	8.0	18.2	0.8	1.5	0.7	4.6	3.5	1.3	5.3
Cycle Q Clear(g_c), s	0.7	6.9	5.0	8.0	18.2	0.8	1.5	0.7	4.6	3.5	1.3	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	116	1188	370	459	1695	633	401	558	686	229	466	396
V/C Ratio(X)	0.36	0.56	0.60	1.05	0.94	0.08	0.24	0.06	0.28	0.87	0.11	0.42
Avail Cap(c_a), veh/h	229	1356	422	459	1695	633	401	558	686	229	466	396
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)	0.86	0.86	0.86	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	20.3	9.3	26.0	19.4	4.5	24.1	15.0	10.9	27.7	17.4	18.9
Incr Delay (d2), s/veh	1.6	0.4	1.6	40.2	4.2	0.0	0.3	0.2	1.0	28.5	0.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	2.3	6.3	9.0	0.3	0.7	0.4	2.2	2.5	0.7	2.7
LnGrp Delay(d),s/veh	30.0	20.6	10.9	66.2	23.6	4.5	24.4	15.2	11.9	56.2	17.9	22.2
LnGrp LOS	C	C	B	F	C	A	C	B	B	E	B	C
Approach Vol, veh/h		926			2126			316			421	
Approach Delay, s/veh		18.7			32.8			16.0			37.8	
Approach LOS		B			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	12.0	18.0	11.0	19.0	6.0	24.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	5.0	15.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	5.5	6.6	10.0	8.9	3.5	7.3	2.7	20.2
Green Ext Time (p_c), s	0.0	0.8	0.0	3.1	0.2	0.5	0.7	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	650	110	270	1430	30	120	20	160	70	40	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	684	116	284	1505	32	126	21	168	74	145	110
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	58	1030	417	531	1650	688	208	497	422	389	588	551
Arrive On Green	0.03	0.20	0.20	0.31	0.65	0.65	0.06	0.27	0.27	0.11	0.32	0.32
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	42	684	116	284	1505	32	126	21	168	74	145	110
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.4	7.4	1.8	4.1	15.3	0.0	2.1	0.5	5.2	1.1	3.5	0.6
Cycle Q Clear(g_c), s	1.4	7.4	1.8	4.1	15.3	0.0	2.1	0.5	5.2	1.1	3.5	0.6
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	58	1030	417	531	1650	688	208	497	422	389	588	551
V/C Ratio(X)	0.73	0.66	0.28	0.53	0.91	0.05	0.60	0.04	0.40	0.19	0.25	0.20
Avail Cap(c_a), veh/h	118	1356	518	531	1695	702	229	497	422	389	588	551
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	22.0	6.3	19.0	9.8	5.0	27.5	16.3	18.0	24.3	15.2	5.5
Incr Delay (d2), s/veh	16.1	0.8	0.4	0.6	5.0	0.0	3.8	0.2	2.8	0.2	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.6	0.8	1.9	7.4	0.2	1.1	0.3	2.6	0.6	1.9	0.9
LnGrp Delay(d),s/veh	44.9	22.8	6.7	19.6	14.8	5.1	31.3	16.5	20.8	24.5	16.2	6.3
LnGrp LOS	D	C	A	B	B	A	C	B	C	C	B	A
Approach Vol, veh/h		842			1821			315			329	
Approach Delay, s/veh		21.7			15.4			24.7			14.8	
Approach LOS		C			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	20.0	13.3	16.2	7.6	22.9	5.9	23.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	3.1	7.2	6.1	9.4	4.1	5.5	3.4	17.3
Green Ext Time (p_c), s	0.1	0.4	0.2	2.7	0.0	1.0	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	190	0	350	410	810	0	0	640	180
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				200	0	368	432	853	0	0	674	189
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				325	0	290	456	1397	0	0	1255	352
Arrive On Green				0.18	0.00	0.18	0.51	1.00	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	0	1583	1774	1863	0	0	2825	766
Grp Volume(v), veh/h				200	0	368	432	853	0	0	436	427
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1863	0	0	1770	1728
Q Serve(g_s), s				12.5	0.0	22.0	27.7	0.0	0.0	0.0	21.2	21.3
Cycle Q Clear(g_c), s				12.5	0.0	22.0	27.7	0.0	0.0	0.0	21.2	21.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.44
Lane Grp Cap(c), veh/h				325	0	290	456	1397	0	0	813	794
V/C Ratio(X)				0.61	0.00	1.27	0.95	0.61	0.00	0.00	0.54	0.54
Avail Cap(c_a), veh/h				325	0	290	650	1397	0	0	813	794
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.79	0.79	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.1	0.0	49.0	28.4	0.0	0.0	0.0	23.3	23.3
Incr Delay (d2), s/veh				3.4	0.0	144.9	15.9	1.6	0.0	0.0	2.5	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
%ile BackOfQ(50%),veh/ln				6.4	0.0	21.3	15.2	0.6	0.0	0.0	10.9	10.6
LnGrp Delay(d),s/veh				48.5	0.0	193.9	44.2	1.6	0.0	0.0	25.8	25.9
LnGrp LOS				D		F	D	A			C	C
Approach Vol, veh/h					568			1285			863	
Approach Delay, s/veh					142.7			15.9			25.8	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		94.0			34.9	59.1		26.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		90.0			44.0	42.0		22.0
Max Q Clear Time (g_c+I1), s		2.0			29.7	23.3		24.0
Green Ext Time (p_c), s		21.9			1.2	11.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	330	0	140	0	0	0	0	880	360	190	640	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	347	0	147				0	926	379	200	674	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	397	0	355				0	1357	607	519	2511	0
Arrive On Green	0.22	0.00	0.22				0.00	0.77	0.77	0.59	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	347	0	147				0	926	379	200	674	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	22.6	0.0	9.5				0.0	15.4	12.9	7.2	0.0	0.0
Cycle Q Clear(g_c), s	22.6	0.0	9.5				0.0	15.4	12.9	7.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	397	0	355				0	1357	607	519	2511	0
V/C Ratio(X)	0.87	0.00	0.41				0.00	0.68	0.62	0.39	0.27	0.00
Avail Cap(c_a), veh/h	562	0	501				0	1357	607	519	2511	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.79	0.79	0.00
Uniform Delay (d), s/veh	44.9	0.0	39.8				0.0	10.4	10.1	19.1	0.0	0.0
Incr Delay (d2), s/veh	10.6	0.0	0.8				0.0	2.5	4.2	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	0.0	4.2				0.0	7.7	6.0	3.5	0.1	0.0
LnGrp Delay(d),s/veh	55.5	0.0	40.6				0.0	12.9	14.4	19.5	0.2	0.0
LnGrp LOS	E		D					B	B	B	A	
Approach Vol, veh/h		494						1305			874	
Approach Delay, s/veh		51.1						13.3			4.6	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	39.1	50.0		30.9		89.1		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	24.0	46.0		38.0		74.0		
Max Q Clear Time (g_c+I1), s	9.2	17.4		24.6		2.0		
Green Ext Time (p_c), s	4.6	9.5		2.2		6.2		

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	110	190	130	170	120	190	980	340	90	460	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	95	116	200	137	179	126	200	1032	358	95	484	105
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	124	163	1130	292	362	162	927	1803	625	726	2161	673
Arrive On Green	0.07	0.09	0.09	0.08	0.10	0.10	0.54	0.97	0.97	0.07	0.14	0.14
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	3731	1294	3442	5085	1583
Grp Volume(v), veh/h	95	116	200	137	179	126	200	938	452	95	484	105
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1634	1721	1695	1583
Q Serve(g_s), s	6.3	7.3	0.0	4.6	5.7	9.3	3.6	2.5	2.5	3.1	10.1	7.0
Cycle Q Clear(g_c), s	6.3	7.3	0.0	4.6	5.7	9.3	3.6	2.5	2.5	3.1	10.1	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	124	163	1130	292	362	162	927	1639	790	726	2161	673
V/C Ratio(X)	0.76	0.71	0.18	0.47	0.49	0.78	0.22	0.57	0.57	0.13	0.22	0.16
Avail Cap(c_a), veh/h	251	388	1513	344	590	264	927	1639	790	726	2161	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	0.97	0.97	0.97
Uniform Delay (d), s/veh	54.8	53.3	26.5	52.3	50.9	52.5	21.1	1.1	1.1	45.5	34.0	32.7
Incr Delay (d2), s/veh	9.4	5.6	0.1	1.2	1.0	7.8	0.1	1.2	2.4	0.1	0.2	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	3.4	4.0	2.3	2.2	2.9	4.4	1.7	1.0	1.3	1.5	4.8	3.2
LnGrp Delay(d),s/veh	64.2	58.9	26.6	53.5	52.0	60.3	21.2	2.3	3.5	45.6	34.3	33.1
LnGrp LOS	E	E	C	D	D	E	C	A	A	D	C	C
Approach Vol, veh/h		411			442			1590			684	
Approach Delay, s/veh		44.4			54.8			5.0			35.7	
Approach LOS		D			D			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.3	62.0	14.2	14.5	36.3	55.0	12.4	16.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	58.0	12.0	25.0	16.0	51.0	17.0	20.0
Max Q Clear Time (g_c+I1), s	5.1	4.5	6.6	9.3	5.6	12.1	8.3	11.3
Green Ext Time (p_c), s	0.4	14.6	0.3	1.2	0.7	4.1	0.5	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	130	90	120	510	230	960	0	0	470	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	53	0	137	95	126	537	242	1011	0	0	495	305
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	283	376	572	586	2909	0	0	737	330
Arrive On Green	0.00	0.00	0.00	0.36	0.36	0.36	0.33	0.57	0.00	0.00	0.07	0.07
Sat Flow, veh/h		0		784	1040	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		221	0	537	242	1011	0	0	495	305
Grp Sat Flow(s),veh/h/ln				1824	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				10.6	0.0	39.3	12.7	12.7	0.0	0.0	16.4	23.0
Cycle Q Clear(g_c), s				10.6	0.0	39.3	12.7	12.7	0.0	0.0	16.4	23.0
Prop In Lane				0.43		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				659	0	572	586	2909	0	0	737	330
V/C Ratio(X)				0.34	0.00	0.94	0.41	0.35	0.00	0.00	0.67	0.92
Avail Cap(c_a), veh/h				729	0	633	586	2909	0	0	737	330
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.98	0.98
Uniform Delay (d), s/veh				27.9	0.0	37.0	31.1	13.7	0.0	0.0	51.9	54.9
Incr Delay (d2), s/veh				0.3	0.0	20.9	0.5	0.3	0.0	0.0	4.8	33.3
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				5.4	0.0	20.5	6.3	6.0	0.0	0.0	8.5	13.1
LnGrp Delay(d),s/veh				28.2	0.0	58.0	31.6	14.0	0.0	0.0	56.6	88.2
LnGrp LOS				C		E	C	B			E	F
Approach Vol, veh/h					758			1253			800	
Approach Delay, s/veh					49.3			17.4			68.7	
Approach LOS					D			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.7			43.7	29.0		47.3
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		53.0			24.0	25.0		48.0
Max Q Clear Time (g_c+I1), s		14.7			14.7	25.0		41.3
Green Ext Time (p_c), s		10.0			5.1	0.0		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	750	1400	480	60	1600	180	160	100	70	40	40	220
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	789	1474	505	63	1684	189	168	105	74	42	0	260
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	863	2976	927	81	1933	602	352	359	235	216	0	422
Arrive On Green	0.25	0.59	0.59	0.05	0.38	0.38	0.10	0.17	0.17	0.06	0.00	0.13
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	2054	1342	3548	0	3167
Grp Volume(v), veh/h	789	1474	505	63	1684	189	168	89	90	42	0	260
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1626	1774	0	1583
Q Serve(g_s), s	26.7	20.3	13.8	4.2	36.8	8.0	5.5	5.3	5.8	1.4	0.0	5.9
Cycle Q Clear(g_c), s	26.7	20.3	13.8	4.2	36.8	8.0	5.5	5.3	5.8	1.4	0.0	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	863	2976	927	81	1933	602	352	310	285	216	0	422
V/C Ratio(X)	0.91	0.50	0.54	0.78	0.87	0.31	0.48	0.29	0.32	0.19	0.00	0.62
Avail Cap(c_a), veh/h	946	2976	927	133	1949	607	352	310	285	216	0	422
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)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	14.5	5.3	56.7	34.5	16.5	50.8	43.0	43.2	53.6	0.0	19.7
Incr Delay (d2), s/veh	11.9	0.1	0.6	14.7	4.6	0.3	1.0	2.3	2.9	0.4	0.0	6.6
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	14.1	9.5	6.1	2.4	18.0	3.5	2.7	2.8	2.8	0.7	0.0	2.9
LnGrp Delay(d),s/veh	55.5	14.7	5.9	71.3	39.1	16.8	51.8	45.3	46.1	54.0	0.0	26.3
LnGrp LOS	E	B	A	E	D	B	D	D	D	D		C
Approach Vol, veh/h		2768			1936			347			302	
Approach Delay, s/veh		24.7			38.0			48.7			30.1	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	25.0	9.5	74.2	16.3	20.0	34.1	49.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	21.0	9.0	70.0	9.0	16.0	33.0	46.0
Max Q Clear Time (g_c+I1), s	3.4	7.8	6.2	22.3	7.5	7.9	28.7	38.8
Green Ext Time (p_c), s	0.0	0.7	0.0	42.9	0.1	0.6	1.4	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	430	1660	1200	690	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	453	1747	1263	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	505	4488	1879	841		
Arrive On Green	0.28	0.88	0.53	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	453	1747	1263	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	14.7	3.7	15.6	0.0		
Cycle Q Clear(g_c), s	14.7	3.7	15.6	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	505	4488	1879	841		
V/C Ratio(X)	0.90	0.39	0.67	0.00		
Avail Cap(c_a), veh/h	562	4746	1947	871		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.49	0.00		
Uniform Delay (d), s/veh	20.6	0.6	10.3	0.0		
Incr Delay (d2), s/veh	1.9	0.0	0.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.4	1.6	7.7	0.0		
LnGrp Delay(d),s/veh	22.5	0.6	10.7	0.0		
LnGrp LOS	C	A	B			
Approach Vol, veh/h		2200	1263			
Approach Delay, s/veh		5.1	10.7			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				57.0			21.1	35.9
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			19.0	33.0
Max Q Clear Time (g_c+I1), s				5.7			16.7	17.6
Green Ext Time (p_c), s				40.6			0.4	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.2
HCM 2010 LOS	A

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	550	0	580	500
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	579	0	611	526
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2063	289			579	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2063	289			579	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			38	
cM capacity (veh/h)	18	707			991	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	386	193	611	263	263
Volume Left	0	0	611	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	991	1700	1700
Volume to Capacity	0.23	0.11	0.62	0.15	0.15
Queue Length 95th (ft)	0	0	110	0	0
Control Delay (s)	0.0	0.0	14.3	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		7.7		
Approach LOS					

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	700	470	0	950	470	370	40	810	380	20	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	737	0	0	1000	495	419	0	0	415	0	116
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	82	2734	851	0	2248	700	569	0	254	545	0	243
Arrive On Green	0.05	0.54	0.00	0.00	0.44	0.44	0.16	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	63	737	0	0	1000	495	419	0	0	415	0	116
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	2.8	6.3	0.0	0.0	11.1	20.6	9.1	0.0	0.0	9.1	0.0	5.4
Cycle Q Clear(g_c), s	2.8	6.3	0.0	0.0	11.1	20.6	9.1	0.0	0.0	9.1	0.0	5.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	2734	851	0	2248	700	569	0	254	545	0	243
V/C Ratio(X)	0.77	0.27	0.00	0.00	0.44	0.71	0.74	0.00	0.00	0.76	0.00	0.48
Avail Cap(c_a), veh/h	438	4081	1271	0	2574	801	569	0	254	876	0	391
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	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	10.1	0.0	0.0	15.7	18.3	32.4	0.0	0.0	32.9	0.0	31.3
Incr Delay (d2), s/veh	13.9	0.1	0.0	0.0	0.1	2.4	8.2	0.0	0.0	2.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.9	0.0	0.0	5.2	9.4	5.1	0.0	0.0	4.6	0.0	4.9
LnGrp Delay(d),s/veh	52.1	10.2	0.0	0.0	15.8	20.8	40.6	0.0	0.0	35.1	0.0	32.8
LnGrp LOS	D	B			B	C	D			D		C
Approach Vol, veh/h		800			1495			419			531	
Approach Delay, s/veh		13.5			17.5			40.6			34.6	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		17.0		47.6		16.4	7.7	39.8
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		13.0		65.0		20.0	20.0	41.0
Max Q Clear Time (g_c+I1), s		11.1		8.3		11.1	4.8	22.6
Green Ext Time (p_c), s		0.3		25.7		1.4	0.1	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2130	280	270	790	340	580
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2242	0	284	832	358	611
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2407	749	326	3210	430	939
Arrive On Green	0.47	0.00	0.09	0.63	0.24	0.24
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2242	0	284	832	358	611
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	26.3	0.0	5.2	4.6	12.1	11.8
Cycle Q Clear(g_c), s	26.3	0.0	5.2	4.6	12.1	11.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2407	749	326	3210	430	939
V/C Ratio(X)	0.93	0.00	0.87	0.26	0.83	0.65
Avail Cap(c_a), veh/h	2410	750	326	3213	476	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	28.3	5.1	22.8	17.8
Incr Delay (d2), s/veh	7.3	0.0	21.6	0.0	11.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	0.0	3.4	2.1	7.2	4.7
LnGrp Delay(d),s/veh	23.0	0.0	49.9	5.2	33.9	19.2
LnGrp LOS	C		D	A	C	B
Approach Vol, veh/h	2242			1116	969	
Approach Delay, s/veh	23.0			16.6	24.6	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		19.3	10.0	34.0				44.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	6.0	30.0				40.0
Max Q Clear Time (g_c+I1), s		14.1	7.2	28.3				6.6
Green Ext Time (p_c), s		1.2	0.0	1.7				29.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	160	190	120	60	50	90	990	150	40	750	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	168	200	126	63	53	95	1042	158	42	789	63
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	187	223	156	212	179	122	1222	185	70	1219	97
Arrive On Green	0.10	0.24	0.24	0.09	0.23	0.23	0.07	0.40	0.40	0.04	0.37	0.37
Sat Flow, veh/h	1774	776	924	1774	936	788	1774	3083	467	1774	3320	265
Grp Volume(v), veh/h	147	0	368	126	0	116	95	597	603	42	420	432
Grp Sat Flow(s),veh/h/ln	1774	0	1700	1774	0	1724	1774	1770	1780	1774	1770	1816
Q Serve(g_s), s	5.5	0.0	14.3	4.7	0.0	3.8	3.6	21.0	21.0	1.6	13.4	13.4
Cycle Q Clear(g_c), s	5.5	0.0	14.3	4.7	0.0	3.8	3.6	21.0	21.0	1.6	13.4	13.4
Prop In Lane	1.00		0.54	1.00		0.46	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	182	0	411	156	0	391	122	701	706	70	649	666
V/C Ratio(X)	0.81	0.00	0.90	0.81	0.00	0.30	0.78	0.85	0.85	0.60	0.65	0.65
Avail Cap(c_a), veh/h	182	0	424	156	0	405	156	701	706	104	649	666
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	29.9	0.0	25.0	30.5	0.0	21.8	31.2	18.7	18.8	32.2	17.9	17.9
Incr Delay (d2), s/veh	22.7	0.0	20.8	25.8	0.0	0.4	17.3	12.4	12.5	8.2	4.9	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	9.0	3.4	0.0	1.8	2.4	12.5	12.7	0.9	7.4	7.6
LnGrp Delay(d),s/veh	52.6	0.0	45.8	56.3	0.0	22.2	48.5	31.2	31.3	40.4	22.8	22.7
LnGrp LOS	D		D	E		C	D	C	C	D	C	C
Approach Vol, veh/h		515			242			1295			894	
Approach Delay, s/veh		47.7			40.0			32.5			23.6	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	31.0	10.0	20.5	8.7	29.0	11.0	19.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	6.0	17.0	6.0	25.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	3.6	23.0	6.7	16.3	5.6	15.4	7.5	5.8
Green Ext Time (p_c), s	0.2	2.6	0.0	0.2	0.0	3.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	310	160	70	140	30	160	120	130	50	170	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	326	168	74	147	32	168	126	137	53	179	126
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	446	794	198	550	131	210	267	290	150	298	209
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.12	0.33	0.33	0.08	0.29	0.29
Sat Flow, veh/h	395	1165	1583	237	1436	343	1774	817	889	1774	1019	717
Grp Volume(v), veh/h	463	0	168	101	0	152	168	0	263	53	0	305
Grp Sat Flow(s),veh/h/ln	1560	0	1583	382	0	1635	1774	0	1706	1774	0	1736
Q Serve(g_s), s	11.7	0.0	3.4	4.1	0.0	3.7	5.4	0.0	7.1	1.6	0.0	8.8
Cycle Q Clear(g_c), s	15.4	0.0	3.4	19.5	0.0	3.7	5.4	0.0	7.1	1.6	0.0	8.8
Prop In Lane	0.30		1.00	0.74		0.21	1.00		0.52	1.00		0.41
Lane Grp Cap(c), veh/h	678	0	794	254	0	626	210	0	557	150	0	507
V/C Ratio(X)	0.68	0.00	0.21	0.40	0.00	0.24	0.80	0.00	0.47	0.35	0.00	0.60
Avail Cap(c_a), veh/h	697	0	814	266	0	646	244	0	557	183	0	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	8.1	20.5	0.0	12.2	25.0	0.0	15.6	25.2	0.0	17.7
Incr Delay (d2), s/veh	2.7	0.0	0.1	1.0	0.0	0.2	14.9	0.0	2.9	1.4	0.0	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	7.1	0.0	1.5	1.6	0.0	1.7	3.5	0.0	3.8	0.9	0.0	4.9
LnGrp Delay(d),s/veh	18.6	0.0	8.2	21.5	0.0	12.4	39.9	0.0	18.5	26.6	0.0	22.9
LnGrp LOS	B		A	C		B	D		B	C		C
Approach Vol, veh/h		631			253			431			358	
Approach Delay, s/veh		15.8			16.0			26.8			23.4	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	23.0		26.3	10.9	21.0		26.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	19.0		23.0	8.0	17.0		23.0
Max Q Clear Time (g_c+I1), s	3.6	9.1		17.4	7.4	10.8		21.5
Green Ext Time (p_c), s	0.5	1.1		2.6	0.0	1.0		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	40	390	190	60	90	390	990	200	100	1020	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	461	200	63	95	411	1042	211	105	1074	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	302	513	209	66	99	501	1263	255	123	1242	37
Arrive On Green	0.00	0.00	0.16	0.22	0.22	0.22	0.29	0.86	0.86	0.07	0.35	0.35
Sat Flow, veh/h	0	1863	3167	968	305	460	3442	2935	593	1774	3509	105
Grp Volume(v), veh/h	0	0	461	358	0	0	411	627	626	105	542	564
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1733	0	0	1721	1770	1758	1774	1770	1844
Q Serve(g_s), s	0.0	0.0	18.6	26.6	0.0	0.0	14.5	22.1	22.4	7.6	37.0	37.0
Cycle Q Clear(g_c), s	0.0	0.0	18.6	26.6	0.0	0.0	14.5	22.1	22.4	7.6	37.0	37.0
Prop In Lane	0.00		1.00	0.56		0.27	1.00		0.34	1.00		0.06
Lane Grp Cap(c), veh/h	0	302	513	373	0	0	501	761	756	123	626	653
V/C Ratio(X)	0.00	0.00	0.90	0.96	0.00	0.00	0.82	0.82	0.83	0.85	0.86	0.86
Avail Cap(c_a), veh/h	0	330	560	373	0	0	501	761	756	123	626	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.22	0.22	0.22	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	53.4	50.4	0.0	0.0	44.5	6.7	6.7	59.9	39.1	39.1
Incr Delay (d2), s/veh	0.0	0.0	16.5	35.9	0.0	0.0	2.5	2.4	2.4	41.0	14.8	14.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	9.3	16.4	0.0	0.0	7.0	10.2	10.6	5.1	20.6	21.4
LnGrp Delay(d),s/veh	0.0	0.0	69.9	86.3	0.0	0.0	47.0	9.1	9.2	100.8	53.9	53.4
LnGrp LOS			E	F			D	A	A	F	D	D
Approach Vol, veh/h		461			358			1664			1211	
Approach Delay, s/veh		69.9			86.3			18.5			57.7	
Approach LOS		E			F			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	59.9		25.1	22.9	50.0		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	9.0	54.0		23.0	17.0	46.0		28.0
Max Q Clear Time (g_c+I1), s	9.6	24.4		20.6	16.5	39.0		28.6
Green Ext Time (p_c), s	0.0	12.9		0.5	0.5	3.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	240	950	950	170	290	320	1110	350	30	1640	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	253	1000	1000	332	203	337	1168	368	32	1726	63
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	396	416	536	737	387	362	205	1132	350	73	1171	524
Arrive On Green	0.22	0.22	0.22	0.21	0.21	0.21	0.12	0.43	0.43	0.03	0.44	0.44
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	2663	824	3442	3539	1583
Grp Volume(v), veh/h	200	253	1000	1000	332	203	337	769	767	32	1726	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1717	1721	1770	1583
Q Serve(g_s), s	12.8	15.9	29.0	27.0	22.3	14.7	15.0	55.3	55.3	1.2	43.0	3.1
Cycle Q Clear(g_c), s	12.8	15.9	29.0	27.0	22.3	14.7	15.0	55.3	55.3	1.2	43.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	396	416	536	737	387	362	205	752	730	73	1171	524
V/C Ratio(X)	0.51	0.61	1.87	1.36	0.86	0.56	1.65	1.02	1.05	0.44	1.47	0.12
Avail Cap(c_a), veh/h	396	416	536	737	387	362	205	752	730	106	1171	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.38	0.38	0.38
Uniform Delay (d), s/veh	44.2	45.4	43.0	51.5	49.7	44.3	57.5	37.4	37.4	62.4	36.4	25.2
Incr Delay (d2), s/veh	1.0	2.6	396.8	169.5	17.2	1.9	311.7	38.7	47.3	1.6	215.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	8.4	78.3	30.5	13.4	6.6	25.1	35.0	35.7	0.6	55.9	1.4
LnGrp Delay(d),s/veh	45.3	48.0	439.8	221.0	66.9	46.3	369.2	76.1	84.6	64.0	251.7	25.4
LnGrp LOS	D	D	F	F	E	D	F	F	F	E	F	C
Approach Vol, veh/h		1453			1535			1873			1821	
Approach Delay, s/veh		317.3			164.5			132.3			240.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.7	59.3		33.0	19.0	47.0		31.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	54.0		29.0	15.0	43.0		27.0
Max Q Clear Time (g_c+I1), s	3.2	57.3		31.0	17.0	45.0		29.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	209.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	980	2550	50	0	680	1750	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1032	2684		0	716	1842	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2012	2110		0	1252	1799	0
Arrive On Green	0.58	0.58		0.00	0.35	0.35	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1032	2684		0	716	1842	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	23.1	76.0		0.0	21.3	46.0	0.0
Cycle Q Clear(g_c), s	23.1	76.0		0.0	21.3	46.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2012	2110		0	1252	1799	0
V/C Ratio(X)	0.51	1.27		0.00	0.57	1.02	0.00
Avail Cap(c_a), veh/h	2012	2110		0	1252	1799	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.0	27.0		0.0	34.0	42.0	0.0
Incr Delay (d2), s/veh	0.2	126.2		0.0	1.9	27.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	60.4		0.0	10.8	26.1	0.0
LnGrp Delay(d),s/veh	16.2	153.2		0.0	35.9	69.4	0.0
LnGrp LOS	B	F			D	F	
Approach Vol, veh/h	3716				716	1842	
Approach Delay, s/veh	115.1				35.9	69.4	
Approach LOS	F				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		80.0		50.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		46.0		76.0		38.0		
Max Q Clear Time (g_c+I1), s		23.3		78.0		48.0		
Green Ext Time (p_c), s		18.8		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	92.7
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2910	580	110	1810	420	210
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	3063	611	116	1905	442	221
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3277	1306	147	4858	640	286
Arrive On Green	0.64	0.64	0.08	0.76	0.18	0.18
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	3063	611	116	1905	442	221
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	70.0	14.3	8.3	13.3	15.2	17.3
Cycle Q Clear(g_c), s	70.0	14.3	8.3	13.3	15.2	17.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3277	1306	147	4858	640	286
V/C Ratio(X)	0.93	0.47	0.79	0.39	0.69	0.77
Avail Cap(c_a), veh/h	3286	1309	150	4880	640	286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	3.3	58.5	5.4	49.9	50.8
Incr Delay (d2), s/veh	3.8	0.2	23.5	0.1	6.0	18.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	33.5	12.6	5.1	5.8	8.0	9.0
LnGrp Delay(d),s/veh	24.5	3.4	82.0	5.5	55.9	69.1
LnGrp LOS	C	A	F	A	E	E
Approach Vol, veh/h	3674			2021	663	
Approach Delay, s/veh	21.0			9.9	60.3	
Approach LOS	C			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		27.4	14.8	87.8				102.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		23.0	11.0	84.0				99.0
Max Q Clear Time (g_c+I1), s		19.3	10.3	72.0				15.3
Green Ext Time (p_c), s		1.0	0.6	11.8				31.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	380	290	140	110	190	90	260	180	190	240	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	400	305	147	116	200	95	274	189	200	253	116
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	150	491	371	150	452	404	122	504	429	210	597	507
Arrive On Green	0.08	0.26	0.26	0.08	0.26	0.26	0.07	0.27	0.27	0.12	0.32	0.32
Sat Flow, veh/h	1774	1923	1453	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	147	368	337	147	116	200	95	274	189	200	253	116
Grp Sat Flow(s),veh/h/ln	1774	1770	1606	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.9	11.5	11.7	4.9	3.1	6.4	3.1	7.4	5.8	6.6	6.3	3.2
Cycle Q Clear(g_c), s	4.9	11.5	11.7	4.9	3.1	6.4	3.1	7.4	5.8	6.6	6.3	3.2
Prop In Lane	1.00		0.90	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	452	410	150	452	404	122	504	429	210	597	507
V/C Ratio(X)	0.98	0.81	0.82	0.98	0.26	0.49	0.78	0.54	0.44	0.95	0.42	0.23
Avail Cap(c_a), veh/h	150	479	435	150	479	429	210	504	429	210	597	507
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	27.0	20.7	20.7	27.0	17.5	18.8	27.1	18.4	17.8	25.9	15.8	14.7
Incr Delay (d2), s/veh	67.0	9.9	11.5	67.0	0.3	0.9	10.2	4.2	3.3	48.4	2.2	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	5.2	6.9	6.5	5.2	1.6	2.9	1.9	4.4	2.9	6.0	3.6	1.5
LnGrp Delay(d),s/veh	94.0	30.6	32.2	94.0	17.8	19.7	37.2	22.6	21.1	74.2	18.0	15.8
LnGrp LOS	F	C	C	F	B	B	D	C	C	E	B	B
Approach Vol, veh/h		852			463			558			569	
Approach Delay, s/veh		42.2			42.8			24.6			37.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	20.0	9.0	19.1	8.1	22.9	9.0	19.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	5.0	16.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	8.6	9.4	6.9	13.7	5.1	8.3	6.9	8.4
Green Ext Time (p_c), s	0.0	2.4	0.0	1.4	0.0	2.6	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	40	50	400	610	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	42	53	421	642	74

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	995	358	716	0	-	0
Stage 1	679	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	242	638	880	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	223	638	880	-	-	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	880	-	223	638	-	-
HCM Lane V/C Ratio	0.06	-	0.189	0.066	-	-
HCM Control Delay (s)	9.4	0.3	24.9	11	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	0.2	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	340	870	240	200	480	190
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	916	253	211	505	200
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	406	989	863	386	624	919
Arrive On Green	0.23	0.53	0.24	0.24	0.35	0.35
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	358	916	253	211	505	200
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	13.3	31.0	4.0	7.9	17.6	4.1
Cycle Q Clear(g_c), s	13.3	31.0	4.0	7.9	17.6	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	406	989	863	386	624	919
V/C Ratio(X)	0.88	0.93	0.29	0.55	0.81	0.22
Avail Cap(c_a), veh/h	468	1037	863	386	624	919
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	25.4	14.8	21.0	22.5	20.1	6.9
Incr Delay (d2), s/veh	16.1	13.3	0.2	1.6	10.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	19.2	2.0	3.6	10.4	5.5
LnGrp Delay(d),s/veh	41.5	28.0	21.2	24.1	30.9	7.4
LnGrp LOS	D	C	C	C	C	A
Approach Vol, veh/h		1274	464		705	
Approach Delay, s/veh		31.8	22.5		24.3	
Approach LOS		C	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				40.3		28.0	19.6	20.6
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				38.0		24.0	18.0	16.0
Max Q Clear Time (g_c+I1), s				33.0		19.6	15.3	9.9
Green Ext Time (p_c), s				3.3		1.1	0.3	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	600	3510	1390	830	0	630
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	632	3695	1898	584		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	740	4721	2515	713		
Arrive On Green	0.42	0.93	0.45	0.45		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	632	3695	1898	584		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	21.0	12.4	18.4	20.9		
Cycle Q Clear(g_c), s	21.0	12.4	18.4	20.9		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	740	4721	2515	713		
V/C Ratio(X)	0.85	0.78	0.75	0.82		
Avail Cap(c_a), veh/h	740	4772	2579	731		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.88	0.88		
Uniform Delay (d), s/veh	17.2	0.6	14.9	15.6		
Incr Delay (d2), s/veh	1.0	0.1	1.1	6.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.4	4.8	9.6	10.4		
LnGrp Delay(d),s/veh	18.1	0.7	16.0	22.0		
LnGrp LOS	B	A	B	C		
Approach Vol, veh/h		4327	2482			
Approach Delay, s/veh		3.2	17.4			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				64.3			31.1	33.3
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				61.0			27.0	30.0
Max Q Clear Time (g_c+I1), s				14.4			23.0	22.9
Green Ext Time (p_c), s				46.0			4.0	6.4

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	2120	720	310	1240	480	0	0	0	1000	0	450
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	495	2232	758	326	1305	0				1053	0	474
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	526	2127	662	306	1498	466				1064	0	950
Arrive On Green	0.30	0.42	0.42	0.17	0.29	0.00				0.30	0.00	0.30
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	495	2232	758	326	1305	0				1053	0	474
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.0	46.0	46.0	19.0	26.8	0.0				32.5	0.0	13.6
Cycle Q Clear(g_c), s	30.0	46.0	46.0	19.0	26.8	0.0				32.5	0.0	13.6
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	526	2127	662	306	1498	466				1064	0	950
V/C Ratio(X)	0.94	1.05	1.14	1.06	0.87	0.00				0.99	0.00	0.50
Avail Cap(c_a), veh/h	526	2127	662	306	1572	489				1064	0	950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	37.8	32.0	32.0	45.5	36.8	0.0				38.3	0.0	31.7
Incr Delay (d2), s/veh	25.4	34.0	82.2	69.3	5.5	0.0				25.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	28.2	35.2	15.2	13.3	0.0				19.7	0.0	6.2
LnGrp Delay(d),s/veh	63.2	66.0	114.2	114.8	42.3	0.0				63.5	0.0	33.6
LnGrp LOS	E	F	F	F	D					E		C
Approach Vol, veh/h		3485			1631						1527	
Approach Delay, s/veh		76.1			56.8						54.2	
Approach LOS		E			E						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			23.0	50.0		37.0	36.6	36.4
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			19.0	46.0		33.0	31.0	34.0
Max Q Clear Time (g_c+I1), s			21.0	48.0		34.5	32.0	28.8
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	66.3
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	220	0	340	200	340	0	0	830	470
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				232	0	0	211	358	0	0	874	495
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				290	0	259	529	2525	0	0	1252	560
Arrive On Green				0.16	0.00	0.00	0.60	1.00	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				232	0	0	211	358	0	0	874	495
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				8.2	0.0	0.0	4.1	0.0	0.0	0.0	13.8	19.1
Cycle Q Clear(g_c), s				8.2	0.0	0.0	4.1	0.0	0.0	0.0	13.8	19.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				290	0	259	529	2525	0	0	1252	560
V/C Ratio(X)				0.80	0.00	0.00	0.40	0.14	0.00	0.00	0.70	0.88
Avail Cap(c_a), veh/h				437	0	390	529	2525	0	0	1252	560
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.68	0.68	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.2	0.0	0.0	10.0	0.0	0.0	0.0	18.0	19.7
Incr Delay (d2), s/veh				6.2	0.0	0.0	0.3	0.1	0.0	0.0	3.2	18.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	0.0	0.0	2.0	0.0	0.0	0.0	7.2	11.1
LnGrp Delay(d),s/veh				32.3	0.0	0.0	10.4	0.1	0.0	0.0	21.3	37.9
LnGrp LOS				C			B	A			C	D
Approach Vol, veh/h					232			569			1369	
Approach Delay, s/veh					32.3			3.9			27.3	
Approach LOS					C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		50.4			23.4	27.0		14.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		41.0			14.0	23.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			6.1	21.1		10.2
Green Ext Time (p_c), s		3.2			1.9	1.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/23/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	300	207	93	30	0	123	87	117	83	50	410	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.95			0.89	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (prot)	1770	1776			1550	1504		3257				1610
Flt Permitted	0.95	1.00			0.99	1.00		1.00				0.95
Satd. Flow (perm)	1770	1776			1550	1504		3257				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	218	98	32	0	129	95	123	87	53	432	466
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	316	316	0	0	130	126	0	247	0	0	0	479
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	27.4	27.4			14.8	14.8		22.8				49.0
Effective Green, g (s)	27.4	27.4			14.8	14.8		22.8				49.0
Actuated g/C Ratio	0.21	0.21			0.11	0.11		0.18				0.38
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	373	374			176	171		571				606
v/s Ratio Prot	c0.18	0.18			c0.08	0.08		c0.08				c0.30
v/s Ratio Perm												
v/c Ratio	0.85	0.84			0.74	0.74		0.43				0.79
Uniform Delay, d1	49.3	49.3			55.7	55.7		47.8				35.9
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.67
Incremental Delay, d2	16.1	15.9			14.9	15.2		2.4				8.2
Delay (s)	65.4	65.2			70.7	70.9		50.2				32.4
Level of Service	E	E			E	E		D				C
Approach Delay (s)		65.3			70.8			50.2				
Approach LOS		E			E			D				

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	197
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.97
Satd. Flow (prot)	3280
Flt Permitted	0.97
Satd. Flow (perm)	3280
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	207
RTOR Reduction (vph)	0
Lane Group Flow (vph)	626
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	49.0
Effective Green, g (s)	49.0
Actuated g/C Ratio	0.38
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	1236
v/s Ratio Prot	0.19
v/s Ratio Perm	
v/c Ratio	0.51
Uniform Delay, d1	31.2
Progression Factor	0.69
Incremental Delay, d2	1.2
Delay (s)	22.8
Level of Service	C
Approach Delay (s)	27.0
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	2320	260	570	1120	140	250	50	770	90	40	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	2442	274	600	1179	147	263	53	811	95	42	84
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	199	2348	731	888	3366	1096	314	240	612	104	126	107
Arrive On Green	0.06	0.46	0.46	0.26	0.66	0.66	0.09	0.13	0.13	0.03	0.07	0.07
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	147	2442	274	600	1179	147	263	53	811	95	42	84
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.6	61.0	10.7	20.7	13.5	4.2	9.9	3.4	12.0	3.6	2.8	6.9
Cycle Q Clear(g_c), s	5.6	61.0	10.7	20.7	13.5	4.2	9.9	3.4	12.0	3.6	2.8	6.9
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	199	2348	731	888	3366	1096	314	240	612	104	126	107
V/C Ratio(X)	0.74	1.04	0.37	0.68	0.35	0.13	0.84	0.22	1.32	0.91	0.33	0.78
Avail Cap(c_a), veh/h	287	2348	731	1094	3542	1151	339	240	612	104	126	107
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	61.2	35.5	11.9	44.0	9.8	6.9	59.1	51.6	27.6	63.9	58.7	60.6
Incr Delay (d2), s/veh	5.7	29.9	0.3	1.2	0.1	0.1	15.9	2.1	157.1	60.7	6.9	42.0
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	2.8	35.0	5.4	10.0	6.2	1.8	5.4	1.9	46.1	2.6	1.7	4.3
LnGrp Delay(d),s/veh	67.0	65.5	12.2	45.3	9.9	6.9	75.0	53.7	184.7	124.6	65.6	102.6
LnGrp LOS	E	F	B	D	A	A	E	D	F	F	E	F
Approach Vol, veh/h		2863			1926			1127			221	
Approach Delay, s/veh		60.4			20.7			152.9			105.0	
Approach LOS		E			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	38.1	65.0	16.0	13.0	11.6	91.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	42.0	61.0	13.0	8.0	11.0	92.0
Max Q Clear Time (g_c+I1), s	5.6	14.0	22.7	63.0	11.9	8.9	7.6	15.5
Green Ext Time (p_c), s	0.0	1.4	11.4	0.0	0.1	0.0	0.1	19.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	2190	460	240	1110	80	320	30	460	30	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	2305	484	253	1168	84	337	32	484	32	0	109
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	182	2260	880	268	2134	703	382	513	436	87	0	923
Arrive On Green	0.10	0.44	0.44	0.08	0.42	0.42	0.11	0.28	0.28	0.02	0.00	0.19
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	147	2305	484	253	1168	84	337	32	484	32	0	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	7.3	40.0	4.8	6.6	15.6	2.8	8.7	1.1	24.8	0.8	0.0	1.5
Cycle Q Clear(g_c), s	7.3	40.0	4.8	6.6	15.6	2.8	8.7	1.1	24.8	0.8	0.0	1.5
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	182	2260	880	268	2134	703	382	513	436	87	0	923
V/C Ratio(X)	0.81	1.02	0.55	0.95	0.55	0.12	0.88	0.06	1.11	0.37	0.00	0.12
Avail Cap(c_a), veh/h	296	2260	880	268	2134	703	382	513	436	158	0	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	25.0	4.5	41.3	19.7	14.7	39.4	24.0	32.6	43.2	0.0	11.2
Incr Delay (d2), s/veh	8.2	24.1	0.7	40.3	0.3	0.1	20.5	0.2	76.3	2.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	23.7	4.1	4.6	7.3	1.2	5.2	0.6	20.1	0.4	0.0	0.7
LnGrp Delay(d),s/veh	47.8	49.1	5.2	81.6	20.0	14.8	60.0	24.3	108.9	45.8	0.0	11.4
LnGrp LOS	D	F	A	F	B	B	E	C	F	D		B
Approach Vol, veh/h		2936			1505			853			141	
Approach Delay, s/veh		41.8			30.0			86.4			19.2	
Approach LOS		D			C			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	28.8	11.0	44.0	14.0	21.0	13.2	41.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	7.0	40.0	10.0	17.0	15.0	32.0
Max Q Clear Time (g_c+I1), s	2.8	26.8	8.6	42.0	10.7	3.5	9.3	17.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.2	14.1

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	460	0	300	480	930	0	0	1130	510
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				400	118	316	505	979	0	0	1189	537
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				382	97	259	437	1347	0	0	1074	464
Arrive On Green				0.22	0.22	0.22	0.25	0.72	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1774	449	1202	1774	1863	0	0	2501	1040
Grp Volume(v), veh/h				400	0	434	505	979	0	0	859	867
Grp Sat Flow(s),veh/h/ln				1774	0	1651	1774	1863	0	0	1770	1679
Q Serve(g_s), s				28.0	0.0	28.0	32.0	39.9	0.0	0.0	58.0	58.0
Cycle Q Clear(g_c), s				28.0	0.0	28.0	32.0	39.9	0.0	0.0	58.0	58.0
Prop In Lane				1.00		0.73	1.00		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				382	0	356	437	1347	0	0	790	749
V/C Ratio(X)				1.05	0.00	1.22	1.16	0.73	0.00	0.00	1.09	1.16
Avail Cap(c_a), veh/h				382	0	356	437	1347	0	0	790	749
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.20	0.20	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				51.0	0.0	51.0	49.0	10.5	0.0	0.0	36.0	36.0
Incr Delay (d2), s/veh				58.8	0.0	122.1	76.1	0.7	0.0	0.0	58.8	85.2
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				19.9	0.0	24.8	24.9	20.4	0.0	0.0	41.2	44.6
LnGrp Delay(d),s/veh				109.8	0.0	173.1	125.1	11.2	0.0	0.0	94.8	121.2
LnGrp LOS				F		F	F	B			F	F
Approach Vol, veh/h					834			1484			1726	
Approach Delay, s/veh					142.7			50.0			108.1	
Approach LOS					F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		98.0			36.0	62.0		32.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		94.0			32.0	58.0		28.0
Max Q Clear Time (g_c+I1), s		41.9			34.0	60.0		30.0
Green Ext Time (p_c), s		40.0			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	450	0	290	0	0	0	0	960	570	540	1050	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	474	0	305				0	1011	600	568	1105	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	491	0	438				0	1062	475	587	2341	0
Arrive On Green	0.28	0.00	0.28				0.00	0.30	0.30	0.22	0.44	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	474	0	305				0	1011	600	568	1105	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	34.3	0.0	22.4				0.0	36.4	39.0	41.2	28.6	0.0
Cycle Q Clear(g_c), s	34.3	0.0	22.4				0.0	36.4	39.0	41.2	28.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	491	0	438				0	1062	475	587	2341	0
V/C Ratio(X)	0.96	0.00	0.70				0.00	0.95	1.26	0.97	0.47	0.00
Avail Cap(c_a), veh/h	491	0	438				0	1062	475	587	2341	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.88	0.88	0.09	0.09	0.00
Uniform Delay (d), s/veh	46.4	0.0	42.1				0.0	44.6	45.5	49.9	20.2	0.0
Incr Delay (d2), s/veh	31.7	0.0	4.7				0.0	16.7	132.7	5.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.0	0.0	10.4				0.0	20.2	34.5	21.1	14.0	0.0
LnGrp Delay(d),s/veh	78.0	0.0	46.8				0.0	61.3	178.2	55.6	20.3	0.0
LnGrp LOS	E		D					E	F	E	C	
Approach Vol, veh/h		779						1611			1673	
Approach Delay, s/veh		65.8						104.8			32.3	
Approach LOS		E						F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	47.0	43.0		40.0		90.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	43.0	39.0		36.0		86.0		
Max Q Clear Time (g_c+I1), s	43.2	41.0		36.3		30.6		
Green Ext Time (p_c), s	0.0	0.0		0.0		15.0		

Intersection Summary	
HCM 2010 Ctrl Delay	67.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	370	410	350	190	130	220	760	200	200	1300	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	353	456	368	200	137	232	800	211	211	1368	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	400	391	927	431	389	174	286	1576	412	515	2333	726
Arrive On Green	0.23	0.21	0.21	0.13	0.11	0.11	0.17	0.78	0.78	0.05	0.15	0.15
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4017	1051	3442	5085	1583
Grp Volume(v), veh/h	211	353	456	368	200	137	232	674	337	211	1368	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1677	1721	1695	1583
Q Serve(g_s), s	13.6	24.0	10.7	13.6	6.9	11.0	8.4	9.2	9.4	7.7	32.6	6.4
Cycle Q Clear(g_c), s	13.6	24.0	10.7	13.6	6.9	11.0	8.4	9.2	9.4	7.7	32.6	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	400	391	927	431	389	174	286	1330	658	515	2333	726
V/C Ratio(X)	0.53	0.90	0.49	0.85	0.51	0.79	0.81	0.51	0.51	0.41	0.59	0.26
Avail Cap(c_a), veh/h	400	416	970	556	681	304	424	1330	658	515	2333	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.86	0.86	0.86
Uniform Delay (d), s/veh	44.3	50.1	20.0	55.7	54.6	56.4	53.2	9.5	9.5	56.2	43.7	7.9
Incr Delay (d2), s/veh	1.3	21.9	0.4	9.9	1.1	7.7	6.2	1.2	2.4	0.5	0.9	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	6.8	14.7	4.7	7.1	3.4	5.2	4.2	4.3	4.6	3.7	15.5	3.0
LnGrp Delay(d),s/veh	45.6	72.0	20.5	65.6	55.7	64.1	59.5	10.7	11.9	56.7	44.6	8.6
LnGrp LOS	D	E	C	E	E	E	E	B	B	E	D	A
Approach Vol, veh/h		1020			705			1243			1768	
Approach Delay, s/veh		43.5			62.5			20.1			42.2	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	55.0	20.3	31.3	14.8	63.6	33.3	18.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	51.0	21.0	29.0	16.0	48.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	9.7	11.4	15.6	26.0	10.4	34.6	15.6	13.0
Green Ext Time (p_c), s	0.3	8.6	0.7	1.2	0.4	8.9	1.5	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	39.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	570	110	210	370	570	720	0	0	1430	630
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	95	0	600	116	221	389	600	758	0	0	1505	663
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	97	185	244	519	3990	0	0	1633	731
Arrive On Green	0.00	0.00	0.00	0.15	0.15	0.15	0.29	0.78	0.00	0.00	0.92	0.92
Sat Flow, veh/h		0		630	1201	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		337	0	389	600	758	0	0	1505	663
Grp Sat Flow(s),veh/h/ln				1831	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				20.0	0.0	20.0	38.0	4.9	0.0	0.0	28.4	25.8
Cycle Q Clear(g_c), s				20.0	0.0	20.0	38.0	4.9	0.0	0.0	28.4	25.8
Prop In Lane				0.34		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				282	0	244	519	3990	0	0	1633	731
V/C Ratio(X)				1.20	0.00	1.60	1.16	0.19	0.00	0.00	0.92	0.91
Avail Cap(c_a), veh/h				282	0	244	519	3990	0	0	1633	731
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73
Uniform Delay (d), s/veh				55.0	0.0	55.0	46.0	3.5	0.0	0.0	3.8	3.7
Incr Delay (d2), s/veh				117.5	0.0	287.1	90.6	0.1	0.0	0.0	7.7	13.3
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				19.3	0.0	28.2	31.6	2.3	0.0	0.0	13.0	11.9
LnGrp Delay(d),s/veh				172.5	0.0	342.1	136.6	3.6	0.0	0.0	11.5	17.0
LnGrp LOS				F		F	F	A			B	B
Approach Vol, veh/h					726			1358			2168	
Approach Delay, s/veh					263.4			62.4			13.2	
Approach LOS					F			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		106.0			42.0	64.0		24.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		93.0			38.0	51.0		20.0
Max Q Clear Time (g_c+I1), s		6.9			40.0	30.4		22.0
Green Ext Time (p_c), s		51.6			0.0	17.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	2420	600	180	1920	150	430	80	160	140	90	710
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	2547	632	189	2021	158	453	84	168	147	0	810
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	0	2
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	506	2347	731	177	2107	656	424	422	378	273	0	609
Arrive On Green	0.15	0.46	0.46	0.10	0.41	0.41	0.12	0.24	0.24	0.08	0.00	0.19
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	1770	1583	3548	0	3167
Grp Volume(v), veh/h	495	2547	632	189	2021	158	453	84	168	147	0	810
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1583	1774	0	1583
Q Serve(g_s), s	18.6	60.0	30.6	13.0	50.2	8.4	16.0	4.9	11.8	5.2	0.0	25.0
Cycle Q Clear(g_c), s	18.6	60.0	30.6	13.0	50.2	8.4	16.0	4.9	11.8	5.2	0.0	25.0
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	506	2347	731	177	2107	656	424	422	378	273	0	609
V/C Ratio(X)	0.98	1.09	0.86	1.07	0.96	0.24	1.07	0.20	0.44	0.54	0.00	1.33
Avail Cap(c_a), veh/h	506	2347	731	177	2112	658	424	422	378	273	0	609
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.2	35.0	13.5	58.5	37.0	24.8	57.0	39.6	42.2	57.8	0.0	52.5
Incr Delay (d2), s/veh	30.2	45.1	8.8	86.0	11.5	0.2	63.5	1.1	3.8	2.1	0.0	159.6
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	11.0	37.8	14.9	10.6	25.6	3.7	11.3	2.5	5.5	2.6	0.0	24.4
LnGrp Delay(d),s/veh	85.4	80.1	22.3	144.5	48.5	24.9	120.5	40.6	45.9	59.9	0.0	212.1
LnGrp LOS	F	F	C	F	D	C	F	D	D	E		F
Approach Vol, veh/h		3674			2368			705			957	
Approach Delay, s/veh		70.9			54.6			93.2			188.7	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	35.0	17.0	64.0	20.0	29.0	23.1	57.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	31.0	13.0	60.0	16.0	25.0	19.0	54.0
Max Q Clear Time (g_c+I1), s	7.2	13.8	15.0	62.0	18.0	27.0	20.6	52.2
Green Ext Time (p_c), s	0.7	1.3	0.0	0.0	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	82.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	780	2700	2060	1120	0	0
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	821	2842	2168	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	655	4929	2015	901		
Arrive On Green	0.74	1.00	0.57	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	821	2842	2168	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	48.0	0.0	74.0	0.0		
Cycle Q Clear(g_c), s	48.0	0.0	74.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	655	4929	2015	901		
V/C Ratio(X)	1.25	0.58	1.08	0.00		
Avail Cap(c_a), veh/h	655	4929	2015	901		
HCM Platoon Ratio	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.19	0.00		
Uniform Delay (d), s/veh	17.0	0.0	28.0	0.0		
Incr Delay (d2), s/veh	115.2	0.0	36.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	43.5	0.0	46.0	0.0		
LnGrp Delay(d),s/veh	132.2	0.0	64.5	0.0		
LnGrp LOS	F	A	F			
Approach Vol, veh/h		3663	2168			
Approach Delay, s/veh		29.6	64.5			
Approach LOS		C	E			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				130.0			52.0	78.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				126.0			48.0	74.0
Max Q Clear Time (g_c+I1), s				2.0			50.0	76.0
Green Ext Time (p_c), s				100.2			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.6
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/23/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	1200	0	480	690
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1263	0	505	726
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2637	632			1263	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2637	632			1263	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			7	
cM capacity (veh/h)	1	423			546	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	842	421	505	363	363
Volume Left	0	0	505	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	546	1700	1700
Volume to Capacity	0.50	0.25	0.93	0.21	0.21
Queue Length 95th (ft)	0	0	286	0	0
Control Delay (s)	0.0	0.0	49.8	0.0	0.0
Lane LOS			E		
Approach Delay (s)	0.0		20.4		
Approach LOS					

Intersection Summary			
Average Delay	10.1		
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	1980	850	0	1650	980	430	60	970	480	20	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	2084	0	0	1737	1032	498	0	0	520	0	221
Adj No. of Lanes	1	3	1	0	3	1	2	0	1	2	0	1
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	0	2	2	2	2	2	2	2	2
Cap, veh/h	208	3235	1007	0	2481	773	445	0	199	519	0	231
Arrive On Green	0.12	0.64	0.00	0.00	0.49	0.49	0.13	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	3548	0	1583	3548	0	1583
Grp Volume(v), veh/h	179	2084	0	0	1737	1032	498	0	0	520	0	221
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	0	1583	1774	0	1583
Q Serve(g_s), s	12.9	32.9	0.0	0.0	34.5	63.4	16.3	0.0	0.0	19.0	0.0	18.0
Cycle Q Clear(g_c), s	12.9	32.9	0.0	0.0	34.5	63.4	16.3	0.0	0.0	19.0	0.0	18.0
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	3235	1007	0	2481	773	445	0	199	519	0	231
V/C Ratio(X)	0.86	0.64	0.00	0.00	0.70	1.34	1.12	0.00	0.00	1.00	0.00	0.96
Avail Cap(c_a), veh/h	409	3599	1121	0	2481	773	445	0	199	519	0	231
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	0.00	0.00	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	14.6	0.0	0.0	25.9	33.3	56.8	0.0	0.0	55.5	0.0	55.1
Incr Delay (d2), s/veh	9.9	0.3	0.0	0.0	0.1	152.0	79.2	0.0	0.0	40.2	0.0	46.5
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	6.9	15.3	0.0	0.0	16.1	60.3	12.9	0.0	0.0	12.2	0.0	17.7
LnGrp Delay(d),s/veh	66.2	14.9	0.0	0.0	26.0	185.2	136.0	0.0	0.0	95.7	0.0	101.6
LnGrp LOS	E	B			C	F	F			F		F
Approach Vol, veh/h		2263			2769			498			741	
Approach Delay, s/veh		19.0			85.3			136.0			97.5	
Approach LOS		B			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		20.3		86.7		23.0	19.3	67.4
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		7.0		92.0		19.0	30.0	58.0
Max Q Clear Time (g_c+I1), s		18.3		34.9		21.0	14.9	65.4
Green Ext Time (p_c), s		0.0		47.8		0.0	0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.8
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2135	285	270	920	535	580
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2247	0	284	968	563	611
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2225	693	301	2924	577	1149
Arrive On Green	0.44	0.00	0.09	0.57	0.32	0.32
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2247	0	284	968	563	611
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	35.0	0.0	6.6	8.0	25.1	13.2
Cycle Q Clear(g_c), s	35.0	0.0	6.6	8.0	25.1	13.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2225	693	301	2924	577	1149
V/C Ratio(X)	1.01	0.00	0.94	0.33	0.98	0.53
Avail Cap(c_a), veh/h	2225	693	301	2924	577	1149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	0.0	36.3	8.9	26.7	17.7
Incr Delay (d2), s/veh	21.5	0.0	36.9	0.1	31.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.7	0.0	4.7	3.7	17.2	5.1
LnGrp Delay(d),s/veh	44.0	0.0	73.2	9.0	58.1	18.2
LnGrp LOS	F		E	A	E	B
Approach Vol, veh/h	2247			1252	1174	
Approach Delay, s/veh	44.0			23.6	37.3	
Approach LOS	D			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		30.0	11.0	39.0				50.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		26.0	7.0	35.0				46.0
Max Q Clear Time (g_c+I1), s		27.1	8.6	37.0				10.0
Green Ext Time (p_c), s		0.0	0.0	0.0				32.1

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	160	200	120	60	50	90	1185	150	40	755	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	168	211	126	63	53	95	1247	158	42	795	63
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	163	205	136	191	161	122	1494	189	52	1439	114
Arrive On Green	0.09	0.22	0.22	0.08	0.20	0.20	0.07	0.47	0.47	0.03	0.43	0.43
Sat Flow, veh/h	1774	752	944	1774	936	788	1774	3163	399	1774	3323	263
Grp Volume(v), veh/h	147	0	379	126	0	116	95	695	710	42	423	435
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	0	1724	1774	1770	1792	1774	1770	1816
Q Serve(g_s), s	6.4	0.0	17.0	5.5	0.0	4.5	4.1	26.7	27.1	1.8	14.0	14.0
Cycle Q Clear(g_c), s	6.4	0.0	17.0	5.5	0.0	4.5	4.1	26.7	27.1	1.8	14.0	14.0
Prop In Lane	1.00		0.56	1.00		0.46	1.00		0.22	1.00		0.14
Lane Grp Cap(c), veh/h	159	0	368	136	0	352	122	836	847	52	766	786
V/C Ratio(X)	0.93	0.00	1.03	0.93	0.00	0.33	0.78	0.83	0.84	0.80	0.55	0.55
Avail Cap(c_a), veh/h	159	0	368	136	0	352	227	836	847	91	766	786
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	35.4	0.0	30.7	35.9	0.0	26.6	35.9	17.9	18.0	37.8	16.5	16.6
Incr Delay (d2), s/veh	50.4	0.0	54.6	55.4	0.0	0.5	10.0	9.5	9.7	24.0	2.9	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	5.4	0.0	13.5	4.8	0.0	2.2	2.4	15.1	15.5	1.2	7.4	7.6
LnGrp Delay(d),s/veh	85.8	0.0	85.3	91.3	0.0	27.1	45.9	27.4	27.7	61.7	19.4	19.3
LnGrp LOS	F		F	F		C	D	C	C	E	B	B
Approach Vol, veh/h		526			242			1500			900	
Approach Delay, s/veh		85.4			60.6			28.7			21.4	
Approach LOS		F			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	41.0	10.0	21.0	9.4	37.9	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	37.0	6.0	17.0	10.0	31.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	3.8	29.1	7.5	19.0	6.1	16.0	8.4	6.5
Green Ext Time (p_c), s	0.0	5.4	0.0	0.0	0.1	5.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	320	180	70	140	30	1345	120	130	50	170	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	337	189	74	147	32	1416	126	137	53	179	126
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	188	1224	47	341	76	923	514	558	68	149	105
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.52	0.63	0.63	0.04	0.15	0.15
Sat Flow, veh/h	301	741	1583	0	1347	300	1774	817	889	1774	1019	717
Grp Volume(v), veh/h	474	0	189	78	0	175	1416	0	263	53	0	305
Grp Sat Flow(s),veh/h/ln	1042	0	1583	5	0	1642	1774	0	1706	1774	0	1736
Q Serve(g_s), s	24.6	0.0	0.0	0.0	0.0	13.4	78.0	0.0	10.2	4.4	0.0	22.0
Cycle Q Clear(g_c), s	38.0	0.0	0.0	38.0	0.0	13.4	78.0	0.0	10.2	4.4	0.0	22.0
Prop In Lane	0.29		1.00	0.95		0.18	1.00		0.52	1.00		0.41
Lane Grp Cap(c), veh/h	295	0	1224	48	0	416	923	0	1072	68	0	255
V/C Ratio(X)	1.61	0.00	0.15	1.62	0.00	0.42	1.53	0.00	0.25	0.78	0.00	1.20
Avail Cap(c_a), veh/h	295	0	1224	48	0	416	923	0	1072	118	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	64.0	0.0	4.4	73.9	0.0	46.8	36.0	0.0	12.3	71.5	0.0	64.0
Incr Delay (d2), s/veh	288.6	0.0	0.1	356.8	0.0	0.7	246.2	0.0	0.5	17.2	0.0	120.6
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	35.8	0.0	2.0	6.8	0.0	6.2	101.0	0.0	4.9	2.5	0.0	19.1
LnGrp Delay(d),s/veh	352.5	0.0	4.4	430.8	0.0	47.5	282.2	0.0	12.8	88.6	0.0	184.6
LnGrp LOS	F		A	F		D	F		B	F		F
Approach Vol, veh/h		663			253			1679			358	
Approach Delay, s/veh		253.3			165.8			240.0			170.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	98.2		42.0	82.0	26.0		42.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	90.0		38.0	78.0	22.0		38.0
Max Q Clear Time (g_c+I1), s	6.4	12.2		40.0	80.0	24.0		40.0
Green Ext Time (p_c), s	0.0	16.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	228.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	40	410	190	60	90	1575	1185	200	100	1035	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	482	200	63	95	1658	1247	211	105	1089	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	236	401	148	47	71	1216	1597	268	154	913	27
Arrive On Green	0.00	0.00	0.13	0.15	0.15	0.15	0.59	0.88	0.88	0.09	0.26	0.26
Sat Flow, veh/h	0	1863	3167	968	305	460	3442	3033	510	1774	3511	103
Grp Volume(v), veh/h	0	0	482	358	0	0	1658	724	734	105	549	572
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1733	0	0	1721	1770	1773	1774	1770	1845
Q Serve(g_s), s	0.0	0.0	19.0	23.0	0.0	0.0	53.0	23.3	24.3	8.6	39.0	39.0
Cycle Q Clear(g_c), s	0.0	0.0	19.0	23.0	0.0	0.0	53.0	23.3	24.3	8.6	39.0	39.0
Prop In Lane	0.00		1.00	0.56		0.27	1.00		0.29	1.00		0.06
Lane Grp Cap(c), veh/h	0	236	401	266	0	0	1216	932	934	154	460	480
V/C Ratio(X)	0.00	0.00	1.20	1.35	0.00	0.00	1.36	0.78	0.79	0.68	1.19	1.19
Avail Cap(c_a), veh/h	0	236	401	266	0	0	1216	932	934	154	460	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	65.5	63.5	0.0	0.0	30.7	5.7	5.7	66.5	55.5	55.5
Incr Delay (d2), s/veh	0.0	0.0	112.3	179.1	0.0	0.0	164.0	0.6	0.6	11.7	106.5	105.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	14.6	24.2	0.0	0.0	52.5	10.8	11.3	4.7	32.7	34.0
LnGrp Delay(d),s/veh	0.0	0.0	177.8	242.6	0.0	0.0	194.8	6.3	6.4	78.2	162.0	161.4
LnGrp LOS			F	F			F	A	A	E	F	F
Approach Vol, veh/h		482			358			3116			1226	
Approach Delay, s/veh		177.8			242.6			106.6			154.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	83.0		23.0	57.0	43.0		27.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	13.0	79.0		19.0	53.0	39.0		23.0
Max Q Clear Time (g_c+I1), s	10.6	26.3		21.0	55.0	41.0		25.0
Green Ext Time (p_c), s	1.7	16.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	134.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	240	955	950	235	1145	450	1635	350	30	1675	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	253	1005	1113	0	1265	474	1721	368	32	1763	63
Adj No. of Lanes	1	1	1	2	0	3	1	2	0	2	2	1
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	308	323	517	899	0	1297	272	1306	270	68	1109	496
Arrive On Green	0.17	0.17	0.17	0.25	0.00	0.25	0.15	0.45	0.45	0.03	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	3548	0	4750	1774	2923	603	3442	3539	1583
Grp Volume(v), veh/h	200	253	1005	1113	0	1265	474	1018	1071	32	1763	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1583	1774	1770	1756	1721	1770	1583
Q Serve(g_s), s	15.8	19.5	26.0	38.0	0.0	38.0	23.0	67.1	67.1	1.4	47.0	3.7
Cycle Q Clear(g_c), s	15.8	19.5	26.0	38.0	0.0	38.0	23.0	67.1	67.1	1.4	47.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	308	323	517	899	0	1297	272	791	785	68	1109	496
V/C Ratio(X)	0.65	0.78	1.94	1.24	0.00	0.98	1.74	1.29	1.36	0.47	1.59	0.13
Avail Cap(c_a), veh/h	308	323	517	899	0	1297	272	791	785	138	1109	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	57.8	59.3	50.5	56.0	0.0	54.0	63.5	41.5	41.5	72.3	43.7	31.1
Incr Delay (d2), s/veh	4.8	11.9	431.4	116.8	0.0	19.3	349.0	138.4	172.2	0.5	265.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	11.1	73.3	33.2	0.0	19.7	37.6	63.2	70.0	0.7	63.8	1.6
LnGrp Delay(d),s/veh	62.5	71.2	481.9	172.8	0.0	73.4	412.5	179.9	213.7	72.7	309.5	31.2
LnGrp LOS	E	E	F	F		E	F	F	F	E	F	C
Approach Vol, veh/h		1458			2378			2563			1858	
Approach Delay, s/veh		353.1			119.9			237.0			296.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	71.1		30.0	27.0	51.0		42.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	64.0		26.0	23.0	47.0		38.0
Max Q Clear Time (g_c+I1), s	3.4	69.1		28.0	25.0	49.0		40.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	237.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1505	2550	50	0	810	1755	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1584	2684		0	853	1847	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2019	2118		0	1274	1831	0
Arrive On Green	0.59	0.59		0.00	0.36	0.36	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1584	2684		0	853	1847	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	52.9	88.0		0.0	30.5	54.0	0.0
Cycle Q Clear(g_c), s	52.9	88.0		0.0	30.5	54.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2019	2118		0	1274	1831	0
V/C Ratio(X)	0.78	1.27		0.00	0.67	1.01	0.00
Avail Cap(c_a), veh/h	2019	2118		0	1274	1831	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	31.0		0.0	40.5	48.0	0.0
Incr Delay (d2), s/veh	2.1	124.2		0.0	2.8	23.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.7	65.7		0.0	15.4	29.2	0.0
LnGrp Delay(d),s/veh	25.8	155.2		0.0	43.3	71.2	0.0
LnGrp LOS	C	F			D	F	
Approach Vol, veh/h	4268				853	1847	
Approach Delay, s/veh	107.2				43.3	71.2	
Approach LOS	F				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		92.0		58.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		54.0		88.0		46.0		
Max Q Clear Time (g_c+I1), s		32.5		90.0		56.0		
Green Ext Time (p_c), s		6.2		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	89.8
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2920	775	110	2140	425	210
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	3074	816	116	2253	447	221
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3281	1321	152	4853	672	300
Arrive On Green	0.65	0.65	0.09	0.76	0.19	0.19
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	3074	816	116	2253	447	221
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	81.3	26.4	9.6	19.7	17.5	19.7
Cycle Q Clear(g_c), s	81.3	26.4	9.6	19.7	17.5	19.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3281	1321	152	4853	672	300
V/C Ratio(X)	0.94	0.62	0.76	0.46	0.67	0.74
Avail Cap(c_a), veh/h	3288	1324	154	4870	672	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	4.2	67.1	6.8	56.4	57.3
Incr Delay (d2), s/veh	3.7	0.5	19.9	0.1	5.2	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.0	24.7	5.5	8.6	9.1	9.9
LnGrp Delay(d),s/veh	27.6	4.7	87.0	6.9	61.6	72.3
LnGrp LOS	C	A	F	A	E	E
Approach Vol, veh/h	3890			2369	668	
Approach Delay, s/veh	22.8			10.8	65.1	
Approach LOS	C			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		32.4	16.8	100.8				117.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		28.0	13.0	97.0				114.0
Max Q Clear Time (g_c+I1), s		21.7	11.6	83.3				21.7
Green Ext Time (p_c), s		1.4	1.3	13.4				46.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	410	290	140	1295	190	90	265	180	190	370	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	432	305	147	1363	200	95	279	189	200	389	184
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	158	835	586	182	1344	195	99	331	281	217	455	387
Arrive On Green	0.09	0.42	0.42	0.10	0.43	0.43	0.06	0.18	0.18	0.12	0.24	0.24
Sat Flow, veh/h	1774	1990	1396	1774	3102	451	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	147	384	353	147	772	791	95	279	189	200	389	184
Grp Sat Flow(s),veh/h/ln	1774	1770	1616	1774	1770	1783	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.4	14.5	14.6	7.3	39.0	39.0	4.8	13.0	10.0	10.0	17.9	8.9
Cycle Q Clear(g_c), s	7.4	14.5	14.6	7.3	39.0	39.0	4.8	13.0	10.0	10.0	17.9	8.9
Prop In Lane	1.00		0.86	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	743	678	182	767	773	99	331	281	217	455	387
V/C Ratio(X)	0.93	0.52	0.52	0.81	1.01	1.02	0.96	0.84	0.67	0.92	0.85	0.48
Avail Cap(c_a), veh/h	158	743	678	296	767	773	99	331	281	217	455	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	19.3	19.4	39.5	25.5	25.5	42.4	35.8	34.5	39.1	32.5	29.1
Incr Delay (d2), s/veh	51.9	0.6	0.7	8.2	34.3	38.4	78.7	22.2	12.1	40.3	18.2	4.1
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	5.9	7.2	6.6	4.0	26.3	27.3	4.5	8.7	5.3	7.3	11.5	4.3
LnGrp Delay(d),s/veh	92.6	20.0	20.1	47.8	59.8	63.9	121.1	57.9	46.6	79.3	50.6	33.2
LnGrp LOS	F	B	C	D	F	F	F	E	D	E	D	C
Approach Vol, veh/h		884			1710			563			773	
Approach Delay, s/veh		32.1			60.7			64.8			53.9	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	20.0	13.2	41.8	9.0	26.0	12.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	16.0	15.0	32.0	5.0	22.0	8.0	39.0
Max Q Clear Time (g_c+I1), s	12.0	15.0	9.3	16.6	6.8	19.9	9.4	41.0
Green Ext Time (p_c), s	0.0	0.6	0.2	12.5	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	45	45	245	400	610	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	47	258	421	642	211

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1473	426	853	0	-	0
Stage 1	747	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	118	577	782	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	67	577	782	-	-	-
Mov Cap-2 Maneuver	67	-	-	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	250	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	75.5	5.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	782	-	67	577	-	-
HCM Lane V/C Ratio	0.33	-	0.707	0.082	-	-
HCM Control Delay (s)	11.9	1.1	139.2	11.8	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.4	-	3.2	0.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	340	870	240	395	485	190
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	916	253	416	511	200
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	406	990	864	387	623	919
Arrive On Green	0.23	0.53	0.24	0.24	0.35	0.35
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	358	916	253	416	511	200
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	13.3	31.0	4.0	16.7	17.9	4.1
Cycle Q Clear(g_c), s	13.3	31.0	4.0	16.7	17.9	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	406	990	864	387	623	919
V/C Ratio(X)	0.88	0.93	0.29	1.08	0.82	0.22
Avail Cap(c_a), veh/h	467	1036	864	387	623	919
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	25.5	14.7	21.0	25.8	20.2	6.9
Incr Delay (d2), s/veh	16.1	13.2	0.2	67.5	11.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	19.2	2.0	14.4	10.7	5.5
LnGrp Delay(d),s/veh	41.6	28.0	21.2	93.3	31.7	7.4
LnGrp LOS	D	C	C	F	C	A
Approach Vol, veh/h		1274	669		711	
Approach Delay, s/veh		31.8	66.1		24.9	
Approach LOS		C	E		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				40.3		28.0	19.6	20.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				38.0		24.0	18.0	16.0
Max Q Clear Time (g_c+I1), s				33.0		19.9	15.3	18.7
Green Ext Time (p_c), s				3.3		1.1	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	640	3650	1720	835	0	1420
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	674	3842	2121	672		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	699	4858	2987	846		
Arrive On Green	0.39	0.96	1.00	1.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	674	3842	2121	672		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	55.7	20.7	0.0	0.0		
Cycle Q Clear(g_c), s	55.7	20.7	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	699	4858	2987	846		
V/C Ratio(X)	0.96	0.79	0.71	0.79		
Avail Cap(c_a), veh/h	757	4950	2987	846		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.09	0.09	0.85	0.85		
Uniform Delay (d), s/veh	44.4	0.6	0.0	0.0		
Incr Delay (d2), s/veh	4.1	0.1	0.7	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	27.9	8.6	0.2	1.1		
LnGrp Delay(d),s/veh	48.5	0.7	0.7	4.5		
LnGrp LOS	D	A	A	A		
Approach Vol, veh/h		4516	2793			
Approach Delay, s/veh		7.8	1.6			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				147.3			63.1	84.2
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			64.0	78.0
Max Q Clear Time (g_c+I1), s				22.7			57.7	2.0
Green Ext Time (p_c), s				120.6			1.4	75.5

Intersection Summary	
HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	2170	740	310	2295	480	0	0	0	1130	0	2095
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	495	2284	779	326	2416	0				1189	0	2205
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	355	2034	633	237	1695	528				1372	0	1224
Arrive On Green	0.20	0.40	0.40	0.13	0.33	0.00				0.39	0.00	0.39
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	495	2284	779	326	2416	0				1189	0	2205
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.0	60.0	60.0	20.0	50.0	0.0				46.4	0.0	58.0
Cycle Q Clear(g_c), s	30.0	60.0	60.0	20.0	50.0	0.0				46.4	0.0	58.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	355	2034	633	237	1695	528				1372	0	1224
V/C Ratio(X)	1.40	1.12	1.23	1.38	1.43	0.00				0.87	0.00	1.80
Avail Cap(c_a), veh/h	355	2034	633	237	1695	528				1372	0	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.47	0.47	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	60.0	45.0	45.0	65.0	50.0	0.0				42.4	0.0	46.0
Incr Delay (d2), s/veh	179.4	56.0	104.9	182.4	193.0	0.0				7.6	0.0	363.6
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	32.4	38.6	44.7	21.8	53.7	0.0				24.1	0.0	87.2
LnGrp Delay(d),s/veh	239.4	101.0	149.9	247.4	243.0	0.0				50.0	0.0	409.6
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3558			2742						3394	
Approach Delay, s/veh		130.9			243.6						283.7	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			24.0	64.0		62.0	34.0	54.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			20.0	60.0		58.0	30.0	50.0
Max Q Clear Time (g_c+I1), s			22.0	62.0		60.0	32.0	52.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	216.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	880	0	405	220	340	0	0	830	470
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				926	0	0	232	358	0	0	874	495
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				934	0	834	237	1486	0	0	920	412
Arrive On Green				0.53	0.00	0.00	0.27	0.84	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				926	0	0	232	358	0	0	874	495
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				77.5	0.0	0.0	19.5	3.0	0.0	0.0	36.4	39.0
Cycle Q Clear(g_c), s				77.5	0.0	0.0	19.5	3.0	0.0	0.0	36.4	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				934	0	834	237	1486	0	0	920	412
V/C Ratio(X)				0.99	0.00	0.00	0.98	0.24	0.00	0.00	0.95	1.20
Avail Cap(c_a), veh/h				934	0	834	237	1486	0	0	920	412
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.69	0.69	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.2	0.0	0.0	54.8	7.2	0.0	0.0	54.5	55.5
Incr Delay (d2), s/veh				27.2	0.0	0.0	43.4	0.3	0.0	0.0	19.7	112.2
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				44.9	0.0	0.0	12.4	1.4	0.0	0.0	20.4	29.9
LnGrp Delay(d),s/veh				62.3	0.0	0.0	98.2	7.5	0.0	0.0	74.3	167.7
LnGrp LOS				E			F	A			E	F
Approach Vol, veh/h					926			590			1369	
Approach Delay, s/veh					62.3			43.2			108.1	
Approach LOS					E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.0			24.0	43.0		83.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		63.0			20.0	39.0		79.0
Max Q Clear Time (g_c+I1), s		5.0			21.5	41.0		79.5
Green Ext Time (p_c), s		3.3			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	80.1
HCM 2010 LOS	F

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/26/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	300	306	849	555	0	123	87	137	98	65	410	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1657			1682	1504		3251				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1657			1682	1504		3251				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	322	894	584	0	129	95	144	103	68	432	362
RTOR Reduction (vph)	0	0	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	316	1216	0	0	597	211	0	298	0	0	0	584
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	58.0	58.0			26.0	26.0		18.0				32.0
Effective Green, g (s)	58.0	58.0			26.0	26.0		18.0				32.0
Actuated g/C Ratio	0.39	0.39			0.17	0.17		0.12				0.21
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	684	640			291	260		390				343
v/s Ratio Prot	0.18	c0.73			c0.36	0.14		c0.09				c0.36
v/s Ratio Perm												
v/c Ratio	0.46	1.90			2.05	0.81		0.76				1.70
Uniform Delay, d1	34.3	46.0			62.0	59.6		63.9				59.0
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.64
Incremental Delay, d2	0.5	410.9			485.0	17.2		13.3				319.7
Delay (s)	34.8	456.9			547.0	76.9		77.3				357.5
Level of Service	C	F			F	E		E				F
Approach Delay (s)		369.8			424.2			77.3				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	352.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.73		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	157.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	956
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3361
Flt Permitted	0.99
Satd. Flow (perm)	3361
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	1006
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1216
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	32.0
Effective Green, g (s)	32.0
Actuated g/C Ratio	0.21
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	717
v/s Ratio Prot	0.36
v/s Ratio Perm	
v/c Ratio	1.70
Uniform Delay, d1	59.0
Progression Factor	0.64
Incremental Delay, d2	314.9
Delay (s)	352.6
Level of Service	F
Approach Delay (s)	354.2
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4625	260	570	1175	140	250	50	770	90	40	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4868	274	600	1237	147	263	53	811	95	42	84
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	193	3017	939	528	3512	1136	275	224	433	92	124	106
Arrive On Green	0.06	0.59	0.59	0.15	0.69	0.69	0.08	0.12	0.12	0.03	0.07	0.07
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	147	4868	274	600	1237	147	263	53	811	95	42	84
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	6.3	89.0	12.8	23.0	14.9	4.3	11.4	3.9	15.0	4.0	3.2	6.9
Cycle Q Clear(g_c), s	6.3	89.0	12.8	23.0	14.9	4.3	11.4	3.9	15.0	4.0	3.2	6.9
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	193	3017	939	528	3512	1136	275	224	433	92	124	106
V/C Ratio(X)	0.76	1.61	0.29	1.14	0.35	0.13	0.96	0.24	1.87	1.04	0.34	0.80
Avail Cap(c_a), veh/h	252	3017	939	528	3512	1136	275	224	433	92	124	106
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	30.5	15.0	63.5	9.5	6.6	68.7	59.8	42.3	73.0	66.8	53.8
Incr Delay (d2), s/veh	0.9	276.2	0.0	64.1	0.0	0.0	42.0	2.5	402.0	103.8	7.2	44.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	118.5	5.6	15.6	7.0	1.9	7.0	2.1	54.8	3.2	1.9	4.3
LnGrp Delay(d),s/veh	70.7	306.7	15.0	127.6	9.5	6.6	110.8	62.3	444.3	177.4	74.1	98.5
LnGrp LOS	E	F	B	F	A	A	F	E	F	F	E	F
Approach Vol, veh/h		5289			1984			1127			221	
Approach Delay, s/veh		285.0			45.0			348.5			127.8	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	27.0	93.0	16.0	14.0	12.4	107.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	23.0	89.0	12.0	10.0	11.0	101.0
Max Q Clear Time (g_c+I1), s	6.0	17.0	25.0	91.0	13.4	8.9	8.3	16.9
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.0	0.0	0.1	20.6

Intersection Summary	
HCM 2010 Ctrl Delay	234.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4495	460	240	1165	80	320	30	460	30	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4732	484	253	1226	84	337	32	484	32	0	109
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	170	3187	1151	184	2969	956	344	361	307	70	0	663
Arrive On Green	0.10	0.63	0.63	0.11	1.00	1.00	0.10	0.19	0.19	0.02	0.00	0.11
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	147	4732	484	253	1226	84	337	32	484	32	0	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	12.3	94.0	3.1	8.0	0.0	0.0	14.7	2.1	25.2	1.3	0.0	3.3
Cycle Q Clear(g_c), s	12.3	94.0	3.1	8.0	0.0	0.0	14.7	2.1	25.2	1.3	0.0	3.3
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	170	3187	1151	184	2969	956	344	361	307	70	0	663
V/C Ratio(X)	0.86	1.48	0.42	1.38	0.41	0.09	0.98	0.09	1.58	0.46	0.00	0.16
Avail Cap(c_a), veh/h	248	3187	1151	184	2969	956	344	361	307	95	0	663
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.8	28.0	8.1	67.0	0.0	0.0	67.3	49.6	45.5	72.7	0.0	30.2
Incr Delay (d2), s/veh	18.4	219.9	0.2	197.5	0.1	0.0	42.8	0.5	275.3	4.7	0.0	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	6.9	108.6	1.3	8.8	0.0	0.0	9.0	1.1	34.4	0.7	0.0	1.5
LnGrp Delay(d),s/veh	85.2	247.9	8.3	264.5	0.1	0.0	110.1	50.1	320.8	77.4	0.0	30.7
LnGrp LOS	F	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		5363			1563			853			141	
Approach Delay, s/veh		221.8			42.9			227.4			41.3	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	33.1	12.0	98.0	19.0	21.0	18.4	91.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	28.0	8.0	94.0	15.0	17.0	21.0	81.0
Max Q Clear Time (g_c+I1), s	3.3	27.2	10.0	96.0	16.7	5.3	14.3	2.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.2	0.2	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	183.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	485	0	300	480	930	0	0	1130	510
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				414	136	316	505	979	0	0	1189	537
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				402	113	263	438	1341	0	0	1076	465
Arrive On Green				0.23	0.23	0.23	0.33	0.96	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1774	499	1159	1774	1863	0	0	2501	1040
Grp Volume(v), veh/h				414	0	452	505	979	0	0	859	867
Grp Sat Flow(s),veh/h/ln				1774	0	1658	1774	1863	0	0	1770	1679
Q Serve(g_s), s				34.0	0.0	34.0	37.0	11.1	0.0	0.0	67.0	67.0
Cycle Q Clear(g_c), s				34.0	0.0	34.0	37.0	11.1	0.0	0.0	67.0	67.0
Prop In Lane				1.00		0.70	1.00		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				402	0	376	438	1341	0	0	790	750
V/C Ratio(X)				1.03	0.00	1.20	1.15	0.73	0.00	0.00	1.09	1.16
Avail Cap(c_a), veh/h				402	0	376	438	1341	0	0	790	750
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				58.0	0.0	58.0	50.4	1.1	0.0	0.0	41.5	41.5
Incr Delay (d2), s/veh				52.7	0.0	113.9	89.1	2.9	0.0	0.0	58.4	84.7
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				22.5	0.0	27.4	28.9	5.7	0.0	0.0	45.5	48.7
LnGrp Delay(d),s/veh				110.7	0.0	171.9	139.5	4.0	0.0	0.0	99.9	126.2
LnGrp LOS				F		F	F	A			F	F
Approach Vol, veh/h					866			1484			1726	
Approach Delay, s/veh					142.6			50.1			113.1	
Approach LOS					F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.0			41.0	71.0		38.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		108.0			37.0	67.0		34.0
Max Q Clear Time (g_c+I1), s		13.1			39.0	69.0		36.0
Green Ext Time (p_c), s		60.4			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	96.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	450	0	290	0	0	0	0	960	1690	540	1075	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	474	0	305				0	1011	1779	568	1132	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	343	0	306				0	1864	834	355	2666	0
Arrive On Green	0.19	0.00	0.19				0.00	0.88	0.88	0.13	0.50	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	474	0	305				0	1011	1779	568	1132	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	29.0	0.0	28.9				0.0	9.9	79.0	30.0	30.2	0.0
Cycle Q Clear(g_c), s	29.0	0.0	28.9				0.0	9.9	79.0	30.0	30.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	343	0	306				0	1864	834	355	2666	0
V/C Ratio(X)	1.38	0.00	1.00				0.00	0.54	2.13	1.60	0.42	0.00
Avail Cap(c_a), veh/h	343	0	306				0	1864	834	355	2666	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.47	0.47	0.09	0.09	0.00
Uniform Delay (d), s/veh	60.5	0.0	60.4				0.0	4.9	9.0	64.9	16.7	0.0
Incr Delay (d2), s/veh	189.2	0.0	50.4				0.0	0.5	511.9	271.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.2	0.0	16.9				0.0	4.6	150.2	41.5	14.8	0.0
LnGrp Delay(d),s/veh	249.7	0.0	110.8				0.0	5.4	520.9	336.5	16.7	0.0
LnGrp LOS	F		F					A	F	F	B	
Approach Vol, veh/h		779						2790			1700	
Approach Delay, s/veh		195.3						334.1			123.6	
Approach LOS		F						F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	34.0	83.0		33.0		117.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	30.0	79.0		29.0		113.0		
Max Q Clear Time (g_c+I1), s	32.0	81.0		31.0		32.2		
Green Ext Time (p_c), s	0.0	0.0		0.0		16.2		

Intersection Summary	
HCM 2010 Ctrl Delay	245.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	370	410	350	190	130	220	1880	200	200	1325	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	353	456	368	200	137	232	1979	211	211	1395	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	372	360	870	413	366	164	280	2305	244	298	2535	789
Arrive On Green	0.21	0.19	0.19	0.12	0.10	0.10	0.16	0.99	0.99	0.03	0.16	0.16
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4672	494	3442	5085	1583
Grp Volume(v), veh/h	211	353	456	368	200	137	232	1431	759	211	1395	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1776	1721	1695	1583
Q Serve(g_s), s	16.0	28.3	13.3	15.8	8.1	12.7	9.8	5.4	5.9	9.1	37.8	7.4
Cycle Q Clear(g_c), s	16.0	28.3	13.3	15.8	8.1	12.7	9.8	5.4	5.9	9.1	37.8	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	372	360	870	413	366	164	280	1672	876	298	2535	789
V/C Ratio(X)	0.57	0.98	0.52	0.89	0.55	0.84	0.83	0.86	0.87	0.71	0.55	0.24
Avail Cap(c_a), veh/h	372	360	870	436	472	211	436	1672	876	298	2535	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	0.87	0.87	0.87
Uniform Delay (d), s/veh	53.1	60.2	26.1	65.0	63.9	66.0	61.8	0.5	0.5	71.0	47.2	8.6
Incr Delay (d2), s/veh	2.0	42.0	0.6	19.3	1.3	19.9	5.2	4.1	8.0	6.5	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	18.8	5.9	8.6	4.0	6.5	4.8	1.3	2.4	4.6	18.0	3.4
LnGrp Delay(d),s/veh	55.1	102.2	26.6	84.4	65.2	86.0	67.0	4.6	8.5	77.5	48.0	9.2
LnGrp LOS	E	F	C	F	E	F	E	A	A	E	D	A
Approach Vol, veh/h		1020			705			2422			1795	
Approach Delay, s/veh		58.7			79.2			11.8			47.4	
Approach LOS		E			E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	78.0	22.0	33.0	16.2	78.8	35.5	19.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	74.0	19.0	29.0	19.0	67.0	28.0	20.0
Max Q Clear Time (g_c+I1), s	11.1	7.9	17.8	30.3	11.8	39.8	18.0	14.7
Green Ext Time (p_c), s	0.1	34.2	0.2	0.0	0.4	14.2	1.5	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	570	110	210	370	570	1840	0	0	1430	655
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	95	0	600	116	221	389	600	1937	0	0	1505	689
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	105	200	264	520	3967	0	0	1628	728
Arrive On Green	0.00	0.00	0.00	0.17	0.17	0.17	0.29	0.78	0.00	0.00	0.61	0.61
Sat Flow, veh/h		0		630	1201	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		337	0	389	600	1937	0	0	1505	689
Grp Sat Flow(s),veh/h/ln				1831	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				25.0	0.0	25.0	44.0	20.3	0.0	0.0	57.0	60.2
Cycle Q Clear(g_c), s				25.0	0.0	25.0	44.0	20.3	0.0	0.0	57.0	60.2
Prop In Lane				0.34		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				305	0	264	520	3967	0	0	1628	728
V/C Ratio(X)				1.10	0.00	1.47	1.15	0.49	0.00	0.00	0.92	0.95
Avail Cap(c_a), veh/h				305	0	264	520	3967	0	0	1628	728
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				62.5	0.0	62.5	53.0	5.9	0.0	0.0	26.8	27.4
Incr Delay (d2), s/veh				82.4	0.0	232.8	89.0	0.4	0.0	0.0	8.1	18.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.6	0.0	28.0	34.4	9.5	0.0	0.0	29.3	29.6
LnGrp Delay(d),s/veh				144.9	0.0	295.3	142.0	6.3	0.0	0.0	34.9	45.8
LnGrp LOS				F		F	F	A			C	D
Approach Vol, veh/h					726			2537			2194	
Approach Delay, s/veh					225.5			38.4			38.3	
Approach LOS					F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		121.0			48.0	73.0		29.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		107.0			44.0	59.0		25.0
Max Q Clear Time (g_c+I1), s		22.3			46.0	62.2		27.0
Green Ext Time (p_c), s		76.1			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	3605	600	180	1950	150	430	80	160	140	90	710
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	3795	632	189	2053	158	453	84	168	147	95	747
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	553	3759	1635	184	3071	759	436	278	249	170	236	353
Arrive On Green	0.21	0.78	0.78	0.05	0.48	0.48	0.13	0.16	0.16	0.10	0.13	0.13
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	495	3795	632	189	2053	158	453	84	168	147	95	747
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	21.0	88.0	10.7	8.0	36.8	8.7	19.0	6.3	15.0	12.3	7.0	14.3
Cycle Q Clear(g_c), s	21.0	88.0	10.7	8.0	36.8	8.7	19.0	6.3	15.0	12.3	7.0	14.3
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	553	3759	1635	184	3071	759	436	278	249	170	236	353
V/C Ratio(X)	0.90	1.01	0.39	1.03	0.67	0.21	1.04	0.30	0.67	0.86	0.40	2.12
Avail Cap(c_a), veh/h	688	3759	1635	184	3071	759	436	278	249	248	236	353
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	16.5	8.0	71.0	29.9	22.6	65.5	55.9	59.6	66.8	60.3	37.3
Incr Delay (d2), s/veh	1.4	7.1	0.0	74.4	0.6	0.1	53.6	2.8	13.7	18.4	5.0	511.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	39.6	4.1	5.7	16.4	3.8	12.3	3.3	7.5	6.9	3.9	30.6
LnGrp Delay(d),s/veh	59.1	23.5	8.0	145.6	30.5	22.7	119.1	58.7	73.3	85.2	65.3	549.1
LnGrp LOS	E	F	A	F	C	C	F	E	E	F	E	F
Approach Vol, veh/h		4922			2400			705			989	
Approach Delay, s/veh		25.1			39.0			101.0			433.7	
Approach LOS		C			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	27.6	12.0	92.0	23.0	23.0	28.1	75.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	17.0	8.0	88.0	19.0	19.0	30.0	66.0
Max Q Clear Time (g_c+I1), s	14.3	17.0	10.0	90.0	21.0	16.3	23.0	38.8
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.0	1.1	1.1	20.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.6
HCM 2010 LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	780	3855	2080	1125	1580	1140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	821	4058	2189	1184	1663	1200
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	826	3930	2221	1895	1668	929
Arrive On Green	0.48	1.00	0.35	0.35	0.33	0.33
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	821	4058	2189	1184	1663	1200
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	35.6	0.0	50.8	35.5	49.8	50.0
Cycle Q Clear(g_c), s	35.6	0.0	50.8	35.5	49.8	50.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	826	3930	2221	1895	1668	929
V/C Ratio(X)	0.99	1.03	0.99	0.62	1.00	1.29
Avail Cap(c_a), veh/h	826	3930	2221	1895	1668	929
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.52	0.52	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	48.6	13.4	49.9	50.0
Incr Delay (d2), s/veh	8.1	15.8	10.6	0.3	21.4	139.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.6	4.3	24.1	24.6	26.2	50.1
LnGrp Delay(d),s/veh	47.0	15.8	59.2	13.7	71.3	189.4
LnGrp LOS	D	F	E	B	E	F
Approach Vol, veh/h		4879	3373		2863	
Approach Delay, s/veh		21.1	43.2		120.8	
Approach LOS		C	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				96.0		54.0	40.0	56.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				92.0		50.0	36.0	52.0
Max Q Clear Time (g_c+I1), s				2.0		52.0	37.6	52.8
Green Ext Time (p_c), s				89.4		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.5
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/26/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	1180	0	480	680
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1242	0	505	716
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2611	621			1242	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2611	621			1242	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			9	
cM capacity (veh/h)	2	430			556	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	828	414	505	358	358
Volume Left	0	0	505	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	556	1700	1700
Volume to Capacity	0.49	0.24	0.91	0.21	0.21
Queue Length 95th (ft)	0	0	273	0	0
Control Delay (s)	0.0	0.0	46.2	0.0	0.0
Lane LOS			E		
Approach Delay (s)	0.0		19.1		
Approach LOS					

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	2130	790	730	1605	950	430	70	1235	470	20	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	2242	832	768	1689	1000	453	74	1300	495	21	221
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	504	2136	843	828	2174	1191	686	302	1122	542	224	190
Arrive On Green	0.15	0.33	0.33	0.40	0.71	0.71	0.20	0.16	0.16	0.16	0.12	0.12
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	2242	832	768	1689	1000	453	74	1300	495	21	221
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	7.0	50.0	47.7	31.9	32.0	24.3	18.2	5.2	18.9	21.2	1.5	18.0
Cycle Q Clear(g_c), s	7.0	50.0	47.7	31.9	32.0	24.3	18.2	5.2	18.9	21.2	1.5	18.0
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	504	2136	843	828	2174	1191	686	302	1122	542	224	190
V/C Ratio(X)	0.35	1.05	0.99	0.93	0.78	0.84	0.66	0.25	1.16	0.91	0.09	1.16
Avail Cap(c_a), veh/h	504	2136	843	987	2712	1486	686	302	1122	574	224	190
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	50.0	34.5	43.6	16.9	7.1	55.4	54.9	20.7	62.2	58.7	66.0
Incr Delay (d2), s/veh	0.4	34.0	27.6	4.1	0.3	1.0	4.9	1.9	81.7	18.6	0.2	116.1
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	3.4	27.1	27.0	15.6	14.6	9.0	9.2	2.8	19.9	11.5	0.8	14.0
LnGrp Delay(d),s/veh	58.1	84.0	62.1	47.7	17.2	8.1	60.3	56.8	102.4	80.8	58.9	182.1
LnGrp LOS	E	F	E	D	B	A	E	E	F	F	E	F
Approach Vol, veh/h		3253			3457			1827			737	
Approach Delay, s/veh		77.0			21.3			90.1			110.6	
Approach LOS		E			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.6	28.3	40.1	54.0	33.9	22.0	26.0	68.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	16.0	43.0	50.0	23.0	18.0	13.0	80.0
Max Q Clear Time (g_c+I1), s	23.2	20.9	33.9	52.0	20.2	20.0	9.0	34.0
Green Ext Time (p_c), s	0.4	0.0	2.2	0.0	2.1	0.0	1.5	30.1

Intersection Summary	
HCM 2010 Ctrl Delay	61.5
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2135	285	270	905	510	580
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2247	0	284	953	537	611
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2288	712	301	2988	554	1115
Arrive On Green	0.45	0.00	0.09	0.59	0.31	0.31
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2247	0	284	953	537	611
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	34.8	0.0	6.6	7.6	23.9	13.5
Cycle Q Clear(g_c), s	34.8	0.0	6.6	7.6	23.9	13.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2288	712	301	2988	554	1115
V/C Ratio(X)	0.98	0.00	0.94	0.32	0.97	0.55
Avail Cap(c_a), veh/h	2288	712	301	2988	554	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	36.3	8.4	27.1	18.4
Incr Delay (d2), s/veh	14.8	0.0	36.9	0.1	30.3	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	19.4	0.0	4.7	3.5	16.3	5.3
LnGrp Delay(d),s/veh	36.4	0.0	73.2	8.4	57.4	19.0
LnGrp LOS	D		E	A	E	B
Approach Vol, veh/h	2247			1237	1148	
Approach Delay, s/veh	36.4			23.3	37.0	
Approach LOS	D			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		29.0	11.0	40.0				51.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	7.0	36.0				47.0
Max Q Clear Time (g_c+I1), s		25.9	8.6	36.8				9.6
Green Ext Time (p_c), s		0.0	0.0	0.0				33.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	160	200	120	60	50	90	1160	150	40	755	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	168	211	126	63	53	95	1221	158	42	795	63
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	163	205	158	191	161	122	1451	187	52	1397	111
Arrive On Green	0.10	0.22	0.22	0.09	0.20	0.20	0.07	0.46	0.46	0.03	0.42	0.42
Sat Flow, veh/h	1774	752	944	1774	936	788	1774	3154	407	1774	3323	263
Grp Volume(v), veh/h	147	0	379	126	0	116	95	683	696	42	423	435
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	0	1724	1774	1770	1791	1774	1770	1816
Q Serve(g_s), s	6.3	0.0	17.0	5.5	0.0	4.5	4.1	26.6	26.9	1.8	14.3	14.3
Cycle Q Clear(g_c), s	6.3	0.0	17.0	5.5	0.0	4.5	4.1	26.6	26.9	1.8	14.3	14.3
Prop In Lane	1.00		0.56	1.00		0.46	1.00		0.23	1.00		0.14
Lane Grp Cap(c), veh/h	181	0	368	158	0	352	122	814	824	52	744	763
V/C Ratio(X)	0.81	0.00	1.03	0.80	0.00	0.33	0.78	0.84	0.84	0.80	0.57	0.57
Avail Cap(c_a), veh/h	181	0	368	159	0	352	227	814	824	91	744	763
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	34.4	0.0	30.6	35.0	0.0	26.6	35.8	18.6	18.7	37.8	17.3	17.3
Incr Delay (d2), s/veh	23.5	0.0	54.5	24.1	0.0	0.5	10.0	10.1	10.4	24.0	3.1	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	4.3	0.0	13.5	3.7	0.0	2.2	2.3	15.2	15.5	1.2	7.6	7.8
LnGrp Delay(d),s/veh	57.9	0.0	85.1	59.0	0.0	27.1	45.8	28.7	29.0	61.7	20.4	20.4
LnGrp LOS	E		F	E		C	D	C	C	E	C	C
Approach Vol, veh/h		526			242			1474			900	
Approach Delay, s/veh		77.5			43.7			30.0			22.3	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	40.0	11.0	21.0	9.4	36.9	12.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	36.0	7.0	17.0	10.0	30.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	3.8	28.9	7.5	19.0	6.1	16.3	8.3	6.5
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.1	4.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	320	180	70	140	30	1195	120	130	50	170	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	337	189	74	147	32	1258	126	137	53	179	126
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	202	1199	50	356	80	874	500	543	68	160	113
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.49	0.61	0.61	0.04	0.16	0.16
Sat Flow, veh/h	311	764	1583	0	1347	301	1774	817	889	1774	1019	717
Grp Volume(v), veh/h	474	0	189	78	0	175	1258	0	263	53	0	305
Grp Sat Flow(s),veh/h/ln	1074	0	1583	6	0	1642	1774	0	1706	1774	0	1736
Q Serve(g_s), s	24.7	0.0	0.0	0.0	0.0	12.3	69.0	0.0	9.9	4.1	0.0	22.0
Cycle Q Clear(g_c), s	37.0	0.0	0.0	37.0	0.0	12.3	69.0	0.0	9.9	4.1	0.0	22.0
Prop In Lane	0.29		1.00	0.94		0.18	1.00		0.52	1.00		0.41
Lane Grp Cap(c), veh/h	317	0	1199	52	0	434	874	0	1043	68	0	273
V/C Ratio(X)	1.49	0.00	0.16	1.52	0.00	0.40	1.44	0.00	0.25	0.78	0.00	1.12
Avail Cap(c_a), veh/h	317	0	1199	52	0	434	874	0	1043	114	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.9	0.0	4.7	68.9	0.0	42.4	35.5	0.0	12.5	66.7	0.0	59.0
Incr Delay (d2), s/veh	238.6	0.0	0.1	311.2	0.0	0.6	204.0	0.0	0.6	17.0	0.0	90.0
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	33.3	0.0	2.0	6.4	0.0	5.6	83.3	0.0	4.8	2.4	0.0	17.4
LnGrp Delay(d),s/veh	297.5	0.0	4.7	380.0	0.0	43.0	239.5	0.0	13.1	83.8	0.0	149.0
LnGrp LOS	F		A	F		D	F		B	F		F
Approach Vol, veh/h		663			253			1521			358	
Approach Delay, s/veh		214.1			147.5			200.3			139.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.4	89.6		41.0	73.0	26.0		41.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	9.0	82.0		37.0	69.0	22.0		37.0
Max Q Clear Time (g_c+I1), s	6.1	11.9		39.0	71.0	24.0		39.0
Green Ext Time (p_c), s	0.0	11.6		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	191.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	40	410	190	60	90	1425	1160	200	100	1035	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	482	200	63	95	1500	1221	211	105	1089	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	226	385	159	50	76	1131	1576	271	139	953	28
Arrive On Green	0.00	0.00	0.12	0.16	0.16	0.16	0.55	0.87	0.87	0.08	0.27	0.27
Sat Flow, veh/h	0	1863	3167	968	305	460	3442	3022	519	1774	3511	103
Grp Volume(v), veh/h	0	0	482	358	0	0	1500	712	720	105	549	572
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1733	0	0	1721	1770	1771	1774	1770	1845
Q Serve(g_s), s	0.0	0.0	17.0	23.0	0.0	0.0	46.0	22.2	22.9	8.1	38.0	38.0
Cycle Q Clear(g_c), s	0.0	0.0	17.0	23.0	0.0	0.0	46.0	22.2	22.9	8.1	38.0	38.0
Prop In Lane	0.00		1.00	0.56		0.27	1.00		0.29	1.00		0.06
Lane Grp Cap(c), veh/h	0	226	385	285	0	0	1131	923	924	139	480	501
V/C Ratio(X)	0.00	0.00	1.25	1.26	0.00	0.00	1.33	0.77	0.78	0.75	1.14	1.14
Avail Cap(c_a), veh/h	0	226	385	285	0	0	1131	923	924	139	480	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	61.5	58.5	0.0	0.0	31.6	5.8	5.8	63.2	51.0	51.0
Incr Delay (d2), s/veh	0.0	0.0	133.8	141.1	0.0	0.0	147.5	0.6	0.6	20.4	86.5	85.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	14.6	22.2	0.0	0.0	44.6	10.3	10.5	4.8	30.1	31.3
LnGrp Delay(d),s/veh	0.0	0.0	195.3	199.6	0.0	0.0	179.1	6.3	6.4	83.6	137.5	136.8
LnGrp LOS			F	F			F	A	A	F	F	F
Approach Vol, veh/h		482			358			2932			1226	
Approach Delay, s/veh		195.3			199.6			94.7			132.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	77.0		21.0	50.0	42.0		27.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	11.0	73.0		17.0	46.0	38.0		23.0
Max Q Clear Time (g_c+I1), s	10.1	24.9		19.0	48.0	40.0		25.0
Green Ext Time (p_c), s	0.6	15.3		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	121.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
5: Fairmont Ave & Camino Del Rio N/Alvarado Canyon Rd

7/27/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	240	955	950	225	1035	435	1570	350	30	1675	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	253	1005	1095	0	1158	458	1653	368	32	1763	63
Adj No. of Lanes	1	1	1	2	0	3	1	2	0	2	2	1
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	241	253	543	786	0	1188	367	1450	311	98	1138	509
Arrive On Green	0.14	0.14	0.14	0.22	0.00	0.22	0.21	0.50	0.50	0.04	0.43	0.43
Sat Flow, veh/h	1774	1863	1583	3548	0	4750	1774	2900	622	3442	3539	1583
Grp Volume(v), veh/h	200	253	1005	1095	0	1158	458	985	1036	32	1763	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1583	1774	1770	1753	1721	1770	1583
Q Serve(g_s), s	15.4	19.0	19.0	31.0	0.0	29.9	29.0	70.0	70.0	1.3	45.0	3.4
Cycle Q Clear(g_c), s	15.4	19.0	19.0	31.0	0.0	29.9	29.0	70.0	70.0	1.3	45.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	241	253	543	786	0	1188	367	885	876	98	1138	509
V/C Ratio(X)	0.83	1.00	1.85	1.39	0.00	0.98	1.25	1.11	1.18	0.33	1.55	0.12
Avail Cap(c_a), veh/h	241	253	543	786	0	1188	367	885	876	98	1138	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	58.9	60.5	46.0	54.5	0.0	52.1	55.5	35.0	35.0	66.0	40.1	28.2
Incr Delay (d2), s/veh	21.1	56.8	390.2	185.0	0.0	20.3	131.7	66.1	93.8	0.2	247.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	13.7	67.0	35.3	0.0	15.3	27.6	50.4	56.4	0.6	61.1	1.5
LnGrp Delay(d),s/veh	80.0	117.3	436.2	239.5	0.0	72.4	187.2	101.1	128.8	66.2	287.9	28.2
LnGrp LOS	F	F	F	F		E	F	F	F	E	F	C
Approach Vol, veh/h		1458			2253			2479			1858	
Approach Delay, s/veh		332.0			153.6			128.6			275.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	74.0		23.0	33.0	49.0		35.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	70.0		19.0	29.0	45.0		31.0
Max Q Clear Time (g_c+I1), s	3.3	72.0		21.0	31.0	47.0		33.0
Green Ext Time (p_c), s	0.2	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	206.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1440	2550	50	0	795	1755	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1516	2684		0	837	1847	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2040	2140		0	1239	1780	0
Arrive On Green	0.59	0.59		0.00	0.35	0.35	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1516	2684		0	837	1847	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	44.9	83.0		0.0	28.2	49.0	0.0
Cycle Q Clear(g_c), s	44.9	83.0		0.0	28.2	49.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2040	2140		0	1239	1780	0
V/C Ratio(X)	0.74	1.25		0.00	0.68	1.04	0.00
Avail Cap(c_a), veh/h	2040	2140		0	1239	1780	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	28.5		0.0	38.7	45.5	0.0
Incr Delay (d2), s/veh	1.5	118.3		0.0	3.0	31.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	62.3		0.0	14.2	28.2	0.0
LnGrp Delay(d),s/veh	22.2	146.8		0.0	41.7	77.3	0.0
LnGrp LOS	C	F			D	F	
Approach Vol, veh/h	4200				837	1847	
Approach Delay, s/veh	101.9				41.7	77.3	
Approach LOS	F				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		53.0		87.0		53.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		49.0		83.0		41.0		
Max Q Clear Time (g_c+I1), s		30.2		85.0		51.0		
Green Ext Time (p_c), s		16.4		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	88.0
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2920	750	110	2095	425	210
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	3074	789	116	2205	447	221
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3311	1324	139	4855	657	293
Arrive On Green	0.65	0.65	0.08	0.76	0.19	0.19
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	3074	789	116	2205	447	221
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	74.7	22.8	9.0	17.8	16.4	18.5
Cycle Q Clear(g_c), s	74.7	22.8	9.0	17.8	16.4	18.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3311	1324	139	4855	657	293
V/C Ratio(X)	0.93	0.60	0.84	0.45	0.68	0.75
Avail Cap(c_a), veh/h	3311	1324	152	4897	657	293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	3.7	63.7	6.3	53.2	54.0
Incr Delay (d2), s/veh	3.3	0.4	29.9	0.1	5.6	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.7	21.2	5.6	7.8	8.6	9.4
LnGrp Delay(d),s/veh	24.8	4.2	93.5	6.3	58.8	70.4
LnGrp LOS	C	A	F	A	E	E
Approach Vol, veh/h	3863			2321	668	
Approach Delay, s/veh	20.6			10.7	62.6	
Approach LOS	C			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		29.9	14.9	95.1				110.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	12.0	91.0				107.0
Max Q Clear Time (g_c+I1), s		20.5	11.0	76.7				19.8
Green Ext Time (p_c), s		1.1	0.0	14.3				86.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	410	290	140	1145	190	90	265	180	190	355	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	432	305	147	1205	200	95	279	189	200	374	174
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	158	769	539	182	1217	201	99	393	334	217	517	440
Arrive On Green	0.09	0.39	0.39	0.10	0.40	0.40	0.06	0.21	0.21	0.12	0.28	0.28
Sat Flow, veh/h	1774	1990	1396	1774	3042	502	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	147	384	353	147	698	707	95	279	189	200	374	174
Grp Sat Flow(s),veh/h/ln	1774	1770	1616	1774	1770	1774	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.4	15.3	15.4	7.3	35.2	35.8	4.8	12.5	9.6	10.0	16.3	8.0
Cycle Q Clear(g_c), s	7.4	15.3	15.4	7.3	35.2	35.8	4.8	12.5	9.6	10.0	16.3	8.0
Prop In Lane	1.00		0.86	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	684	625	182	708	710	99	393	334	217	517	440
V/C Ratio(X)	0.93	0.56	0.57	0.81	0.99	1.00	0.96	0.71	0.57	0.92	0.72	0.40
Avail Cap(c_a), veh/h	158	684	625	296	708	710	99	393	334	217	517	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	21.6	21.7	39.5	26.8	26.9	42.4	32.9	31.8	39.1	29.4	26.4
Incr Delay (d2), s/veh	51.9	1.0	1.2	8.2	30.3	32.7	78.7	10.4	6.8	40.3	8.5	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	5.9	7.7	7.1	4.0	23.0	23.9	4.5	7.6	4.8	7.3	9.6	3.8
LnGrp Delay(d),s/veh	92.6	22.7	22.9	47.8	57.1	59.6	121.1	43.3	38.6	79.3	37.9	29.0
LnGrp LOS	F	C	C	D	E	E	F	D	D	E	D	C
Approach Vol, veh/h		884			1552			563			748	
Approach Delay, s/veh		34.4			57.4			54.8			46.9	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	23.0	13.2	38.8	9.0	29.0	12.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	19.0	15.0	29.0	5.0	25.0	8.0	36.0
Max Q Clear Time (g_c+I1), s	12.0	14.5	9.3	17.4	6.8	18.3	9.4	37.8
Green Ext Time (p_c), s	0.0	2.2	0.2	9.3	0.0	2.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	45	45	220	400	610	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	47	232	421	642	195

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1413	418	837	0	-	0
Stage 1	739	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	129	584	793	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	584	793	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	289	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	56.4	4.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	793	-	80	584	-	-
HCM Lane V/C Ratio	0.292	-	0.592	0.081	-	-
HCM Control Delay (s)	11.4	1	101.1	11.7	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	2.6	0.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	340	870	240	370	485	190
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	916	253	389	511	200
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	406	990	864	387	623	919
Arrive On Green	0.23	0.53	0.24	0.24	0.35	0.35
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	358	916	253	389	511	200
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	13.3	31.0	4.0	16.7	17.9	4.1
Cycle Q Clear(g_c), s	13.3	31.0	4.0	16.7	17.9	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	406	990	864	387	623	919
V/C Ratio(X)	0.88	0.93	0.29	1.01	0.82	0.22
Avail Cap(c_a), veh/h	468	1036	864	387	623	919
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	25.4	14.7	21.0	25.8	20.2	6.9
Incr Delay (d2), s/veh	16.1	13.2	0.2	47.3	11.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	19.2	2.0	12.3	10.7	5.5
LnGrp Delay(d),s/veh	41.6	28.0	21.2	73.2	31.7	7.4
LnGrp LOS	D	C	C	F	C	A
Approach Vol, veh/h		1274	642		711	
Approach Delay, s/veh		31.8	52.7		24.9	
Approach LOS		C	D		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				40.3		28.0	19.6	20.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				38.0		24.0	18.0	16.0
Max Q Clear Time (g_c+I1), s				33.0		19.9	15.3	18.7
Green Ext Time (p_c), s				3.3		1.1	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	640	3635	1675	835	0	1320
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	674	3826	2091	660		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	701	4850	2962	839		
Arrive On Green	0.40	0.95	0.70	0.70		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	674	3826	2091	660		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	51.9	19.7	30.8	38.6		
Cycle Q Clear(g_c), s	51.9	19.7	30.8	38.6		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	701	4850	2962	839		
V/C Ratio(X)	0.96	0.79	0.71	0.79		
Avail Cap(c_a), veh/h	760	4940	2962	839		
HCM Platoon Ratio	1.00	1.00	1.33	1.33		
Upstream Filter(I)	0.09	0.09	0.85	0.85		
Uniform Delay (d), s/veh	41.3	0.6	14.2	15.4		
Incr Delay (d2), s/veh	3.9	0.1	0.7	4.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	26.0	8.2	15.7	17.6		
LnGrp Delay(d),s/veh	45.2	0.7	14.9	19.7		
LnGrp LOS	D	A	B	B		
Approach Vol, veh/h		4500	2751			
Approach Delay, s/veh		7.4	16.1			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				137.5			59.3	78.2
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				136.0			60.0	72.0
Max Q Clear Time (g_c+I1), s				21.7			53.9	40.6
Green Ext Time (p_c), s				111.8			1.4	31.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	2170	740	310	2160	480	0	0	0	1115	0	1885
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	495	2284	779	326	2274	0				1174	0	1984
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	380	2070	645	253	1707	532				1293	0	1154
Arrive On Green	0.21	0.41	0.41	0.14	0.34	0.00				0.36	0.00	0.36
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	495	2284	779	326	2274	0				1174	0	1984
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.0	57.0	57.0	20.0	47.0	0.0				44.0	0.0	51.0
Cycle Q Clear(g_c), s	30.0	57.0	57.0	20.0	47.0	0.0				44.0	0.0	51.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	380	2070	645	253	1707	532				1293	0	1154
V/C Ratio(X)	1.30	1.10	1.21	1.29	1.33	0.00				0.91	0.00	1.72
Avail Cap(c_a), veh/h	380	2070	645	253	1707	532				1293	0	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.48	0.48	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	41.5	41.5	60.0	46.5	0.0				42.3	0.0	44.5
Incr Delay (d2), s/veh	137.8	47.2	95.2	142.8	151.4	0.0				10.9	0.0	327.6
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	29.2	35.7	41.9	19.8	45.9	0.0				23.5	0.0	74.8
LnGrp Delay(d),s/veh	192.8	88.7	136.7	202.8	197.9	0.0				53.2	0.0	372.1
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3558			2600						3158	
Approach Delay, s/veh		113.7			198.5						253.6	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			24.0	61.0		55.0	34.0	51.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			20.0	57.0		51.0	30.0	47.0
Max Q Clear Time (g_c+I1), s			22.0	59.0		53.0	32.0	49.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	184.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	795	0	395	220	340	0	0	830	470
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				837	0	0	232	358	0	0	874	495
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				865	0	772	276	1612	0	0	961	430
Arrive On Green				0.49	0.00	0.00	0.31	0.91	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				837	0	0	232	358	0	0	874	495
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				64.1	0.0	0.0	17.1	1.6	0.0	0.0	33.4	38.0
Cycle Q Clear(g_c), s				64.1	0.0	0.0	17.1	1.6	0.0	0.0	33.4	38.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				865	0	772	276	1612	0	0	961	430
V/C Ratio(X)				0.97	0.00	0.00	0.84	0.22	0.00	0.00	0.91	1.15
Avail Cap(c_a), veh/h				887	0	792	276	1612	0	0	961	430
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.68	0.68	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	0.0	46.6	3.5	0.0	0.0	49.3	51.0
Incr Delay (d2), s/veh				22.5	0.0	0.0	14.6	0.2	0.0	0.0	14.0	91.9
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				36.8	0.0	0.0	9.5	0.7	0.0	0.0	18.3	27.6
LnGrp Delay(d),s/veh				57.3	0.0	0.0	61.2	3.7	0.0	0.0	63.4	142.9
LnGrp LOS				E			E	A			E	F
Approach Vol, veh/h					837			590			1369	
Approach Delay, s/veh					57.3			26.3			92.1	
Approach LOS					E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.8			25.8	42.0		72.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		62.0			20.0	38.0		70.0
Max Q Clear Time (g_c+I1), s		3.6			19.1	40.0		66.1
Green Ext Time (p_c), s		3.3			0.3	0.0		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	300	301	744	490	0	123	87	137	98	65	410	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1664			1681	1504		3251				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1664			1681	1504		3251				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	317	783	516	0	129	95	144	103	68	432	367
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	316	1100	0	0	529	211	0	297	0	0	0	557
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	53.0	53.0			23.0	23.0		17.0				31.0
Effective Green, g (s)	53.0	53.0			23.0	23.0		17.0				31.0
Actuated g/C Ratio	0.38	0.38			0.16	0.16		0.12				0.22
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	670	629			276	247		394				356
v/s Ratio Prot	0.18	c0.66			c0.31	0.14		c0.09				c0.35
v/s Ratio Perm												
v/c Ratio	0.47	1.75			1.92	0.85		0.75				1.56
Uniform Delay, d1	32.9	43.5			58.5	56.9		59.5				54.5
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.64
Incremental Delay, d2	0.5	343.5			425.7	23.8		12.6				259.4
Delay (s)	33.4	387.0			484.2	80.7		72.1				294.0
Level of Service	C	F			F	F		E				F
Approach Delay (s)		308.1			369.2			72.1				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	293.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	145.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	866
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3355
Flt Permitted	0.99
Satd. Flow (perm)	3355
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	912
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1154
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	31.0
Effective Green, g (s)	31.0
Actuated g/C Ratio	0.22
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	742
v/s Ratio Prot	0.34
v/s Ratio Perm	
v/c Ratio	1.56
Uniform Delay, d1	54.5
Progression Factor	0.64
Incremental Delay, d2	252.5
Delay (s)	287.1
Level of Service	F
Approach Delay (s)	289.4
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4330	260	570	1175	140	250	50	770	90	40	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4558	274	600	1237	147	263	53	811	95	42	84
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	196	2906	905	565	3451	1120	320	226	452	98	106	90
Arrive On Green	0.06	0.57	0.57	0.16	0.68	0.68	0.09	0.12	0.12	0.03	0.06	0.06
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	147	4558	274	600	1237	147	263	53	811	95	42	84
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.9	80.0	8.2	23.0	14.5	1.2	10.5	3.6	17.0	3.9	3.0	6.5
Cycle Q Clear(g_c), s	5.9	80.0	8.2	23.0	14.5	1.2	10.5	3.6	17.0	3.9	3.0	6.5
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	196	2906	905	565	3451	1120	320	226	452	98	106	90
V/C Ratio(X)	0.75	1.57	0.30	1.06	0.36	0.13	0.82	0.23	1.79	0.97	0.39	0.93
Avail Cap(c_a), veh/h	270	2906	905	565	3451	1120	320	226	452	98	106	90
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	30.0	6.6	58.5	9.5	2.3	62.4	55.6	38.9	67.9	63.7	50.8
Incr Delay (d2), s/veh	0.7	256.0	0.0	31.8	0.0	0.0	15.8	2.4	365.5	79.5	10.6	76.5
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	106.0	3.5	13.4	6.8	0.9	5.7	2.0	62.0	2.9	1.9	4.8
LnGrp Delay(d),s/veh	65.7	286.0	6.6	90.3	9.6	2.3	78.2	58.0	404.4	147.4	74.3	127.2
LnGrp LOS	E	F	A	F	A	A	E	E	F	F	E	F
Approach Vol, veh/h		4979			1984			1127			221	
Approach Delay, s/veh		264.1			33.4			312.0			125.9	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	27.0	84.0	17.0	12.0	12.0	99.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	23.0	80.0	13.0	8.0	11.0	92.0
Max Q Clear Time (g_c+I1), s	5.9	19.0	25.0	82.0	12.5	8.5	7.9	16.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	0.0	0.1	75.0

Intersection Summary	
HCM 2010 Ctrl Delay	211.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4200	460	240	1165	80	320	30	460	30	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4421	484	253	1226	84	337	32	484	32	0	109
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	172	3051	1108	197	2849	919	344	388	330	72	0	714
Arrive On Green	0.10	0.60	0.60	0.11	1.00	1.00	0.10	0.21	0.21	0.02	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	147	4421	484	253	1226	84	337	32	484	32	0	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	11.4	84.0	4.5	8.0	0.0	0.0	13.7	1.9	24.9	1.2	0.0	2.9
Cycle Q Clear(g_c), s	11.4	84.0	4.5	8.0	0.0	0.0	13.7	1.9	24.9	1.2	0.0	2.9
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	172	3051	1108	197	2849	919	344	388	330	72	0	714
V/C Ratio(X)	0.86	1.45	0.44	1.29	0.43	0.09	0.98	0.08	1.47	0.44	0.00	0.15
Avail Cap(c_a), veh/h	253	3051	1108	197	2849	919	344	388	330	101	0	714
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	28.0	9.1	62.0	0.0	0.0	62.9	44.6	40.6	67.8	0.0	26.3
Incr Delay (d2), s/veh	16.8	203.9	0.3	158.8	0.1	0.0	42.8	0.4	226.5	4.2	0.0	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	6.4	96.6	2.0	8.1	0.0	0.0	8.6	1.0	31.6	0.7	0.0	1.3
LnGrp Delay(d),s/veh	79.0	231.9	9.3	220.8	0.1	0.0	105.6	45.1	267.1	72.0	0.0	26.8
LnGrp LOS	E	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		5052			1563			853			141	
Approach Delay, s/veh		206.1			35.8			195.0			37.1	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	33.2	12.0	88.0	18.0	22.0	17.6	82.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	28.0	8.0	84.0	14.0	18.0	20.0	72.0
Max Q Clear Time (g_c+I1), s	3.2	26.9	10.0	86.0	15.7	4.9	13.4	2.0
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.3	0.2	15.4

Intersection Summary	
HCM 2010 Ctrl Delay	166.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	485	0	300	480	930	0	0	1130	510
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				414	136	316	505	979	0	0	1189	537
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				393	110	257	444	1344	0	0	1067	461
Arrive On Green				0.22	0.22	0.22	0.33	0.96	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1774	499	1159	1774	1863	0	0	2501	1040
Grp Volume(v), veh/h				414	0	452	505	979	0	0	859	867
Grp Sat Flow(s),veh/h/ln				1774	0	1658	1774	1863	0	0	1770	1679
Q Serve(g_s), s				31.0	0.0	31.0	35.0	9.9	0.0	0.0	62.0	62.0
Cycle Q Clear(g_c), s				31.0	0.0	31.0	35.0	9.9	0.0	0.0	62.0	62.0
Prop In Lane				1.00		0.70	1.00		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				393	0	367	444	1344	0	0	784	744
V/C Ratio(X)				1.05	0.00	1.23	1.14	0.73	0.00	0.00	1.10	1.17
Avail Cap(c_a), veh/h				393	0	367	444	1344	0	0	784	744
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				54.5	0.0	54.5	46.7	1.0	0.0	0.0	39.0	39.0
Incr Delay (d2), s/veh				60.3	0.0	125.6	82.6	2.8	0.0	0.0	61.8	88.7
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				21.7	0.0	27.0	27.3	5.1	0.0	0.0	43.7	47.0
LnGrp Delay(d),s/veh				114.8	0.0	180.1	129.4	3.8	0.0	0.0	100.8	127.7
LnGrp LOS				F		F	F	A			F	F
Approach Vol, veh/h					866			1484			1726	
Approach Delay, s/veh					148.9			46.5			114.3	
Approach LOS					F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		105.0			39.0	66.0		35.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		101.0			35.0	62.0		31.0
Max Q Clear Time (g_c+I1), s		11.9			37.0	64.0		33.0
Green Ext Time (p_c), s		58.2			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	450	0	290	0	0	0	0	960	1545	540	1075	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	474	0	305				0	1011	1626	568	1132	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	355	0	317				0	1795	803	367	2629	0
Arrive On Green	0.20	0.00	0.20				0.00	0.85	0.85	0.14	0.50	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	474	0	305				0	1011	1626	568	1132	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	28.0	0.0	26.7				0.0	11.7	71.0	29.0	28.6	0.0
Cycle Q Clear(g_c), s	28.0	0.0	26.7				0.0	11.7	71.0	29.0	28.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	317				0	1795	803	367	2629	0
V/C Ratio(X)	1.34	0.00	0.96				0.00	0.56	2.02	1.55	0.43	0.00
Avail Cap(c_a), veh/h	355	0	317				0	1795	803	367	2629	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.52	0.52	0.09	0.09	0.00
Uniform Delay (d), s/veh	56.0	0.0	55.5				0.0	6.2	10.7	60.3	16.2	0.0
Incr Delay (d2), s/veh	169.2	0.0	40.6				0.0	0.7	463.5	246.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.4	0.0	15.3				0.0	5.5	132.4	39.4	14.0	0.0
LnGrp Delay(d),s/veh	225.2	0.0	96.1				0.0	6.9	474.3	307.1	16.3	0.0
LnGrp LOS	F		F					A	F	F	B	
Approach Vol, veh/h		779						2637			1700	
Approach Delay, s/veh		174.6						295.1			113.4	
Approach LOS		F						F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	33.0	75.0		32.0		108.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	29.0	71.0		28.0		104.0		
Max Q Clear Time (g_c+I1), s	31.0	73.0		30.0		30.6		
Green Ext Time (p_c), s	0.0	0.0		0.0		16.1		

Intersection Summary	
HCM 2010 Ctrl Delay	216.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	370	410	350	190	130	220	1735	200	200	1325	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	353	456	368	200	137	232	1826	211	211	1395	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	383	373	898	419	375	168	287	2182	251	318	2443	761
Arrive On Green	0.22	0.20	0.20	0.12	0.11	0.11	0.08	0.47	0.47	0.03	0.16	0.16
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4627	532	3442	5085	1583
Grp Volume(v), veh/h	211	353	456	368	200	137	232	1335	702	211	1395	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1769	1721	1695	1583
Q Serve(g_s), s	14.8	26.2	12.0	14.7	7.5	11.9	9.3	48.1	48.7	8.5	35.5	6.9
Cycle Q Clear(g_c), s	14.8	26.2	12.0	14.7	7.5	11.9	9.3	48.1	48.7	8.5	35.5	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	383	373	898	419	375	168	287	1598	834	318	2443	761
V/C Ratio(X)	0.55	0.95	0.51	0.88	0.53	0.82	0.81	0.84	0.84	0.66	0.57	0.25
Avail Cap(c_a), veh/h	383	373	898	467	531	237	442	1598	834	318	2443	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70	0.87	0.87	0.87
Uniform Delay (d), s/veh	48.8	55.3	23.0	60.4	59.3	61.3	63.0	32.3	32.4	65.7	45.6	8.3
Incr Delay (d2), s/veh	1.7	33.2	0.5	15.9	1.2	13.9	4.5	3.8	7.3	4.4	0.8	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	7.4	16.9	5.3	7.9	3.7	5.8	4.6	23.3	25.5	4.3	16.9	3.2
LnGrp Delay(d),s/veh	50.5	88.5	23.5	76.3	60.5	75.1	67.5	36.1	39.7	70.1	46.4	8.9
LnGrp LOS	D	F	C	E	E	E	E	D	D	E	D	A
Approach Vol, veh/h		1020			705			2269			1795	
Approach Delay, s/veh		51.6			71.6			40.4			45.3	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	70.0	21.1	32.0	15.7	71.2	34.2	18.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	66.0	19.0	28.0	18.0	59.0	26.0	21.0
Max Q Clear Time (g_c+I1), s	10.5	50.7	16.7	28.2	11.3	37.5	16.8	13.9
Green Ext Time (p_c), s	0.0	11.8	0.3	0.0	0.4	12.4	1.5	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	570	110	210	370	570	1695	0	0	1430	655
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	95	0	600	116	221	389	600	1784	0	0	1505	689
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	121	231	304	519	3794	0	0	1497	670
Arrive On Green	0.00	0.00	0.00	0.19	0.19	0.19	0.29	0.75	0.00	0.00	0.42	0.42
Sat Flow, veh/h		0		630	1201	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		337	0	389	600	1784	0	0	1505	689
Grp Sat Flow(s),veh/h/ln				1831	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				23.7	0.0	25.0	38.0	17.8	0.0	0.0	55.0	55.0
Cycle Q Clear(g_c), s				23.7	0.0	25.0	38.0	17.8	0.0	0.0	55.0	55.0
Prop In Lane				0.34		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				352	0	304	519	3794	0	0	1497	670
V/C Ratio(X)				0.96	0.00	1.28	1.16	0.47	0.00	0.00	1.01	1.03
Avail Cap(c_a), veh/h				352	0	304	519	3794	0	0	1497	670
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.74	0.74
Uniform Delay (d), s/veh				52.0	0.0	52.5	46.0	6.5	0.0	0.0	37.5	37.5
Incr Delay (d2), s/veh				36.6	0.0	147.9	90.6	0.4	0.0	0.0	21.2	37.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				15.6	0.0	23.4	31.6	8.4	0.0	0.0	31.2	31.0
LnGrp Delay(d),s/veh				88.6	0.0	200.4	136.6	6.9	0.0	0.0	58.7	74.9
LnGrp LOS				F		F	F	A			F	F
Approach Vol, veh/h					726			2384			2194	
Approach Delay, s/veh					148.5			39.5			63.8	
Approach LOS					F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		101.0			42.0	59.0		29.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		87.0			38.0	45.0		25.0
Max Q Clear Time (g_c+I1), s		19.8			40.0	57.0		27.0
Green Ext Time (p_c), s		60.3			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	3455	600	180	1950	150	430	80	160	140	90	710
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	3637	632	189	2053	158	453	84	168	147	95	747
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	559	3616	1572	197	2941	727	442	296	265	172	253	378
Arrive On Green	0.16	0.56	0.56	0.06	0.46	0.46	0.13	0.17	0.17	0.10	0.14	0.14
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	495	3637	632	189	2053	158	453	84	168	147	95	747
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	19.7	79.0	17.9	7.7	35.7	8.4	18.0	5.8	13.8	11.4	6.5	14.2
Cycle Q Clear(g_c), s	19.7	79.0	17.9	7.7	35.7	8.4	18.0	5.8	13.8	11.4	6.5	14.2
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	559	3616	1572	197	2941	727	442	296	265	172	253	378
V/C Ratio(X)	0.89	1.01	0.40	0.96	0.70	0.22	1.02	0.28	0.63	0.86	0.38	1.98
Avail Cap(c_a), veh/h	688	3616	1572	197	2941	727	442	296	265	253	253	378
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)	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	30.5	17.2	65.8	30.2	22.8	61.0	50.9	54.3	62.2	55.1	33.7
Incr Delay (d2), s/veh	1.4	6.3	0.0	52.8	0.7	0.1	49.0	2.4	11.0	16.8	4.2	448.3
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	9.5	36.2	6.9	5.1	16.0	3.7	11.6	3.0	6.9	6.4	3.6	29.0
LnGrp Delay(d),s/veh	58.8	36.8	17.2	118.7	30.9	22.9	110.0	53.3	65.3	79.0	59.3	481.9
LnGrp LOS	E	F	B	F	C	C	F	D	E	E	E	F
Approach Vol, veh/h		4764			2400			705			989	
Approach Delay, s/veh		36.5			37.3			92.6			381.5	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	27.4	12.0	83.0	22.0	23.0	26.7	68.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	17.0	8.0	79.0	18.0	19.0	28.0	59.0
Max Q Clear Time (g_c+I1), s	13.4	15.8	9.7	81.0	20.0	16.2	21.7	37.7
Green Ext Time (p_c), s	0.2	0.4	0.0	0.0	0.0	1.2	1.0	16.8

Intersection Summary	
HCM 2010 Ctrl Delay	79.7
HCM 2010 LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	780	3805	2080	1125	1480	1140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	821	4005	2189	1184	1558	1200
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	836	4027	2288	1871	1573	876
Arrive On Green	0.49	1.00	0.36	0.36	0.31	0.31
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	821	4005	2189	1184	1558	1200
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	32.8	0.0	46.7	34.0	43.4	44.0
Cycle Q Clear(g_c), s	32.8	0.0	46.7	34.0	43.4	44.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	836	4027	2288	1871	1573	876
V/C Ratio(X)	0.98	0.99	0.96	0.63	0.99	1.37
Avail Cap(c_a), veh/h	836	4028	2289	1871	1573	876
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	44.0	13.1	47.8	48.0
Incr Delay (d2), s/veh	6.0	3.2	6.2	0.4	20.5	173.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	0.9	21.7	22.9	22.9	49.7
LnGrp Delay(d),s/veh	41.7	3.2	50.1	13.5	68.3	221.6
LnGrp LOS	D	A	D	B	E	F
Approach Vol, veh/h		4826	3373		2758	
Approach Delay, s/veh		9.7	37.3		135.0	
Approach LOS		A	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				92.0		48.0	38.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				88.0		44.0	34.0	50.0
Max Q Clear Time (g_c+I1), s				2.0		46.0	34.8	48.7
Green Ext Time (p_c), s				85.3		0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	49.7
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	1180	0	480	680
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1242	0	505	716
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2611	621			1242	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2611	621			1242	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			9	
cM capacity (veh/h)	2	430			556	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	828	414	505	358	358
Volume Left	0	0	505	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	556	1700	1700
Volume to Capacity	0.49	0.24	0.91	0.21	0.21
Queue Length 95th (ft)	0	0	273	0	0
Control Delay (s)	0.0	0.0	46.2	0.0	0.0
Lane LOS			E		
Approach Delay (s)	0.0		19.1		
Approach LOS					

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	2115	790	730	1605	950	430	70	1200	470	20	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	2226	832	768	1689	1000	453	74	1263	495	21	221
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	484	2105	828	831	2184	1197	669	290	1107	551	226	192
Arrive On Green	0.14	0.33	0.33	0.40	0.72	0.72	0.19	0.16	0.16	0.16	0.12	0.12
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	2226	832	768	1689	1000	453	74	1263	495	21	221
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	6.6	46.0	46.0	29.7	29.5	22.0	17.1	4.9	17.4	19.8	1.4	17.0
Cycle Q Clear(g_c), s	6.6	46.0	46.0	29.7	29.5	22.0	17.1	4.9	17.4	19.8	1.4	17.0
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	484	2105	828	831	2184	1197	669	290	1107	551	226	192
V/C Ratio(X)	0.37	1.06	1.00	0.92	0.77	0.84	0.68	0.26	1.14	0.90	0.09	1.15
Avail Cap(c_a), veh/h	484	2105	828	983	2688	1473	669	290	1107	615	226	192
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	47.0	33.4	40.6	15.5	6.3	52.3	52.0	18.9	57.7	54.6	61.5
Incr Delay (d2), s/veh	0.5	36.8	32.5	4.2	0.3	1.0	5.4	2.1	74.7	15.2	0.2	110.9
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	3.2	25.7	27.2	14.5	13.6	8.2	8.6	2.7	24.1	10.6	0.7	13.3
LnGrp Delay(d),s/veh	55.0	83.8	65.9	44.8	15.8	7.3	57.8	54.1	93.7	72.9	54.8	172.4
LnGrp LOS	E	F	F	D	B	A	E	D	F	E	D	F
Approach Vol, veh/h		3237			3457			1790			737	
Approach Delay, s/veh		77.6			19.8			82.9			102.2	
Approach LOS		E			B			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	25.8	37.8	50.0	31.2	21.0	23.7	64.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	13.0	40.0	46.0	21.0	17.0	12.0	74.0
Max Q Clear Time (g_c+I1), s	21.8	19.4	31.7	48.0	19.1	19.0	8.6	31.5
Green Ext Time (p_c), s	0.6	0.0	2.1	0.0	1.4	0.0	1.4	28.6

Intersection Summary	
HCM 2010 Ctrl Delay	58.9
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	530	130	180	680	220	250
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	558	0	189	716	232	263
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1693	527	342	2809	367	853
Arrive On Green	0.33	0.00	0.10	0.55	0.21	0.21
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	558	0	189	716	232	263
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	2.7	0.0	1.7	2.4	4.0	2.4
Cycle Q Clear(g_c), s	2.7	0.0	1.7	2.4	4.0	2.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1693	527	342	2809	367	853
V/C Ratio(X)	0.33	0.00	0.55	0.25	0.63	0.31
Avail Cap(c_a), veh/h	2446	762	517	3823	640	1282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.3	0.0	14.3	3.9	12.0	8.8
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.0	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.9	1.1	2.1	0.9
LnGrp Delay(d),s/veh	8.4	0.0	15.7	3.9	13.8	9.0
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	558			905	495	
Approach Delay, s/veh	8.4			6.4	11.3	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.9	7.3	15.1				22.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		12.0	5.0	16.0				25.0
Max Q Clear Time (g_c+I1), s		6.0	3.7	4.7				4.4
Green Ext Time (p_c), s		1.0	0.1	6.3				9.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	50	60	70	60	30	60	470	40	20	310	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	53	63	74	63	32	63	495	42	21	326	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	94	112	93	141	72	85	1541	130	36	1387	177
Arrive On Green	0.05	0.12	0.12	0.05	0.12	0.12	0.05	0.47	0.47	0.02	0.44	0.44
Sat Flow, veh/h	1774	777	923	1774	1166	592	1774	3304	280	1774	3158	403
Grp Volume(v), veh/h	74	0	116	74	0	95	63	265	272	21	181	187
Grp Sat Flow(s),veh/h/ln	1774	0	1700	1774	0	1758	1774	1770	1813	1774	1770	1792
Q Serve(g_s), s	1.9	0.0	3.0	1.9	0.0	2.4	1.7	4.4	4.5	0.6	3.0	3.1
Cycle Q Clear(g_c), s	1.9	0.0	3.0	1.9	0.0	2.4	1.7	4.4	4.5	0.6	3.0	3.1
Prop In Lane	1.00		0.54	1.00		0.34	1.00		0.15	1.00		0.23
Lane Grp Cap(c), veh/h	93	0	206	93	0	213	85	825	846	36	777	787
V/C Ratio(X)	0.79	0.00	0.56	0.79	0.00	0.45	0.75	0.32	0.32	0.58	0.23	0.24
Avail Cap(c_a), veh/h	263	0	577	263	0	596	226	825	846	150	777	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	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	22.1	0.0	19.5	22.1	0.0	19.2	22.2	7.9	7.9	22.9	8.3	8.3
Incr Delay (d2), s/veh	13.8	0.0	2.4	13.8	0.0	1.5	12.2	1.0	1.0	13.8	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	1.3	0.0	1.6	1.3	0.0	1.2	1.1	2.4	2.4	0.4	1.6	1.7
LnGrp Delay(d),s/veh	35.9	0.0	21.9	35.9	0.0	20.7	34.3	8.9	8.9	36.7	9.0	9.0
LnGrp LOS	D		C	D		C	C	A	A	D	A	A
Approach Vol, veh/h		190			169			600			389	
Approach Delay, s/veh		27.4			27.4			11.6			10.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	26.0	6.5	9.7	6.2	24.7	6.5	9.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	7.0	16.0	6.0	20.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	6.5	3.9	5.0	3.7	5.1	3.9	4.4
Green Ext Time (p_c), s	0.0	5.0	0.0	0.8	0.0	4.9	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	80	70	60	50	20	60	70	80	20	70	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	84	74	63	53	21	63	74	84	21	74	32
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	239	365	301	236	100	91	384	436	34	554	240
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.48	0.48	0.02	0.45	0.45
Sat Flow, veh/h	374	1336	1583	708	1320	561	1774	798	905	1774	1235	534
Grp Volume(v), veh/h	126	0	74	77	0	60	63	0	158	21	0	106
Grp Sat Flow(s),veh/h/ln	1709	0	1583	993	0	1596	1774	0	1703	1774	0	1769
Q Serve(g_s), s	0.1	0.0	1.4	1.4	0.0	1.2	1.3	0.0	2.0	0.4	0.0	1.3
Cycle Q Clear(g_c), s	2.2	0.0	1.4	3.6	0.0	1.2	1.3	0.0	2.0	0.4	0.0	1.3
Prop In Lane	0.33		1.00	0.82		0.35	1.00		0.53	1.00		0.30
Lane Grp Cap(c), veh/h	434	0	365	352	0	286	91	0	819	34	0	794
V/C Ratio(X)	0.29	0.00	0.20	0.22	0.00	0.21	0.69	0.00	0.19	0.61	0.00	0.13
Avail Cap(c_a), veh/h	842	0	758	677	0	683	284	0	819	190	0	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	11.6	14.4	0.0	13.1	17.5	0.0	5.6	18.2	0.0	6.0
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.3	0.0	0.4	9.0	0.0	0.5	16.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.6	0.8	0.0	0.5	0.9	0.0	1.0	0.4	0.0	0.7
LnGrp Delay(d),s/veh	13.9	0.0	11.9	14.7	0.0	13.5	26.4	0.0	6.1	34.6	0.0	6.4
LnGrp LOS	B		B	B		B	C		A	C		A
Approach Vol, veh/h		200			137			221			127	
Approach Delay, s/veh		13.2			14.1			11.9			11.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	22.0		10.7	5.9	20.8		10.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	4.0		4.2	3.3	3.3		5.6
Green Ext Time (p_c), s	0.0	0.7		1.4	0.0	0.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	30	340	390	90	110	420	530	90	30	380	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	414	411	95	116	442	558	95	32	400	42
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	269	457	398	92	112	459	875	148	79	647	68
Arrive On Green	0.00	0.00	0.14	0.34	0.34	0.34	0.27	0.58	0.58	0.04	0.20	0.20
Sat Flow, veh/h	0	1863	3167	1155	267	326	3442	3028	514	1774	3235	338
Grp Volume(v), veh/h	0	0	414	622	0	0	442	325	328	32	218	224
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1747	0	0	1721	1770	1772	1774	1770	1803
Q Serve(g_s), s	0.0	0.0	11.6	31.0	0.0	0.0	11.4	11.1	11.1	1.6	10.1	10.2
Cycle Q Clear(g_c), s	0.0	0.0	11.6	31.0	0.0	0.0	11.4	11.1	11.1	1.6	10.1	10.2
Prop In Lane	0.00		1.00	0.66		0.19	1.00		0.29	1.00		0.19
Lane Grp Cap(c), veh/h	0	269	457	602	0	0	459	511	512	79	354	361
V/C Ratio(X)	0.00	0.00	0.91	1.03	0.00	0.00	0.96	0.64	0.64	0.41	0.62	0.62
Avail Cap(c_a), veh/h	0	269	457	602	0	0	459	511	512	79	354	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	37.9	29.5	0.0	0.0	32.8	15.8	15.9	41.8	32.8	32.9
Incr Delay (d2), s/veh	0.0	0.0	21.3	45.5	0.0	0.0	29.2	5.0	5.0	3.3	7.8	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.4	22.5	0.0	0.0	7.3	6.0	6.0	0.8	5.7	5.9
LnGrp Delay(d),s/veh	0.0	0.0	59.2	75.0	0.0	0.0	62.0	20.8	20.9	45.2	40.6	40.7
LnGrp LOS			E	F			E	C	C	D	D	D
Approach Vol, veh/h		414			622			1095			474	
Approach Delay, s/veh		59.2			75.0			37.5			41.0	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	30.0		17.0	16.0	22.0		35.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	26.0		13.0	12.0	18.0		31.0
Max Q Clear Time (g_c+I1), s	3.6	13.1		13.6	13.4	12.2		33.0
Green Ext Time (p_c), s	0.1	3.3		0.0	0.0	1.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	60	370	280	140	240	230	700	150	40	810	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	42	63	389	197	411	169	242	737	158	42	853	95
Adj No. of Lanes	1	1	1	1	2	1	1	2	0	2	2	1
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	276	290	494	261	548	278	278	1424	305	99	1285	575
Arrive On Green	0.16	0.16	0.16	0.15	0.15	0.15	0.16	0.49	0.49	0.04	0.48	0.48
Sat Flow, veh/h	1774	1863	1583	1774	3725	1583	1774	2901	622	3442	3539	1583
Grp Volume(v), veh/h	42	63	389	197	411	169	242	450	445	42	853	95
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1753	1721	1770	1583
Q Serve(g_s), s	1.8	2.7	14.0	9.6	9.5	8.9	12.0	15.6	15.6	1.1	16.5	3.0
Cycle Q Clear(g_c), s	1.8	2.7	14.0	9.6	9.5	8.9	12.0	15.6	15.6	1.1	16.5	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	276	290	494	261	548	278	278	868	860	99	1285	575
V/C Ratio(X)	0.15	0.22	0.79	0.76	0.75	0.61	0.87	0.52	0.52	0.42	0.66	0.17
Avail Cap(c_a), veh/h	276	290	494	315	662	327	315	868	860	268	1285	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.60	0.60	0.60
Uniform Delay (d), s/veh	32.9	33.2	28.2	36.8	36.8	34.2	37.1	15.6	15.6	42.5	19.1	15.6
Incr Delay (d2), s/veh	0.3	0.4	8.2	8.2	3.9	2.4	20.5	2.2	2.2	1.7	1.7	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	0.9	1.4	9.9	5.3	5.2	4.0	7.4	8.1	8.1	0.5	8.3	1.4
LnGrp Delay(d),s/veh	33.1	33.6	36.5	45.0	40.7	36.6	57.5	17.8	17.9	44.3	20.8	16.0
LnGrp LOS	C	C	D	D	D	D	E	B	B	D	C	B
Approach Vol, veh/h		494			777			1137			990	
Approach Delay, s/veh		35.8			40.9			26.3			21.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	48.2		18.0	18.1	36.7		17.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	37.0		14.0	16.0	28.0		16.0
Max Q Clear Time (g_c+I1), s	3.1	17.6		16.0	14.0	18.5		11.6
Green Ext Time (p_c), s	0.0	12.1		0.0	0.1	7.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	540	580	40	0	530	590	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	568	611		0	558	621	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	920	965		0	1965	2823	0
Arrive On Green	0.27	0.27		0.00	0.56	0.56	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	568	611		0	558	621	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	6.5	6.7		0.0	3.7	2.8	0.0
Cycle Q Clear(g_c), s	6.5	6.7		0.0	3.7	2.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	920	965		0	1965	2823	0
V/C Ratio(X)	0.62	0.63		0.00	0.28	0.22	0.00
Avail Cap(c_a), veh/h	1299	1363		0	1965	2823	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.5	14.6		0.0	5.3	5.1	0.0
Incr Delay (d2), s/veh	0.7	0.7		0.0	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.1		0.0	1.9	1.3	0.0
LnGrp Delay(d),s/veh	15.2	15.2		0.0	5.7	5.3	0.0
LnGrp LOS	B	B			A	A	
Approach Vol, veh/h	1179				558	621	
Approach Delay, s/veh	15.2				5.7	5.3	
Approach LOS	B				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		29.0		16.0		29.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		25.0		17.0		14.0		
Max Q Clear Time (g_c+I1), s		5.7		8.7		4.8		
Green Ext Time (p_c), s		8.1		3.3		5.1		

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	860	250	80	940	240	70
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	905	263	84	989	253	74
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1677	1275	109	2792	1687	753
Arrive On Green	0.33	0.33	0.06	0.44	0.48	0.48
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	905	263	84	989	253	74
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	13.1	3.5	4.2	9.3	3.6	2.3
Cycle Q Clear(g_c), s	13.1	3.5	4.2	9.3	3.6	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1677	1275	109	2792	1687	753
V/C Ratio(X)	0.54	0.21	0.77	0.35	0.15	0.10
Avail Cap(c_a), veh/h	2034	1386	315	3987	1687	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	2.0	41.6	16.9	13.3	13.0
Incr Delay (d2), s/veh	0.3	0.1	10.8	0.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	5.3	2.4	4.1	1.8	1.1
LnGrp Delay(d),s/veh	24.9	2.1	52.4	17.0	13.5	13.3
LnGrp LOS	C	A	D	B	B	B
Approach Vol, veh/h	1168			1073	327	
Approach Delay, s/veh	19.7			19.8	13.5	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		46.8	9.5	33.7				43.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		26.0	16.0	36.0				56.0
Max Q Clear Time (g_c+I1), s		5.6	6.2	15.1				11.3
Green Ext Time (p_c), s		1.1	0.1	14.6				23.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	70	70	50	70	70	40	70	40	110	160	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	74	74	53	74	74	42	74	42	116	168	53
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	64	199	178	75	211	188	64	782	664	150	872	742
Arrive On Green	0.04	0.11	0.11	0.04	0.12	0.12	0.04	0.42	0.42	0.08	0.47	0.47
Sat Flow, veh/h	1774	1772	1581	1774	1772	1581	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	42	74	74	53	74	74	42	74	42	116	168	53
Grp Sat Flow(s),veh/h/ln	1774	1770	1584	1774	1770	1584	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.1	1.8	2.0	1.4	1.8	2.0	1.1	1.1	0.7	3.0	2.5	0.9
Cycle Q Clear(g_c), s	1.1	1.8	2.0	1.4	1.8	2.0	1.1	1.1	0.7	3.0	2.5	0.9
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	64	199	178	75	211	189	64	782	664	150	872	742
V/C Ratio(X)	0.66	0.37	0.42	0.70	0.35	0.39	0.66	0.09	0.06	0.77	0.19	0.07
Avail Cap(c_a), veh/h	189	603	539	227	640	573	189	782	664	340	872	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	22.4	19.3	19.4	22.2	19.0	19.1	22.4	8.2	8.1	21.1	7.3	6.9
Incr Delay (d2), s/veh	11.0	1.1	1.5	11.2	1.0	1.3	11.0	0.2	0.2	8.2	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.9	1.0	0.9	0.9	1.0	0.7	0.6	0.4	1.8	1.4	0.4
LnGrp Delay(d),s/veh	33.4	20.4	20.9	33.4	20.0	20.4	33.4	8.5	8.3	29.2	7.8	7.1
LnGrp LOS	C	C	C	C	C	C	C	A	A	C	A	A
Approach Vol, veh/h		190			201			158			337	
Approach Delay, s/veh		23.5			23.7			15.0			15.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	23.7	6.0	9.3	5.7	26.0	5.7	9.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	18.0	6.0	16.0	5.0	22.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	5.0	3.1	3.4	4.0	3.1	4.5	3.1	4.0
Green Ext Time (p_c), s	0.1	1.4	0.0	1.3	0.0	1.5	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	40	30	100	180	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	42	32	105	189	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	327	116	232	0	-	0
Stage 1	211	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	642	914	1333	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	626	914	1333	-	-	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	874	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1333	-	626	914	-	-
HCM Lane V/C Ratio	0.024	-	0.05	0.046	-	-
HCM Control Delay (s)	7.8	0.1	11.1	9.1	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	60	120	130	100	180	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	126	137	105	189	42
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	93	596	546	244	804	801
Arrive On Green	0.05	0.32	0.15	0.15	0.45	0.45
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	63	126	137	105	189	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.2	1.7	1.2	2.1	2.3	0.5
Cycle Q Clear(g_c), s	1.2	1.7	1.2	2.1	2.3	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	596	546	244	804	801
V/C Ratio(X)	0.68	0.21	0.25	0.43	0.23	0.05
Avail Cap(c_a), veh/h	302	1373	1605	718	804	801
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	16.4	8.8	13.1	13.5	5.9	4.4
Incr Delay (d2), s/veh	8.4	0.2	0.2	1.2	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	0.6	1.0	1.3	0.6
LnGrp Delay(d),s/veh	24.9	8.9	13.4	14.7	6.6	4.6
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		189	242		231	
Approach Delay, s/veh		14.2	14.0		6.2	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				15.3		20.0	5.8	9.4
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				3.7		4.3	3.2	4.1
Green Ext Time (p_c), s				1.9		0.5	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	220	1110	730	450	0	540
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	232	1168	676	536		
Adj No. of Lanes	1	3	2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	276	2883	1366	1161		
Arrive On Green	0.16	0.57	0.73	0.73		
Sat Flow, veh/h	1774	5253	3725	3167		
Grp Volume(v), veh/h	232	1168	676	536		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	11.4	11.6	6.8	6.1		
Cycle Q Clear(g_c), s	11.4	11.6	6.8	6.1		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	276	2883	1366	1161		
V/C Ratio(X)	0.84	0.41	0.49	0.46		
Avail Cap(c_a), veh/h	650	4859	2028	1724		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.96	0.96	0.95	0.95		
Uniform Delay (d), s/veh	36.9	11.0	8.5	8.4		
Incr Delay (d2), s/veh	6.5	0.1	0.3	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.1	5.4	3.4	2.6		
LnGrp Delay(d),s/veh	43.4	11.0	8.8	8.7		
LnGrp LOS	D	B	A	A		
Approach Vol, veh/h		1400	1212			
Approach Delay, s/veh		16.4	8.7			
Approach LOS		B	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				55.0			18.0	37.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				86.0			33.0	49.0
Max Q Clear Time (g_c+I1), s				13.6			13.4	8.8
Green Ext Time (p_c), s				32.0			0.6	24.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	410	200	130	770	370	0	0	0	350	0	490
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	189	432	211	137	811	0				368	0	516
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	254	1118	348	310	1278	398				1316	0	1175
Arrive On Green	0.14	0.22	0.22	0.18	0.25	0.00				0.37	0.00	0.37
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	189	432	211	137	811	0				368	0	516
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	5.2	3.7	6.1	3.5	7.3	0.0				3.7	0.0	6.3
Cycle Q Clear(g_c), s	5.2	3.7	6.1	3.5	7.3	0.0				3.7	0.0	6.3
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	254	1118	348	310	1278	398				1316	0	1175
V/C Ratio(X)	0.74	0.39	0.61	0.44	0.63	0.00				0.28	0.00	0.44
Avail Cap(c_a), veh/h	554	2184	680	416	1787	556				1316	0	1175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	17.0	18.0	18.9	17.1	0.0				11.3	0.0	12.1
Incr Delay (d2), s/veh	4.3	0.2	1.7	1.0	0.5	0.0				0.5	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	2.9	1.7	2.8	1.8	3.4	0.0				1.9	0.0	2.9
LnGrp Delay(d),s/veh	25.3	17.3	19.7	19.9	17.6	0.0				11.8	0.0	13.3
LnGrp LOS	C	B	B	B	B					B		B
Approach Vol, veh/h		832			948						884	
Approach Delay, s/veh		19.7			17.9						12.7	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			13.0	15.3		23.0	11.3	16.9
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			12.0	22.0		19.0	16.0	18.0
Max Q Clear Time (g_c+I1), s			5.5	8.1		8.3	7.2	9.3
Green Ext Time (p_c), s			0.5	3.1		2.8	0.6	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	340	20	150	60	120	0	20	230	140
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	1900	1863	1863
Adj Flow Rate, veh/h				358	21	0	63	126	0	21	242	147
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				453	27	426	429	1957	0	120	731	352
Arrive On Green				0.27	0.27	0.00	0.48	1.00	0.00	0.22	0.22	0.22
Sat Flow, veh/h				1680	99	1583	1774	3632	0	125	3288	1583
Grp Volume(v), veh/h				379	0	0	63	126	0	142	121	147
Grp Sat Flow(s),veh/h/ln				1779	0	1583	1774	1770	0	1803	1610	1583
Q Serve(g_s), s				8.9	0.0	0.0	0.9	0.0	0.0	0.0	2.8	3.6
Cycle Q Clear(g_c), s				8.9	0.0	0.0	0.9	0.0	0.0	2.9	2.8	3.6
Prop In Lane				0.94		1.00	1.00		0.00	0.15		1.00
Lane Grp Cap(c), veh/h				479	0	426	429	1957	0	492	358	352
V/C Ratio(X)				0.79	0.00	0.00	0.15	0.06	0.00	0.29	0.34	0.42
Avail Cap(c_a), veh/h				711	0	633	429	1957	0	492	358	352
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.97	0.97	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				15.3	0.0	0.0	9.0	0.0	0.0	14.7	14.7	15.0
Incr Delay (d2), s/veh				3.7	0.0	0.0	0.2	0.1	0.0	1.5	2.6	3.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	0.0	0.5	0.0	0.0	1.7	1.5	1.9
LnGrp Delay(d),s/veh				18.9	0.0	0.0	9.2	0.1	0.0	16.2	17.3	18.6
LnGrp LOS				B			A	A		B	B	B
Approach Vol, veh/h					379			189			410	
Approach Delay, s/veh					18.9			3.1			17.4	
Approach LOS					B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		28.9			14.9	14.0		16.1
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		19.0			5.0	10.0		18.0
Max Q Clear Time (g_c+I1), s		2.0			2.9	5.6		10.9
Green Ext Time (p_c), s		0.8			0.2	0.8		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	90	20	40	150	40	0	56	44	34	26	20	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.89			0.93	0.85		0.91			
Flt Protected	0.95		1.00			0.97	1.00		1.00			
Satd. Flow (prot)	1770		1655			1605	1504		3236			
Flt Permitted	0.95		0.43			0.97	1.00		1.00			
Satd. Flow (perm)	1770		715			1605	1504		3236			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	21	42	158	42	0	59	48	36	27	21	211
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	16	0	0	0
Lane Group Flow (vph)	95	0	221	0	0	77	72	0	68	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	29.9		29.9			6.0	6.0		22.1			
Effective Green, g (s)	29.9		29.9			6.0	6.0		22.1			
Actuated g/C Ratio	0.33		0.33			0.07	0.07		0.25			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	588		237			107	100		794			
v/s Ratio Prot	0.05					c0.05	0.05		c0.02			
v/s Ratio Perm			c0.31									
v/c Ratio	0.16		0.93			0.72	0.72		0.09			
Uniform Delay, d1	21.2		29.1			41.2	41.2		26.2			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.1		40.1			20.6	21.9		0.2			
Delay (s)	21.3		69.2			61.7	63.0		26.4			
Level of Service	C		E			E	E		C			
Approach Delay (s)			54.8			62.4			26.4			
Approach LOS			D			E			C			

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	80	300
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.99
Satd. Flow (prot)	1610	3358
Flt Permitted	0.95	0.99
Satd. Flow (perm)	1610	3358
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	84	316
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	219	392
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.18	0.18
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	286	596
v/s Ratio Prot	c0.14	0.12
v/s Ratio Perm		
v/c Ratio	0.77	0.66
Uniform Delay, d1	35.2	34.5
Progression Factor	0.85	0.86
Incremental Delay, d2	16.6	5.2
Delay (s)	46.7	34.7
Level of Service	D	C
Approach Delay (s)		39.0
Approach LOS		D

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	450	150	380	570	40	80	30	300	100	40	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	53	474	158	400	600	42	84	32	316	105	42	116
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	393	883	275	518	1068	427	207	574	726	207	574	488
Arrive On Green	0.11	0.17	0.17	0.15	0.21	0.21	0.06	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	53	474	158	400	600	42	84	32	316	105	42	116
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.7	4.4	3.5	5.8	5.5	0.5	1.2	0.6	7.0	1.5	0.8	2.8
Cycle Q Clear(g_c), s	0.7	4.4	3.5	5.8	5.5	0.5	1.2	0.6	7.0	1.5	0.8	2.8
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	393	883	275	518	1068	427	207	574	726	207	574	488
V/C Ratio(X)	0.13	0.54	0.57	0.77	0.56	0.10	0.41	0.06	0.44	0.51	0.07	0.24
Avail Cap(c_a), veh/h	393	1566	488	530	1957	705	265	574	726	265	574	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	19.6	10.8	21.2	18.4	4.9	23.5	12.7	9.5	23.7	12.7	13.4
Incr Delay (d2), s/veh	0.2	0.5	1.9	6.8	0.5	0.1	1.3	0.2	1.9	1.9	0.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	1.7	3.2	2.6	0.2	0.6	0.3	3.4	0.8	0.5	1.4
LnGrp Delay(d),s/veh	20.9	20.1	12.7	28.0	18.9	5.0	24.8	12.8	11.4	25.6	13.0	14.6
LnGrp LOS	C	C	B	C	B	A	C	B	B	C	B	B
Approach Vol, veh/h		685			1042			432			263	
Approach Delay, s/veh		18.4			21.8			14.1			18.7	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	20.0	11.8	13.0	7.1	20.0	9.9	14.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	3.5	9.0	7.8	6.4	3.2	4.8	2.7	7.5
Green Ext Time (p_c), s	0.0	1.0	0.0	2.6	0.2	0.4	0.5	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	430	120	180	530	40	100	20	130	50	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	453	126	189	558	42	105	21	137	53	87	68
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	114	880	372	305	1005	379	214	687	584	148	649	653
Arrive On Green	0.06	0.17	0.17	0.09	0.20	0.20	0.06	0.37	0.37	0.04	0.35	0.35
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	42	453	126	189	558	42	105	21	137	53	87	68
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.1	3.9	1.8	2.6	4.8	0.0	1.4	0.4	2.9	0.7	1.6	0.3
Cycle Q Clear(g_c), s	1.1	3.9	1.8	2.6	4.8	0.0	1.4	0.4	2.9	0.7	1.6	0.3
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	114	880	372	305	1005	379	214	687	584	148	649	653
V/C Ratio(X)	0.37	0.52	0.34	0.62	0.56	0.11	0.49	0.03	0.23	0.36	0.13	0.10
Avail Cap(c_a), veh/h	182	1667	617	423	1771	618	353	687	584	291	649	653
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	21.9	18.3	5.7	21.4	17.7	14.5	22.1	9.8	10.6	22.7	10.9	2.5
Incr Delay (d2), s/veh	2.0	0.5	0.5	2.0	0.5	0.1	1.7	0.1	0.9	1.5	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.9	1.0	1.3	2.3	0.4	0.7	0.2	1.4	0.4	0.9	0.3
LnGrp Delay(d),s/veh	23.9	18.8	6.2	23.5	18.1	14.6	23.9	9.9	11.6	24.2	11.3	2.8
LnGrp LOS	C	B	A	C	B	B	C	A	B	C	B	A
Approach Vol, veh/h		621			789			263			208	
Approach Delay, s/veh		16.6			19.2			16.4			11.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	22.0	8.3	12.4	7.0	21.0	7.1	13.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	2.7	4.9	4.6	5.9	3.4	3.6	3.1	6.8
Green Ext Time (p_c), s	0.1	0.4	0.1	2.5	0.0	0.7	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	250	0	170	150	270	0	0	170	70
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				221	59	179	158	284	0	0	179	74
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				325	75	226	193	1356	0	0	1422	566
Arrive On Green				0.18	0.18	0.18	0.22	1.00	0.00	0.00	0.57	0.57
Sat Flow, veh/h				1774	408	1237	1774	1863	0	0	2567	985
Grp Volume(v), veh/h				221	0	238	158	284	0	0	126	127
Grp Sat Flow(s),veh/h/ln				1774	0	1644	1774	1863	0	0	1770	1689
Q Serve(g_s), s				10.5	0.0	12.4	7.6	0.0	0.0	0.0	2.9	3.1
Cycle Q Clear(g_c), s				10.5	0.0	12.4	7.6	0.0	0.0	0.0	2.9	3.1
Prop In Lane				1.00		0.75	1.00		0.00	0.00		0.58
Lane Grp Cap(c), veh/h				325	0	301	193	1356	0	0	1017	971
V/C Ratio(X)				0.68	0.00	0.79	0.82	0.21	0.00	0.00	0.12	0.13
Avail Cap(c_a), veh/h				650	0	603	493	1356	0	0	1017	971
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.3	0.0	35.1	34.4	0.0	0.0	0.0	8.8	8.8
Incr Delay (d2), s/veh				2.5	0.0	4.6	8.2	0.4	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.3	0.0	6.0	4.1	0.1	0.0	0.0	1.5	1.5
LnGrp Delay(d),s/veh				36.8	0.0	39.8	42.6	0.4	0.0	0.0	9.0	9.1
LnGrp LOS				D		D	D	A			A	A
Approach Vol, veh/h					459			442			253	
Approach Delay, s/veh					38.3			15.5			9.0	
Approach LOS					D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		69.5			13.8	55.7		20.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		49.0			25.0	20.0		33.0
Max Q Clear Time (g_c+I1), s		2.0			9.6	5.1		14.4
Green Ext Time (p_c), s		3.6			0.4	2.8		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	0	50	0	0	0	0	260	190	100	320	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	168	0	53				0	274	200	105	337	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	220	0	197				0	2361	1056	134	2785	0
Arrive On Green	0.12	0.00	0.12				0.00	1.00	1.00	0.15	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	168	0	53				0	274	200	105	337	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	8.2	0.0	2.7				0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	8.2	0.0	2.7				0.0	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	220	0	197				0	2361	1056	134	2785	0
V/C Ratio(X)	0.76	0.00	0.27				0.00	0.12	0.19	0.79	0.12	0.00
Avail Cap(c_a), veh/h	532	0	475				0	2361	1056	394	2785	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.99	0.99	0.96	0.96	0.00
Uniform Delay (d), s/veh	38.1	0.0	35.7				0.0	0.0	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.0	0.7				0.0	0.1	0.4	9.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	1.2				0.0	0.0	0.1	2.9	0.0	0.0
LnGrp Delay(d),s/veh	43.5	0.0	36.4				0.0	0.1	0.4	46.8	0.1	0.0
LnGrp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		221						474			442	
Approach Delay, s/veh		41.8						0.2			11.2	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.8	64.0		15.2		74.8		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	20.0	31.0		27.0		55.0		
Max Q Clear Time (g_c+I1), s	7.1	2.0		10.2		2.0		
Green Ext Time (p_c), s	0.2	5.2		1.0		5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	40	110	60	60	40	150	380	60	20	260	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	74	42	116	63	63	42	158	400	63	21	274	84
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	96	95	1542	198	191	86	1501	3094	476	62	1413	440
Arrive On Green	0.05	0.05	0.05	0.06	0.05	0.05	0.14	0.23	0.23	0.01	0.09	0.09
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4448	684	3442	5085	1583
Grp Volume(v), veh/h	74	42	116	63	63	42	158	303	160	21	274	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1742	1721	1695	1583
Q Serve(g_s), s	3.7	2.0	0.0	1.6	1.5	2.3	3.6	6.4	6.6	0.5	4.5	3.5
Cycle Q Clear(g_c), s	3.7	2.0	0.0	1.6	1.5	2.3	3.6	6.4	6.6	0.5	4.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	96	95	1542	198	191	86	1501	2359	1212	62	1413	440
V/C Ratio(X)	0.77	0.44	0.08	0.32	0.33	0.49	0.11	0.13	0.13	0.34	0.19	0.19
Avail Cap(c_a), veh/h	315	538	2296	344	747	334	1501	2359	1212	268	1413	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	41.5	12.3	40.7	41.0	41.4	23.3	13.0	13.1	44.2	31.6	20.3
Incr Delay (d2), s/veh	12.0	3.2	0.0	0.9	1.0	4.3	0.0	0.1	0.2	3.1	0.3	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	2.1	1.1	0.8	0.8	0.8	1.1	1.7	3.0	3.2	0.3	2.1	1.7
LnGrp Delay(d),s/veh	54.0	44.7	12.3	41.6	42.0	45.7	23.3	13.1	13.3	47.3	31.9	21.2
LnGrp LOS	D	D	B	D	D	D	C	B	B	D	C	C
Approach Vol, veh/h		232			168			621			379	
Approach Delay, s/veh		31.5			42.8			15.8			30.4	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	66.6	9.2	8.6	43.2	29.0	8.9	8.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	32.0	9.0	26.0	14.0	25.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	2.5	8.6	3.6	4.0	5.6	6.5	5.7	4.3
Green Ext Time (p_c), s	0.0	3.6	0.3	0.6	2.3	1.9	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	0	90	80	100	220	200	340	0	0	260	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	32	0	95	84	105	232	211	358	0	0	274	168
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	142	177	277	773	3742	0	0	904	405
Arrive On Green	0.00	0.00	0.00	0.18	0.18	0.18	0.44	0.74	0.00	0.00	0.34	0.34
Sat Flow, veh/h		0		810	1012	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		189	0	232	211	358	0	0	274	168
Grp Sat Flow(s),veh/h/ln				1822	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				8.6	0.0	12.7	6.9	1.8	0.0	0.0	5.1	7.3
Cycle Q Clear(g_c), s				8.6	0.0	12.7	6.9	1.8	0.0	0.0	5.1	7.3
Prop In Lane				0.44		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				319	0	277	773	3742	0	0	904	405
V/C Ratio(X)				0.59	0.00	0.84	0.27	0.10	0.00	0.00	0.30	0.42
Avail Cap(c_a), veh/h				425	0	369	773	3742	0	0	904	405
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	35.9	16.3	3.4	0.0	0.0	23.8	24.5
Incr Delay (d2), s/veh				1.8	0.0	11.9	0.2	0.1	0.0	0.0	0.9	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
%ile BackOfQ(50%),veh/ln				4.5	0.0	6.5	3.4	0.8	0.0	0.0	2.6	3.6
LnGrp Delay(d),s/veh				35.9	0.0	47.8	16.4	3.4	0.0	0.0	24.7	27.6
LnGrp LOS				D		D	B	A			C	C
Approach Vol, veh/h					421			569			442	
Approach Delay, s/veh					42.4			8.3			25.8	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		70.2			43.2	27.0		19.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		50.0			23.0	23.0		21.0
Max Q Clear Time (g_c+I1), s		3.8			8.9	9.3		14.7
Green Ext Time (p_c), s		3.3			2.6	1.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	260	990	280	50	670	70	130	50	80	40	30	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	274	1042	295	53	705	74	137	53	84	42	32	158
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	544	1888	821	112	1084	268	862	823	736	53	455	681
Arrive On Green	0.32	0.59	0.59	0.03	0.17	0.17	0.25	0.47	0.47	0.03	0.24	0.24
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	274	1042	295	53	705	74	137	53	84	42	32	158
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	5.8	8.9	2.6	1.4	9.2	3.1	2.8	1.5	2.7	2.1	1.2	4.1
Cycle Q Clear(g_c), s	5.8	8.9	2.6	1.4	9.2	3.1	2.8	1.5	2.7	2.1	1.2	4.1
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	544	1888	821	112	1084	268	862	823	736	53	455	681
V/C Ratio(X)	0.50	0.55	0.36	0.47	0.65	0.28	0.16	0.06	0.11	0.79	0.07	0.23
Avail Cap(c_a), veh/h	688	2492	1084	229	1638	405	862	823	736	197	455	681
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)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	14.9	3.8	42.8	34.9	23.9	26.3	13.3	13.6	43.4	26.1	27.2
Incr Delay (d2), s/veh	0.6	0.2	0.2	3.1	0.7	0.6	0.1	0.2	0.3	22.4	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	2.8	3.8	1.0	0.7	4.1	1.4	1.3	0.8	1.2	1.4	0.7	1.7
LnGrp Delay(d),s/veh	28.5	15.1	4.0	45.8	35.6	24.5	26.4	13.4	13.9	65.8	26.4	28.0
LnGrp LOS	C	B	A	D	D	C	C	B	B	E	C	C
Approach Vol, veh/h		1611			832			274			232	
Approach Delay, s/veh		15.3			35.2			20.1			34.6	
Approach LOS		B			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	45.9	6.9	30.5	26.5	26.0	18.2	19.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	23.0	6.0	35.0	11.0	22.0	18.0	23.0
Max Q Clear Time (g_c+I1), s	4.1	4.7	3.4	10.9	4.8	6.1	7.8	11.2
Green Ext Time (p_c), s	0.0	1.2	0.0	10.9	0.3	0.6	6.4	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	180	1520	680	290	520	520
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	189	1600	716	305	547	547
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	272	2853	2061	2195	2331	1298
Arrive On Green	0.08	0.45	0.32	0.32	0.47	0.47
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	189	1600	716	305	547	547
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	4.8	16.6	7.7	2.3	5.9	11.7
Cycle Q Clear(g_c), s	4.8	16.6	7.7	2.3	5.9	11.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	272	2853	2061	2195	2331	1298
V/C Ratio(X)	0.69	0.56	0.35	0.14	0.23	0.42
Avail Cap(c_a), veh/h	574	3346	2061	2195	2331	1298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	40.4	18.5	23.3	2.3	14.4	16.0
Incr Delay (d2), s/veh	3.0	0.2	0.1	0.0	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.4	3.4	2.9	2.7	10.6
LnGrp Delay(d),s/veh	43.4	18.6	23.4	2.3	14.6	17.0
LnGrp LOS	D	B	C	A	B	B
Approach Vol, veh/h		1789	1021		1094	
Approach Delay, s/veh		21.2	17.1		15.8	
Approach LOS		C	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				44.1		45.9	11.1	33.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				47.0		35.0	15.0	28.0
Max Q Clear Time (g_c+I1), s				18.6		13.7	6.8	9.7
Green Ext Time (p_c), s				21.4		4.6	0.4	15.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	390	20	450	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	411	21	474	337
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1537	216			432	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1537	216			432	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			58	
cM capacity (veh/h)	62	789			1124	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	274	158	474	168	168
Volume Left	0	0	474	0	0
Volume Right	0	21	0	0	0
cSH	1700	1700	1124	1700	1700
Volume to Capacity	0.16	0.09	0.42	0.10	0.10
Queue Length 95th (ft)	0	0	53	0	0
Control Delay (s)	0.0	0.0	10.5	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		6.1		
Approach LOS					

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	450	300	280	600	320	300	30	400	230	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	474	316	295	632	337	316	32	421	242	21	95
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	204	1206	645	442	1308	717	755	374	917	434	200	170
Arrive On Green	0.06	0.19	0.19	0.13	0.26	0.26	0.22	0.20	0.20	0.13	0.11	0.11
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	63	474	316	295	632	337	316	32	421	242	21	95
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	0.8	2.9	2.4	3.7	4.7	4.6	3.5	0.6	2.2	3.0	0.5	2.6
Cycle Q Clear(g_c), s	0.8	2.9	2.4	3.7	4.7	4.6	3.5	0.6	2.2	3.0	0.5	2.6
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	204	1206	645	442	1308	717	755	374	917	434	200	170
V/C Ratio(X)	0.31	0.39	0.49	0.67	0.48	0.47	0.42	0.09	0.46	0.56	0.11	0.56
Avail Cap(c_a), veh/h	307	2285	912	614	2267	1242	755	374	917	1228	706	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	16.0	2.4	18.6	14.1	14.1	15.0	14.6	3.3	18.4	18.1	19.0
Incr Delay (d2), s/veh	0.8	0.2	0.6	1.7	0.3	0.5	1.7	0.5	1.7	1.1	0.2	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	0.4	1.3	1.5	1.8	2.2	1.8	1.8	0.4	1.3	1.5	0.2	1.2
LnGrp Delay(d),s/veh	21.1	16.2	3.0	20.4	14.4	14.6	16.8	15.0	4.9	19.6	18.3	21.9
LnGrp LOS	C	B	A	C	B	B	B	B	A	B	B	C
Approach Vol, veh/h		853			1264			769			358	
Approach Delay, s/veh		11.6			15.8			10.2			20.1	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	13.0	9.8	12.4	13.8	8.8	6.7	15.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	9.0	8.0	16.0	8.0	17.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	5.0	4.2	5.7	4.9	5.5	4.6	2.8	6.7
Green Ext Time (p_c), s	0.7	0.9	0.2	3.5	0.6	0.3	0.6	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	940	220	250	690	230	320
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	989	0	263	726	242	337
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1991	620	424	3081	375	933
Arrive On Green	0.39	0.00	0.12	0.61	0.21	0.21
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	989	0	263	726	242	337
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	6.4	0.0	3.2	2.9	5.5	4.0
Cycle Q Clear(g_c), s	6.4	0.0	3.2	2.9	5.5	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1991	620	424	3081	375	933
V/C Ratio(X)	0.50	0.00	0.62	0.24	0.64	0.36
Avail Cap(c_a), veh/h	2436	759	864	4177	850	1678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	0.0	18.2	4.0	15.8	11.0
Incr Delay (d2), s/veh	0.2	0.0	1.5	0.0	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.6	1.4	2.8	1.5
LnGrp Delay(d),s/veh	10.3	0.0	19.7	4.0	17.6	11.3
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	989			989	579	
Approach Delay, s/veh	10.3			8.2	13.9	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.3	9.4	21.2				30.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	11.0	21.0				36.0
Max Q Clear Time (g_c+I1), s		7.5	5.2	8.4				4.9
Green Ext Time (p_c), s		1.8	0.4	8.7				15.7

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	80	80	70	60	40	50	570	90	30	490	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	84	84	74	63	42	53	600	95	32	516	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	123	123	97	144	96	73	1433	226	39	1454	149
Arrive On Green	0.06	0.14	0.14	0.05	0.14	0.14	0.04	0.47	0.47	0.02	0.45	0.45
Sat Flow, veh/h	1774	856	856	1774	1044	696	1774	3063	484	1774	3242	332
Grp Volume(v), veh/h	84	0	168	74	0	105	53	346	349	32	281	288
Grp Sat Flow(s),veh/h/ln	1774	0	1712	1774	0	1740	1774	1770	1777	1774	1770	1804
Q Serve(g_s), s	2.4	0.0	4.8	2.1	0.0	2.8	1.5	6.6	6.7	0.9	5.3	5.4
Cycle Q Clear(g_c), s	2.4	0.0	4.8	2.1	0.0	2.8	1.5	6.6	6.7	0.9	5.3	5.4
Prop In Lane	1.00		0.50	1.00		0.40	1.00		0.27	1.00		0.18
Lane Grp Cap(c), veh/h	108	0	246	97	0	240	73	828	831	39	794	809
V/C Ratio(X)	0.78	0.00	0.68	0.76	0.00	0.44	0.72	0.42	0.42	0.81	0.35	0.36
Avail Cap(c_a), veh/h	311	0	600	242	0	542	207	828	831	173	794	809
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	23.8	0.0	20.9	23.9	0.0	20.3	24.3	9.0	9.0	25.0	9.3	9.3
Incr Delay (d2), s/veh	11.6	0.0	3.3	11.7	0.0	1.3	12.6	1.6	1.6	31.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	2.5	1.3	0.0	1.5	1.0	3.5	3.6	0.8	2.8	2.9
LnGrp Delay(d),s/veh	35.3	0.0	24.2	35.6	0.0	21.6	36.9	10.6	10.6	56.3	10.5	10.5
LnGrp LOS	D		C	D		C	D	B	B	E	B	B
Approach Vol, veh/h		252			179			748			601	
Approach Delay, s/veh		27.9			27.4			12.5			13.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	28.0	6.8	11.4	6.1	27.0	7.1	11.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	24.0	7.0	18.0	6.0	23.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	2.9	8.7	4.1	6.8	3.5	7.4	4.4	4.8
Green Ext Time (p_c), s	0.4	3.9	0.2	0.6	0.0	3.2	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	120	100	50	90	20	110	80	80	20	80	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	126	105	53	95	21	116	84	84	21	84	53
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	269	428	206	325	76	151	466	466	33	511	323
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.09	0.54	0.54	0.02	0.48	0.48
Sat Flow, veh/h	278	1455	1583	454	1756	412	1774	856	856	1774	1069	675
Grp Volume(v), veh/h	168	0	105	86	0	83	116	0	168	21	0	137
Grp Sat Flow(s),veh/h/ln	1733	0	1583	1000	0	1622	1774	0	1712	1774	0	1744
Q Serve(g_s), s	1.0	0.0	2.5	1.1	0.0	2.1	3.1	0.0	2.4	0.6	0.0	2.1
Cycle Q Clear(g_c), s	4.0	0.0	2.5	5.1	0.0	2.1	3.1	0.0	2.4	0.6	0.0	2.1
Prop In Lane	0.25		1.00	0.61		0.25	1.00		0.50	1.00		0.39
Lane Grp Cap(c), veh/h	415	0	428	307	0	300	151	0	933	33	0	834
V/C Ratio(X)	0.40	0.00	0.25	0.28	0.00	0.28	0.77	0.00	0.18	0.64	0.00	0.16
Avail Cap(c_a), veh/h	736	0	732	565	0	612	409	0	933	149	0	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	13.6	17.6	0.0	16.7	21.4	0.0	5.5	23.3	0.0	7.0
Incr Delay (d2), s/veh	0.6	0.0	0.3	0.5	0.0	0.5	7.9	0.0	0.4	18.5	0.0	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	2.0	0.0	1.1	1.1	0.0	1.0	1.8	0.0	1.2	0.4	0.0	1.1
LnGrp Delay(d),s/veh	18.1	0.0	13.9	18.1	0.0	17.2	29.3	0.0	5.9	41.7	0.0	7.5
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		273			169			284			158	
Approach Delay, s/veh		16.5			17.6			15.4			12.0	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	30.0		12.8	8.1	26.8		12.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	26.0		18.0	11.0	19.0		18.0
Max Q Clear Time (g_c+I1), s	2.6	4.4		6.0	5.1	4.1		7.1
Green Ext Time (p_c), s	0.0	0.9		1.9	0.1	0.6		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	400	110	10	40	500	590	160	90	610	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	494	116	11	42	526	621	168	95	642	63
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	339	576	145	14	53	932	1178	318	121	733	72
Arrive On Green	0.00	0.00	0.18	0.12	0.12	0.12	0.45	0.71	0.71	0.07	0.22	0.22
Sat Flow, veh/h	0	1863	3167	1186	112	429	3442	2756	745	1774	3257	319
Grp Volume(v), veh/h	0	0	494	169	0	0	526	398	391	95	348	357
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1728	0	0	1721	1770	1731	1774	1770	1806
Q Serve(g_s), s	0.0	0.0	12.1	7.6	0.0	0.0	9.0	8.3	8.3	4.2	15.2	15.2
Cycle Q Clear(g_c), s	0.0	0.0	12.1	7.6	0.0	0.0	9.0	8.3	8.3	4.2	15.2	15.2
Prop In Lane	0.00		1.00	0.69		0.25	1.00		0.43	1.00		0.18
Lane Grp Cap(c), veh/h	0	339	576	212	0	0	932	756	740	121	398	406
V/C Ratio(X)	0.00	0.00	0.86	0.80	0.00	0.00	0.56	0.53	0.53	0.78	0.88	0.88
Avail Cap(c_a), veh/h	0	373	633	346	0	0	932	756	740	155	398	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	31.7	34.1	0.0	0.0	18.5	7.8	7.8	36.7	29.9	29.9
Incr Delay (d2), s/veh	0.0	0.0	10.6	6.8	0.0	0.0	0.5	1.8	1.8	17.7	22.6	22.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.1	4.0	0.0	0.0	4.3	4.2	4.2	2.7	9.9	10.2
LnGrp Delay(d),s/veh	0.0	0.0	42.4	40.9	0.0	0.0	19.0	9.5	9.6	54.4	52.5	52.4
LnGrp LOS			D	D			B	A	A	D	D	D
Approach Vol, veh/h		494			169			1315			800	
Approach Delay, s/veh		42.4			40.9			13.3			52.7	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	38.2		18.5	25.7	22.0		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	25.0		16.0	14.0	18.0		16.0
Max Q Clear Time (g_c+I1), s	6.2	10.3		14.1	11.0	17.2		9.6
Green Ext Time (p_c), s	0.0	6.3		0.4	1.7	0.4		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	60	620	490	140	310	240	790	110	40	1040	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	84	92	653	546	268	217	253	832	116	42	1095	95
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	355	373	495	661	347	343	200	1196	167	104	1066	477
Arrive On Green	0.20	0.20	0.20	0.19	0.19	0.19	0.11	0.38	0.38	0.03	0.30	0.30
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3121	435	3442	3539	1583
Grp Volume(v), veh/h	84	92	653	546	268	217	253	472	476	42	1095	95
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1786	1721	1770	1583
Q Serve(g_s), s	3.2	3.3	16.0	11.8	10.9	10.0	9.0	17.9	17.9	1.0	24.1	3.6
Cycle Q Clear(g_c), s	3.2	3.3	16.0	11.8	10.9	10.0	9.0	17.9	17.9	1.0	24.1	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	355	373	495	661	347	343	200	678	685	104	1066	477
V/C Ratio(X)	0.24	0.25	1.32	0.83	0.77	0.63	1.27	0.70	0.70	0.40	1.03	0.20
Avail Cap(c_a), veh/h	355	373	495	710	373	365	200	678	685	215	1066	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	0.58	0.58	0.58
Uniform Delay (d), s/veh	26.9	26.9	27.5	31.3	30.9	28.4	35.5	20.7	20.7	38.1	28.0	20.8
Incr Delay (d2), s/veh	0.3	0.3	157.6	7.5	9.0	3.2	153.9	5.8	5.8	1.5	28.4	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	1.6	1.7	32.5	6.5	6.5	4.6	12.9	9.7	9.8	0.5	15.9	1.6
LnGrp Delay(d),s/veh	27.2	27.3	185.1	38.8	40.0	31.7	189.4	26.6	26.5	39.5	56.3	21.3
LnGrp LOS	C	C	F	D	D	C	F	C	C	D	F	C
Approach Vol, veh/h		829			1031			1201			1232	
Approach Delay, s/veh		151.6			37.6			60.8			53.0	
Approach LOS		F			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	34.7		20.0	13.0	28.1		18.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	27.0		16.0	9.0	23.0		16.0
Max Q Clear Time (g_c+I1), s	3.0	19.9		18.0	11.0	26.1		13.8
Green Ext Time (p_c), s	0.0	6.0		0.0	0.0	0.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	70.5
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	690	1670	30	0	440	1050	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	726	1758		0	463	1105	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1901	1994		0	1376	1977	0
Arrive On Green	0.55	0.55		0.00	0.39	0.39	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	726	1758		0	463	1105	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	16.3	57.9		0.0	12.5	23.1	0.0
Cycle Q Clear(g_c), s	16.3	57.9		0.0	12.5	23.1	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1901	1994		0	1376	1977	0
V/C Ratio(X)	0.38	0.88		0.00	0.34	0.56	0.00
Avail Cap(c_a), veh/h	2247	2357		0	1376	1977	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	26.6		0.0	29.3	32.5	0.0
Incr Delay (d2), s/veh	0.1	3.8		0.0	0.7	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	32.8		0.0	6.2	11.1	0.0
LnGrp Delay(d),s/veh	17.4	30.4		0.0	29.9	33.7	0.0
LnGrp LOS	B	C			C	C	
Approach Vol, veh/h	2484				463	1105	
Approach Delay, s/veh	26.6				29.9	33.7	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		57.0		79.3		57.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		53.0		89.0		43.0		
Max Q Clear Time (g_c+I1), s		14.5		59.9		25.1		
Green Ext Time (p_c), s		15.5		15.4		10.4		

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1270	440	110	1280	310	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1337	463	116	1347	326	105
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1834	1152	218	3417	1301	581
Arrive On Green	0.36	0.36	0.12	0.53	0.37	0.37
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1337	463	116	1347	326	105
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	18.2	9.0	4.9	9.9	5.1	3.6
Cycle Q Clear(g_c), s	18.2	9.0	4.9	9.9	5.1	3.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1834	1152	218	3417	1301	581
V/C Ratio(X)	0.73	0.40	0.53	0.39	0.25	0.18
Avail Cap(c_a), veh/h	2098	1234	266	3925	1301	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	4.2	32.9	11.0	17.7	17.2
Incr Delay (d2), s/veh	1.1	0.2	2.0	0.1	0.5	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	9.2	2.5	4.4	2.6	1.7
LnGrp Delay(d),s/veh	23.2	4.4	35.0	11.1	18.1	17.9
LnGrp LOS	C	A	C	B	B	B
Approach Vol, veh/h	1800			1463	431	
Approach Delay, s/veh	18.4			13.0	18.1	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		33.3	13.8	32.8				46.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		23.0	12.0	33.0				49.0
Max Q Clear Time (g_c+I1), s		7.1	6.9	20.2				11.9
Green Ext Time (p_c), s		1.4	3.7	8.6				13.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	100	90	50	80	120	70	160	80	150	160	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	74	105	95	53	84	126	74	168	84	158	168	84
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	93	301	249	75	271	243	93	633	538	202	748	635
Arrive On Green	0.05	0.16	0.16	0.04	0.15	0.15	0.05	0.34	0.34	0.11	0.40	0.40
Sat Flow, veh/h	1774	1842	1521	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	74	100	100	53	84	126	74	168	84	158	168	84
Grp Sat Flow(s),veh/h/ln	1774	1770	1594	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.9	2.4	2.6	1.4	2.0	3.4	1.9	3.1	1.7	4.1	2.8	1.6
Cycle Q Clear(g_c), s	1.9	2.4	2.6	1.4	2.0	3.4	1.9	3.1	1.7	4.1	2.8	1.6
Prop In Lane	1.00		0.95	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	289	261	75	271	243	93	633	538	202	748	635
V/C Ratio(X)	0.79	0.35	0.38	0.70	0.31	0.52	0.79	0.27	0.16	0.78	0.22	0.13
Avail Cap(c_a), veh/h	151	602	542	151	602	538	226	633	538	302	748	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	17.5	17.6	22.2	17.7	18.3	22.0	11.3	10.8	20.3	9.3	8.9
Incr Delay (d2), s/veh	13.8	0.7	0.9	11.3	0.6	1.7	13.8	1.0	0.6	7.5	0.7	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	1.3	1.2	1.2	0.9	1.0	1.6	1.3	1.8	0.8	2.4	1.5	0.8
LnGrp Delay(d),s/veh	35.8	18.2	18.5	33.5	18.4	20.0	35.8	12.3	11.4	27.7	10.0	9.3
LnGrp LOS	D	B	B	C	B	C	D	B	B	C	A	A
Approach Vol, veh/h		274			263			326			410	
Approach Delay, s/veh		23.1			22.2			17.4			16.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	20.0	6.0	11.7	6.5	22.9	6.5	11.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	16.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	6.1	5.1	3.4	4.6	3.9	4.8	3.9	5.4
Green Ext Time (p_c), s	0.1	1.9	0.0	1.9	0.0	2.1	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	40	40	200	270	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	42	42	211	284	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	500	168	337	0	-	0
Stage 1	311	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	500	847	1219	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	481	847	1219	-	-	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1219	-	481	847	-	-
HCM Lane V/C Ratio	0.035	-	0.088	0.05	-	-
HCM Control Delay (s)	8.1	0.1	13.2	9.5	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0.2	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	90	230	160	160	190	100
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	242	168	168	200	105
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	123	639	678	303	874	890
Arrive On Green	0.07	0.34	0.19	0.19	0.49	0.49
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	95	242	168	168	200	105
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.6	4.8	2.0	4.7	3.1	1.5
Cycle Q Clear(g_c), s	2.6	4.8	2.0	4.7	3.1	1.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	123	639	678	303	874	890
V/C Ratio(X)	0.77	0.38	0.25	0.55	0.23	0.12
Avail Cap(c_a), veh/h	473	1453	1525	682	874	890
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	22.3	12.1	16.7	17.8	7.1	5.0
Incr Delay (d2), s/veh	9.6	0.4	0.2	1.6	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.5	1.0	2.1	1.6	2.1
LnGrp Delay(d),s/veh	31.9	12.4	16.9	19.4	7.7	5.3
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		337	336		305	
Approach Delay, s/veh		17.9	18.1		6.9	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				20.7		28.0	7.4	13.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				38.0		24.0	13.0	21.0
Max Q Clear Time (g_c+I1), s				6.8		5.1	4.6	6.7
Green Ext Time (p_c), s				3.3		0.9	0.1	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	700	1730	1080	500	0	620
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	737	1821	1302	416		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	893	4455	1803	511		
Arrive On Green	0.50	0.88	0.65	0.65		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	737	1821	1302	416		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	28.2	5.5	12.4	15.7		
Cycle Q Clear(g_c), s	28.2	5.5	12.4	15.7		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	893	4455	1803	511		
V/C Ratio(X)	0.83	0.41	0.72	0.81		
Avail Cap(c_a), veh/h	931	4831	2096	594		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.76	0.76	0.94	0.94		
Uniform Delay (d), s/veh	16.9	1.0	11.8	12.4		
Incr Delay (d2), s/veh	4.6	0.0	1.0	7.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	14.9	2.5	6.2	7.5		
LnGrp Delay(d),s/veh	21.5	1.0	12.8	19.5		
LnGrp LOS	C	A	B	B		
Approach Vol, veh/h		2558	1718			
Approach Delay, s/veh		6.9	14.4			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				74.1			44.3	29.8
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				76.0			42.0	30.0
Max Q Clear Time (g_c+I1), s				7.5			30.2	17.7
Green Ext Time (p_c), s				35.6			10.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	530	1250	530	220	1050	440	0	0	0	510	10	560
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	558	1316	558	232	1105	0				545	0	589
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	612	2233	695	299	1338	416				952	0	850
Arrive On Green	0.34	0.44	0.44	0.17	0.26	0.00				0.27	0.00	0.27
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	558	1316	558	232	1105	0				545	0	589
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	29.1	19.0	29.6	12.1	19.8	0.0				12.9	0.0	16.2
Cycle Q Clear(g_c), s	29.1	19.0	29.6	12.1	19.8	0.0				12.9	0.0	16.2
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	612	2233	695	299	1338	416				952	0	850
V/C Ratio(X)	0.91	0.59	0.80	0.78	0.83	0.00				0.57	0.00	0.69
Avail Cap(c_a), veh/h	805	2571	801	421	1469	457				952	0	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	30.3	20.6	23.5	38.5	33.6	0.0				30.7	0.0	31.9
Incr Delay (d2), s/veh	12.1	0.3	5.2	5.8	3.7	0.0				2.5	0.0	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
%ile BackOfQ(50%),veh/ln	16.3	9.0	13.9	6.4	9.8	0.0				6.6	0.0	7.6
LnGrp Delay(d),s/veh	42.5	20.8	28.8	44.3	37.4	0.0				33.2	0.0	36.5
LnGrp LOS	D	C	C	D	D					C		D
Approach Vol, veh/h		2432			1337						1134	
Approach Delay, s/veh		27.6			38.6						34.9	
Approach LOS		C			D						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			20.4	46.6		30.0	37.4	29.5
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			23.0	49.0		26.0	44.0	28.0
Max Q Clear Time (g_c+I1), s			14.1	31.6		18.2	31.1	21.8
Green Ext Time (p_c), s			1.9	11.0		3.0	2.3	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	100	0	250	190	240	0	10	270	170
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	1900	1863	1863
Adj Flow Rate, veh/h				105	0	0	200	253	0	11	284	179
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	2	2	2
Cap, veh/h				141	0	126	835	2904	0	61	1020	475
Arrive On Green				0.08	0.00	0.00	0.94	1.00	0.00	0.30	0.30	0.30
Sat Flow, veh/h				1774	0	1583	1774	3632	0	44	3399	1583
Grp Volume(v), veh/h				105	0	0	200	253	0	158	137	179
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	1833	1610	1583
Q Serve(g_s), s				4.6	0.0	0.0	0.7	0.0	0.0	0.0	5.2	7.1
Cycle Q Clear(g_c), s				4.6	0.0	0.0	0.7	0.0	0.0	5.2	5.2	7.1
Prop In Lane				1.00		1.00	1.00		0.00	0.07		1.00
Lane Grp Cap(c), veh/h				141	0	126	835	2904	0	598	483	475
V/C Ratio(X)				0.75	0.00	0.00	0.24	0.09	0.00	0.26	0.28	0.38
Avail Cap(c_a), veh/h				488	0	435	835	2904	0	598	483	475
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.84	0.84	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				36.0	0.0	0.0	1.3	0.0	0.0	21.4	21.4	22.1
Incr Delay (d2), s/veh				7.6	0.0	0.0	0.1	0.0	0.0	1.1	1.5	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	0.0	0.0	0.3	0.0	0.0	2.9	2.5	3.4
LnGrp Delay(d),s/veh				43.6	0.0	0.0	1.4	0.0	0.0	22.5	22.9	24.4
LnGrp LOS				D			A	A		C	C	C
Approach Vol, veh/h					105			453			474	
Approach Delay, s/veh					43.6			0.6			23.3	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		69.6			41.6	28.0		10.4
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		50.0			22.0	24.0		22.0
Max Q Clear Time (g_c+I1), s		2.0			2.7	9.1		6.6
Green Ext Time (p_c), s		2.4			2.1	2.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	220	10	74	56	30	0	57	83	153	227	40	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.94			0.91	0.85		0.90			
Flt Protected	0.95		1.00			0.98	1.00		1.00			
Satd. Flow (prot)	1770		1745			1574	1504		3202			
Flt Permitted	0.95		0.47			0.98	1.00		1.00			
Satd. Flow (perm)	1770		816			1574	1504		3202			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	11	78	59	32	0	60	90	161	239	42	232
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	232	0	148	0	0	86	96	0	433	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	17.0		17.0			7.3	7.3		22.7			
Effective Green, g (s)	17.0		17.0			7.3	7.3		22.7			
Actuated g/C Ratio	0.21		0.21			0.09	0.09		0.28			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	376		173			143	137		908			
v/s Ratio Prot	0.13					0.05	c0.06		c0.14			
v/s Ratio Perm			c0.18									
v/c Ratio	0.62		0.86			0.60	0.70		0.48			
Uniform Delay, d1	28.5		30.3			35.0	35.3		23.7			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	3.0		31.5			6.9	15.0		1.8			
Delay (s)	31.6		61.8			41.9	50.2		25.5			
Level of Service	C		E			D	D		C			
Approach Delay (s)			43.4			46.3			25.5			
Approach LOS			D			D			C			

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	86	64
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3299
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3299
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	91	67
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	241	149
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	17.0	17.0
Effective Green, g (s)	17.0	17.0
Actuated g/C Ratio	0.21	0.21
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	342	701
v/s Ratio Prot	c0.15	0.05
v/s Ratio Perm		
v/c Ratio	0.70	0.21
Uniform Delay, d1	29.2	26.0
Progression Factor	0.54	0.49
Incremental Delay, d2	11.4	0.7
Delay (s)	27.2	13.5
Level of Service	C	B
Approach Delay (s)		21.9
Approach LOS		C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	1340	270	720	950	120	230	40	760	80	40	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	1411	284	758	1000	126	242	42	800	84	42	116
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	159	1725	537	1132	3162	1046	302	289	767	133	198	168
Arrive On Green	0.05	0.34	0.34	0.33	0.62	0.62	0.09	0.16	0.16	0.04	0.11	0.11
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	105	1411	284	758	1000	126	242	42	800	84	42	116
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.5	29.4	12.8	22.0	10.7	3.4	8.0	2.3	10.5	2.8	2.4	8.2
Cycle Q Clear(g_c), s	3.5	29.4	12.8	22.0	10.7	3.4	8.0	2.3	10.5	2.8	2.4	8.2
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	159	1725	537	1132	3162	1046	302	289	767	133	198	168
V/C Ratio(X)	0.66	0.82	0.53	0.67	0.32	0.12	0.80	0.15	1.04	0.63	0.21	0.69
Avail Cap(c_a), veh/h	238	1887	588	1723	4082	1332	356	289	767	149	198	168
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	54.4	35.0	17.9	33.5	10.3	7.3	51.9	42.3	16.7	54.9	47.3	49.9
Incr Delay (d2), s/veh	4.6	2.7	0.8	0.7	0.1	0.1	10.7	1.1	44.4	7.1	2.4	20.7
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	14.2	6.0	10.5	5.0	1.5	4.2	1.3	30.1	1.5	1.4	4.6
LnGrp Delay(d),s/veh	59.0	37.8	18.8	34.2	10.4	7.3	62.6	43.3	61.1	62.0	49.8	70.6
LnGrp LOS	E	D	B	C	B	A	E	D	F	E	D	E
Approach Vol, veh/h		1800			1884			1084			242	
Approach Delay, s/veh		36.0			19.7			60.7			64.0	
Approach LOS		D			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	22.0	42.1	43.3	14.2	16.3	9.3	76.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	58.0	43.0	12.0	11.0	8.0	93.0
Max Q Clear Time (g_c+I1), s	4.8	12.5	24.0	31.4	10.0	10.2	5.5	12.7
Green Ext Time (p_c), s	0.0	2.3	14.1	7.9	0.2	0.4	0.1	17.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1200	430	300	860	60	340	50	450	60	40	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	1263	453	316	905	63	358	53	474	63	89	74
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	147	1471	718	398	1637	567	565	694	590	128	455	519
Arrive On Green	0.08	0.29	0.29	0.12	0.32	0.32	0.16	0.37	0.37	0.04	0.24	0.24
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	116	1263	453	316	905	63	358	53	474	63	89	74
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.5	20.2	5.6	7.7	12.6	2.3	8.3	1.6	23.0	1.5	3.3	1.6
Cycle Q Clear(g_c), s	5.5	20.2	5.6	7.7	12.6	2.3	8.3	1.6	23.0	1.5	3.3	1.6
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	147	1471	718	398	1637	567	565	694	590	128	455	519
V/C Ratio(X)	0.79	0.86	0.63	0.79	0.55	0.11	0.63	0.08	0.80	0.49	0.20	0.14
Avail Cap(c_a), veh/h	248	1539	739	481	1637	567	601	694	590	165	455	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	28.9	6.7	37.0	24.0	18.4	33.5	17.4	24.1	40.6	25.7	8.1
Incr Delay (d2), s/veh	9.0	5.0	1.7	7.4	0.4	0.1	2.0	0.2	11.1	2.9	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	10.0	4.6	4.1	5.9	1.0	4.1	0.9	11.8	0.8	1.8	0.9
LnGrp Delay(d),s/veh	47.6	33.8	8.3	44.4	24.4	18.5	35.5	17.6	35.2	43.5	26.7	8.7
LnGrp LOS	D	C	A	D	C	B	D	B	D	D	C	A
Approach Vol, veh/h		1832			1284			885			226	
Approach Delay, s/veh		28.4			29.0			34.3			25.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	36.0	13.9	28.8	18.1	25.0	11.1	31.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	32.0	12.0	26.0	15.0	21.0	12.0	26.0
Max Q Clear Time (g_c+I1), s	3.5	25.0	9.7	22.2	10.3	5.3	7.5	14.6
Green Ext Time (p_c), s	0.0	2.2	0.3	2.7	1.6	0.6	0.1	10.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	750	0	20	260	640	0	0	10	560
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				809	0	0	274	674	0	0	11	589
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				964	506	0	649	1170	0	0	376	336
Arrive On Green				0.27	0.00	0.00	0.12	0.21	0.00	0.00	0.21	0.21
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1863	1583
Grp Volume(v), veh/h				809	0	0	274	674	0	0	11	589
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1583
Q Serve(g_s), s				17.2	0.0	0.0	11.4	26.1	0.0	0.0	0.4	17.0
Cycle Q Clear(g_c), s				17.2	0.0	0.0	11.4	26.1	0.0	0.0	0.4	17.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				964	506	0	649	1170	0	0	376	336
V/C Ratio(X)				0.84	0.00	0.00	0.42	0.58	0.00	0.00	0.03	1.75
Avail Cap(c_a), veh/h				1331	699	0	649	1170	0	0	376	336
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.5	0.0	0.0	27.3	22.1	0.0	0.0	25.0	31.5
Incr Delay (d2), s/veh				3.6	0.0	0.0	0.4	1.9	0.0	0.0	0.1	349.8
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				8.9	0.0	0.0	5.7	14.1	0.0	0.0	0.2	40.1
LnGrp Delay(d),s/veh				31.1	0.0	0.0	27.7	24.1	0.0	0.0	25.1	381.3
LnGrp LOS				C			C	C			C	F
Approach Vol, veh/h					809			948			600	
Approach Delay, s/veh					31.1			25.1			374.8	
Approach LOS					C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		54.3			33.3	21.0		25.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		42.0			21.0	17.0		30.0
Max Q Clear Time (g_c+I1), s		28.1			13.4	19.0		19.2
Green Ext Time (p_c), s		4.8			3.3	0.0		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	116.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	280	0	130	0	0	0	0	620	480	120	640	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	295	0	137				0	653	505	126	674	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	361	0	322				0	1416	633	438	2466	0
Arrive On Green	0.20	0.00	0.20				0.00	0.27	0.27	0.17	0.47	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	295	0	137				0	653	505	126	674	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	12.7	0.0	6.0				0.0	12.3	23.8	5.0	9.3	0.0
Cycle Q Clear(g_c), s	12.7	0.0	6.0				0.0	12.3	23.8	5.0	9.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	361	0	322				0	1416	633	438	2466	0
V/C Ratio(X)	0.82	0.00	0.43				0.00	0.46	0.80	0.29	0.27	0.00
Avail Cap(c_a), veh/h	532	0	475				0	1416	633	438	2466	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.67	0.67	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.92	0.92	0.79	0.79	0.00
Uniform Delay (d), s/veh	30.5	0.0	27.8				0.0	22.1	26.3	27.2	9.0	0.0
Incr Delay (d2), s/veh	6.3	0.0	0.9				0.0	1.0	9.4	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	2.7				0.0	6.2	12.0	2.5	4.6	0.0
LnGrp Delay(d),s/veh	36.7	0.0	28.7				0.0	23.1	35.6	27.5	9.2	0.0
LnGrp LOS	D		C					C	D	C	A	
Approach Vol, veh/h		432						1158			800	
Approach Delay, s/veh		34.2						28.5			12.1	
Approach LOS		C						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	23.7	36.0		20.3		59.7		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	12.0	32.0		24.0		48.0		
Max Q Clear Time (g_c+I1), s	7.0	25.8		14.7		11.3		
Green Ext Time (p_c), s	2.2	3.3		1.6		5.7		

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	190	450	110	90	50	210	620	150	60	770	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	242	200	474	116	95	53	221	653	158	63	811	221
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	285	304	792	204	218	97	300	1333	318	869	2494	777
Arrive On Green	0.16	0.16	0.16	0.06	0.06	0.06	0.17	0.65	0.65	0.08	0.16	0.16
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4103	978	3442	5085	1583
Grp Volume(v), veh/h	242	200	474	116	95	53	221	538	273	63	811	221
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1690	1721	1695	1583
Q Serve(g_s), s	10.6	8.1	7.6	2.6	2.1	1.6	4.9	6.5	6.7	1.4	11.3	9.8
Cycle Q Clear(g_c), s	10.6	8.1	7.6	2.6	2.1	1.6	4.9	6.5	6.7	1.4	11.3	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	285	304	792	204	218	97	300	1102	549	869	2494	777
V/C Ratio(X)	0.85	0.66	0.60	0.57	0.44	0.54	0.74	0.49	0.50	0.07	0.33	0.28
Avail Cap(c_a), veh/h	399	652	1384	258	708	317	387	1102	549	869	2494	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.97	0.97	0.97
Uniform Delay (d), s/veh	32.6	31.4	14.3	36.6	36.2	14.2	32.2	10.6	10.6	28.0	21.8	21.2
Incr Delay (d2), s/veh	11.5	2.4	0.7	2.5	1.4	4.7	4.9	1.4	3.0	0.0	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	6.1	4.3	3.4	1.3	1.1	0.8	2.5	3.2	3.5	0.6	5.4	4.5
LnGrp Delay(d),s/veh	44.1	33.8	15.0	39.1	37.6	18.9	37.1	12.0	13.6	28.1	22.2	22.1
LnGrp LOS	D	C	B	D	D	B	D	B	B	C	C	C
Approach Vol, veh/h		916			264			1032			1095	
Approach Delay, s/veh		26.8			34.5			17.8			22.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	30.0	8.7	17.1	11.0	43.2	16.9	8.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	6.0	28.0	9.0	21.0	18.0	16.0
Max Q Clear Time (g_c+I1), s	3.4	8.7	4.6	10.1	6.9	13.3	12.6	4.1
Green Ext Time (p_c), s	0.0	5.1	0.2	3.0	0.2	3.9	0.3	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	530	70	180	290	540	600	0	0	920	410
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	95	0	558	74	189	305	568	632	0	0	968	432
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	71	182	218	554	3878	0	0	1416	633
Arrive On Green	0.00	0.00	0.00	0.14	0.14	0.14	0.31	0.76	0.00	0.00	0.53	0.53
Sat Flow, veh/h		0		517	1320	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		263	0	305	568	632	0	0	968	432
Grp Sat Flow(s),veh/h/ln				1837	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				11.0	0.0	11.0	25.0	2.7	0.0	0.0	16.1	16.0
Cycle Q Clear(g_c), s				11.0	0.0	11.0	25.0	2.7	0.0	0.0	16.1	16.0
Prop In Lane				0.28		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				253	0	218	554	3878	0	0	1416	633
V/C Ratio(X)				1.04	0.00	1.40	1.02	0.16	0.00	0.00	0.68	0.68
Avail Cap(c_a), veh/h				253	0	218	554	3878	0	0	1416	633
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.93	0.93
Uniform Delay (d), s/veh				34.5	0.0	34.5	27.5	2.6	0.0	0.0	15.0	15.0
Incr Delay (d2), s/veh				67.8	0.0	205.8	44.6	0.1	0.0	0.0	2.5	5.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				10.3	0.0	17.2	19.0	1.3	0.0	0.0	8.2	7.8
LnGrp Delay(d),s/veh				102.3	0.0	240.3	72.1	2.7	0.0	0.0	17.5	20.4
LnGrp LOS				F		F	F	A			B	C
Approach Vol, veh/h					568			1200			1400	
Approach Delay, s/veh					176.4			35.5			18.4	
Approach LOS					F			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		65.0			29.0	36.0		15.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		52.0			25.0	23.0		11.0
Max Q Clear Time (g_c+I1), s		4.7			27.0	18.1		13.0
Green Ext Time (p_c), s		21.0			0.0	4.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	350	1220	730	190	1550	80	530	80	170	60	60	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	368	1284	768	200	1632	84	558	84	179	63	63	295
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	467	2123	923	341	1888	467	842	465	416	190	233	348
Arrive On Green	0.04	0.11	0.11	0.10	0.29	0.29	0.24	0.26	0.26	0.11	0.13	0.13
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	368	1284	768	200	1632	84	558	84	179	63	63	295
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	8.5	15.3	21.6	4.4	19.3	3.2	11.7	2.9	7.5	2.6	2.5	8.3
Cycle Q Clear(g_c), s	8.5	15.3	21.6	4.4	19.3	3.2	11.7	2.9	7.5	2.6	2.5	8.3
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	467	2123	923	341	1888	467	842	465	416	190	233	348
V/C Ratio(X)	0.79	0.60	0.83	0.59	0.86	0.18	0.66	0.18	0.43	0.33	0.27	0.85
Avail Cap(c_a), veh/h	516	2163	940	387	1922	475	842	465	416	190	233	348
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	30.6	33.4	34.5	26.7	21.0	27.2	22.8	24.5	33.1	31.7	34.3
Incr Delay (d2), s/veh	5.9	0.4	5.1	1.8	4.3	0.2	2.0	0.9	3.2	1.0	2.8	21.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	6.8	9.0	2.2	9.1	1.4	5.8	1.5	3.7	1.3	1.4	4.2
LnGrp Delay(d),s/veh	42.9	31.0	38.5	36.3	31.0	21.2	29.2	23.7	27.8	34.1	34.5	56.0
LnGrp LOS	D	C	D	D	C	C	C	C	C	C	C	E
Approach Vol, veh/h		2420			1916			821			421	
Approach Delay, s/veh		35.2			31.1			28.3			49.5	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	25.0	11.9	30.5	23.6	14.0	14.9	27.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0	9.0	27.0	18.0	10.0	12.0	24.0
Max Q Clear Time (g_c+I1), s	4.6	9.5	6.4	23.6	13.7	10.3	10.5	21.3
Green Ext Time (p_c), s	0.6	1.2	0.6	2.9	1.0	0.0	0.4	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	850	2270	1600	780	700	1110
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	895	2389	1684	821	737	1168
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	960	4054	1947	1592	1338	745
Arrive On Green	0.56	1.00	0.30	0.30	0.27	0.27
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	895	2389	1684	821	737	1168
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	19.2	0.0	19.9	14.3	10.1	21.4
Cycle Q Clear(g_c), s	19.2	0.0	19.9	14.3	10.1	21.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	960	4054	1947	1592	1338	745
V/C Ratio(X)	0.93	0.59	0.86	0.52	0.55	1.57
Avail Cap(c_a), veh/h	1032	4165	1947	1592	1338	745
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.55	0.55	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	26.3	10.4	25.2	29.3
Incr Delay (d2), s/veh	7.2	0.1	2.5	0.2	1.6	262.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	9.1	8.9	4.8	41.3
LnGrp Delay(d),s/veh	24.2	0.1	28.8	10.6	26.8	291.3
LnGrp LOS	C	A	C	B	C	F
Approach Vol, veh/h		3284	2505		1905	
Approach Delay, s/veh		6.7	22.8		189.0	
Approach LOS		A	C		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				54.6		25.4	26.3	28.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				52.0		20.0	24.0	24.0
Max Q Clear Time (g_c+I1), s				2.0		23.4	21.2	21.9
Green Ext Time (p_c), s				48.6		0.0	1.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	57.1
HCM 2010 LOS	E

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	950	10	450	380
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1000	11	474	400
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2153	505			1011	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2153	505			1011	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			31	
cM capacity (veh/h)	13	512			682	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	667	344	474	200	200
Volume Left	0	0	474	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	682	1700	1700
Volume to Capacity	0.39	0.20	0.69	0.12	0.12
Queue Length 95th (ft)	0	0	140	0	0
Control Delay (s)	0.0	0.0	21.4	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		11.6		
Approach LOS					

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	1600	990	520	1560	760	540	60	600	250	20	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	1684	1042	547	1642	800	568	63	632	263	21	137
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	176	1682	851	516	1837	1007	947	524	1203	365	209	178
Arrive On Green	0.05	0.26	0.26	0.05	0.12	0.12	0.28	0.28	0.28	0.11	0.11	0.11
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	147	1684	1042	547	1642	800	568	63	632	263	21	137
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	3.4	21.0	21.0	12.0	25.5	15.1	11.5	2.0	3.7	5.9	0.8	6.7
Cycle Q Clear(g_c), s	3.4	21.0	21.0	12.0	25.5	15.1	11.5	2.0	3.7	5.9	0.8	6.7
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	176	1682	851	516	1837	1007	947	524	1203	365	209	178
V/C Ratio(X)	0.83	1.00	1.22	1.06	0.89	0.79	0.60	0.12	0.53	0.72	0.10	0.77
Avail Cap(c_a), veh/h	176	1682	851	516	1843	1010	947	524	1203	688	373	317
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	29.5	18.5	38.0	33.7	14.9	25.2	21.4	6.3	34.6	31.9	34.5
Incr Delay (d2), s/veh	27.5	22.2	111.4	43.2	2.8	2.0	2.8	0.5	1.6	2.7	0.2	6.8
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	2.3	11.8	35.1	8.8	12.4	6.1	5.8	1.1	3.0	2.9	0.4	3.3
LnGrp Delay(d),s/veh	65.2	51.7	129.9	81.3	36.5	16.8	28.0	21.8	8.0	37.3	32.1	41.3
LnGrp LOS	E	F	F	F	D	B	C	C	A	D	C	D
Approach Vol, veh/h		2873			2989			1263			421	
Approach Delay, s/veh		80.7			39.4			17.7			38.4	
Approach LOS		F			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	26.5	16.0	25.0	26.0	13.0	8.1	32.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	15.0	12.0	21.0	15.0	16.0	4.0	29.0
Max Q Clear Time (g_c+I1), s	7.9	5.7	14.0	23.0	13.5	8.7	5.4	27.5
Green Ext Time (p_c), s	0.6	3.8	0.0	0.0	0.9	0.3	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	51.4
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2135	285	270	920	535	580
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2247	0	284	968	563	611
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2225	693	301	2924	577	1149
Arrive On Green	0.44	0.00	0.09	0.57	0.32	0.32
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2247	0	284	968	563	611
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	35.0	0.0	6.6	8.0	25.1	13.2
Cycle Q Clear(g_c), s	35.0	0.0	6.6	8.0	25.1	13.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2225	693	301	2924	577	1149
V/C Ratio(X)	1.01	0.00	0.94	0.33	0.98	0.53
Avail Cap(c_a), veh/h	2225	693	301	2924	577	1149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	0.0	36.3	8.9	26.7	17.7
Incr Delay (d2), s/veh	21.5	0.0	36.9	0.1	31.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.7	0.0	4.7	3.7	17.2	5.1
LnGrp Delay(d),s/veh	44.0	0.0	73.2	9.0	58.1	18.2
LnGrp LOS	F		E	A	E	B
Approach Vol, veh/h	2247			1252	1174	
Approach Delay, s/veh	44.0			23.6	37.3	
Approach LOS	D			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		30.0	11.0	39.0				50.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		26.0	7.0	35.0				46.0
Max Q Clear Time (g_c+I1), s		27.1	8.6	37.0				10.0
Green Ext Time (p_c), s		0.0	0.0	0.0				32.1

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	160	200	120	60	50	90	1185	150	40	755	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	168	211	126	63	53	95	1247	158	42	795	63
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	163	205	136	191	161	122	1494	189	52	1439	114
Arrive On Green	0.09	0.22	0.22	0.08	0.20	0.20	0.07	0.47	0.47	0.03	0.43	0.43
Sat Flow, veh/h	1774	752	944	1774	936	788	1774	3163	399	1774	3323	263
Grp Volume(v), veh/h	147	0	379	126	0	116	95	695	710	42	423	435
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	0	1724	1774	1770	1792	1774	1770	1816
Q Serve(g_s), s	6.4	0.0	17.0	5.5	0.0	4.5	4.1	26.7	27.1	1.8	14.0	14.0
Cycle Q Clear(g_c), s	6.4	0.0	17.0	5.5	0.0	4.5	4.1	26.7	27.1	1.8	14.0	14.0
Prop In Lane	1.00		0.56	1.00		0.46	1.00		0.22	1.00		0.14
Lane Grp Cap(c), veh/h	159	0	368	136	0	352	122	836	847	52	766	786
V/C Ratio(X)	0.93	0.00	1.03	0.93	0.00	0.33	0.78	0.83	0.84	0.80	0.55	0.55
Avail Cap(c_a), veh/h	159	0	368	136	0	352	227	836	847	91	766	786
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	35.4	0.0	30.7	35.9	0.0	26.6	35.9	17.9	18.0	37.8	16.5	16.6
Incr Delay (d2), s/veh	50.4	0.0	54.6	55.4	0.0	0.5	10.0	9.5	9.7	24.0	2.9	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	5.4	0.0	13.5	4.8	0.0	2.2	2.4	15.1	15.5	1.2	7.4	7.6
LnGrp Delay(d),s/veh	85.8	0.0	85.3	91.3	0.0	27.1	45.9	27.4	27.7	61.7	19.4	19.3
LnGrp LOS	F		F	F		C	D	C	C	E	B	B
Approach Vol, veh/h		526			242			1500			900	
Approach Delay, s/veh		85.4			60.6			28.7			21.4	
Approach LOS		F			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	41.0	10.0	21.0	9.4	37.9	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	37.0	6.0	17.0	10.0	31.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	3.8	29.1	7.5	19.0	6.1	16.0	8.4	6.5
Green Ext Time (p_c), s	0.0	5.4	0.0	0.0	0.1	5.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	320	180	70	140	30	1345	120	130	50	170	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	337	189	74	147	32	1416	126	137	53	179	126
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	188	1224	47	341	76	923	514	558	68	149	105
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.52	0.63	0.63	0.04	0.15	0.15
Sat Flow, veh/h	301	741	1583	0	1347	300	1774	817	889	1774	1019	717
Grp Volume(v), veh/h	474	0	189	78	0	175	1416	0	263	53	0	305
Grp Sat Flow(s),veh/h/ln	1042	0	1583	5	0	1642	1774	0	1706	1774	0	1736
Q Serve(g_s), s	24.6	0.0	0.0	0.0	0.0	13.4	78.0	0.0	10.2	4.4	0.0	22.0
Cycle Q Clear(g_c), s	38.0	0.0	0.0	38.0	0.0	13.4	78.0	0.0	10.2	4.4	0.0	22.0
Prop In Lane	0.29		1.00	0.95		0.18	1.00		0.52	1.00		0.41
Lane Grp Cap(c), veh/h	295	0	1224	48	0	416	923	0	1072	68	0	255
V/C Ratio(X)	1.61	0.00	0.15	1.62	0.00	0.42	1.53	0.00	0.25	0.78	0.00	1.20
Avail Cap(c_a), veh/h	295	0	1224	48	0	416	923	0	1072	118	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	64.0	0.0	4.4	73.9	0.0	46.8	36.0	0.0	12.3	71.5	0.0	64.0
Incr Delay (d2), s/veh	288.6	0.0	0.1	356.8	0.0	0.7	246.2	0.0	0.5	17.2	0.0	120.6
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	35.8	0.0	2.0	6.8	0.0	6.2	101.0	0.0	4.9	2.5	0.0	19.1
LnGrp Delay(d),s/veh	352.5	0.0	4.4	430.8	0.0	47.5	282.2	0.0	12.8	88.6	0.0	184.6
LnGrp LOS	F		A	F		D	F		B	F		F
Approach Vol, veh/h		663			253			1679			358	
Approach Delay, s/veh		253.3			165.8			240.0			170.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	98.2		42.0	82.0	26.0		42.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	90.0		38.0	78.0	22.0		38.0
Max Q Clear Time (g_c+I1), s	6.4	12.2		40.0	80.0	24.0		40.0
Green Ext Time (p_c), s	0.0	16.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	228.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	40	410	190	60	90	1575	1185	200	100	1035	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	482	200	63	95	1658	1247	211	105	1089	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	236	401	148	47	71	1216	1597	268	154	913	27
Arrive On Green	0.00	0.00	0.13	0.15	0.15	0.15	0.59	0.88	0.88	0.09	0.26	0.26
Sat Flow, veh/h	0	1863	3167	968	305	460	3442	3033	510	1774	3511	103
Grp Volume(v), veh/h	0	0	482	358	0	0	1658	724	734	105	549	572
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1733	0	0	1721	1770	1773	1774	1770	1845
Q Serve(g_s), s	0.0	0.0	19.0	23.0	0.0	0.0	53.0	23.3	24.3	8.6	39.0	39.0
Cycle Q Clear(g_c), s	0.0	0.0	19.0	23.0	0.0	0.0	53.0	23.3	24.3	8.6	39.0	39.0
Prop In Lane	0.00		1.00	0.56		0.27	1.00		0.29	1.00		0.06
Lane Grp Cap(c), veh/h	0	236	401	266	0	0	1216	932	934	154	460	480
V/C Ratio(X)	0.00	0.00	1.20	1.35	0.00	0.00	1.36	0.78	0.79	0.68	1.19	1.19
Avail Cap(c_a), veh/h	0	236	401	266	0	0	1216	932	934	154	460	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	65.5	63.5	0.0	0.0	30.7	5.7	5.7	66.5	55.5	55.5
Incr Delay (d2), s/veh	0.0	0.0	112.3	179.1	0.0	0.0	164.0	0.6	0.6	11.7	106.5	105.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	14.6	24.2	0.0	0.0	52.5	10.8	11.3	4.7	32.7	34.0
LnGrp Delay(d),s/veh	0.0	0.0	177.8	242.6	0.0	0.0	194.8	6.3	6.4	78.2	162.0	161.4
LnGrp LOS			F	F			F	A	A	E	F	F
Approach Vol, veh/h		482			358			3116			1226	
Approach Delay, s/veh		177.8			242.6			106.6			154.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	83.0		23.0	57.0	43.0		27.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	13.0	79.0		19.0	53.0	39.0		23.0
Max Q Clear Time (g_c+I1), s	10.6	26.3		21.0	55.0	41.0		25.0
Green Ext Time (p_c), s	1.7	16.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	134.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	240	955	950	235	1145	450	1635	350	30	1675	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	253	1005	1113	0	1265	474	1721	368	32	1763	63
Adj No. of Lanes	1	1	1	2	0	3	1	2	0	2	2	1
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	308	323	517	899	0	1297	272	1306	270	68	1109	496
Arrive On Green	0.17	0.17	0.17	0.25	0.00	0.25	0.15	0.45	0.45	0.03	0.42	0.42
Sat Flow, veh/h	1774	1863	1583	3548	0	4750	1774	2923	603	3442	3539	1583
Grp Volume(v), veh/h	200	253	1005	1113	0	1265	474	1018	1071	32	1763	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1583	1774	1770	1756	1721	1770	1583
Q Serve(g_s), s	15.8	19.5	26.0	38.0	0.0	38.0	23.0	67.1	67.1	1.4	47.0	3.7
Cycle Q Clear(g_c), s	15.8	19.5	26.0	38.0	0.0	38.0	23.0	67.1	67.1	1.4	47.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	308	323	517	899	0	1297	272	791	785	68	1109	496
V/C Ratio(X)	0.65	0.78	1.94	1.24	0.00	0.98	1.74	1.29	1.36	0.47	1.59	0.13
Avail Cap(c_a), veh/h	308	323	517	899	0	1297	272	791	785	138	1109	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	57.8	59.3	50.5	56.0	0.0	54.0	63.5	41.5	41.5	72.3	43.7	31.1
Incr Delay (d2), s/veh	4.8	11.9	431.4	116.8	0.0	19.3	349.0	138.4	172.2	0.5	265.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	11.1	73.3	33.2	0.0	19.7	37.6	63.2	70.0	0.7	63.8	1.6
LnGrp Delay(d),s/veh	62.5	71.2	481.9	172.8	0.0	73.4	412.5	179.9	213.7	72.7	309.5	31.2
LnGrp LOS	E	E	F	F		E	F	F	F	E	F	C
Approach Vol, veh/h		1458			2378			2563			1858	
Approach Delay, s/veh		353.1			119.9			237.0			296.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	71.1		30.0	27.0	51.0		42.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	64.0		26.0	23.0	47.0		38.0
Max Q Clear Time (g_c+I1), s	3.4	69.1		28.0	25.0	49.0		40.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	237.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1505	2550	50	0	810	1755	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1584	2684		0	853	1847	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2019	2118		0	1274	1831	0
Arrive On Green	0.59	0.59		0.00	0.36	0.36	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1584	2684		0	853	1847	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	52.9	88.0		0.0	30.5	54.0	0.0
Cycle Q Clear(g_c), s	52.9	88.0		0.0	30.5	54.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2019	2118		0	1274	1831	0
V/C Ratio(X)	0.78	1.27		0.00	0.67	1.01	0.00
Avail Cap(c_a), veh/h	2019	2118		0	1274	1831	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	31.0		0.0	40.5	48.0	0.0
Incr Delay (d2), s/veh	2.1	124.2		0.0	2.8	23.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.7	65.7		0.0	15.4	29.2	0.0
LnGrp Delay(d),s/veh	25.8	155.2		0.0	43.3	71.2	0.0
LnGrp LOS	C	F			D	F	
Approach Vol, veh/h	4268				853	1847	
Approach Delay, s/veh	107.2				43.3	71.2	
Approach LOS	F				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		92.0		58.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		54.0		88.0		46.0		
Max Q Clear Time (g_c+I1), s		32.5		90.0		56.0		
Green Ext Time (p_c), s		6.2		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	89.8
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2920	775	110	2140	425	210
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	3074	816	116	2253	447	221
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3281	1321	152	4853	672	300
Arrive On Green	0.65	0.65	0.09	0.76	0.19	0.19
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	3074	816	116	2253	447	221
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	81.3	26.4	9.6	19.7	17.5	19.7
Cycle Q Clear(g_c), s	81.3	26.4	9.6	19.7	17.5	19.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3281	1321	152	4853	672	300
V/C Ratio(X)	0.94	0.62	0.76	0.46	0.67	0.74
Avail Cap(c_a), veh/h	3288	1324	154	4870	672	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	4.2	67.1	6.8	56.4	57.3
Incr Delay (d2), s/veh	3.7	0.5	19.9	0.1	5.2	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.0	24.7	5.5	8.6	9.1	9.9
LnGrp Delay(d),s/veh	27.6	4.7	87.0	6.9	61.6	72.3
LnGrp LOS	C	A	F	A	E	E
Approach Vol, veh/h	3890			2369	668	
Approach Delay, s/veh	22.8			10.8	65.1	
Approach LOS	C			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		32.4	16.8	100.8				117.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		28.0	13.0	97.0				114.0
Max Q Clear Time (g_c+I1), s		21.7	11.6	83.3				21.7
Green Ext Time (p_c), s		1.4	1.3	13.4				46.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	410	290	140	1295	190	90	265	180	190	370	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	432	305	147	1363	200	95	279	189	200	389	184
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	158	835	586	182	1344	195	99	331	281	217	455	387
Arrive On Green	0.09	0.42	0.42	0.10	0.43	0.43	0.06	0.18	0.18	0.12	0.24	0.24
Sat Flow, veh/h	1774	1990	1396	1774	3102	451	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	147	384	353	147	772	791	95	279	189	200	389	184
Grp Sat Flow(s),veh/h/ln	1774	1770	1616	1774	1770	1783	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.4	14.5	14.6	7.3	39.0	39.0	4.8	13.0	10.0	10.0	17.9	8.9
Cycle Q Clear(g_c), s	7.4	14.5	14.6	7.3	39.0	39.0	4.8	13.0	10.0	10.0	17.9	8.9
Prop In Lane	1.00		0.86	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	743	678	182	767	773	99	331	281	217	455	387
V/C Ratio(X)	0.93	0.52	0.52	0.81	1.01	1.02	0.96	0.84	0.67	0.92	0.85	0.48
Avail Cap(c_a), veh/h	158	743	678	296	767	773	99	331	281	217	455	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	19.3	19.4	39.5	25.5	25.5	42.4	35.8	34.5	39.1	32.5	29.1
Incr Delay (d2), s/veh	51.9	0.6	0.7	8.2	34.3	38.4	78.7	22.2	12.1	40.3	18.2	4.1
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	5.9	7.2	6.6	4.0	26.3	27.3	4.5	8.7	5.3	7.3	11.5	4.3
LnGrp Delay(d),s/veh	92.6	20.0	20.1	47.8	59.8	63.9	121.1	57.9	46.6	79.3	50.6	33.2
LnGrp LOS	F	B	C	D	F	F	F	E	D	E	D	C
Approach Vol, veh/h		884			1710			563			773	
Approach Delay, s/veh		32.1			60.7			64.8			53.9	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	20.0	13.2	41.8	9.0	26.0	12.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	16.0	15.0	32.0	5.0	22.0	8.0	39.0
Max Q Clear Time (g_c+I1), s	12.0	15.0	9.3	16.6	6.8	19.9	9.4	41.0
Green Ext Time (p_c), s	0.0	0.6	0.2	12.5	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	45	45	245	400	610	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	47	258	421	642	211

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1473	426	853	0	-	0
Stage 1	747	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	118	577	782	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	67	577	782	-	-	-
Mov Cap-2 Maneuver	67	-	-	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	250	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	75.5	5.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	782	-	67	577	-	-
HCM Lane V/C Ratio	0.33	-	0.707	0.082	-	-
HCM Control Delay (s)	11.9	1.1	139.2	11.8	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.4	-	3.2	0.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	340	870	240	395	485	190
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	916	253	416	511	200
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	406	990	864	387	623	919
Arrive On Green	0.23	0.53	0.24	0.24	0.35	0.35
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	358	916	253	416	511	200
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	13.3	31.0	4.0	16.7	17.9	4.1
Cycle Q Clear(g_c), s	13.3	31.0	4.0	16.7	17.9	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	406	990	864	387	623	919
V/C Ratio(X)	0.88	0.93	0.29	1.08	0.82	0.22
Avail Cap(c_a), veh/h	467	1036	864	387	623	919
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	25.5	14.7	21.0	25.8	20.2	6.9
Incr Delay (d2), s/veh	16.1	13.2	0.2	67.5	11.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	19.2	2.0	14.4	10.7	5.5
LnGrp Delay(d),s/veh	41.6	28.0	21.2	93.3	31.7	7.4
LnGrp LOS	D	C	C	F	C	A
Approach Vol, veh/h		1274	669		711	
Approach Delay, s/veh		31.8	66.1		24.9	
Approach LOS		C	E		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				40.3		28.0	19.6	20.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				38.0		24.0	18.0	16.0
Max Q Clear Time (g_c+I1), s				33.0		19.9	15.3	18.7
Green Ext Time (p_c), s				3.3		1.1	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	640	3650	1720	835	0	1420
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	674	3842	2121	672		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	699	4858	2987	846		
Arrive On Green	0.39	0.96	1.00	1.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	674	3842	2121	672		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	55.7	20.7	0.0	0.0		
Cycle Q Clear(g_c), s	55.7	20.7	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	699	4858	2987	846		
V/C Ratio(X)	0.96	0.79	0.71	0.79		
Avail Cap(c_a), veh/h	757	4950	2987	846		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.09	0.09	0.85	0.85		
Uniform Delay (d), s/veh	44.4	0.6	0.0	0.0		
Incr Delay (d2), s/veh	4.1	0.1	0.7	4.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	27.9	8.6	0.2	1.1		
LnGrp Delay(d),s/veh	48.5	0.7	0.7	4.5		
LnGrp LOS	D	A	A	A		
Approach Vol, veh/h		4516	2793			
Approach Delay, s/veh		7.8	1.6			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				147.3			63.1	84.2
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			64.0	78.0
Max Q Clear Time (g_c+I1), s				22.7			57.7	2.0
Green Ext Time (p_c), s				120.6			1.4	75.5

Intersection Summary	
HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	2170	740	310	2295	480	0	0	0	1130	0	2095
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	495	2284	779	326	2416	0				1189	0	2205
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	355	2034	633	237	1695	528				1372	0	1224
Arrive On Green	0.20	0.40	0.40	0.13	0.33	0.00				0.39	0.00	0.39
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	495	2284	779	326	2416	0				1189	0	2205
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.0	60.0	60.0	20.0	50.0	0.0				46.4	0.0	58.0
Cycle Q Clear(g_c), s	30.0	60.0	60.0	20.0	50.0	0.0				46.4	0.0	58.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	355	2034	633	237	1695	528				1372	0	1224
V/C Ratio(X)	1.40	1.12	1.23	1.38	1.43	0.00				0.87	0.00	1.80
Avail Cap(c_a), veh/h	355	2034	633	237	1695	528				1372	0	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.47	0.47	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	60.0	45.0	45.0	65.0	50.0	0.0				42.4	0.0	46.0
Incr Delay (d2), s/veh	179.4	56.0	104.9	182.4	193.0	0.0				7.6	0.0	363.6
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	32.4	38.6	44.7	21.8	53.7	0.0				24.1	0.0	87.2
LnGrp Delay(d),s/veh	239.4	101.0	149.9	247.4	243.0	0.0				50.0	0.0	409.6
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3558			2742						3394	
Approach Delay, s/veh		130.9			243.6						283.7	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			24.0	64.0		62.0	34.0	54.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			20.0	60.0		58.0	30.0	50.0
Max Q Clear Time (g_c+I1), s			22.0	62.0		60.0	32.0	52.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	216.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	880	0	405	220	340	0	0	830	470
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				926	0	0	232	358	0	0	874	495
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				934	0	834	237	1486	0	0	920	412
Arrive On Green				0.53	0.00	0.00	0.27	0.84	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				926	0	0	232	358	0	0	874	495
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				77.5	0.0	0.0	19.5	3.0	0.0	0.0	36.4	39.0
Cycle Q Clear(g_c), s				77.5	0.0	0.0	19.5	3.0	0.0	0.0	36.4	39.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				934	0	834	237	1486	0	0	920	412
V/C Ratio(X)				0.99	0.00	0.00	0.98	0.24	0.00	0.00	0.95	1.20
Avail Cap(c_a), veh/h				934	0	834	237	1486	0	0	920	412
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.69	0.69	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.2	0.0	0.0	54.8	7.2	0.0	0.0	54.5	55.5
Incr Delay (d2), s/veh				27.2	0.0	0.0	43.4	0.3	0.0	0.0	19.7	112.2
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				44.9	0.0	0.0	12.4	1.4	0.0	0.0	20.4	29.9
LnGrp Delay(d),s/veh				62.3	0.0	0.0	98.2	7.5	0.0	0.0	74.3	167.7
LnGrp LOS				E			F	A			E	F
Approach Vol, veh/h					926			590			1369	
Approach Delay, s/veh					62.3			43.2			108.1	
Approach LOS					E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.0			24.0	43.0		83.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		63.0			20.0	39.0		79.0
Max Q Clear Time (g_c+I1), s		5.0			21.5	41.0		79.5
Green Ext Time (p_c), s		3.3			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	80.1
HCM 2010 LOS	F

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	300	306	849	555	0	123	87	137	98	65	410	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1657			1682	1504		3251				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1657			1682	1504		3251				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	322	894	584	0	129	95	144	103	68	432	362
RTOR Reduction (vph)	0	0	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	316	1216	0	0	597	211	0	298	0	0	0	584
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	58.0	58.0			26.0	26.0		18.0				32.0
Effective Green, g (s)	58.0	58.0			26.0	26.0		18.0				32.0
Actuated g/C Ratio	0.39	0.39			0.17	0.17		0.12				0.21
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	684	640			291	260		390				343
v/s Ratio Prot	0.18	c0.73			c0.36	0.14		c0.09				c0.36
v/s Ratio Perm												
v/c Ratio	0.46	1.90			2.05	0.81		0.76				1.70
Uniform Delay, d1	34.3	46.0			62.0	59.6		63.9				59.0
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.64
Incremental Delay, d2	0.5	410.9			485.0	17.2		13.3				319.7
Delay (s)	34.8	456.9			547.0	76.9		77.3				357.5
Level of Service	C	F			F	E		E				F
Approach Delay (s)		369.8			424.2			77.3				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	352.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.73		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	157.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	956
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3361
Flt Permitted	0.99
Satd. Flow (perm)	3361
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	1006
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1216
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	32.0
Effective Green, g (s)	32.0
Actuated g/C Ratio	0.21
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	717
v/s Ratio Prot	0.36
v/s Ratio Perm	
v/c Ratio	1.70
Uniform Delay, d1	59.0
Progression Factor	0.64
Incremental Delay, d2	314.9
Delay (s)	352.6
Level of Service	F
Approach Delay (s)	354.2
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4625	260	570	1175	140	250	50	770	90	40	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4868	274	600	1237	147	263	53	811	95	42	84
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	193	3017	939	528	3512	1136	275	224	433	92	124	106
Arrive On Green	0.06	0.59	0.59	0.15	0.69	0.69	0.08	0.12	0.12	0.03	0.07	0.07
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	147	4868	274	600	1237	147	263	53	811	95	42	84
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	6.3	89.0	12.8	23.0	14.9	4.3	11.4	3.9	15.0	4.0	3.2	6.9
Cycle Q Clear(g_c), s	6.3	89.0	12.8	23.0	14.9	4.3	11.4	3.9	15.0	4.0	3.2	6.9
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	193	3017	939	528	3512	1136	275	224	433	92	124	106
V/C Ratio(X)	0.76	1.61	0.29	1.14	0.35	0.13	0.96	0.24	1.87	1.04	0.34	0.80
Avail Cap(c_a), veh/h	252	3017	939	528	3512	1136	275	224	433	92	124	106
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	30.5	15.0	63.5	9.5	6.6	68.7	59.8	42.3	73.0	66.8	53.8
Incr Delay (d2), s/veh	0.9	276.2	0.0	64.1	0.0	0.0	42.0	2.5	402.0	103.8	7.2	44.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	118.5	5.6	15.6	7.0	1.9	7.0	2.1	54.8	3.2	1.9	4.3
LnGrp Delay(d),s/veh	70.7	306.7	15.0	127.6	9.5	6.6	110.8	62.3	444.3	177.4	74.1	98.5
LnGrp LOS	E	F	B	F	A	A	F	E	F	F	E	F
Approach Vol, veh/h		5289			1984			1127			221	
Approach Delay, s/veh		285.0			45.0			348.5			127.8	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	27.0	93.0	16.0	14.0	12.4	107.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	23.0	89.0	12.0	10.0	11.0	101.0
Max Q Clear Time (g_c+I1), s	6.0	17.0	25.0	91.0	13.4	8.9	8.3	16.9
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.0	0.0	0.1	20.6

Intersection Summary	
HCM 2010 Ctrl Delay	234.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4495	460	240	1165	80	320	30	460	30	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4732	484	253	1226	84	337	32	484	32	0	109
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	170	3187	1151	184	2969	956	344	361	307	70	0	663
Arrive On Green	0.10	0.63	0.63	0.11	1.00	1.00	0.10	0.19	0.19	0.02	0.00	0.11
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	147	4732	484	253	1226	84	337	32	484	32	0	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	12.3	94.0	3.1	8.0	0.0	0.0	14.7	2.1	25.2	1.3	0.0	3.3
Cycle Q Clear(g_c), s	12.3	94.0	3.1	8.0	0.0	0.0	14.7	2.1	25.2	1.3	0.0	3.3
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	170	3187	1151	184	2969	956	344	361	307	70	0	663
V/C Ratio(X)	0.86	1.48	0.42	1.38	0.41	0.09	0.98	0.09	1.58	0.46	0.00	0.16
Avail Cap(c_a), veh/h	248	3187	1151	184	2969	956	344	361	307	95	0	663
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.8	28.0	8.1	67.0	0.0	0.0	67.3	49.6	45.5	72.7	0.0	30.2
Incr Delay (d2), s/veh	18.4	219.9	0.2	197.5	0.1	0.0	42.8	0.5	275.3	4.7	0.0	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	6.9	108.6	1.3	8.8	0.0	0.0	9.0	1.1	34.4	0.7	0.0	1.5
LnGrp Delay(d),s/veh	85.2	247.9	8.3	264.5	0.1	0.0	110.1	50.1	320.8	77.4	0.0	30.7
LnGrp LOS	F	F	A	F	A	A	F	D	F	E		C
Approach Vol, veh/h		5363			1563			853			141	
Approach Delay, s/veh		221.8			42.9			227.4			41.3	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	33.1	12.0	98.0	19.0	21.0	18.4	91.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	28.0	8.0	94.0	15.0	17.0	21.0	81.0
Max Q Clear Time (g_c+I1), s	3.3	27.2	10.0	96.0	16.7	5.3	14.3	2.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.2	0.2	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	183.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	485	0	300	480	930	0	0	1130	510
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				414	136	316	505	979	0	0	1189	537
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				402	113	263	438	1341	0	0	1076	465
Arrive On Green				0.23	0.23	0.23	0.33	0.96	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1774	499	1159	1774	1863	0	0	2501	1040
Grp Volume(v), veh/h				414	0	452	505	979	0	0	859	867
Grp Sat Flow(s),veh/h/ln				1774	0	1658	1774	1863	0	0	1770	1679
Q Serve(g_s), s				34.0	0.0	34.0	37.0	11.1	0.0	0.0	67.0	67.0
Cycle Q Clear(g_c), s				34.0	0.0	34.0	37.0	11.1	0.0	0.0	67.0	67.0
Prop In Lane				1.00		0.70	1.00		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				402	0	376	438	1341	0	0	790	750
V/C Ratio(X)				1.03	0.00	1.20	1.15	0.73	0.00	0.00	1.09	1.16
Avail Cap(c_a), veh/h				402	0	376	438	1341	0	0	790	750
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				58.0	0.0	58.0	50.4	1.1	0.0	0.0	41.5	41.5
Incr Delay (d2), s/veh				52.7	0.0	113.9	89.1	2.9	0.0	0.0	58.4	84.7
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				22.5	0.0	27.4	28.9	5.7	0.0	0.0	45.5	48.7
LnGrp Delay(d),s/veh				110.7	0.0	171.9	139.5	4.0	0.0	0.0	99.9	126.2
LnGrp LOS				F		F	F	A			F	F
Approach Vol, veh/h					866			1484			1726	
Approach Delay, s/veh					142.6			50.1			113.1	
Approach LOS					F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.0			41.0	71.0		38.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		108.0			37.0	67.0		34.0
Max Q Clear Time (g_c+I1), s		13.1			39.0	69.0		36.0
Green Ext Time (p_c), s		60.4			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	96.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	450	0	290	0	0	0	0	960	1690	540	1075	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	474	0	305				0	1011	1779	568	1132	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	343	0	306				0	1864	834	355	2666	0
Arrive On Green	0.19	0.00	0.19				0.00	0.88	0.88	0.13	0.50	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	474	0	305				0	1011	1779	568	1132	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	29.0	0.0	28.9				0.0	9.9	79.0	30.0	30.2	0.0
Cycle Q Clear(g_c), s	29.0	0.0	28.9				0.0	9.9	79.0	30.0	30.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	343	0	306				0	1864	834	355	2666	0
V/C Ratio(X)	1.38	0.00	1.00				0.00	0.54	2.13	1.60	0.42	0.00
Avail Cap(c_a), veh/h	343	0	306				0	1864	834	355	2666	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.47	0.47	0.09	0.09	0.00
Uniform Delay (d), s/veh	60.5	0.0	60.4				0.0	4.9	9.0	64.9	16.7	0.0
Incr Delay (d2), s/veh	189.2	0.0	50.4				0.0	0.5	511.9	271.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.2	0.0	16.9				0.0	4.6	150.2	41.5	14.8	0.0
LnGrp Delay(d),s/veh	249.7	0.0	110.8				0.0	5.4	520.9	336.5	16.7	0.0
LnGrp LOS	F		F					A	F	F	B	
Approach Vol, veh/h		779						2790			1700	
Approach Delay, s/veh		195.3						334.1			123.6	
Approach LOS		F						F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	34.0	83.0		33.0		117.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	30.0	79.0		29.0		113.0		
Max Q Clear Time (g_c+I1), s	32.0	81.0		31.0		32.2		
Green Ext Time (p_c), s	0.0	0.0		0.0		16.2		

Intersection Summary	
HCM 2010 Ctrl Delay	245.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	370	410	350	190	130	220	1880	200	200	1325	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	353	456	368	200	137	232	1979	211	211	1395	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	372	360	870	413	366	164	280	2305	244	298	2535	789
Arrive On Green	0.21	0.19	0.19	0.12	0.10	0.10	0.16	0.99	0.99	0.03	0.16	0.16
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4672	494	3442	5085	1583
Grp Volume(v), veh/h	211	353	456	368	200	137	232	1431	759	211	1395	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1776	1721	1695	1583
Q Serve(g_s), s	16.0	28.3	13.3	15.8	8.1	12.7	9.8	5.4	5.9	9.1	37.8	7.4
Cycle Q Clear(g_c), s	16.0	28.3	13.3	15.8	8.1	12.7	9.8	5.4	5.9	9.1	37.8	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	372	360	870	413	366	164	280	1672	876	298	2535	789
V/C Ratio(X)	0.57	0.98	0.52	0.89	0.55	0.84	0.83	0.86	0.87	0.71	0.55	0.24
Avail Cap(c_a), veh/h	372	360	870	436	472	211	436	1672	876	298	2535	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	0.87	0.87	0.87
Uniform Delay (d), s/veh	53.1	60.2	26.1	65.0	63.9	66.0	61.8	0.5	0.5	71.0	47.2	8.6
Incr Delay (d2), s/veh	2.0	42.0	0.6	19.3	1.3	19.9	5.2	4.1	8.0	6.5	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	18.8	5.9	8.6	4.0	6.5	4.8	1.3	2.4	4.6	18.0	3.4
LnGrp Delay(d),s/veh	55.1	102.2	26.6	84.4	65.2	86.0	67.0	4.6	8.5	77.5	48.0	9.2
LnGrp LOS	E	F	C	F	E	F	E	A	A	E	D	A
Approach Vol, veh/h		1020			705			2422			1795	
Approach Delay, s/veh		58.7			79.2			11.8			47.4	
Approach LOS		E			E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	78.0	22.0	33.0	16.2	78.8	35.5	19.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	74.0	19.0	29.0	19.0	67.0	28.0	20.0
Max Q Clear Time (g_c+I1), s	11.1	7.9	17.8	30.3	11.8	39.8	18.0	14.7
Green Ext Time (p_c), s	0.1	34.2	0.2	0.0	0.4	14.2	1.5	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	570	110	210	370	570	1840	0	0	1430	655
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	95	0	600	116	221	389	600	1937	0	0	1505	689
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	105	200	264	520	3967	0	0	1628	728
Arrive On Green	0.00	0.00	0.00	0.17	0.17	0.17	0.29	0.78	0.00	0.00	0.61	0.61
Sat Flow, veh/h		0		630	1201	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		337	0	389	600	1937	0	0	1505	689
Grp Sat Flow(s),veh/h/ln				1831	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				25.0	0.0	25.0	44.0	20.3	0.0	0.0	57.0	60.2
Cycle Q Clear(g_c), s				25.0	0.0	25.0	44.0	20.3	0.0	0.0	57.0	60.2
Prop In Lane				0.34		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				305	0	264	520	3967	0	0	1628	728
V/C Ratio(X)				1.10	0.00	1.47	1.15	0.49	0.00	0.00	0.92	0.95
Avail Cap(c_a), veh/h				305	0	264	520	3967	0	0	1628	728
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				62.5	0.0	62.5	53.0	5.9	0.0	0.0	26.8	27.4
Incr Delay (d2), s/veh				82.4	0.0	232.8	89.0	0.4	0.0	0.0	8.1	18.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.6	0.0	28.0	34.4	9.5	0.0	0.0	29.3	29.6
LnGrp Delay(d),s/veh				144.9	0.0	295.3	142.0	6.3	0.0	0.0	34.9	45.8
LnGrp LOS				F		F	F	A			C	D
Approach Vol, veh/h					726			2537			2194	
Approach Delay, s/veh					225.5			38.4			38.3	
Approach LOS					F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		121.0			48.0	73.0		29.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		107.0			44.0	59.0		25.0
Max Q Clear Time (g_c+I1), s		22.3			46.0	62.2		27.0
Green Ext Time (p_c), s		76.1			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	3605	600	180	1950	150	430	80	160	140	90	710
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	3795	632	189	2053	158	453	84	168	147	95	747
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	553	3759	1635	184	3071	759	436	278	249	170	236	353
Arrive On Green	0.21	0.78	0.78	0.05	0.48	0.48	0.13	0.16	0.16	0.10	0.13	0.13
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	495	3795	632	189	2053	158	453	84	168	147	95	747
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	21.0	88.0	10.7	8.0	36.8	8.7	19.0	6.3	15.0	12.3	7.0	14.3
Cycle Q Clear(g_c), s	21.0	88.0	10.7	8.0	36.8	8.7	19.0	6.3	15.0	12.3	7.0	14.3
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	553	3759	1635	184	3071	759	436	278	249	170	236	353
V/C Ratio(X)	0.90	1.01	0.39	1.03	0.67	0.21	1.04	0.30	0.67	0.86	0.40	2.12
Avail Cap(c_a), veh/h	688	3759	1635	184	3071	759	436	278	249	248	236	353
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	16.5	8.0	71.0	29.9	22.6	65.5	55.9	59.6	66.8	60.3	37.3
Incr Delay (d2), s/veh	1.4	7.1	0.0	74.4	0.6	0.1	53.6	2.8	13.7	18.4	5.0	511.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	39.6	4.1	5.7	16.4	3.8	12.3	3.3	7.5	6.9	3.9	30.6
LnGrp Delay(d),s/veh	59.1	23.5	8.0	145.6	30.5	22.7	119.1	58.7	73.3	85.2	65.3	549.1
LnGrp LOS	E	F	A	F	C	C	F	E	E	F	E	F
Approach Vol, veh/h		4922			2400			705			989	
Approach Delay, s/veh		25.1			39.0			101.0			433.7	
Approach LOS		C			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	27.6	12.0	92.0	23.0	23.0	28.1	75.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	17.0	8.0	88.0	19.0	19.0	30.0	66.0
Max Q Clear Time (g_c+I1), s	14.3	17.0	10.0	90.0	21.0	16.3	23.0	38.8
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.0	1.1	1.1	20.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.6
HCM 2010 LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	780	3855	2080	1125	1580	1140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	821	4058	2189	1184	1663	1200
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	826	3930	2221	1895	1668	929
Arrive On Green	0.48	1.00	0.35	0.35	0.33	0.33
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	821	4058	2189	1184	1663	1200
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	35.6	0.0	50.8	35.5	49.8	50.0
Cycle Q Clear(g_c), s	35.6	0.0	50.8	35.5	49.8	50.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	826	3930	2221	1895	1668	929
V/C Ratio(X)	0.99	1.03	0.99	0.62	1.00	1.29
Avail Cap(c_a), veh/h	826	3930	2221	1895	1668	929
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.52	0.52	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	48.6	13.4	49.9	50.0
Incr Delay (d2), s/veh	8.1	15.8	10.6	0.3	21.4	139.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.6	4.3	24.1	24.6	26.2	50.1
LnGrp Delay(d),s/veh	47.0	15.8	59.2	13.7	71.3	189.4
LnGrp LOS	D	F	E	B	E	F
Approach Vol, veh/h		4879	3373		2863	
Approach Delay, s/veh		21.1	43.2		120.8	
Approach LOS		C	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				96.0		54.0	40.0	56.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				92.0		50.0	36.0	52.0
Max Q Clear Time (g_c+I1), s				2.0		52.0	37.6	52.8
Green Ext Time (p_c), s				89.4		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.5
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	1180	0	480	680
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1242	0	505	716
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2611	621			1242	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2611	621			1242	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			9	
cM capacity (veh/h)	2	430			556	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	828	414	505	358	358
Volume Left	0	0	505	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	556	1700	1700
Volume to Capacity	0.49	0.24	0.91	0.21	0.21
Queue Length 95th (ft)	0	0	273	0	0
Control Delay (s)	0.0	0.0	46.2	0.0	0.0
Lane LOS			E		
Approach Delay (s)	0.0		19.1		
Approach LOS					

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	2130	790	730	1605	950	430	70	1235	470	20	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	2242	832	768	1689	1000	453	74	1300	495	21	221
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	504	2136	843	828	2174	1191	686	302	1122	542	224	190
Arrive On Green	0.15	0.33	0.33	0.40	0.71	0.71	0.20	0.16	0.16	0.16	0.12	0.12
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	2242	832	768	1689	1000	453	74	1300	495	21	221
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	7.0	50.0	47.7	31.9	32.0	24.3	18.2	5.2	18.9	21.2	1.5	18.0
Cycle Q Clear(g_c), s	7.0	50.0	47.7	31.9	32.0	24.3	18.2	5.2	18.9	21.2	1.5	18.0
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	504	2136	843	828	2174	1191	686	302	1122	542	224	190
V/C Ratio(X)	0.35	1.05	0.99	0.93	0.78	0.84	0.66	0.25	1.16	0.91	0.09	1.16
Avail Cap(c_a), veh/h	504	2136	843	987	2712	1486	686	302	1122	574	224	190
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	50.0	34.5	43.6	16.9	7.1	55.4	54.9	20.7	62.2	58.7	66.0
Incr Delay (d2), s/veh	0.4	34.0	27.6	4.1	0.3	1.0	4.9	1.9	81.7	18.6	0.2	116.1
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	3.4	27.1	27.0	15.6	14.6	9.0	9.2	2.8	19.9	11.5	0.8	14.0
LnGrp Delay(d),s/veh	58.1	84.0	62.1	47.7	17.2	8.1	60.3	56.8	102.4	80.8	58.9	182.1
LnGrp LOS	E	F	E	D	B	A	E	E	F	F	E	F
Approach Vol, veh/h		3253			3457			1827			737	
Approach Delay, s/veh		77.0			21.3			90.1			110.6	
Approach LOS		E			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.6	28.3	40.1	54.0	33.9	22.0	26.0	68.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	16.0	43.0	50.0	23.0	18.0	13.0	80.0
Max Q Clear Time (g_c+I1), s	23.2	20.9	33.9	52.0	20.2	20.0	9.0	34.0
Green Ext Time (p_c), s	0.4	0.0	2.2	0.0	2.1	0.0	1.5	30.1

Intersection Summary	
HCM 2010 Ctrl Delay	61.5
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2135	285	270	905	510	580
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2247	0	284	953	537	611
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2288	712	301	2988	554	1115
Arrive On Green	0.45	0.00	0.09	0.59	0.31	0.31
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	2247	0	284	953	537	611
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	34.8	0.0	6.6	7.6	23.9	13.5
Cycle Q Clear(g_c), s	34.8	0.0	6.6	7.6	23.9	13.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2288	712	301	2988	554	1115
V/C Ratio(X)	0.98	0.00	0.94	0.32	0.97	0.55
Avail Cap(c_a), veh/h	2288	712	301	2988	554	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	36.3	8.4	27.1	18.4
Incr Delay (d2), s/veh	14.8	0.0	36.9	0.1	30.3	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	19.4	0.0	4.7	3.5	16.3	5.3
LnGrp Delay(d),s/veh	36.4	0.0	73.2	8.4	57.4	19.0
LnGrp LOS	D		E	A	E	B
Approach Vol, veh/h	2247			1237	1148	
Approach Delay, s/veh	36.4			23.3	37.0	
Approach LOS	D			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		29.0	11.0	40.0				51.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	7.0	36.0				47.0
Max Q Clear Time (g_c+I1), s		25.9	8.6	36.8				9.6
Green Ext Time (p_c), s		0.0	0.0	0.0				33.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	160	200	120	60	50	90	1160	150	40	755	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	168	211	126	63	53	95	1221	158	42	795	63
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	163	205	158	191	161	122	1451	187	52	1397	111
Arrive On Green	0.10	0.22	0.22	0.09	0.20	0.20	0.07	0.46	0.46	0.03	0.42	0.42
Sat Flow, veh/h	1774	752	944	1774	936	788	1774	3154	407	1774	3323	263
Grp Volume(v), veh/h	147	0	379	126	0	116	95	683	696	42	423	435
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	0	1724	1774	1770	1791	1774	1770	1816
Q Serve(g_s), s	6.3	0.0	17.0	5.5	0.0	4.5	4.1	26.6	26.9	1.8	14.3	14.3
Cycle Q Clear(g_c), s	6.3	0.0	17.0	5.5	0.0	4.5	4.1	26.6	26.9	1.8	14.3	14.3
Prop In Lane	1.00		0.56	1.00		0.46	1.00		0.23	1.00		0.14
Lane Grp Cap(c), veh/h	181	0	368	158	0	352	122	814	824	52	744	763
V/C Ratio(X)	0.81	0.00	1.03	0.80	0.00	0.33	0.78	0.84	0.84	0.80	0.57	0.57
Avail Cap(c_a), veh/h	181	0	368	159	0	352	227	814	824	91	744	763
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	34.4	0.0	30.6	35.0	0.0	26.6	35.8	18.6	18.7	37.8	17.3	17.3
Incr Delay (d2), s/veh	23.5	0.0	54.5	24.1	0.0	0.5	10.0	10.1	10.4	24.0	3.1	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	4.3	0.0	13.5	3.7	0.0	2.2	2.3	15.2	15.5	1.2	7.6	7.8
LnGrp Delay(d),s/veh	57.9	0.0	85.1	59.0	0.0	27.1	45.8	28.7	29.0	61.7	20.4	20.4
LnGrp LOS	E		F	E		C	D	C	C	E	C	C
Approach Vol, veh/h		526			242			1474			900	
Approach Delay, s/veh		77.5			43.7			30.0			22.3	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	40.0	11.0	21.0	9.4	36.9	12.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	36.0	7.0	17.0	10.0	30.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	3.8	28.9	7.5	19.0	6.1	16.3	8.3	6.5
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.1	4.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	320	180	70	140	30	1195	120	130	50	170	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	337	189	74	147	32	1258	126	137	53	179	126
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	202	1199	50	356	80	874	500	543	68	160	113
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.49	0.61	0.61	0.04	0.16	0.16
Sat Flow, veh/h	311	764	1583	0	1347	301	1774	817	889	1774	1019	717
Grp Volume(v), veh/h	474	0	189	78	0	175	1258	0	263	53	0	305
Grp Sat Flow(s),veh/h/ln	1074	0	1583	6	0	1642	1774	0	1706	1774	0	1736
Q Serve(g_s), s	24.7	0.0	0.0	0.0	0.0	12.3	69.0	0.0	9.9	4.1	0.0	22.0
Cycle Q Clear(g_c), s	37.0	0.0	0.0	37.0	0.0	12.3	69.0	0.0	9.9	4.1	0.0	22.0
Prop In Lane	0.29		1.00	0.94		0.18	1.00		0.52	1.00		0.41
Lane Grp Cap(c), veh/h	317	0	1199	52	0	434	874	0	1043	68	0	273
V/C Ratio(X)	1.49	0.00	0.16	1.52	0.00	0.40	1.44	0.00	0.25	0.78	0.00	1.12
Avail Cap(c_a), veh/h	317	0	1199	52	0	434	874	0	1043	114	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.9	0.0	4.7	68.9	0.0	42.4	35.5	0.0	12.5	66.7	0.0	59.0
Incr Delay (d2), s/veh	238.6	0.0	0.1	311.2	0.0	0.6	204.0	0.0	0.6	17.0	0.0	90.0
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	33.3	0.0	2.0	6.4	0.0	5.6	83.3	0.0	4.8	2.4	0.0	17.4
LnGrp Delay(d),s/veh	297.5	0.0	4.7	380.0	0.0	43.0	239.5	0.0	13.1	83.8	0.0	149.0
LnGrp LOS	F		A	F		D	F		B	F		F
Approach Vol, veh/h		663			253			1521			358	
Approach Delay, s/veh		214.1			147.5			200.3			139.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.4	89.6		41.0	73.0	26.0		41.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	9.0	82.0		37.0	69.0	22.0		37.0
Max Q Clear Time (g_c+I1), s	6.1	11.9		39.0	71.0	24.0		39.0
Green Ext Time (p_c), s	0.0	11.6		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	191.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	40	410	190	60	90	1425	1160	200	100	1035	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	482	200	63	95	1500	1221	211	105	1089	32
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	236	401	155	49	74	1170	1592	273	142	936	28
Arrive On Green	0.00	0.00	0.13	0.16	0.16	0.16	0.57	0.88	0.88	0.08	0.27	0.27
Sat Flow, veh/h	0	1863	3167	968	305	460	3442	3022	519	1774	3511	103
Grp Volume(v), veh/h	0	0	482	358	0	0	1500	712	720	105	549	572
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1733	0	0	1721	1770	1771	1774	1770	1845
Q Serve(g_s), s	0.0	0.0	19.0	24.0	0.0	0.0	51.0	22.1	22.9	8.7	40.0	40.0
Cycle Q Clear(g_c), s	0.0	0.0	19.0	24.0	0.0	0.0	51.0	22.1	22.9	8.7	40.0	40.0
Prop In Lane	0.00		1.00	0.56		0.27	1.00		0.29	1.00		0.06
Lane Grp Cap(c), veh/h	0	236	401	277	0	0	1170	932	933	142	472	492
V/C Ratio(X)	0.00	0.00	1.20	1.29	0.00	0.00	1.28	0.76	0.77	0.74	1.16	1.16
Avail Cap(c_a), veh/h	0	236	401	277	0	0	1170	932	933	142	472	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	65.5	63.0	0.0	0.0	32.4	5.6	5.7	67.5	55.0	55.0
Incr Delay (d2), s/veh	0.0	0.0	112.3	155.2	0.0	0.0	127.5	0.6	0.6	18.4	94.5	93.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	14.6	23.4	0.0	0.0	44.6	10.3	10.4	5.0	31.9	33.2
LnGrp Delay(d),s/veh	0.0	0.0	177.8	218.2	0.0	0.0	159.9	6.2	6.2	85.9	149.5	148.9
LnGrp LOS			F	F			F	A	A	F	F	F
Approach Vol, veh/h		482			358			2932			1226	
Approach Delay, s/veh		177.8			218.2			84.8			143.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	83.0		23.0	55.0	44.0		28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	12.0	79.0		19.0	51.0	40.0		24.0
Max Q Clear Time (g_c+I1), s	10.7	24.9		21.0	53.0	42.0		26.0
Green Ext Time (p_c), s	0.9	15.7		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	117.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	240	955	950	225	1035	435	1570	350	30	1675	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	253	1005	1095	0	1158	458	1653	368	32	1763	63
Adj No. of Lanes	1	1	1	2	0	3	1	2	0	2	2	1
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	284	298	486	852	0	1457	260	1237	266	229	1227	549
Arrive On Green	0.16	0.16	0.16	0.24	0.00	0.24	0.15	0.43	0.43	0.09	0.46	0.46
Sat Flow, veh/h	1774	1863	1583	3548	0	4750	1774	2900	622	3442	3539	1583
Grp Volume(v), veh/h	200	253	1005	1095	0	1158	458	985	1036	32	1763	63
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1583	1774	1770	1753	1721	1770	1583
Q Serve(g_s), s	16.0	19.8	24.0	36.0	0.0	23.5	22.0	64.0	64.0	1.3	52.0	3.4
Cycle Q Clear(g_c), s	16.0	19.8	24.0	36.0	0.0	23.5	22.0	64.0	64.0	1.3	52.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	284	298	486	852	0	1457	260	755	748	229	1227	549
V/C Ratio(X)	0.70	0.85	2.07	1.29	0.00	0.79	1.76	1.30	1.39	0.14	1.44	0.11
Avail Cap(c_a), veh/h	284	298	486	852	0	1457	260	755	748	229	1227	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	59.6	61.2	52.0	57.0	0.0	47.7	64.0	43.0	43.0	64.4	40.4	27.3
Incr Delay (d2), s/veh	7.7	20.0	488.5	137.5	0.0	3.1	357.4	146.4	181.8	0.0	197.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	11.8	86.0	33.9	0.0	10.7	36.6	61.9	68.7	0.6	58.9	1.5
LnGrp Delay(d),s/veh	67.3	81.2	540.5	194.5	0.0	50.8	421.4	189.4	224.8	64.4	237.5	27.4
LnGrp LOS	E	F	F	F		D	F	F	F	E	F	C
Approach Vol, veh/h		1458			2253			2479			1858	
Approach Delay, s/veh		395.9			120.7			247.1			227.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	68.0		28.0	26.0	56.0		40.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	64.0		24.0	22.0	52.0		36.0
Max Q Clear Time (g_c+I1), s	3.3	66.0		26.0	24.0	54.0		38.0
Green Ext Time (p_c), s	5.6	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	234.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	1440	2550	50	0	795	1755	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	1516	2684		0	837	1847	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	2040	2140		0	1239	1780	0
Arrive On Green	0.59	0.59		0.00	0.35	0.35	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	1516	2684		0	837	1847	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	44.9	83.0		0.0	28.2	49.0	0.0
Cycle Q Clear(g_c), s	44.9	83.0		0.0	28.2	49.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	2040	2140		0	1239	1780	0
V/C Ratio(X)	0.74	1.25		0.00	0.68	1.04	0.00
Avail Cap(c_a), veh/h	2040	2140		0	1239	1780	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	28.5		0.0	38.7	45.5	0.0
Incr Delay (d2), s/veh	1.5	118.3		0.0	3.0	31.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	62.3		0.0	14.2	28.2	0.0
LnGrp Delay(d),s/veh	22.2	146.8		0.0	41.7	77.3	0.0
LnGrp LOS	C	F			D	F	
Approach Vol, veh/h	4200				837	1847	
Approach Delay, s/veh	101.9				41.7	77.3	
Approach LOS	F				D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		53.0		87.0		53.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		49.0		83.0		41.0		
Max Q Clear Time (g_c+I1), s		30.2		85.0		51.0		
Green Ext Time (p_c), s		16.4		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	88.0
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2920	750	110	2095	425	210
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	3074	789	116	2205	447	221
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3311	1324	139	4855	657	293
Arrive On Green	0.65	0.65	0.08	0.76	0.19	0.19
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	3074	789	116	2205	447	221
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	74.7	22.8	9.0	17.8	16.4	18.5
Cycle Q Clear(g_c), s	74.7	22.8	9.0	17.8	16.4	18.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3311	1324	139	4855	657	293
V/C Ratio(X)	0.93	0.60	0.84	0.45	0.68	0.75
Avail Cap(c_a), veh/h	3311	1324	152	4897	657	293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	3.7	63.7	6.3	53.2	54.0
Incr Delay (d2), s/veh	3.3	0.4	29.9	0.1	5.6	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.7	21.2	5.6	7.8	8.6	9.4
LnGrp Delay(d),s/veh	24.8	4.2	93.5	6.3	58.8	70.4
LnGrp LOS	C	A	F	A	E	E
Approach Vol, veh/h	3863			2321	668	
Approach Delay, s/veh	20.6			10.7	62.6	
Approach LOS	C			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		29.9	14.9	95.1				110.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		25.0	12.0	91.0				107.0
Max Q Clear Time (g_c+I1), s		20.5	11.0	76.7				19.8
Green Ext Time (p_c), s		1.1	0.0	14.3				86.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	410	290	140	1145	190	90	265	180	190	355	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	432	305	147	1205	200	95	279	189	200	374	174
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	158	769	539	182	1217	201	99	393	334	217	517	440
Arrive On Green	0.09	0.39	0.39	0.10	0.40	0.40	0.06	0.21	0.21	0.12	0.28	0.28
Sat Flow, veh/h	1774	1990	1396	1774	3042	502	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	147	384	353	147	698	707	95	279	189	200	374	174
Grp Sat Flow(s),veh/h/ln	1774	1770	1616	1774	1770	1774	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.4	15.3	15.4	7.3	35.2	35.8	4.8	12.5	9.6	10.0	16.3	8.0
Cycle Q Clear(g_c), s	7.4	15.3	15.4	7.3	35.2	35.8	4.8	12.5	9.6	10.0	16.3	8.0
Prop In Lane	1.00		0.86	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	684	625	182	708	710	99	393	334	217	517	440
V/C Ratio(X)	0.93	0.56	0.57	0.81	0.99	1.00	0.96	0.71	0.57	0.92	0.72	0.40
Avail Cap(c_a), veh/h	158	684	625	296	708	710	99	393	334	217	517	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	21.6	21.7	39.5	26.8	26.9	42.4	32.9	31.8	39.1	29.4	26.4
Incr Delay (d2), s/veh	51.9	1.0	1.2	8.2	30.3	32.7	78.7	10.4	6.8	40.3	8.5	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	5.9	7.7	7.1	4.0	23.0	23.9	4.5	7.6	4.8	7.3	9.6	3.8
LnGrp Delay(d),s/veh	92.6	22.7	22.9	47.8	57.1	59.6	121.1	43.3	38.6	79.3	37.9	29.0
LnGrp LOS	F	C	C	D	E	E	F	D	D	E	D	C
Approach Vol, veh/h		884			1552			563			748	
Approach Delay, s/veh		34.4			57.4			54.8			46.9	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	23.0	13.2	38.8	9.0	29.0	12.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	19.0	15.0	29.0	5.0	25.0	8.0	36.0
Max Q Clear Time (g_c+I1), s	12.0	14.5	9.3	17.4	6.8	18.3	9.4	37.8
Green Ext Time (p_c), s	0.0	2.2	0.2	9.3	0.0	2.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	45	45	220	400	610	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	47	232	421	642	195

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1413	418	837	0	-	0
Stage 1	739	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	129	584	793	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	584	793	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	289	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	56.4	4.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	793	-	80	584	-	-
HCM Lane V/C Ratio	0.292	-	0.592	0.081	-	-
HCM Control Delay (s)	11.4	1	101.1	11.7	-	-
HCM Lane LOS	B	A	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	2.6	0.3	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	340	870	240	370	485	190
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	916	253	389	511	200
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	406	990	864	387	623	919
Arrive On Green	0.23	0.53	0.24	0.24	0.35	0.35
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	358	916	253	389	511	200
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	13.3	31.0	4.0	16.7	17.9	4.1
Cycle Q Clear(g_c), s	13.3	31.0	4.0	16.7	17.9	4.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	406	990	864	387	623	919
V/C Ratio(X)	0.88	0.93	0.29	1.01	0.82	0.22
Avail Cap(c_a), veh/h	468	1036	864	387	623	919
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	25.4	14.7	21.0	25.8	20.2	6.9
Incr Delay (d2), s/veh	16.1	13.2	0.2	47.3	11.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	19.2	2.0	12.3	10.7	5.5
LnGrp Delay(d),s/veh	41.6	28.0	21.2	73.2	31.7	7.4
LnGrp LOS	D	C	C	F	C	A
Approach Vol, veh/h		1274	642		711	
Approach Delay, s/veh		31.8	52.7		24.9	
Approach LOS		C	D		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				40.3		28.0	19.6	20.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				38.0		24.0	18.0	16.0
Max Q Clear Time (g_c+I1), s				33.0		19.9	15.3	18.7
Green Ext Time (p_c), s				3.3		1.1	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	640	3635	1675	835	0	1320
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	674	3826	2091	660		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	701	4850	2962	839		
Arrive On Green	0.40	0.95	0.70	0.70		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	674	3826	2091	660		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	51.9	19.7	30.8	38.6		
Cycle Q Clear(g_c), s	51.9	19.7	30.8	38.6		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	701	4850	2962	839		
V/C Ratio(X)	0.96	0.79	0.71	0.79		
Avail Cap(c_a), veh/h	760	4940	2962	839		
HCM Platoon Ratio	1.00	1.00	1.33	1.33		
Upstream Filter(I)	0.09	0.09	0.85	0.85		
Uniform Delay (d), s/veh	41.3	0.6	14.2	15.4		
Incr Delay (d2), s/veh	3.9	0.1	0.7	4.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	26.0	8.2	15.7	17.6		
LnGrp Delay(d),s/veh	45.2	0.7	14.9	19.7		
LnGrp LOS	D	A	B	B		
Approach Vol, veh/h		4500	2751			
Approach Delay, s/veh		7.4	16.1			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				137.5			59.3	78.2
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				136.0			60.0	72.0
Max Q Clear Time (g_c+I1), s				21.7			53.9	40.6
Green Ext Time (p_c), s				111.8			1.4	31.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	2170	740	310	2160	480	0	0	0	1115	0	1885
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	495	2284	779	326	2274	0				1174	0	1984
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	380	2070	645	253	1707	532				1293	0	1154
Arrive On Green	0.21	0.41	0.41	0.14	0.34	0.00				0.36	0.00	0.36
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	495	2284	779	326	2274	0				1174	0	1984
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.0	57.0	57.0	20.0	47.0	0.0				44.0	0.0	51.0
Cycle Q Clear(g_c), s	30.0	57.0	57.0	20.0	47.0	0.0				44.0	0.0	51.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	380	2070	645	253	1707	532				1293	0	1154
V/C Ratio(X)	1.30	1.10	1.21	1.29	1.33	0.00				0.91	0.00	1.72
Avail Cap(c_a), veh/h	380	2070	645	253	1707	532				1293	0	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.48	0.48	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	41.5	41.5	60.0	46.5	0.0				42.3	0.0	44.5
Incr Delay (d2), s/veh	137.8	47.2	95.2	142.8	151.4	0.0				10.9	0.0	327.6
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	29.2	35.7	41.9	19.8	45.9	0.0				23.5	0.0	74.8
LnGrp Delay(d),s/veh	192.8	88.7	136.7	202.8	197.9	0.0				53.2	0.0	372.1
LnGrp LOS	F	F	F	F	F					D		F
Approach Vol, veh/h		3558			2600						3158	
Approach Delay, s/veh		113.7			198.5						253.6	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			24.0	61.0		55.0	34.0	51.0
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			20.0	57.0		51.0	30.0	47.0
Max Q Clear Time (g_c+I1), s			22.0	59.0		53.0	32.0	49.0
Green Ext Time (p_c), s			0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	184.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	795	0	395	220	340	0	0	830	470
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				837	0	0	232	358	0	0	874	495
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				865	0	772	276	1612	0	0	961	430
Arrive On Green				0.49	0.00	0.00	0.31	0.91	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				837	0	0	232	358	0	0	874	495
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				64.1	0.0	0.0	17.1	1.6	0.0	0.0	33.4	38.0
Cycle Q Clear(g_c), s				64.1	0.0	0.0	17.1	1.6	0.0	0.0	33.4	38.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				865	0	772	276	1612	0	0	961	430
V/C Ratio(X)				0.97	0.00	0.00	0.84	0.22	0.00	0.00	0.91	1.15
Avail Cap(c_a), veh/h				887	0	792	276	1612	0	0	961	430
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.68	0.68	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	0.0	46.6	3.5	0.0	0.0	49.3	51.0
Incr Delay (d2), s/veh				22.5	0.0	0.0	14.6	0.2	0.0	0.0	14.0	91.9
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				36.8	0.0	0.0	9.5	0.7	0.0	0.0	18.3	27.6
LnGrp Delay(d),s/veh				57.3	0.0	0.0	61.2	3.7	0.0	0.0	63.4	142.9
LnGrp LOS				E			E	A			E	F
Approach Vol, veh/h					837			590			1369	
Approach Delay, s/veh					57.3			26.3			92.1	
Approach LOS					E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.8			25.8	42.0		72.2
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		62.0			20.0	38.0		70.0
Max Q Clear Time (g_c+I1), s		3.6			19.1	40.0		66.1
Green Ext Time (p_c), s		3.3			0.3	0.0		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	300	301	744	490	0	123	87	137	98	65	410	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.89			1.00	0.85		0.92				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1664			1681	1504		3251				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1664			1681	1504		3251				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	317	783	516	0	129	95	144	103	68	432	367
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	316	1100	0	0	529	211	0	297	0	0	0	557
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	53.0	53.0			23.0	23.0		17.0				31.0
Effective Green, g (s)	53.0	53.0			23.0	23.0		17.0				31.0
Actuated g/C Ratio	0.38	0.38			0.16	0.16		0.12				0.22
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	670	629			276	247		394				356
v/s Ratio Prot	0.18	c0.66			c0.31	0.14		c0.09				c0.35
v/s Ratio Perm												
v/c Ratio	0.47	1.75			1.92	0.85		0.75				1.56
Uniform Delay, d1	32.9	43.5			58.5	56.9		59.5				54.5
Progression Factor	1.00	1.00			1.00	1.00		1.00				0.64
Incremental Delay, d2	0.5	343.5			425.7	23.8		12.6				259.4
Delay (s)	33.4	387.0			484.2	80.7		72.1				294.0
Level of Service	C	F			F	F		E				F
Approach Delay (s)		308.1			369.2			72.1				
Approach LOS		F			F			E				

Intersection Summary			
HCM 2000 Control Delay	293.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	145.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	866
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3355
Flt Permitted	0.99
Satd. Flow (perm)	3355
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	912
RTOR Reduction (vph)	0
Lane Group Flow (vph)	1154
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	31.0
Effective Green, g (s)	31.0
Actuated g/C Ratio	0.22
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	742
v/s Ratio Prot	0.34
v/s Ratio Perm	
v/c Ratio	1.56
Uniform Delay, d1	54.5
Progression Factor	0.64
Incremental Delay, d2	252.5
Delay (s)	287.1
Level of Service	F
Approach Delay (s)	289.4
Approach LOS	F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4330	260	570	1175	140	250	50	770	90	40	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4558	274	600	1237	147	263	53	811	95	42	84
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	1401	2906	905	565	1671	565	320	226	452	98	106	90
Arrive On Green	0.41	0.57	0.57	0.16	0.33	0.33	0.09	0.12	0.12	0.03	0.06	0.06
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	147	4558	274	600	1237	147	263	53	811	95	42	84
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.7	80.0	8.2	23.0	30.2	5.2	10.5	3.6	17.0	3.9	3.0	7.4
Cycle Q Clear(g_c), s	3.7	80.0	8.2	23.0	30.2	5.2	10.5	3.6	17.0	3.9	3.0	7.4
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	1401	2906	905	565	1671	565	320	226	452	98	106	90
V/C Ratio(X)	0.10	1.57	0.30	1.06	0.74	0.26	0.82	0.23	1.79	0.97	0.39	0.93
Avail Cap(c_a), veh/h	1401	2906	905	565	3342	1086	320	226	452	98	106	90
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)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	30.0	6.6	58.5	41.7	31.9	62.4	55.6	38.9	67.9	63.7	65.7
Incr Delay (d2), s/veh	0.0	256.0	0.0	31.8	0.1	0.0	15.8	2.4	365.5	79.5	10.6	76.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	106.0	3.5	13.4	14.2	2.3	5.7	2.0	62.0	2.9	1.9	5.2
LnGrp Delay(d),s/veh	25.7	286.0	6.6	90.3	41.8	31.9	78.2	58.0	404.4	147.4	74.3	142.2
LnGrp LOS	C	F	A	F	D	C	E	E	F	F	E	F
Approach Vol, veh/h		4979			1984			1127			221	
Approach Delay, s/veh		262.9			55.7			312.0			131.5	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	27.0	84.0	17.0	12.0	61.0	50.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	23.0	80.0	13.0	8.0	11.0	92.0
Max Q Clear Time (g_c+I1), s	5.9	19.0	25.0	82.0	12.5	9.4	5.7	32.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	0.0	5.3	13.8

Intersection Summary	
HCM 2010 Ctrl Delay	216.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	4200	460	240	1165	80	320	30	460	30	20	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	4421	484	253	1226	84	337	32	484	32	0	109
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
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	172	3051	1108	197	2849	919	344	388	330	72	0	714
Arrive On Green	0.10	0.60	0.60	0.11	1.00	1.00	0.10	0.21	0.21	0.02	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	0	3167
Grp Volume(v), veh/h	147	4421	484	253	1226	84	337	32	484	32	0	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	11.4	84.0	9.7	8.0	0.0	0.0	13.7	1.9	24.9	1.2	0.0	3.9
Cycle Q Clear(g_c), s	11.4	84.0	9.7	8.0	0.0	0.0	13.7	1.9	24.9	1.2	0.0	3.9
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	172	3051	1108	197	2849	919	344	388	330	72	0	714
V/C Ratio(X)	0.86	1.45	0.44	1.29	0.43	0.09	0.98	0.08	1.47	0.44	0.00	0.15
Avail Cap(c_a), veh/h	253	3051	1108	197	2849	919	344	388	330	101	0	714
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	28.0	3.2	62.0	0.0	0.0	62.9	44.6	40.6	67.8	0.0	43.5
Incr Delay (d2), s/veh	16.8	203.9	0.3	151.7	0.1	0.0	42.8	0.4	226.5	4.2	0.0	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	6.4	96.6	4.3	7.9	0.0	0.0	8.6	1.0	31.6	0.7	0.0	1.7
LnGrp Delay(d),s/veh	79.0	231.9	3.5	213.7	0.1	0.0	105.6	45.1	267.1	72.0	0.0	43.9
LnGrp LOS	E	F	A	F	A	A	F	D	F	E		D
Approach Vol, veh/h		5052			1563			853			141	
Approach Delay, s/veh		205.6			34.7			195.0			50.3	
Approach LOS		F			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	33.2	12.0	88.0	18.0	22.0	17.6	82.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	28.0	8.0	84.0	14.0	18.0	20.0	72.0
Max Q Clear Time (g_c+I1), s	3.2	26.9	10.0	86.0	15.7	5.9	13.4	2.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	2.0	0.2	15.4

Intersection Summary	
HCM 2010 Ctrl Delay	166.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	485	0	300	480	930	0	0	1130	510
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				414	136	316	505	979	0	0	1189	537
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				393	110	257	444	1344	0	0	1067	461
Arrive On Green				0.22	0.22	0.22	0.50	1.00	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1774	499	1159	1774	1863	0	0	2501	1040
Grp Volume(v), veh/h				414	0	452	505	979	0	0	859	867
Grp Sat Flow(s),veh/h/ln				1774	0	1658	1774	1863	0	0	1770	1679
Q Serve(g_s), s				31.0	0.0	31.0	35.0	0.0	0.0	0.0	62.0	62.0
Cycle Q Clear(g_c), s				31.0	0.0	31.0	35.0	0.0	0.0	0.0	62.0	62.0
Prop In Lane				1.00		0.70	1.00		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				393	0	367	444	1344	0	0	784	744
V/C Ratio(X)				1.05	0.00	1.23	1.14	0.73	0.00	0.00	1.10	1.17
Avail Cap(c_a), veh/h				393	0	367	444	1344	0	0	784	744
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				54.5	0.0	54.5	35.0	0.0	0.0	0.0	39.0	39.0
Incr Delay (d2), s/veh				60.3	0.0	125.6	82.6	2.8	0.0	0.0	61.8	88.7
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				21.7	0.0	27.0	26.9	1.1	0.0	0.0	43.7	47.0
LnGrp Delay(d),s/veh				114.8	0.0	180.1	117.6	2.8	0.0	0.0	100.8	127.7
LnGrp LOS				F		F	F	A			F	F
Approach Vol, veh/h					866			1484			1726	
Approach Delay, s/veh					148.9			41.9			114.3	
Approach LOS					F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		105.0			39.0	66.0		35.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		101.0			35.0	62.0		31.0
Max Q Clear Time (g_c+I1), s		2.0			37.0	64.0		33.0
Green Ext Time (p_c), s		62.0			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	95.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	450	0	290	0	0	0	0	960	1545	540	1075	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	474	0	305				0	1011	1626	568	1132	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	355	0	317				0	1795	803	367	2629	0
Arrive On Green	0.20	0.00	0.20				0.00	0.85	0.85	0.41	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	474	0	305				0	1011	1626	568	1132	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	28.0	0.0	26.7				0.0	11.7	71.0	29.0	0.0	0.0
Cycle Q Clear(g_c), s	28.0	0.0	26.7				0.0	11.7	71.0	29.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	317				0	1795	803	367	2629	0
V/C Ratio(X)	1.34	0.00	0.96				0.00	0.56	2.02	1.55	0.43	0.00
Avail Cap(c_a), veh/h	355	0	317				0	1795	803	367	2629	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.52	0.52	0.09	0.09	0.00
Uniform Delay (d), s/veh	56.0	0.0	55.5				0.0	6.2	10.7	41.0	0.0	0.0
Incr Delay (d2), s/veh	169.2	0.0	40.6				0.0	0.7	463.5	246.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.4	0.0	15.3				0.0	5.5	132.4	39.3	0.0	0.0
LnGrp Delay(d),s/veh	225.2	0.0	96.1				0.0	6.9	474.3	287.8	0.0	0.0
LnGrp LOS	F		F					A	F	F	A	
Approach Vol, veh/h		779						2637			1700	
Approach Delay, s/veh		174.6						295.1			96.2	
Approach LOS		F						F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	33.0	75.0		32.0		108.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	29.0	71.0		28.0		104.0		
Max Q Clear Time (g_c+I1), s	31.0	73.0		30.0		2.0		
Green Ext Time (p_c), s	0.0	0.0		0.0		16.4		

Intersection Summary	
HCM 2010 Ctrl Delay	210.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	370	410	350	190	130	220	1735	200	200	1325	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	353	456	368	200	137	232	1826	211	211	1395	189
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	383	373	898	419	375	168	287	2182	251	318	2443	761
Arrive On Green	0.22	0.20	0.20	0.12	0.11	0.11	0.08	0.47	0.47	0.03	0.16	0.16
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4627	532	3442	5085	1583
Grp Volume(v), veh/h	211	353	456	368	200	137	232	1335	702	211	1395	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1769	1721	1695	1583
Q Serve(g_s), s	14.8	26.2	12.0	14.7	7.5	11.9	9.3	48.1	48.7	8.5	35.5	6.9
Cycle Q Clear(g_c), s	14.8	26.2	12.0	14.7	7.5	11.9	9.3	48.1	48.7	8.5	35.5	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	383	373	898	419	375	168	287	1598	834	318	2443	761
V/C Ratio(X)	0.55	0.95	0.51	0.88	0.53	0.82	0.81	0.84	0.84	0.66	0.57	0.25
Avail Cap(c_a), veh/h	383	373	898	467	531	237	442	1598	834	318	2443	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70	0.87	0.87	0.87
Uniform Delay (d), s/veh	48.8	55.3	23.0	60.4	59.3	61.3	63.0	32.3	32.4	65.7	45.6	8.3
Incr Delay (d2), s/veh	1.7	33.2	0.5	15.9	1.2	13.9	4.4	3.8	7.3	4.4	0.8	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	7.4	16.9	5.3	7.9	3.7	5.8	4.6	23.3	25.5	4.3	16.9	3.2
LnGrp Delay(d),s/veh	50.5	88.5	23.5	76.3	60.5	75.1	67.5	36.1	39.7	70.1	46.4	8.9
LnGrp LOS	D	F	C	E	E	E	E	D	D	E	D	A
Approach Vol, veh/h		1020			705			2269			1795	
Approach Delay, s/veh		51.6			71.6			40.4			45.3	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	70.0	21.1	32.0	15.7	71.2	34.2	18.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	66.0	19.0	28.0	18.0	59.0	26.0	21.0
Max Q Clear Time (g_c+I1), s	10.5	50.7	16.7	28.2	11.3	37.5	16.8	13.9
Green Ext Time (p_c), s	0.0	11.8	0.3	0.0	0.4	12.4	1.5	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	0	570	110	210	370	570	1695	0	0	1430	655
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	95	0	600	116	221	389	600	1784	0	0	1505	689
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	116	222	292	519	3834	0	0	1525	682
Arrive On Green	0.00	0.00	0.00	0.18	0.18	0.18	0.29	0.75	0.00	0.00	0.43	0.43
Sat Flow, veh/h		0		630	1201	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		337	0	389	600	1784	0	0	1505	689
Grp Sat Flow(s),veh/h/ln				1831	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				23.9	0.0	24.0	38.0	17.3	0.0	0.0	54.7	56.0
Cycle Q Clear(g_c), s				23.9	0.0	24.0	38.0	17.3	0.0	0.0	54.7	56.0
Prop In Lane				0.34		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				338	0	292	519	3834	0	0	1525	682
V/C Ratio(X)				1.00	0.00	1.33	1.16	0.47	0.00	0.00	0.99	1.01
Avail Cap(c_a), veh/h				338	0	292	519	3834	0	0	1525	682
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.74	0.74
Uniform Delay (d), s/veh				53.0	0.0	53.0	46.0	6.1	0.0	0.0	36.6	37.0
Incr Delay (d2), s/veh				48.0	0.0	170.5	90.6	0.4	0.0	0.0	17.0	32.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.6	0.0	24.3	31.6	8.1	0.0	0.0	30.4	30.5
LnGrp Delay(d),s/veh				101.0	0.0	223.5	136.6	6.5	0.0	0.0	53.6	69.1
LnGrp LOS				F		F	F	A			D	F
Approach Vol, veh/h					726			2384			2194	
Approach Delay, s/veh					166.6			39.2			58.5	
Approach LOS					F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		102.0			42.0	60.0		28.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		90.0			38.0	48.0		24.0
Max Q Clear Time (g_c+I1), s		19.3			40.0	58.0		26.0
Green Ext Time (p_c), s		63.2			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	470	3455	600	180	1950	150	430	80	160	140	90	710
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	3637	632	189	2053	158	453	84	168	147	95	747
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	559	3616	1572	197	2941	727	442	296	265	172	253	378
Arrive On Green	0.16	0.56	0.56	0.06	0.46	0.46	0.13	0.17	0.17	0.10	0.14	0.14
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	495	3637	632	189	2053	158	453	84	168	147	95	747
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	19.7	79.0	17.9	7.7	35.7	8.4	18.0	5.8	13.8	11.4	6.5	14.2
Cycle Q Clear(g_c), s	19.7	79.0	17.9	7.7	35.7	8.4	18.0	5.8	13.8	11.4	6.5	14.2
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	559	3616	1572	197	2941	727	442	296	265	172	253	378
V/C Ratio(X)	0.89	1.01	0.40	0.96	0.70	0.22	1.02	0.28	0.63	0.86	0.38	1.98
Avail Cap(c_a), veh/h	688	3616	1572	197	2941	727	442	296	265	253	253	378
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)	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	30.5	17.2	65.8	30.2	22.8	61.0	50.9	54.3	62.2	55.1	33.7
Incr Delay (d2), s/veh	1.4	6.3	0.0	52.8	0.7	0.1	49.0	2.4	11.0	16.8	4.2	448.3
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	9.5	36.2	6.9	5.1	16.0	3.7	11.6	3.0	6.9	6.4	3.6	29.0
LnGrp Delay(d),s/veh	58.8	36.8	17.2	118.7	30.9	22.9	110.0	53.3	65.3	79.0	59.3	481.9
LnGrp LOS	E	F	B	F	C	C	F	D	E	E	E	F
Approach Vol, veh/h		4764			2400			705			989	
Approach Delay, s/veh		36.5			37.3			92.6			381.5	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	27.4	12.0	83.0	22.0	23.0	26.7	68.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	17.0	8.0	79.0	18.0	19.0	28.0	59.0
Max Q Clear Time (g_c+I1), s	13.4	15.8	9.7	81.0	20.0	16.2	21.7	37.7
Green Ext Time (p_c), s	0.2	0.4	0.0	0.0	0.0	1.2	1.0	16.8

Intersection Summary	
HCM 2010 Ctrl Delay	79.7
HCM 2010 LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	780	3805	2080	1125	1480	1140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	821	4005	2189	1184	1558	1200
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	836	4027	2288	1871	1573	876
Arrive On Green	0.49	1.00	0.36	0.36	0.31	0.31
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	821	4005	2189	1184	1558	1200
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	32.8	0.0	46.7	34.0	43.4	44.0
Cycle Q Clear(g_c), s	32.8	0.0	46.7	34.0	43.4	44.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	836	4027	2288	1871	1573	876
V/C Ratio(X)	0.98	0.99	0.96	0.63	0.99	1.37
Avail Cap(c_a), veh/h	836	4028	2289	1871	1573	876
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	44.0	13.1	47.8	48.0
Incr Delay (d2), s/veh	6.0	3.2	6.2	0.4	20.5	173.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	0.9	21.7	22.9	22.9	49.7
LnGrp Delay(d),s/veh	41.7	3.2	50.1	13.5	68.3	221.6
LnGrp LOS	D	A	D	B	E	F
Approach Vol, veh/h		4826	3373		2758	
Approach Delay, s/veh		9.7	37.3		135.0	
Approach LOS		A	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				92.0		48.0	38.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				88.0		44.0	34.0	50.0
Max Q Clear Time (g_c+I1), s				2.0		46.0	34.8	48.7
Green Ext Time (p_c), s				85.3		0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	49.7
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	1180	0	480	680
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1242	0	505	716
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2611	621			1242	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2611	621			1242	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			9	
cM capacity (veh/h)	2	430			556	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	828	414	505	358	358
Volume Left	0	0	505	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	556	1700	1700
Volume to Capacity	0.49	0.24	0.91	0.21	0.21
Queue Length 95th (ft)	0	0	273	0	0
Control Delay (s)	0.0	0.0	46.2	0.0	0.0
Lane LOS			E		
Approach Delay (s)	0.0		19.1		
Approach LOS					

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	2115	790	730	1605	950	430	70	1200	470	20	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	2226	832	768	1689	1000	453	74	1263	495	21	221
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	484	2105	828	831	2184	1197	669	290	1107	551	226	192
Arrive On Green	0.14	0.33	0.33	0.40	0.72	0.72	0.19	0.16	0.16	0.16	0.12	0.12
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	2226	832	768	1689	1000	453	74	1263	495	21	221
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	6.6	46.0	46.0	29.7	29.5	22.0	17.1	4.9	17.4	19.8	1.4	17.0
Cycle Q Clear(g_c), s	6.6	46.0	46.0	29.7	29.5	22.0	17.1	4.9	17.4	19.8	1.4	17.0
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	484	2105	828	831	2184	1197	669	290	1107	551	226	192
V/C Ratio(X)	0.37	1.06	1.00	0.92	0.77	0.84	0.68	0.26	1.14	0.90	0.09	1.15
Avail Cap(c_a), veh/h	484	2105	828	983	2688	1473	669	290	1107	615	226	192
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	47.0	33.4	40.6	15.5	6.3	52.3	52.0	18.9	57.7	54.6	61.5
Incr Delay (d2), s/veh	0.5	36.8	32.5	4.2	0.3	1.0	5.4	2.1	74.7	15.2	0.2	110.9
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	3.2	25.7	27.2	14.5	13.6	8.2	8.6	2.7	24.1	10.6	0.7	13.3
LnGrp Delay(d),s/veh	55.0	83.8	65.9	44.8	15.8	7.3	57.8	54.1	93.7	72.9	54.8	172.4
LnGrp LOS	E	F	F	D	B	A	E	D	F	E	D	F
Approach Vol, veh/h		3237			3457			1790			737	
Approach Delay, s/veh		77.6			19.8			82.9			102.2	
Approach LOS		E			B			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	25.8	37.8	50.0	31.2	21.0	23.7	64.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	13.0	40.0	46.0	21.0	17.0	12.0	74.0
Max Q Clear Time (g_c+I1), s	21.8	19.4	31.7	48.0	19.1	19.0	8.6	31.5
Green Ext Time (p_c), s	0.6	0.0	2.1	0.0	1.4	0.0	1.4	28.6

Intersection Summary	
HCM 2010 Ctrl Delay	58.9
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1005	465	200	625	185	250
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1058	0	211	658	195	263
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2396	746	349	3339	311	771
Arrive On Green	0.47	0.00	0.10	0.66	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	1058	0	211	658	195	263
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	6.6	0.0	2.8	2.4	4.8	3.6
Cycle Q Clear(g_c), s	6.6	0.0	2.8	2.4	4.8	3.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2396	746	349	3339	311	771
V/C Ratio(X)	0.44	0.00	0.60	0.20	0.63	0.34
Avail Cap(c_a), veh/h	3528	1099	796	5132	895	1689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	20.5	3.2	18.2	13.7
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	2.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	1.4	1.1	2.6	1.4
LnGrp Delay(d),s/veh	8.5	0.0	22.1	3.2	20.3	14.0
LnGrp LOS	A		C	A	C	B
Approach Vol, veh/h	1058			869	458	
Approach Delay, s/veh	8.5			7.8	16.7	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		12.3	8.8	26.4				35.2
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	11.0	33.0				48.0
Max Q Clear Time (g_c+I1), s		6.8	4.8	8.6				4.4
Green Ext Time (p_c), s		1.5	0.3	13.8				18.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	60	600	70	60	30	40	465	80	30	665	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	63	632	74	63	32	42	489	84	32	700	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	766	65	657	93	82	42	54	887	152	174	1203	91
Arrive On Green	0.43	0.45	0.45	0.05	0.07	0.07	0.03	0.29	0.29	0.10	0.36	0.36
Sat Flow, veh/h	1774	146	1460	1774	1166	592	1774	3024	517	1774	3335	252
Grp Volume(v), veh/h	95	0	695	74	0	95	42	285	288	32	371	382
Grp Sat Flow(s),veh/h/ln	1774	0	1605	1774	0	1758	1774	1770	1772	1774	1770	1818
Q Serve(g_s), s	4.8	0.0	63.0	6.2	0.0	8.0	3.5	20.4	20.6	2.5	25.5	25.5
Cycle Q Clear(g_c), s	4.8	0.0	63.0	6.2	0.0	8.0	3.5	20.4	20.6	2.5	25.5	25.5
Prop In Lane	1.00		0.91	1.00		0.34	1.00		0.29	1.00		0.14
Lane Grp Cap(c), veh/h	766	0	722	93	0	124	54	519	520	174	638	656
V/C Ratio(X)	0.12	0.00	0.96	0.80	0.00	0.77	0.78	0.55	0.55	0.18	0.58	0.58
Avail Cap(c_a), veh/h	766	0	760	142	0	797	106	519	520	174	638	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)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	25.6	0.0	40.0	70.3	0.0	68.5	72.2	44.6	44.7	62.2	38.8	38.8
Incr Delay (d2), s/veh	0.1	0.0	23.3	16.1	0.0	9.5	20.6	4.1	4.2	0.4	3.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	32.5	3.5	0.0	4.2	2.0	10.6	10.7	1.2	13.1	13.4
LnGrp Delay(d),s/veh	25.7	0.0	63.4	86.4	0.0	78.0	92.8	48.8	48.9	62.6	42.2	42.1
LnGrp LOS	C		E	F		E	F	D	D	E	D	D
Approach Vol, veh/h		790			169			615			785	
Approach Delay, s/veh		58.8			81.7			51.9			43.0	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	48.0	11.9	71.5	8.6	58.1	68.8	14.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	44.0	12.0	71.0	9.0	42.0	15.0	68.0
Max Q Clear Time (g_c+I1), s	4.5	22.6	8.2	65.0	5.5	27.5	6.8	10.0
Green Ext Time (p_c), s	0.0	3.5	0.0	2.4	0.0	4.2	3.4	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	53.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	650	1155	40	80	20	130	70	60	20	60	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	684	1216	42	84	21	137	74	63	21	63	63
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	768	1267	65	576	144	639	432	368	28	103	103
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.36	0.46	0.46	0.02	0.12	0.12
Sat Flow, veh/h	80	1747	1583	38	1310	327	1774	931	792	1774	856	856
Grp Volume(v), veh/h	726	0	1216	42	0	105	137	0	137	21	0	126
Grp Sat Flow(s),veh/h/ln	1827	0	1583	38	0	1637	1774	0	1723	1774	0	1712
Q Serve(g_s), s	39.6	0.0	45.3	10.7	0.0	5.8	8.0	0.0	6.9	1.8	0.0	10.5
Cycle Q Clear(g_c), s	55.3	0.0	45.3	66.0	0.0	5.8	8.0	0.0	6.9	1.8	0.0	10.5
Prop In Lane	0.06		1.00	1.00		0.20	1.00		0.46	1.00		0.50
Lane Grp Cap(c), veh/h	829	0	1267	65	0	720	639	0	800	28	0	205
V/C Ratio(X)	0.88	0.00	0.96	0.65	0.00	0.15	0.21	0.00	0.17	0.76	0.00	0.61
Avail Cap(c_a), veh/h	829	0	1267	65	0	720	639	0	800	71	0	205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	12.9	72.9	0.0	25.1	33.3	0.0	23.4	73.6	0.0	62.7
Incr Delay (d2), s/veh	10.4	0.0	16.6	20.2	0.0	0.1	0.2	0.0	0.5	34.1	0.0	12.9
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	30.2	0.0	24.7	2.1	0.0	2.6	3.9	0.0	3.4	1.1	0.0	5.7
LnGrp Delay(d),s/veh	49.2	0.0	29.6	93.1	0.0	25.2	33.5	0.0	23.8	107.7	0.0	75.6
LnGrp LOS	D		C	F		C	C		C	F		E
Approach Vol, veh/h		1942			147			274			147	
Approach Delay, s/veh		36.9			44.6			28.6			80.2	
Approach LOS		D			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	73.7		70.0	58.0	22.0		70.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	66.0		66.0	54.0	18.0		66.0
Max Q Clear Time (g_c+I1), s	3.8	8.9		57.3	10.0	12.5		68.0
Green Ext Time (p_c), s	0.0	1.3		7.1	1.3	0.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	20	1385	90	20	30	430	505	90	30	1335	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	1506	95	21	32	453	532	95	32	1405	42
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	683	1161	109	24	37	321	1220	217	41	1178	35
Arrive On Green	0.00	0.00	0.37	0.10	0.10	0.10	0.09	0.41	0.41	0.02	0.34	0.34
Sat Flow, veh/h	0	1863	3167	1117	247	376	3442	3004	534	1774	3509	105
Grp Volume(v), veh/h	0	0	1506	148	0	0	453	313	314	32	708	739
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1740	0	0	1721	1770	1768	1774	1770	1844
Q Serve(g_s), s	0.0	0.0	55.0	12.6	0.0	0.0	14.0	19.1	19.3	2.7	50.4	50.4
Cycle Q Clear(g_c), s	0.0	0.0	55.0	12.6	0.0	0.0	14.0	19.1	19.3	2.7	50.4	50.4
Prop In Lane	0.00		1.00	0.64		0.22	1.00		0.30	1.00		0.06
Lane Grp Cap(c), veh/h	0	683	1161	170	0	0	321	718	718	41	594	619
V/C Ratio(X)	0.00	0.00	1.30	0.87	0.00	0.00	1.41	0.44	0.44	0.78	1.19	1.19
Avail Cap(c_a), veh/h	0	683	1161	186	0	0	321	718	718	71	594	619
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)	0.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	47.5	66.7	0.0	0.0	68.0	32.1	32.2	72.9	49.8	49.8
Incr Delay (d2), s/veh	0.0	0.0	140.1	31.6	0.0	0.0	200.5	1.7	1.7	26.8	102.0	102.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	46.6	7.5	0.0	0.0	15.6	9.7	9.8	1.6	41.4	43.3
LnGrp Delay(d),s/veh	0.0	0.0	187.6	98.4	0.0	0.0	268.5	33.9	33.9	99.7	151.8	152.4
LnGrp LOS			F	F			F	C	C	F	F	F
Approach Vol, veh/h		1506			148			1080			1479	
Approach Delay, s/veh		187.6			98.4			132.3			151.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	64.9		59.0	18.0	54.4		18.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	57.0		55.0	14.0	49.0		16.0
Max Q Clear Time (g_c+I1), s	4.7	21.3		57.0	16.0	52.4		14.6
Green Ext Time (p_c), s	0.0	20.7		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	157.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	60	745	440	110	225	265	715	80	30	2690	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	85	784	478	214	158	279	753	84	32	2832	95
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	331	348	443	426	224	317	166	1627	181	275	1746	781
Arrive On Green	0.19	0.19	0.19	0.12	0.12	0.12	0.09	0.51	0.51	0.11	0.66	0.66
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3211	358	3442	3539	1583
Grp Volume(v), veh/h	79	85	784	478	214	158	279	415	422	32	2832	95
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1800	1721	1770	1583
Q Serve(g_s), s	5.7	5.8	28.0	18.0	17.1	1.3	14.0	22.7	22.7	1.3	74.0	3.4
Cycle Q Clear(g_c), s	5.7	5.8	28.0	18.0	17.1	1.3	14.0	22.7	22.7	1.3	74.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	331	348	443	426	224	317	166	897	912	275	1746	781
V/C Ratio(X)	0.24	0.24	1.77	1.12	0.96	0.50	1.69	0.46	0.46	0.12	1.62	0.12
Avail Cap(c_a), veh/h	331	348	443	426	224	317	166	897	912	275	1746	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	51.9	52.0	54.0	66.0	65.6	53.3	68.0	23.8	23.8	62.2	25.8	13.6
Incr Delay (d2), s/veh	0.4	0.4	354.9	81.4	48.1	1.2	333.0	1.7	1.7	0.0	280.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.0	62.1	13.6	11.8	0.7	22.2	11.5	11.7	0.6	103.7	1.5
LnGrp Delay(d),s/veh	52.3	52.3	408.9	147.4	113.7	54.5	401.0	25.6	25.5	62.2	305.9	13.7
LnGrp LOS	D	D	F	F	F	D	F	C	C	E	F	B
Approach Vol, veh/h		948			850			1116			2959	
Approach Delay, s/veh		347.2			121.7			119.4			293.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	80.0		32.0	18.0	78.0		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	12.0	76.0		28.0	14.0	74.0		18.0
Max Q Clear Time (g_c+I1), s	3.3	24.7		30.0	16.0	76.0		20.0
Green Ext Time (p_c), s	8.5	6.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	244.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	565	1580	30	0	445	1145	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	595	1663		0	468	1205	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1749	1835		0	1552	2230	0
Arrive On Green	0.51	0.51		0.00	0.44	0.44	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	595	1663		0	468	1205	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	15.4	63.0		0.0	12.8	26.2	0.0
Cycle Q Clear(g_c), s	15.4	63.0		0.0	12.8	26.2	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1749	1835		0	1552	2230	0
V/C Ratio(X)	0.34	0.91		0.00	0.30	0.54	0.00
Avail Cap(c_a), veh/h	1950	2046		0	1552	2230	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.9	33.6		0.0	27.3	31.0	0.0
Incr Delay (d2), s/veh	0.1	5.9		0.0	0.5	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	35.3		0.0	6.3	12.5	0.0
LnGrp Delay(d),s/veh	22.0	39.5		0.0	27.8	31.9	0.0
LnGrp LOS	C	D			C	C	
Approach Vol, veh/h	2258				468	1205	
Approach Delay, s/veh	34.9				27.8	31.9	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		69.8		80.2		69.8		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		57.0		85.0		47.0		
Max Q Clear Time (g_c+I1), s		14.8		65.0		28.2		
Green Ext Time (p_c), s		17.6		11.2		11.5		

Intersection Summary	
HCM 2010 Ctrl Delay	33.2
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1580	425	80	1190	545	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1663	447	84	1253	574	105
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2281	1210	161	3765	1119	499
Arrive On Green	0.45	0.45	0.09	0.59	0.32	0.32
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1663	447	84	1253	574	105
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	22.1	7.7	3.7	8.3	10.9	4.0
Cycle Q Clear(g_c), s	22.1	7.7	3.7	8.3	10.9	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2281	1210	161	3765	1119	499
V/C Ratio(X)	0.73	0.37	0.52	0.33	0.51	0.21
Avail Cap(c_a), veh/h	2591	1306	215	4353	1119	499
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	3.2	35.8	8.7	23.0	20.7
Incr Delay (d2), s/veh	0.9	0.2	2.6	0.1	1.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	7.9	1.9	3.7	5.6	1.9
LnGrp Delay(d),s/veh	19.6	3.4	38.4	8.8	24.7	21.6
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	2110			1337	679	
Approach Delay, s/veh	16.1			10.6	24.3	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		30.0	11.5	41.0				52.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		26.0	10.0	42.0				56.0
Max Q Clear Time (g_c+I1), s		12.9	5.7	24.1				10.3
Green Ext Time (p_c), s		2.2	3.0	12.9				12.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	1655	70	50	100	80	60	325	60	160	145	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	168	1742	74	53	105	84	63	342	63	168	153	74
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	779	1703	72	68	177	130	81	354	301	179	457	388
Arrive On Green	0.44	0.49	0.49	0.04	0.09	0.09	0.05	0.19	0.19	0.10	0.25	0.25
Sat Flow, veh/h	1774	3460	146	1774	1947	1433	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	168	886	930	53	95	94	63	342	63	168	153	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1837	1774	1770	1610	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.2	44.0	44.0	2.6	4.6	5.1	3.1	16.3	3.0	8.4	6.0	1.0
Cycle Q Clear(g_c), s	5.2	44.0	44.0	2.6	4.6	5.1	3.1	16.3	3.0	8.4	6.0	1.0
Prop In Lane	1.00		0.08	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	779	871	904	68	161	146	81	354	301	179	457	388
V/C Ratio(X)	0.22	1.02	1.03	0.79	0.59	0.64	0.78	0.97	0.21	0.94	0.34	0.19
Avail Cap(c_a), veh/h	779	871	904	79	633	576	159	354	301	179	457	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	22.7	22.7	42.6	39.0	39.2	42.2	35.9	30.5	39.9	27.8	2.4
Incr Delay (d2), s/veh	0.1	35.0	37.4	34.4	3.4	4.7	14.6	39.9	1.6	50.3	2.0	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	2.6	29.8	31.5	1.9	2.4	2.4	1.9	12.3	1.4	6.6	3.4	1.5
LnGrp Delay(d),s/veh	15.7	57.7	60.1	77.1	42.4	43.9	56.8	75.8	32.1	90.2	29.7	3.5
LnGrp LOS	B	F	F	E	D	D	E	E	C	F	C	A
Approach Vol, veh/h		1984			242			468			395	
Approach Delay, s/veh		55.3			50.6			67.3			50.5	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	21.0	7.4	48.0	8.1	25.9	43.3	12.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	17.0	4.0	44.0	8.0	18.0	16.0	32.0
Max Q Clear Time (g_c+I1), s	10.4	18.3	4.6	46.0	5.1	8.0	7.2	7.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.5	7.2	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	56.1
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	215	305	45	180	210	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	226	321	47	189	221	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	428	129	258	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	555	897	1304	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	533	897	1304	-	-	-
Mov Cap-2 Maneuver	533	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1304	-	533	897	-	-
HCM Lane V/C Ratio	0.036	-	0.425	0.358	-	-
HCM Control Delay (s)	7.9	0.1	16.6	11.2	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	1.6	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	120	210	170	135	475	70
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	221	179	142	500	74
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	163	583	539	241	975	1016
Arrive On Green	0.09	0.31	0.15	0.15	0.55	0.55
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	126	221	179	142	500	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	4.0	5.4	2.6	4.9	10.3	1.0
Cycle Q Clear(g_c), s	4.0	5.4	2.6	4.9	10.3	1.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	163	583	539	241	975	1016
V/C Ratio(X)	0.77	0.38	0.33	0.59	0.51	0.07
Avail Cap(c_a), veh/h	305	960	973	435	975	1016
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	25.8	15.6	22.0	23.0	8.2	3.9
Incr Delay (d2), s/veh	7.6	0.4	0.4	2.3	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.8	1.3	2.3	5.5	1.7
LnGrp Delay(d),s/veh	33.5	16.0	22.4	25.3	10.1	4.1
LnGrp LOS	C	B	C	C	B	A
Approach Vol, veh/h		347	321		574	
Approach Delay, s/veh		22.3	23.7		9.4	
Approach LOS		C	C		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.2		36.0	9.3	12.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				30.0		32.0	10.0	16.0
Max Q Clear Time (g_c+I1), s				7.4		12.3	6.0	6.9
Green Ext Time (p_c), s				2.9		1.8	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2935	1995	1030	625	0	590
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	3089	2100	1418	436		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1277	4950	1267	359		
Arrive On Green	0.72	0.97	0.23	0.23		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	3089	2100	1418	436		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	108.0	2.8	34.0	34.0		
Cycle Q Clear(g_c), s	108.0	2.8	34.0	34.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	1277	4950	1267	359		
V/C Ratio(X)	2.42	0.42	1.12	1.21		
Avail Cap(c_a), veh/h	1277	4950	1267	359		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.92	0.92		
Uniform Delay (d), s/veh	21.0	0.1	58.0	58.0		
Incr Delay (d2), s/veh	638.5	0.0	64.1	118.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	278.7	1.2	25.0	26.6		
LnGrp Delay(d),s/veh	659.5	0.1	122.1	176.1		
LnGrp LOS	F	A	F	F		
Approach Vol, veh/h		5189	1854			
Approach Delay, s/veh		392.6	134.8			
Approach LOS		F	F			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				150.0			112.0	38.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			108.0	34.0
Max Q Clear Time (g_c+I1), s				4.8			110.0	36.0
Green Ext Time (p_c), s				114.9			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	324.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	510	3885	1535	200	1000	420	0	0	0	435	0	475
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	537	4089	1616	211	1053	0				458	0	500
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	941	3526	1098	177	1338	417				449	0	401
Arrive On Green	0.53	0.69	0.69	0.10	0.26	0.00				0.13	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	537	4089	1616	211	1053	0				458	0	500
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	30.6	104.0	104.0	15.0	28.9	0.0				19.0	0.0	19.0
Cycle Q Clear(g_c), s	30.6	104.0	104.0	15.0	28.9	0.0				19.0	0.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	941	3526	1098	177	1338	417				449	0	401
V/C Ratio(X)	0.57	1.16	1.47	1.19	0.79	0.00				1.02	0.00	1.25
Avail Cap(c_a), veh/h	941	3526	1098	177	1966	612				449	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	23.0	23.0	67.5	51.4	0.0				65.5	0.0	65.5
Incr Delay (d2), s/veh	0.4	73.6	214.8	90.6	0.1	0.0				47.4	0.0	130.3
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	15.0	72.0	110.3	11.8	13.6	0.0				12.3	0.0	15.6
LnGrp Delay(d),s/veh	24.1	96.6	237.8	158.1	51.5	0.0				112.9	0.0	195.8
LnGrp LOS	C	F	F	F	D					F		F
Approach Vol, veh/h		6242			1264						958	
Approach Delay, s/veh		126.9			69.3						156.1	
Approach LOS		F			E						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			19.0	108.0		23.0	83.5	43.5
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			15.0	104.0		19.0	61.0	58.0
Max Q Clear Time (g_c+I1), s			17.0	106.0		21.0	32.6	30.9
Green Ext Time (p_c), s			0.0	0.0		0.0	2.5	8.6

Intersection Summary	
HCM 2010 Ctrl Delay	121.6
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	70	0	240	1315	260	0	0	310	150
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				74	0	0	1384	274	0	0	326	158
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				94	0	84	1373	3163	0	0	330	148
Arrive On Green				0.05	0.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				74	0	0	1384	274	0	0	326	158
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				6.2	0.0	0.0	0.0	0.0	0.0	0.0	13.8	14.0
Cycle Q Clear(g_c), s				6.2	0.0	0.0	0.0	0.0	0.0	0.0	13.8	14.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				94	0	84	1373	3163	0	0	330	148
V/C Ratio(X)				0.79	0.00	0.00	1.01	0.09	0.00	0.00	0.99	1.07
Avail Cap(c_a), veh/h				189	0	169	1373	3163	0	0	330	148
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				70.2	0.0	0.0	0.0	0.0	0.0	0.0	67.9	68.0
Incr Delay (d2), s/veh				13.4	0.0	0.0	9.4	0.0	0.0	0.0	46.3	93.7
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				3.4	0.0	0.0	3.6	0.0	0.0	0.0	8.9	10.0
LnGrp Delay(d),s/veh				83.6	0.0	0.0	9.4	0.0	0.0	0.0	114.2	161.7
LnGrp LOS				F			F	A			F	F
Approach Vol, veh/h					74			1658			484	
Approach Delay, s/veh					83.6			7.9			129.7	
Approach LOS					F			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		138.0			120.0	18.0		12.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		126.0			108.0	14.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	16.0		8.2
Green Ext Time (p_c), s		15.8			15.8	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	190	20	109	66	35	0	79	71	1306	1179	755	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.95			0.91	0.85		0.91			
Flt Protected	0.95		0.99			0.98	1.00		1.00			
Satd. Flow (prot)	1770		1760			1573	1504		3222			
Flt Permitted	0.95		0.32			0.98	1.00		1.00			
Satd. Flow (perm)	1770		574			1573	1504		3222			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	21	115	69	37	0	83	77	1375	1241	795	284
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	200	0	205	0	0	100	97	0	3392	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	31.0		31.0			5.0	5.0		79.0			
Effective Green, g (s)	31.0		31.0			5.0	5.0		79.0			
Actuated g/C Ratio	0.21		0.21			0.03	0.03		0.53			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	365		118			52	50		1696			
v/s Ratio Prot	0.11					0.06	c0.06		c1.05			
v/s Ratio Perm			c0.36									
v/c Ratio	0.55		1.74			1.92	1.94		2.35dr			
Uniform Delay, d1	53.2		59.5			72.5	72.5		35.5			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	1.7		364.5			478.0	487.5		452.1			
Delay (s)	54.9		424.0			550.5	560.0		487.6			
Level of Service	D		F			F	F		F			
Approach Delay (s)			241.7			555.2			487.6			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	438.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	144.4%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	71	39
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3288
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3288
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	75	41
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	291	109
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	19.0	19.0
Effective Green, g (s)	19.0	19.0
Actuated g/C Ratio	0.13	0.13
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	203	416
v/s Ratio Prot	c0.18	0.03
v/s Ratio Perm		
v/c Ratio	1.43	0.26
Uniform Delay, d1	65.5	59.2
Progression Factor	0.12	0.04
Incremental Delay, d2	214.3	1.1
Delay (s)	221.9	3.5
Level of Service	F	A
Approach Delay (s)		162.4
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	1285	310	680	3875	110	260	30	740	100	40	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	1353	326	716	4079	116	274	32	779	105	42	105
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	115	2677	834	804	3695	1193	321	199	539	92	75	63
Arrive On Green	0.03	0.53	0.53	0.23	0.73	0.73	0.09	0.11	0.11	0.03	0.04	0.04
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	126	1353	326	716	4079	116	274	32	779	105	42	105
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.0	25.7	12.7	30.2	109.0	0.0	11.8	2.3	16.0	4.0	3.3	6.0
Cycle Q Clear(g_c), s	5.0	25.7	12.7	30.2	109.0	0.0	11.8	2.3	16.0	4.0	3.3	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	115	2677	834	804	3695	1193	321	199	539	92	75	63
V/C Ratio(X)	1.10	0.51	0.39	0.89	1.10	0.10	0.85	0.16	1.45	1.14	0.56	1.66
Avail Cap(c_a), veh/h	115	2677	834	1354	3695	1193	321	199	539	92	75	63
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)	0.45	0.45	0.45	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.5	22.9	10.1	55.6	20.5	4.9	67.0	60.9	39.3	73.0	70.7	72.0
Incr Delay (d2), s/veh	85.4	0.1	0.1	2.8	49.8	0.0	19.4	1.7	211.1	138.0	27.4	355.7
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	3.7	12.0	5.6	14.6	67.3	1.3	6.5	1.3	52.1	3.7	2.3	8.9
LnGrp Delay(d),s/veh	157.9	23.0	10.2	58.5	70.3	4.9	86.3	62.6	250.4	211.0	98.1	427.7
LnGrp LOS	F	C	B	E	F	A	F	E	F	F	F	F
Approach Vol, veh/h		1805			4911			1085			252	
Approach Delay, s/veh		30.1			67.0			203.4			282.5	
Approach LOS		C			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	39.0	83.0	18.0	10.0	9.0	113.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	59.0	55.0	14.0	6.0	5.0	109.0
Max Q Clear Time (g_c+I1), s	6.0	18.0	32.2	27.7	13.8	8.0	7.0	111.0
Green Ext Time (p_c), s	0.0	0.0	2.8	14.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	83.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	1095	380	240	3895	70	340	40	510	50	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	1153	400	253	4100	74	358	42	537	53	79	64
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	95	1577	618	1250	3153	1021	275	363	309	89	261	306
Arrive On Green	0.05	0.31	0.31	0.36	0.62	0.62	0.08	0.19	0.19	0.03	0.14	0.14
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	126	1153	400	253	4100	74	358	42	537	53	79	64
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	8.0	30.3	16.2	7.6	93.0	2.6	12.0	2.8	14.1	2.2	5.7	5.1
Cycle Q Clear(g_c), s	8.0	30.3	16.2	7.6	93.0	2.6	12.0	2.8	14.1	2.2	5.7	5.1
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	95	1577	618	1250	3153	1021	275	363	309	89	261	306
V/C Ratio(X)	1.33	0.73	0.65	0.20	1.30	0.07	1.30	0.12	1.74	0.60	0.30	0.21
Avail Cap(c_a), veh/h	95	2848	1013	1250	3153	1021	275	363	309	95	261	306
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	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	46.2	23.2	32.8	28.5	9.9	69.0	49.7	14.1	72.4	57.9	50.9
Incr Delay (d2), s/veh	204.9	0.7	1.1	0.0	135.4	0.0	159.1	0.6	346.0	8.9	3.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	14.3	7.2	3.6	82.7	1.1	11.8	1.5	35.8	1.2	3.2	2.4
LnGrp Delay(d),s/veh	275.9	46.8	24.3	32.8	163.9	9.9	228.1	50.4	360.0	81.3	60.9	52.4
LnGrp LOS	F	D	C	C	F	A	F	D	F	F	E	D
Approach Vol, veh/h		1679			4427			937			196	
Approach Delay, s/veh		58.7			153.8			295.8			63.6	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	33.2	58.5	50.5	16.0	25.0	12.0	97.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	29.0	17.0	84.0	12.0	21.0	8.0	93.0
Max Q Clear Time (g_c+I1), s	4.2	16.1	9.6	32.3	14.0	7.7	10.0	95.0
Green Ext Time (p_c), s	0.0	2.5	7.4	14.2	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	147.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	1740	0	180	250	460	0	0	820	340
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				2008	0	0	263	484	0	0	863	358
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				1774	931	0	225	832	0	0	717	296
Arrive On Green				0.50	0.00	0.00	0.25	0.89	0.00	0.00	0.29	0.29
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2538	1010
Grp Volume(v), veh/h				2008	0	0	263	484	0	0	624	597
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1685
Q Serve(g_s), s				75.0	0.0	0.0	19.0	8.7	0.0	0.0	44.0	44.0
Cycle Q Clear(g_c), s				75.0	0.0	0.0	19.0	8.7	0.0	0.0	44.0	44.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.60
Lane Grp Cap(c), veh/h				1774	931	0	225	832	0	0	519	494
V/C Ratio(X)				1.13	0.00	0.00	1.17	0.58	0.00	0.00	1.20	1.21
Avail Cap(c_a), veh/h				1774	931	0	225	832	0	0	519	494
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.87	0.87	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.5	0.0	0.0	56.0	4.9	0.0	0.0	53.0	53.0
Incr Delay (d2), s/veh				67.1	0.0	0.0	110.1	2.6	0.0	0.0	108.0	111.7
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				53.0	0.0	0.0	16.1	4.6	0.0	0.0	37.1	35.8
LnGrp Delay(d),s/veh				104.6	0.0	0.0	166.1	7.5	0.0	0.0	161.0	164.7
LnGrp LOS				F			F	A			F	F
Approach Vol, veh/h					2008			747			1221	
Approach Delay, s/veh					104.6			63.3			162.8	
Approach LOS					F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		71.0			23.0	48.0		79.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		67.0			19.0	44.0		75.0
Max Q Clear Time (g_c+I1), s		10.7			21.0	46.0		77.0
Green Ext Time (p_c), s		19.2			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	114.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	0	90	0	0	0	0	500	440	550	2010	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	221	0	95				0	526	463	579	2116	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	252	0	225				0	967	433	895	2847	0
Arrive On Green	0.14	0.00	0.14				0.00	0.18	0.18	1.00	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	221	0	95				0	526	463	579	2116	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	18.3	0.0	8.2				0.0	20.2	41.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.3	0.0	8.2				0.0	20.2	41.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	252	0	225				0	967	433	895	2847	0
V/C Ratio(X)	0.88	0.00	0.42				0.00	0.54	1.07	0.65	0.74	0.00
Avail Cap(c_a), veh/h	343	0	306				0	967	433	895	2847	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.67	0.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.09	0.09	0.00
Uniform Delay (d), s/veh	63.0	0.0	58.7				0.0	52.8	61.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	17.1	0.0	1.3				0.0	2.1	61.9	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.0	3.7				0.0	10.2	25.4	0.0	0.1	0.0
LnGrp Delay(d),s/veh	80.1	0.0	60.0				0.0	54.9	123.2	0.1	0.2	0.0
LnGrp LOS	F		E					D	F	A	A	
Approach Vol, veh/h		316						989			2695	
Approach Delay, s/veh		74.0						86.9			0.2	
Approach LOS		E						F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	79.7	45.0		25.3		124.7		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	68.0	41.0		29.0		113.0		
Max Q Clear Time (g_c+I1), s	2.0	43.0		20.3		2.0		
Green Ext Time (p_c), s	44.2	0.0		1.0		59.2		

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	180	450	100	80	50	180	700	110	40	2190	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	189	474	105	84	53	189	737	116	42	2305	158
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	244	261	982	149	163	73	584	3052	476	76	2746	855
Arrive On Green	0.14	0.14	0.14	0.04	0.05	0.05	0.06	0.23	0.23	0.01	0.36	0.36
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4438	693	3442	5085	1583
Grp Volume(v), veh/h	200	189	474	105	84	53	189	561	292	42	2305	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1741	1721	1695	1583
Q Serve(g_s), s	16.4	14.6	1.8	4.5	3.5	4.6	7.9	20.3	20.6	1.8	62.3	10.2
Cycle Q Clear(g_c), s	16.4	14.6	1.8	4.5	3.5	4.6	7.9	20.3	20.6	1.8	62.3	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	244	261	982	149	163	73	584	2331	1197	76	2746	855
V/C Ratio(X)	0.82	0.72	0.48	0.71	0.51	0.72	0.32	0.24	0.24	0.55	0.84	0.18
Avail Cap(c_a), veh/h	296	397	1213	206	378	169	584	2331	1197	115	2746	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	0.60	0.60	0.60
Uniform Delay (d), s/veh	62.9	61.7	28.8	70.8	69.9	59.9	62.5	26.0	26.1	73.2	41.9	25.3
Incr Delay (d2), s/veh	14.1	3.8	0.4	6.3	2.5	12.7	0.3	0.2	0.4	3.7	2.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	7.8	6.5	2.3	1.8	2.3	3.8	9.6	10.1	0.9	29.7	4.6
LnGrp Delay(d),s/veh	77.0	65.5	29.1	77.1	72.4	72.6	62.8	26.2	26.5	76.9	43.9	25.6
LnGrp LOS	E	E	C	E	E	E	E	C	C	E	D	C
Approach Vol, veh/h		863			242			1042			2505	
Approach Delay, s/veh		48.2			74.5			32.9			43.3	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	107.2	10.5	25.0	29.5	85.0	24.6	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	88.0	9.0	32.0	12.0	81.0	25.0	16.0
Max Q Clear Time (g_c+I1), s	3.8	22.6	6.5	16.6	9.9	64.3	18.4	6.6
Green Ext Time (p_c), s	0.0	8.0	0.1	3.4	0.5	14.4	2.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	43.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	550	70	180	240	510	670	0	0	930	1800
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	579	74	189	253	537	705	0	0	979	1895
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	41	106	127	402	4407	0	0	2171	971
Arrive On Green	0.00	0.00	0.00	0.08	0.08	0.08	0.23	0.87	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		517	1320	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		263	0	253	537	705	0	0	979	1895
Grp Sat Flow(s),veh/h/ln				1837	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				12.0	0.0	12.0	34.0	3.2	0.0	0.0	0.0	92.0
Cycle Q Clear(g_c), s				12.0	0.0	12.0	34.0	3.2	0.0	0.0	0.0	92.0
Prop In Lane				0.28		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				147	0	127	402	4407	0	0	2171	971
V/C Ratio(X)				1.79	0.00	2.00	1.34	0.16	0.00	0.00	0.45	1.95
Avail Cap(c_a), veh/h				147	0	127	402	4407	0	0	2171	971
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.61	0.61
Uniform Delay (d), s/veh				69.0	0.0	69.0	58.0	1.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				381.2	0.0	475.7	167.0	0.1	0.0	0.0	0.4	430.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.6	0.0	22.0	35.3	1.5	0.0	0.0	0.1	116.1
LnGrp Delay(d),s/veh				450.2	0.0	544.7	225.0	1.6	0.0	0.0	0.4	430.4
LnGrp LOS				F		F	F	A			A	F
Approach Vol, veh/h					516			1242			2874	
Approach Delay, s/veh					496.5			98.2			283.9	
Approach LOS					F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		134.0			38.0	96.0		16.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		121.0			25.0	92.0		12.0
Max Q Clear Time (g_c+I1), s		5.2			36.0	94.0		14.0
Green Ext Time (p_c), s		8.5			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	257.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	1430	570	130	3115	80	540	60	160	50	40	270
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	1505	600	137	3279	84	568	63	168	53	42	284
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	253	2104	915	975	3449	852	671	366	327	133	161	242
Arrive On Green	0.15	0.66	0.66	0.28	0.54	0.54	0.20	0.21	0.21	0.08	0.09	0.09
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	211	1505	600	137	3279	84	568	63	168	53	42	284
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	8.9	22.8	19.5	4.5	72.6	2.8	23.9	4.4	14.1	4.3	3.2	11.2
Cycle Q Clear(g_c), s	8.9	22.8	19.5	4.5	72.6	2.8	23.9	4.4	14.1	4.3	3.2	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	253	2104	915	975	3449	852	671	366	327	133	161	242
V/C Ratio(X)	0.83	0.72	0.66	0.14	0.95	0.10	0.85	0.17	0.51	0.40	0.26	1.18
Avail Cap(c_a), veh/h	275	3503	1523	975	3460	855	671	366	327	133	161	242
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)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	21.2	20.6	40.1	32.8	8.8	58.2	48.9	52.8	66.1	64.0	50.8
Incr Delay (d2), s/veh	15.7	0.4	0.7	0.1	7.0	0.0	9.8	1.0	5.7	1.9	3.9	113.8
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	4.8	9.9	7.4	2.1	33.6	1.2	12.3	2.3	6.7	2.2	1.8	8.1
LnGrp Delay(d),s/veh	78.8	21.6	21.3	40.2	39.8	8.9	68.0	50.0	58.5	68.1	67.9	164.6
LnGrp LOS	E	C	C	D	D	A	E	D	E	E	E	F
Approach Vol, veh/h		2316			3500			799			379	
Approach Delay, s/veh		26.7			39.0			64.6			140.4	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	35.0	46.5	53.2	33.3	17.0	15.0	84.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	31.0	11.0	82.0	28.0	13.0	12.0	81.0
Max Q Clear Time (g_c+I1), s	6.3	16.1	6.5	24.8	25.9	13.2	10.9	74.6
Green Ext Time (p_c), s	0.9	1.1	4.5	24.4	0.6	0.0	0.1	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	760	2150	2795	1110	700	1010
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	800	2263	2942	1168	737	1063
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	826	4656	2948	1895	1101	613
Arrive On Green	0.08	0.24	0.46	0.46	0.22	0.22
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	800	2263	2942	1168	737	1063
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	34.8	45.6	68.8	34.6	20.2	33.0
Cycle Q Clear(g_c), s	34.8	45.6	68.8	34.6	20.2	33.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	826	4656	2948	1895	1101	613
V/C Ratio(X)	0.97	0.49	1.00	0.62	0.67	1.73
Avail Cap(c_a), veh/h	826	4656	2948	1895	1101	613
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.29	0.29	1.00	1.00
Uniform Delay (d), s/veh	68.5	32.9	40.4	13.2	53.5	58.5
Incr Delay (d2), s/veh	15.1	0.0	8.4	0.2	3.2	337.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	20.3	32.0	22.4	9.7	51.3
LnGrp Delay(d),s/veh	83.6	32.9	48.8	13.4	56.8	395.6
LnGrp LOS	F	C	D	B	E	F
Approach Vol, veh/h		3063	4110		1800	
Approach Delay, s/veh		46.2	38.8		256.8	
Approach LOS		D	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				113.0		37.0	40.0	73.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				109.0		33.0	36.0	69.0
Max Q Clear Time (g_c+I1), s				47.6		35.0	36.8	70.8
Green Ext Time (p_c), s				61.1		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.0
HCM 2010 LOS	F

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	940	0	410	340
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	989	0	432	358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2032	495			989	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2032	495			989	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			38	
cM capacity (veh/h)	19	520			694	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	660	330	432	179	179
Volume Left	0	0	432	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	694	1700	1700
Volume to Capacity	0.39	0.19	0.62	0.11	0.11
Queue Length 95th (ft)	0	0	109	0	0
Control Delay (s)	0.0	0.0	18.3	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		10.0		
Approach LOS					

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	1545	990	490	1665	740	400	50	475	240	20	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	1626	1042	516	1753	779	421	53	500	253	21	105
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	186	1666	1035	551	1861	1020	1354	671	1449	390	149	126
Arrive On Green	0.05	0.26	0.26	0.05	0.12	0.12	0.39	0.36	0.36	0.11	0.08	0.08
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	1626	1042	516	1753	779	421	53	500	253	21	105
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	7.8	37.7	39.0	22.4	51.3	40.6	12.7	2.8	9.4	10.6	1.6	9.8
Cycle Q Clear(g_c), s	7.8	37.7	39.0	22.4	51.3	40.6	12.7	2.8	9.4	10.6	1.6	9.8
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	186	1666	1035	551	1861	1020	1354	671	1449	390	149	126
V/C Ratio(X)	0.96	0.98	1.01	0.94	0.94	0.76	0.31	0.08	0.35	0.65	0.14	0.83
Avail Cap(c_a), veh/h	186	1666	1035	551	1865	1022	1354	671	1449	390	224	190
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	55.0	12.2	70.3	64.4	59.7	31.4	31.6	9.3	63.6	64.2	68.0
Incr Delay (d2), s/veh	55.2	16.6	29.7	4.8	1.7	0.5	0.6	0.2	0.7	3.7	0.4	17.0
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	5.1	18.6	44.5	11.1	24.4	15.8	6.1	1.5	3.7	5.2	0.8	4.9
LnGrp Delay(d),s/veh	126.0	71.7	42.0	75.1	66.1	60.1	32.0	31.8	10.0	67.4	64.7	85.0
LnGrp LOS	F	E	F	E	E	E	C	C	A	E	E	F
Approach Vol, veh/h		2847			3048			974			379	
Approach Delay, s/veh		64.2			66.1			20.7			72.1	
Approach LOS		E			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	58.0	28.0	43.0	63.0	16.0	12.1	58.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	54.0	24.0	39.0	53.0	18.0	8.0	55.0
Max Q Clear Time (g_c+I1), s	12.6	11.4	24.4	41.0	14.7	11.8	9.8	53.3
Green Ext Time (p_c), s	0.4	2.5	0.0	0.0	2.6	0.2	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	59.6
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	350	80	140	505	165	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	368	0	147	532	174	179
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1655	515	323	2803	327	775
Arrive On Green	0.33	0.00	0.09	0.55	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	368	0	147	532	174	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.6	0.0	1.2	1.6	2.7	1.5
Cycle Q Clear(g_c), s	1.6	0.0	1.2	1.6	2.7	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1655	515	323	2803	327	775
V/C Ratio(X)	0.22	0.00	0.46	0.19	0.53	0.23
Avail Cap(c_a), veh/h	4032	1255	1592	7056	1758	3023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	13.0	3.4	11.2	8.4
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.0	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.6	0.7	1.4	0.6
LnGrp Delay(d),s/veh	7.5	0.0	14.0	3.4	12.5	8.6
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	368			679	353	
Approach Delay, s/veh	7.5			5.7	10.5	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.6	6.8	13.8				20.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		30.0	14.0	24.0				42.0
Max Q Clear Time (g_c+I1), s		4.7	3.2	3.6				3.6
Green Ext Time (p_c), s		1.2	0.3	6.3				7.4

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	40	70	60	20	40	285	50	20	190	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	53	42	74	63	21	42	300	53	21	200	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	92	73	101	142	47	63	1558	272	22	1444	297
Arrive On Green	0.05	0.10	0.10	0.06	0.11	0.11	0.04	0.52	0.52	0.01	0.49	0.49
Sat Flow, veh/h	1774	964	764	1774	1338	446	1774	3013	526	1774	2924	602
Grp Volume(v), veh/h	63	0	95	74	0	84	42	175	178	21	119	123
Grp Sat Flow(s),veh/h/ln	1774	0	1728	1774	0	1784	1774	1770	1770	1774	1770	1756
Q Serve(g_s), s	1.8	0.0	2.6	2.1	0.0	2.2	1.2	2.7	2.7	0.6	1.8	1.9
Cycle Q Clear(g_c), s	1.8	0.0	2.6	2.1	0.0	2.2	1.2	2.7	2.7	0.6	1.8	1.9
Prop In Lane	1.00		0.44	1.00		0.25	1.00		0.30	1.00		0.34
Lane Grp Cap(c), veh/h	83	0	166	101	0	189	63	915	915	22	874	868
V/C Ratio(X)	0.76	0.00	0.57	0.73	0.00	0.44	0.67	0.19	0.19	0.95	0.14	0.14
Avail Cap(c_a), veh/h	388	0	653	458	0	745	317	915	915	212	874	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(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	23.7	0.0	21.8	23.3	0.0	21.1	24.0	6.5	6.5	24.8	6.9	6.9
Incr Delay (d2), s/veh	13.5	0.0	3.1	9.9	0.0	1.6	11.7	0.5	0.5	76.9	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.4	1.3	0.0	1.2	0.8	1.4	1.5	0.8	1.0	1.0
LnGrp Delay(d),s/veh	37.2	0.0	24.9	33.2	0.0	22.7	35.7	7.0	7.0	101.7	7.2	7.3
LnGrp LOS	D		C	C		C	D	A	A	F	A	A
Approach Vol, veh/h		158			158			395			263	
Approach Delay, s/veh		29.8			27.6			10.0			14.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	30.0	6.9	8.8	5.8	28.8	6.3	9.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	13.0	19.0	9.0	23.0	11.0	21.0
Max Q Clear Time (g_c+I1), s	2.6	4.7	4.1	4.6	3.2	3.9	3.8	4.2
Green Ext Time (p_c), s	0.0	2.0	0.4	0.3	0.0	1.3	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	100	120	30	60	20	435	60	50	20	50	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	105	126	32	63	21	458	63	53	21	53	32
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	178	1131	95	197	71	1014	698	587	29	207	125
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.57	0.75	0.75	0.02	0.19	0.19
Sat Flow, veh/h	350	1250	1583	332	1382	498	1774	936	788	1774	1089	658
Grp Volume(v), veh/h	147	0	126	48	0	68	458	0	116	21	0	85
Grp Sat Flow(s),veh/h/ln	1600	0	1583	605	0	1607	1774	0	1724	1774	0	1747
Q Serve(g_s), s	6.5	0.0	0.0	3.0	0.0	4.8	18.8	0.0	2.3	1.5	0.0	5.2
Cycle Q Clear(g_c), s	11.2	0.0	0.0	14.2	0.0	4.8	18.8	0.0	2.3	1.5	0.0	5.2
Prop In Lane	0.29		1.00	0.66		0.31	1.00		0.46	1.00		0.38
Lane Grp Cap(c), veh/h	265	0	1131	134	0	229	1014	0	1285	29	0	333
V/C Ratio(X)	0.55	0.00	0.11	0.36	0.00	0.30	0.45	0.00	0.09	0.72	0.00	0.26
Avail Cap(c_a), veh/h	476	0	1332	301	0	433	1126	0	1285	141	0	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	0.0	5.6	54.0	0.0	48.4	15.6	0.0	4.4	61.7	0.0	43.4
Incr Delay (d2), s/veh	1.8	0.0	0.0	1.6	0.0	0.7	0.3	0.0	0.1	27.5	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	1.4	1.7	0.0	2.2	9.2	0.0	1.1	1.0	0.0	2.7
LnGrp Delay(d),s/veh	52.9	0.0	5.6	55.7	0.0	49.1	15.9	0.0	4.5	89.2	0.0	45.3
LnGrp LOS	D		A	E		D	B		A	F		D
Approach Vol, veh/h		273			116			574			106	
Approach Delay, s/veh		31.1			51.8			13.6			54.0	
Approach LOS		C			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	98.0		22.0	76.1	28.0		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	94.0		34.0	80.0	24.0		34.0
Max Q Clear Time (g_c+I1), s	3.5	4.3		13.2	20.8	7.2		16.2
Green Ext Time (p_c), s	0.0	2.3		1.9	2.3	0.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	20	230	190	0	0	625	365	60	30	240	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	278	200	0	0	658	384	63	32	253	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	186	317	252	0	0	688	1132	184	280	1090	90
Arrive On Green	0.00	0.00	0.10	0.14	0.00	0.00	0.07	0.12	0.12	0.16	0.33	0.33
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	3049	496	1774	3311	273
Grp Volume(v), veh/h	0	0	278	200	0	0	658	222	225	32	134	140
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1775	1774	1770	1815
Q Serve(g_s), s	0.0	0.0	6.1	7.6	0.0	0.0	13.3	8.0	8.1	1.1	3.9	3.9
Cycle Q Clear(g_c), s	0.0	0.0	6.1	7.6	0.0	0.0	13.3	8.0	8.1	1.1	3.9	3.9
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.28	1.00		0.15
Lane Grp Cap(c), veh/h	0	186	317	252	0	0	688	657	659	280	583	597
V/C Ratio(X)	0.00	0.00	0.88	0.79	0.00	0.00	0.96	0.34	0.34	0.11	0.23	0.23
Avail Cap(c_a), veh/h	0	186	317	405	0	0	688	657	659	280	583	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.84	0.84	0.84	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	31.1	29.0	0.0	0.0	32.4	22.8	22.9	25.3	17.0	17.1
Incr Delay (d2), s/veh	0.0	0.0	23.2	5.6	0.0	0.0	21.3	1.2	1.2	0.2	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	0.0	0.0	3.6	4.1	0.0	0.0	8.4	4.1	4.2	0.5	2.0	2.1
LnGrp Delay(d),s/veh	0.0	0.0	54.3	34.6	0.0	0.0	53.7	24.0	24.1	25.5	18.0	18.0
LnGrp LOS			D	C			D	C	C	C	B	B
Approach Vol, veh/h		278			200			1105			306	
Approach Delay, s/veh		54.3			34.6			41.7			18.8	
Approach LOS		D			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	30.0		11.0	18.0	27.0		14.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	26.0		7.0	14.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	3.1	10.1		8.1	15.3	5.9		9.6
Green Ext Time (p_c), s	0.3	2.4		0.0	0.0	1.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	39.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	210	230	120	415	175	535	220	40	510	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	58	60	221	161	208	457	184	563	232	42	537	74
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	116	121	554	291	306	1151	505	839	345	686	910	407
Arrive On Green	0.07	0.07	0.07	0.16	0.16	0.16	0.28	0.34	0.34	0.07	0.08	0.08
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	2448	1007	3442	3539	1583
Grp Volume(v), veh/h	58	60	221	161	208	457	184	407	388	42	537	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1685	1721	1770	1583
Q Serve(g_s), s	2.2	2.2	0.0	5.8	7.4	0.0	5.8	13.7	13.8	0.8	10.2	3.0
Cycle Q Clear(g_c), s	2.2	2.2	0.0	5.8	7.4	0.0	5.8	13.7	13.8	0.8	10.2	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	116	121	554	291	306	1151	505	607	578	686	910	407
V/C Ratio(X)	0.50	0.49	0.40	0.55	0.68	0.40	0.36	0.67	0.67	0.06	0.59	0.18
Avail Cap(c_a), veh/h	177	186	609	405	426	1355	505	607	578	686	910	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	31.6	31.6	17.2	26.9	27.5	16.6	20.0	19.6	19.6	26.6	28.5	25.2
Incr Delay (d2), s/veh	3.3	3.1	0.5	1.6	2.7	0.2	0.4	5.8	6.1	0.0	2.4	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	1.2	1.2	3.3	3.0	4.0	3.3	2.9	7.6	7.4	0.4	5.3	1.4
LnGrp Delay(d),s/veh	35.0	34.7	17.6	28.5	30.2	16.8	20.4	25.4	25.8	26.6	30.9	26.0
LnGrp LOS	C	C	B	C	C	B	C	C	C	C	C	C
Approach Vol, veh/h		339			826			979			653	
Approach Delay, s/veh		23.6			22.5			24.6			30.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.9	28.0		8.6	23.9	22.0		15.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	24.0		7.0	13.0	18.0		16.0
Max Q Clear Time (g_c+I1), s	2.8	15.8		4.2	7.8	12.2		9.4
Green Ext Time (p_c), s	0.2	3.2		0.4	0.3	1.9		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	505	600	60	0	395	410	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	532	632		0	416	432	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	811	851		0	2428	2043	0
Arrive On Green	0.24	0.24		0.00	0.69	0.40	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	532	632		0	416	432	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	14.3	16.6		0.0	4.3	5.7	0.0
Cycle Q Clear(g_c), s	14.3	16.6		0.0	4.3	5.7	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	811	851		0	2428	2043	0
V/C Ratio(X)	0.66	0.74		0.00	0.17	0.21	0.00
Avail Cap(c_a), veh/h	2428	2547		0	2428	2043	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.3	36.1		0.0	5.7	20.0	0.0
Incr Delay (d2), s/veh	0.9	1.3		0.0	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	10.6		0.0	2.1	2.7	0.0
LnGrp Delay(d),s/veh	36.2	37.4		0.0	5.9	20.2	0.0
LnGrp LOS	D	D			A	C	
Approach Vol, veh/h	1164				416	432	
Approach Delay, s/veh	36.9				5.9	20.2	
Approach LOS	D				A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		74.0		28.1		45.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		70.0		72.0		41.0		
Max Q Clear Time (g_c+I1), s		6.3		18.6		7.7		
Green Ext Time (p_c), s		3.1		5.5		3.2		

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	520	355	50	760	180	60
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	547	374	53	800	189	63
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1024	1188	127	2130	1948	869
Arrive On Green	0.20	0.20	0.07	0.33	0.55	0.55
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	547	374	53	800	189	63
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	6.5	5.2	1.9	6.4	1.7	1.3
Cycle Q Clear(g_c), s	6.5	5.2	1.9	6.4	1.7	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1024	1188	127	2130	1948	869
V/C Ratio(X)	0.53	0.31	0.42	0.38	0.10	0.07
Avail Cap(c_a), veh/h	2113	1527	342	4278	1948	869
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	24.1	2.8	29.9	17.2	7.2	7.1
Incr Delay (d2), s/veh	0.4	0.2	2.2	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.9	1.0	2.8	0.9	0.6
LnGrp Delay(d),s/veh	24.5	2.9	32.1	17.3	7.3	7.3
LnGrp LOS	C	A	C	B	A	A
Approach Vol, veh/h	921			853	252	
Approach Delay, s/veh	15.7			18.2	7.3	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		41.0	8.8	17.6				26.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		37.0	13.0	28.0				45.0
Max Q Clear Time (g_c+I1), s		3.7	3.9	8.5				8.4
Green Ext Time (p_c), s		0.9	3.8	5.1				6.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	80	50	60	385	90	50	60	50	130	125	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	84	53	63	405	95	53	63	53	137	132	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	48	423	248	81	614	143	67	768	653	178	885	752
Arrive On Green	0.03	0.20	0.20	0.05	0.22	0.22	0.04	0.41	0.41	0.10	0.47	0.47
Sat Flow, veh/h	1774	2151	1259	1774	2852	663	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	32	68	69	63	250	250	53	63	53	137	132	63
Grp Sat Flow(s),veh/h/ln	1774	1770	1641	1774	1770	1746	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.2	2.1	2.3	2.3	8.4	8.6	1.9	1.3	1.3	4.9	2.6	1.4
Cycle Q Clear(g_c), s	1.2	2.1	2.3	2.3	8.4	8.6	1.9	1.3	1.3	4.9	2.6	1.4
Prop In Lane	1.00		0.77	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	348	323	81	381	375	67	768	653	178	885	752
V/C Ratio(X)	0.67	0.20	0.21	0.78	0.66	0.67	0.79	0.08	0.08	0.77	0.15	0.08
Avail Cap(c_a), veh/h	217	596	553	326	705	695	245	768	653	489	885	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	21.9	22.0	30.8	23.4	23.5	31.1	11.7	11.7	28.6	9.7	9.4
Incr Delay (d2), s/veh	14.9	0.3	0.3	15.0	1.9	2.0	18.2	0.2	0.2	6.8	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	1.1	1.5	4.3	4.3	1.3	0.7	0.6	2.7	1.4	0.7
LnGrp Delay(d),s/veh	46.4	22.2	22.3	45.8	25.3	25.5	49.4	11.9	11.9	35.4	10.0	9.6
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	A
Approach Vol, veh/h		169			563			169			332	
Approach Delay, s/veh		26.8			27.7			23.6			20.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	30.9	7.0	16.8	6.5	35.0	5.8	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	22.0	12.0	22.0	9.0	31.0	8.0	26.0
Max Q Clear Time (g_c+I1), s	6.9	3.3	4.3	4.3	3.9	4.6	3.2	10.6
Green Ext Time (p_c), s	0.2	1.3	0.1	3.7	0.0	1.5	0.0	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	30	85	100	140	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	89	105	147	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	414	108	216	0	-	0
Stage 1	182	-	-	-	-	-
Stage 2	232	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	566	925	1351	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	526	925	1351	-	-	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	3.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1351	-	526	925	-	-
HCM Lane V/C Ratio	0.066	-	0.06	0.034	-	-
HCM Control Delay (s)	7.9	0.1	12.3	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	40	120	90	155	130	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	126	95	163	137	42
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	64	547	609	272	949	904
Arrive On Green	0.04	0.29	0.17	0.17	0.54	0.54
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	42	126	95	163	137	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.1	2.4	1.1	4.4	1.8	0.5
Cycle Q Clear(g_c), s	1.1	2.4	1.1	4.4	1.8	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	64	547	609	272	949	904
V/C Ratio(X)	0.66	0.23	0.16	0.60	0.14	0.05
Avail Cap(c_a), veh/h	380	1475	1742	779	949	904
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	22.2	12.5	16.5	17.8	5.5	4.4
Incr Delay (d2), s/veh	10.9	0.2	0.1	2.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	0.5	2.1	1.0	0.8
LnGrp Delay(d),s/veh	33.2	12.7	16.6	20.0	5.8	4.5
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h		168	258		179	
Approach Delay, s/veh		17.8	18.7		5.5	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.7		29.0	5.7	12.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				37.0		25.0	10.0	23.0
Max Q Clear Time (g_c+I1), s				4.4		3.8	3.1	6.4
Green Ext Time (p_c), s				1.9		0.5	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	160	855	660	280	0	635
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	168	900	766	248		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	229	4486	3551	1006		
Arrive On Green	0.13	0.88	0.64	0.64		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	168	900	766	248		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	3.1	0.9	2.0	2.3		
Cycle Q Clear(g_c), s	3.1	0.9	2.0	2.3		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	229	4486	3551	1006		
V/C Ratio(X)	0.73	0.20	0.22	0.25		
Avail Cap(c_a), veh/h	1254	9885	6254	1772		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.2	0.3	2.6	2.7		
Incr Delay (d2), s/veh	4.5	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.8	0.3	1.0	1.0		
LnGrp Delay(d),s/veh	18.8	0.3	2.6	2.8		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		1068	1014			
Approach Delay, s/veh		3.2	2.7			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				34.0			8.4	25.6
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				66.0			24.0	38.0
Max Q Clear Time (g_c+I1), s				2.9			5.1	4.3
Green Ext Time (p_c), s				21.9			0.4	17.3

Intersection Summary	
HCM 2010 Ctrl Delay	3.0
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	290	130	120	870	300	0	0	0	295	0	890
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	168	305	137	126	916	0				311	0	937
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	234	1463	456	156	1239	386				1835	0	1638
Arrive On Green	0.13	0.29	0.29	0.09	0.24	0.00				0.52	0.00	0.52
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	168	305	137	126	916	0				311	0	937
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	10.2	5.1	7.6	7.8	18.6	0.0				5.2	0.0	22.7
Cycle Q Clear(g_c), s	10.2	5.1	7.6	7.8	18.6	0.0				5.2	0.0	22.7
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	234	1463	456	156	1239	386				1835	0	1638
V/C Ratio(X)	0.72	0.21	0.30	0.81	0.74	0.00				0.17	0.00	0.57
Avail Cap(c_a), veh/h	443	2132	664	364	1905	593				1835	0	1638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	30.3	31.1	50.2	39.1	0.0				14.3	0.0	18.6
Incr Delay (d2), s/veh	4.1	0.1	0.4	9.4	0.9	0.0				0.2	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	5.3	2.4	3.4	4.3	8.8	0.0				2.6	0.0	10.2
LnGrp Delay(d),s/veh	50.7	30.3	31.5	59.6	40.0	0.0				14.5	0.0	20.0
LnGrp LOS	D	C	C	E	D					B		C
Approach Vol, veh/h		610			1042						1248	
Approach Delay, s/veh		36.2			42.4						18.6	
Approach LOS		D			D						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			13.9	36.3		62.0	18.8	31.3
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			23.0	47.0		58.0	28.0	42.0
Max Q Clear Time (g_c+I1), s			9.8	9.6		24.7	12.2	20.6
Green Ext Time (p_c), s			0.2	3.2		6.1	2.7	6.7

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	510	0	120	60	80	0	0	220	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				537	0	0	63	84	0	0	232	126
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				661	0	590	293	1753	0	0	935	418
Arrive On Green				0.37	0.00	0.00	0.17	0.50	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				537	0	0	63	84	0	0	232	126
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				16.5	0.0	0.0	1.9	0.7	0.0	0.0	3.1	3.9
Cycle Q Clear(g_c), s				16.5	0.0	0.0	1.9	0.7	0.0	0.0	3.1	3.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				661	0	590	293	1753	0	0	935	418
V/C Ratio(X)				0.81	0.00	0.00	0.22	0.05	0.00	0.00	0.25	0.30
Avail Cap(c_a), veh/h				1523	0	1359	293	1753	0	0	935	418
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.1	0.0	0.0	21.9	7.9	0.0	0.0	17.5	17.8
Incr Delay (d2), s/veh				2.5	0.0	0.0	0.4	0.1	0.0	0.0	0.6	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				8.5	0.0	0.0	0.9	0.4	0.0	0.0	1.6	1.9
LnGrp Delay(d),s/veh				19.6	0.0	0.0	22.3	8.0	0.0	0.0	18.2	19.7
LnGrp LOS				B			C	A			B	B
Approach Vol, veh/h					537			147			358	
Approach Delay, s/veh					19.6			14.1			18.7	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		34.0			14.0	20.0		26.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		30.0			10.0	16.0		52.0
Max Q Clear Time (g_c+I1), s		2.7			3.9	5.9		18.5
Green Ext Time (p_c), s		0.6			0.3	1.3		4.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	60	49	356	175	0	55	35	25	15	20	160	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.87			1.00	0.85		0.91				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1617			1680	1504		3227				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1617			1680	1504		3227				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	52	375	184	0	58	38	26	16	21	168	75
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	63	427	0	0	190	90	0	45	0	0	0	235
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	38.8	38.8			19.3	19.3		18.3				34.6
Effective Green, g (s)	38.8	38.8			19.3	19.3		18.3				34.6
Actuated g/C Ratio	0.31	0.31			0.15	0.15		0.14				0.27
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	540	494			255	228		464				438
v/s Ratio Prot	0.04	c0.26			c0.11	0.06		c0.01				0.15
v/s Ratio Perm												
v/c Ratio	0.12	0.86			0.75	0.39		0.10				0.54
Uniform Delay, d1	31.8	41.6			51.5	48.6		47.2				39.4
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.1	14.6			11.2	1.1		0.4				4.7
Delay (s)	31.9	56.2			62.7	49.7		47.6				44.0
Level of Service	C	E			E	D		D				D
Approach Delay (s)		53.0			58.5			47.6				
Approach LOS		D			E			D				

Intersection Summary			
HCM 2000 Control Delay	49.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	127.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	509
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	1.00
Satd. Flow (prot)	3388
Flt Permitted	1.00
Satd. Flow (perm)	3388
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	536
RTOR Reduction (vph)	0
Lane Group Flow (vph)	544
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	34.6
Effective Green, g (s)	34.6
Actuated g/C Ratio	0.27
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	923
v/s Ratio Prot	c0.16
v/s Ratio Perm	
v/c Ratio	0.59
Uniform Delay, d1	40.0
Progression Factor	1.00
Incremental Delay, d2	2.8
Delay (s)	42.8
Level of Service	D
Approach Delay (s)	43.2
Approach LOS	D

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	1010	90	290	460	50	70	20	220	70	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	1063	95	305	484	53	74	21	232	74	42	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	100	1622	505	542	2276	768	134	569	733	130	567	482
Arrive On Green	0.03	0.32	0.32	0.16	0.45	0.45	0.04	0.31	0.31	0.04	0.30	0.30
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	42	1063	95	305	484	53	74	21	232	74	42	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	1.1	16.0	3.9	7.3	5.2	1.6	1.9	0.7	1.3	1.9	1.4	3.3
Cycle Q Clear(g_c), s	1.1	16.0	3.9	7.3	5.2	1.6	1.9	0.7	1.3	1.9	1.4	3.3
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	100	1622	505	542	2276	768	134	569	733	130	567	482
V/C Ratio(X)	0.42	0.66	0.19	0.56	0.21	0.07	0.55	0.04	0.32	0.57	0.07	0.20
Avail Cap(c_a), veh/h	349	3609	1124	1241	4926	1594	465	569	733	465	567	482
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	42.4	26.0	21.9	34.6	15.0	12.2	41.9	21.7	7.3	42.0	22.0	15.7
Incr Delay (d2), s/veh	2.8	0.5	0.2	0.9	0.0	0.0	3.5	0.1	1.1	3.9	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	0.5	7.5	1.7	3.5	2.4	0.7	1.0	0.4	2.6	1.0	0.8	1.7
LnGrp Delay(d),s/veh	45.1	26.5	22.1	35.5	15.0	12.2	45.4	21.8	8.4	45.9	22.2	16.6
LnGrp LOS	D	C	C	D	B	B	D	C	A	D	C	B
Approach Vol, veh/h		1200			842			327			211	
Approach Delay, s/veh		26.8			22.3			17.6			28.0	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	31.1	18.0	32.3	7.5	31.0	6.6	43.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	27.0	32.0	63.0	12.0	27.0	9.0	86.0
Max Q Clear Time (g_c+I1), s	3.9	3.3	9.3	18.0	3.9	5.3	3.1	7.2
Green Ext Time (p_c), s	0.1	1.1	4.7	10.3	0.3	0.5	0.0	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	980	90	140	420	40	70	20	100	40	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	1032	95	147	442	42	74	21	105	42	82	68
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	44	1593	597	336	1963	658	219	702	597	104	639	582
Arrive On Green	0.02	0.31	0.31	0.10	0.39	0.39	0.06	0.38	0.38	0.03	0.34	0.34
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	32	1032	95	147	442	42	74	21	105	42	82	68
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.6	15.3	0.0	3.5	5.1	1.4	1.8	0.6	2.7	1.0	2.6	1.7
Cycle Q Clear(g_c), s	1.6	15.3	0.0	3.5	5.1	1.4	1.8	0.6	2.7	1.0	2.6	1.7
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	44	1593	597	336	1963	658	219	702	597	104	639	582
V/C Ratio(X)	0.73	0.65	0.16	0.44	0.23	0.06	0.34	0.03	0.18	0.40	0.13	0.12
Avail Cap(c_a), veh/h	264	4010	1349	826	4475	1440	551	702	597	446	639	582
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	42.4	25.9	18.1	37.2	18.1	15.4	39.2	17.2	8.8	41.7	19.8	9.1
Incr Delay (d2), s/veh	20.5	0.4	0.1	0.9	0.1	0.0	0.9	0.1	0.6	2.5	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	1.0	7.2	1.5	1.7	2.4	0.6	0.9	0.3	1.7	0.5	1.4	0.9
LnGrp Delay(d),s/veh	62.9	26.3	18.2	38.1	18.1	15.4	40.1	17.2	9.5	44.2	20.2	9.5
LnGrp LOS	E	C	B	D	B	B	D	B	A	D	C	A
Approach Vol, veh/h		1159			631			200			192	
Approach Delay, s/veh		26.7			22.6			21.6			21.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	37.0	12.5	31.4	9.6	34.0	6.2	37.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	33.0	21.0	69.0	14.0	30.0	13.0	77.0
Max Q Clear Time (g_c+I1), s	3.0	4.7	5.5	17.3	3.8	4.6	3.6	7.1
Green Ext Time (p_c), s	0.0	0.7	3.3	10.1	0.5	0.6	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	130	0	170	120	250	0	0	180	70
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				137	0	179	126	263	0	0	189	74
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				272	0	242	165	1365	0	0	1465	554
Arrive On Green				0.15	0.00	0.15	0.06	0.49	0.00	0.00	0.58	0.58
Sat Flow, veh/h				1774	0	1583	1774	1863	0	0	2607	951
Grp Volume(v), veh/h				137	0	179	126	263	0	0	131	132
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1863	0	0	1770	1695
Q Serve(g_s), s				5.0	0.0	7.6	4.9	5.6	0.0	0.0	2.3	2.5
Cycle Q Clear(g_c), s				5.0	0.0	7.6	4.9	5.6	0.0	0.0	2.3	2.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h				272	0	242	165	1365	0	0	1031	988
V/C Ratio(X)				0.50	0.00	0.74	0.77	0.19	0.00	0.00	0.13	0.13
Avail Cap(c_a), veh/h				558	0	498	456	1365	0	0	1031	988
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.2	0.0	28.3	32.1	6.2	0.0	0.0	6.6	6.6
Incr Delay (d2), s/veh				1.4	0.0	4.4	7.2	0.3	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	3.6	2.7	3.0	0.0	0.0	1.2	1.2
LnGrp Delay(d),s/veh				28.7	0.0	32.7	39.3	6.5	0.0	0.0	6.8	6.9
LnGrp LOS				C		C	D	A			A	A
Approach Vol, veh/h					316			389			263	
Approach Delay, s/veh					30.9			17.1			6.9	
Approach LOS					C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		55.3			10.5	44.8		14.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		40.0			18.0	18.0		22.0
Max Q Clear Time (g_c+I1), s		7.6			6.9	4.5		9.6
Green Ext Time (p_c), s		3.4			0.2	2.6		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	0	40	0	0	0	0	230	495	90	220	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	147	0	42				0	242	521	95	232	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	203	0	181				0	2286	1022	121	2730	0
Arrive On Green	0.11	0.00	0.11				0.00	1.00	1.00	0.14	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	147	0	42				0	242	521	95	232	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	5.6	0.0	1.7				0.0	0.0	0.0	3.6	0.0	0.0
Cycle Q Clear(g_c), s	5.6	0.0	1.7				0.0	0.0	0.0	3.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	203	0	181				0	2286	1022	121	2730	0
V/C Ratio(X)	0.72	0.00	0.23				0.00	0.11	0.51	0.78	0.08	0.00
Avail Cap(c_a), veh/h	456	0	407				0	2286	1022	228	2730	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.99	0.99	0.99	0.99	0.00
Uniform Delay (d), s/veh	29.9	0.0	28.2				0.0	0.0	0.0	29.7	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.0	0.6				0.0	0.1	1.8	10.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.8				0.0	0.0	0.5	2.1	0.0	0.0
LnGrp Delay(d),s/veh	34.8	0.0	28.8				0.0	0.1	1.8	40.1	0.1	0.0
LnGrp LOS	C		C					A	A	D	A	
Approach Vol, veh/h		189						763			327	
Approach Delay, s/veh		33.4						1.3			11.7	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	8.8	49.2		12.0		58.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	9.0	31.0		18.0		44.0		
Max Q Clear Time (g_c+I1), s	5.6	2.0		7.6		2.0		
Green Ext Time (p_c), s	0.1	5.6		0.6		5.9		

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	120	30	60	20	140	585	50	20	220	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	42	42	126	32	63	21	147	616	53	21	232	74
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	59	119	415	91	201	90	231	1773	151	1066	3122	972
Arrive On Green	0.03	0.06	0.06	0.03	0.06	0.06	0.13	0.74	0.74	0.31	0.61	0.61
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4774	407	3442	5085	1583
Grp Volume(v), veh/h	42	42	126	32	63	21	147	436	233	21	232	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1791	1721	1695	1583
Q Serve(g_s), s	1.6	1.5	1.9	0.6	1.2	0.9	2.8	3.1	3.2	0.3	1.3	0.8
Cycle Q Clear(g_c), s	1.6	1.5	1.9	0.6	1.2	0.9	2.8	3.1	3.2	0.3	1.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	59	119	415	91	201	90	231	1259	665	1066	3122	972
V/C Ratio(X)	0.71	0.35	0.30	0.35	0.31	0.23	0.64	0.35	0.35	0.02	0.07	0.08
Avail Cap(c_a), veh/h	203	506	1072	246	809	362	442	1259	665	1066	3122	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	31.4	16.7	33.5	31.7	31.5	29.5	6.1	6.1	16.8	5.5	2.1
Incr Delay (d2), s/veh	14.3	1.8	0.4	2.3	0.9	1.3	2.9	0.7	1.4	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.8	0.9	0.3	0.6	0.4	1.4	1.5	1.7	0.1	0.6	0.4
LnGrp Delay(d),s/veh	47.8	33.1	17.1	35.8	32.6	32.9	32.3	6.8	7.5	16.8	5.5	2.2
LnGrp LOS	D	C	B	D	C	C	C	A	A	B	A	A
Approach Vol, veh/h		210			116			816			327	
Approach Delay, s/veh		26.4			33.5			11.6			5.5	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.7	30.0	5.9	8.5	8.7	47.0	6.3	8.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	5.0	19.0	9.0	21.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	5.2	2.6	3.9	4.8	3.3	3.6	3.2
Green Ext Time (p_c), s	0.0	4.4	0.0	0.5	0.2	1.7	0.1	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	0	80	50	70	140	160	615	0	0	240	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	21	0	84	53	74	147	168	647	0	0	253	126
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	94	131	195	212	3877	0	0	2073	927
Arrive On Green	0.00	0.00	0.00	0.12	0.12	0.12	0.12	0.76	0.00	0.00	0.19	0.19
Sat Flow, veh/h		0		761	1063	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		127	0	147	168	647	0	0	253	126
Grp Sat Flow(s),veh/h/ln				1825	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				4.6	0.0	6.3	6.4	2.4	0.0	0.0	4.1	4.6
Cycle Q Clear(g_c), s				4.6	0.0	6.3	6.4	2.4	0.0	0.0	4.1	4.6
Prop In Lane				0.42		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				225	0	195	212	3877	0	0	2073	927
V/C Ratio(X)				0.56	0.00	0.75	0.79	0.17	0.00	0.00	0.12	0.14
Avail Cap(c_a), veh/h				313	0	271	405	3877	0	0	2073	927
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.9	0.0	29.6	30.0	2.3	0.0	0.0	13.4	13.6
Incr Delay (d2), s/veh				2.2	0.0	7.4	6.5	0.1	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	3.1	3.6	1.1	0.0	0.0	2.1	2.1
LnGrp Delay(d),s/veh				31.1	0.0	37.0	36.5	2.4	0.0	0.0	13.5	13.9
LnGrp LOS				C		D	D	A			B	B
Approach Vol, veh/h					274			815			379	
Approach Delay, s/veh					34.3			9.4			13.6	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		57.4			12.4	45.0		12.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		42.0			16.0	22.0		12.0
Max Q Clear Time (g_c+I1), s		4.4			8.4	6.6		8.3
Green Ext Time (p_c), s		7.9			0.3	5.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	785	330	50	590	50	140	30	30	20	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	826	347	53	621	53	147	32	32	21	42	95
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	262	1447	629	137	1214	300	235	872	761	34	815	1219
Arrive On Green	0.03	0.07	0.07	0.04	0.19	0.19	0.07	0.49	0.49	0.02	0.44	0.44
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1793	1564	1774	1863	2787
Grp Volume(v), veh/h	168	826	347	53	621	53	147	32	32	21	42	95
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1587	1774	1863	1393
Q Serve(g_s), s	3.4	8.7	6.4	1.1	6.1	2.0	2.9	0.7	0.8	0.8	0.9	1.4
Cycle Q Clear(g_c), s	3.4	8.7	6.4	1.1	6.1	2.0	2.9	0.7	0.8	0.8	0.9	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Lane Grp Cap(c), veh/h	262	1447	629	137	1214	300	235	861	772	34	815	1219
V/C Ratio(X)	0.64	0.57	0.55	0.39	0.51	0.18	0.63	0.04	0.04	0.62	0.05	0.08
Avail Cap(c_a), veh/h	442	1922	836	295	1648	407	442	861	772	152	815	1219
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	29.1	16.9	32.8	25.5	23.8	31.7	9.4	9.4	34.1	11.3	11.5
Incr Delay (d2), s/veh	2.4	0.3	0.7	1.8	0.3	0.3	2.7	0.1	0.1	16.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.9	2.5	0.5	2.7	0.9	1.5	0.3	0.3	0.6	0.5	0.6
LnGrp Delay(d),s/veh	35.6	29.4	17.6	34.5	25.8	24.1	34.5	9.5	9.5	50.9	11.4	11.6
LnGrp LOS	D	C	B	C	C	C	C	A	A	D	B	B
Approach Vol, veh/h		1341			727			211			158	
Approach Delay, s/veh		27.2			26.3			26.9			16.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	38.1	6.8	19.8	8.8	34.6	9.3	17.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	21.0	6.0	21.0	9.0	18.0	9.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	2.8	3.1	10.7	4.9	3.4	5.4	8.1
Green Ext Time (p_c), s	0.0	0.8	1.3	5.1	0.1	0.7	0.2	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	140	1050	580	190	525	370
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	1105	611	200	553	389
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	424	2225	1069	1965	2694	1500
Arrive On Green	0.12	0.35	0.17	0.17	0.54	0.54
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	147	1105	611	200	553	389
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	2.7	9.5	6.1	1.6	4.0	5.2
Cycle Q Clear(g_c), s	2.7	9.5	6.1	1.6	4.0	5.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	424	2225	1069	1965	2694	1500
V/C Ratio(X)	0.35	0.50	0.57	0.10	0.21	0.26
Avail Cap(c_a), veh/h	590	3112	1648	2217	2694	1500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.92	0.92	1.00	1.00
Uniform Delay (d), s/veh	28.1	18.0	26.9	3.3	8.4	8.7
Incr Delay (d2), s/veh	0.5	0.2	0.4	0.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	2.7	1.7	1.9	5.6
LnGrp Delay(d),s/veh	28.6	18.2	27.3	3.3	8.6	9.1
LnGrp LOS	C	B	C	A	A	A
Approach Vol, veh/h		1252	811		942	
Approach Delay, s/veh		19.4	21.4		8.8	
Approach LOS		B	C		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				28.3		41.7	12.6	15.7
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				34.0		28.0	12.0	18.0
Max Q Clear Time (g_c+I1), s				11.5		7.2	4.7	8.1
Green Ext Time (p_c), s				9.1		3.8	4.4	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	340	0	290	270
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	358	0	305	284
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1111	179			358	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1111	179			358	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			75	
cM capacity (veh/h)	151	833			1197	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	239	119	305	142	142
Volume Left	0	0	305	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1197	1700	1700
Volume to Capacity	0.14	0.07	0.25	0.08	0.08
Queue Length 95th (ft)	0	0	25	0	0
Control Delay (s)	0.0	0.0	9.0	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	325	240	260	410	270	180	30	350	180	0	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	342	253	274	432	284	189	32	368	189	0	105
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	241	753	903	407	843	462	1558	857	1611	302	177	150
Arrive On Green	0.07	0.12	0.12	0.12	0.17	0.17	0.45	0.46	0.46	0.09	0.00	0.09
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	63	342	253	274	432	284	189	32	368	189	0	105
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	1.3	3.7	0.0	5.6	5.7	5.4	2.4	0.7	1.6	3.9	0.0	4.8
Cycle Q Clear(g_c), s	1.3	3.7	0.0	5.6	5.7	5.4	2.4	0.7	1.6	3.9	0.0	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	241	753	903	407	843	462	1558	857	1611	302	177	150
V/C Ratio(X)	0.26	0.45	0.28	0.67	0.51	0.61	0.12	0.04	0.23	0.63	0.00	0.70
Avail Cap(c_a), veh/h	512	2080	1231	1396	2958	1621	1558	857	1611	1210	680	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	30.4	8.1	31.2	28.1	16.8	11.7	11.0	2.1	32.5	0.0	32.4
Incr Delay (d2), s/veh	0.6	0.4	0.2	1.9	0.5	1.3	0.2	0.1	0.3	2.1	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.6	2.6	2.8	2.7	2.5	1.1	0.4	0.9	2.0	0.0	2.3
LnGrp Delay(d),s/veh	33.1	30.8	8.3	33.2	28.6	18.1	11.9	11.1	2.4	34.7	0.0	38.2
LnGrp LOS	C	C	A	C	C	B	B	B	A	C		D
Approach Vol, veh/h		658			990			589			294	
Approach Delay, s/veh		22.4			26.8			5.9			35.9	
Approach LOS		C			C			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	38.0	12.8	12.7	37.5	11.0	9.2	16.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	26.0	34.0	30.0	24.0	33.0	27.0	11.0	43.0
Max Q Clear Time (g_c+I1), s	5.9	3.6	7.6	5.7	4.4	6.8	3.3	7.7
Green Ext Time (p_c), s	0.6	2.4	1.1	3.0	2.4	0.3	0.7	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	350	80	140	470	110	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	368	0	147	495	116	179
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1590	495	342	2858	245	663
Arrive On Green	0.31	0.00	0.10	0.56	0.14	0.14
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	368	0	147	495	116	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.4	0.0	1.1	1.3	1.6	1.4
Cycle Q Clear(g_c), s	1.4	0.0	1.1	1.3	1.6	1.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1590	495	342	2858	245	663
V/C Ratio(X)	0.23	0.00	0.43	0.17	0.47	0.27
Avail Cap(c_a), veh/h	3238	1008	774	5143	665	1321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	11.3	2.8	10.6	8.3
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.0	1.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.6	0.6	0.9	0.6
LnGrp Delay(d),s/veh	6.9	0.0	12.2	2.9	12.0	8.5
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	368			642	295	
Approach Delay, s/veh	6.9			5.0	9.9	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.7	6.7	12.3				19.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		10.0	6.0	17.0				27.0
Max Q Clear Time (g_c+I1), s		3.6	3.1	3.4				3.3
Green Ext Time (p_c), s		0.5	0.1	4.9				6.3

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	40	70	60	20	40	230	50	20	190	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	53	42	74	63	21	42	242	53	21	200	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	101	80	94	148	49	64	1378	297	36	1345	277
Arrive On Green	0.05	0.11	0.11	0.05	0.11	0.11	0.04	0.48	0.48	0.02	0.46	0.46
Sat Flow, veh/h	1774	964	764	1774	1338	446	1774	2899	624	1774	2924	602
Grp Volume(v), veh/h	63	0	95	74	0	84	42	146	149	21	119	123
Grp Sat Flow(s),veh/h/ln	1774	0	1728	1774	0	1784	1774	1770	1753	1774	1770	1756
Q Serve(g_s), s	1.6	0.0	2.4	1.9	0.0	2.0	1.1	2.2	2.3	0.5	1.8	1.9
Cycle Q Clear(g_c), s	1.6	0.0	2.4	1.9	0.0	2.0	1.1	2.2	2.3	0.5	1.8	1.9
Prop In Lane	1.00		0.44	1.00		0.25	1.00		0.36	1.00		0.34
Lane Grp Cap(c), veh/h	85	0	182	94	0	197	64	841	833	36	814	808
V/C Ratio(X)	0.74	0.00	0.52	0.79	0.00	0.43	0.66	0.17	0.18	0.58	0.15	0.15
Avail Cap(c_a), veh/h	230	0	598	268	0	656	192	841	833	153	814	808
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	21.7	0.0	19.6	21.6	0.0	19.2	22.0	6.9	7.0	22.5	7.2	7.3
Incr Delay (d2), s/veh	11.8	0.0	2.3	13.3	0.0	1.5	10.9	0.4	0.5	13.7	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	0.0	1.3	1.3	0.0	1.1	0.7	1.2	1.2	0.4	0.9	1.0
LnGrp Delay(d),s/veh	33.6	0.0	21.9	35.0	0.0	20.7	32.9	7.4	7.4	36.2	7.6	7.7
LnGrp LOS	C		C	C		C	C	A	A	D	A	A
Approach Vol, veh/h		158			158			337			263	
Approach Delay, s/veh		26.6			27.4			10.6			9.9	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	26.0	6.5	8.9	5.7	25.3	6.2	9.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	7.0	16.0	5.0	21.0	6.0	17.0
Max Q Clear Time (g_c+I1), s	2.5	4.3	3.9	4.4	3.1	3.9	3.6	4.0
Green Ext Time (p_c), s	0.0	3.0	0.0	0.7	0.0	2.9	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	100	120	30	60	20	110	60	50	20	50	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	105	126	32	63	21	116	63	53	21	53	32
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	230	394	211	309	104	147	452	380	52	467	282
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.08	0.48	0.48	0.03	0.43	0.43
Sat Flow, veh/h	336	1384	1583	395	1858	629	1774	936	788	1774	1089	658
Grp Volume(v), veh/h	147	0	126	63	0	53	116	0	116	21	0	85
Grp Sat Flow(s),veh/h/ln	1720	0	1583	1298	0	1584	1774	0	1724	1774	0	1747
Q Serve(g_s), s	1.0	0.0	2.4	0.0	0.0	1.1	2.4	0.0	1.4	0.4	0.0	1.1
Cycle Q Clear(g_c), s	2.8	0.0	2.4	2.8	0.0	1.1	2.4	0.0	1.4	0.4	0.0	1.1
Prop In Lane	0.29		1.00	0.51		0.40	1.00		0.46	1.00		0.38
Lane Grp Cap(c), veh/h	410	0	394	361	0	263	147	0	832	52	0	749
V/C Ratio(X)	0.36	0.00	0.32	0.17	0.00	0.20	0.79	0.00	0.14	0.40	0.00	0.11
Avail Cap(c_a), veh/h	847	0	811	733	0	680	285	0	832	190	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	11.4	13.4	0.0	13.4	16.8	0.0	5.3	17.8	0.0	6.4
Incr Delay (d2), s/veh	0.5	0.0	0.5	0.2	0.0	0.4	8.9	0.0	0.4	4.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.1	0.6	0.0	0.5	1.5	0.0	0.7	0.3	0.0	0.6
LnGrp Delay(d),s/veh	14.6	0.0	11.9	13.7	0.0	13.8	25.7	0.0	5.7	22.7	0.0	6.7
LnGrp LOS	B		B	B		B	C		A	C		A
Approach Vol, veh/h		273			116			232			106	
Approach Delay, s/veh		13.4			13.7			15.7			9.9	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	22.0		10.2	7.1	20.0		10.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0		16.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	3.4		4.8	4.4	3.1		4.8
Green Ext Time (p_c), s	0.1	0.5		1.5	0.0	0.3		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	20	230	190	0	0	300	310	60	30	240	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	278	200	0	0	316	326	63	32	253	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	186	317	260	0	0	344	840	161	361	1281	106
Arrive On Green	0.00	0.00	0.10	0.15	0.00	0.00	0.07	0.19	0.19	0.20	0.39	0.39
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	2966	567	1774	3311	273
Grp Volume(v), veh/h	0	0	278	200	0	0	316	193	196	32	134	140
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1763	1774	1770	1815
Q Serve(g_s), s	0.0	0.0	5.2	6.5	0.0	0.0	5.5	5.7	5.8	0.9	3.0	3.1
Cycle Q Clear(g_c), s	0.0	0.0	5.2	6.5	0.0	0.0	5.5	5.7	5.8	0.9	3.0	3.1
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.32	1.00		0.15
Lane Grp Cap(c), veh/h	0	186	317	260	0	0	344	501	499	361	685	702
V/C Ratio(X)	0.00	0.00	0.88	0.77	0.00	0.00	0.92	0.38	0.39	0.09	0.20	0.20
Avail Cap(c_a), veh/h	0	186	317	473	0	0	344	501	499	361	685	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	26.6	24.6	0.0	0.0	27.7	19.7	19.8	19.4	12.2	12.2
Incr Delay (d2), s/veh	0.0	0.0	23.2	4.8	0.0	0.0	27.2	2.1	2.1	0.1	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.3	3.5	0.0	0.0	3.9	3.1	3.1	0.4	1.6	1.6
LnGrp Delay(d),s/veh	0.0	0.0	49.9	29.4	0.0	0.0	55.0	21.8	21.9	19.5	12.8	12.8
LnGrp LOS			D	C			D	C	C	B	B	B
Approach Vol, veh/h		278			200			705			306	
Approach Delay, s/veh		49.9			29.4			36.7			13.5	
Approach LOS		D			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.2	21.0		10.0	10.0	27.2		12.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	17.0		6.0	6.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.9	7.8		7.2	7.5	5.1		8.5
Green Ext Time (p_c), s	0.3	1.5		0.0	0.0	1.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	210	230	100	180	140	390	220	40	510	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	58	60	221	273	156	126	147	411	232	42	537	74
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	148	155	290	495	260	528	177	694	388	667	1453	650
Arrive On Green	0.08	0.08	0.08	0.14	0.14	0.14	0.10	0.32	0.32	0.06	0.14	0.14
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	2192	1224	3442	3539	1583
Grp Volume(v), veh/h	58	60	221	273	156	126	147	331	312	42	537	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1647	1721	1770	1583
Q Serve(g_s), s	1.9	1.8	5.0	4.3	4.7	0.0	4.9	9.4	9.6	0.7	8.3	2.5
Cycle Q Clear(g_c), s	1.9	1.8	5.0	4.3	4.7	0.0	4.9	9.4	9.6	0.7	8.3	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	148	155	290	495	260	528	177	560	521	667	1453	650
V/C Ratio(X)	0.39	0.39	0.76	0.55	0.60	0.24	0.83	0.59	0.60	0.06	0.37	0.11
Avail Cap(c_a), veh/h	148	155	290	946	497	729	177	560	521	667	1453	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	26.1	26.0	23.3	24.1	24.2	14.5	26.5	17.2	17.3	23.0	18.9	16.4
Incr Delay (d2), s/veh	1.7	1.6	11.2	1.0	2.2	0.2	26.7	4.5	5.0	0.0	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.0	4.3	2.2	2.6	1.5	3.7	5.3	5.1	0.3	4.2	1.1
LnGrp Delay(d),s/veh	27.7	27.6	34.5	25.0	26.5	14.7	53.2	21.8	22.3	23.0	19.5	16.7
LnGrp LOS	C	C	C	C	C	B	D	C	C	C	B	B
Approach Vol, veh/h		339			555			790			653	
Approach Delay, s/veh		32.1			23.1			27.8			19.4	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.6	23.0		9.0	10.0	28.6		12.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	19.0		5.0	6.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.7	11.6		7.0	6.9	10.3		6.7
Green Ext Time (p_c), s	0.5	2.4		0.0	0.0	2.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	360	600	60	0	360	410	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	379	632		0	379	432	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	866	908		0	2177	3128	0
Arrive On Green	0.25	0.25		0.00	0.62	0.62	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	379	632		0	379	432	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	5.6	9.5		0.0	2.8	2.1	0.0
Cycle Q Clear(g_c), s	5.6	9.5		0.0	2.8	2.1	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	866	908		0	2177	3128	0
V/C Ratio(X)	0.44	0.70		0.00	0.17	0.14	0.00
Avail Cap(c_a), veh/h	1377	1444		0	2177	3128	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.9	20.4		0.0	5.0	4.9	0.0
Incr Delay (d2), s/veh	0.3	1.0		0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.2		0.0	1.4	1.0	0.0
LnGrp Delay(d),s/veh	19.2	21.3		0.0	5.2	4.9	0.0
LnGrp LOS	B	C			A	A	
Approach Vol, veh/h	1011				379	432	
Approach Delay, s/veh	20.6				5.2	4.9	
Approach LOS	C				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		40.9		19.1		40.9		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		28.0		24.0		15.0		
Max Q Clear Time (g_c+I1), s		4.8		11.5		4.1		
Green Ext Time (p_c), s		2.5		3.6		2.1		

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	520	300	50	670	180	60
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	547	316	53	705	189	63
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	981	1179	98	2017	1958	874
Arrive On Green	0.19	0.19	0.06	0.31	0.55	0.55
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	547	316	53	705	189	63
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	5.8	3.8	1.7	5.1	1.5	1.1
Cycle Q Clear(g_c), s	5.8	3.8	1.7	5.1	1.5	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	981	1179	98	2017	1958	874
V/C Ratio(X)	0.56	0.27	0.54	0.35	0.10	0.07
Avail Cap(c_a), veh/h	1610	1375	237	3311	1958	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	2.4	27.6	15.8	6.4	6.3
Incr Delay (d2), s/veh	0.5	0.1	4.6	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	5.2	1.0	2.3	0.8	0.5
LnGrp Delay(d),s/veh	22.4	2.6	32.2	15.9	6.5	6.4
LnGrp LOS	C	A	C	B	A	A
Approach Vol, veh/h	863			758	252	
Approach Delay, s/veh	15.1			17.1	6.5	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		37.1	7.3	15.6				22.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	8.0	19.0				31.0
Max Q Clear Time (g_c+I1), s		3.5	3.7	7.8				7.1
Green Ext Time (p_c), s		0.8	1.9	3.7				5.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	80	50	60	60	90	50	60	50	130	90	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	84	53	63	63	95	53	63	53	137	95	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	52	235	137	85	227	203	76	738	628	178	846	719
Arrive On Green	0.03	0.11	0.11	0.05	0.13	0.13	0.04	0.40	0.40	0.10	0.45	0.45
Sat Flow, veh/h	1774	2151	1259	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	32	68	69	63	63	95	53	63	53	137	95	42
Grp Sat Flow(s),veh/h/ln	1774	1770	1641	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.8	1.6	1.8	1.6	1.5	2.6	1.4	1.0	1.0	3.5	1.4	0.7
Cycle Q Clear(g_c), s	0.8	1.6	1.8	1.6	1.5	2.6	1.4	1.0	1.0	3.5	1.4	0.7
Prop In Lane	1.00		0.77	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	193	179	85	227	203	76	738	628	178	846	719
V/C Ratio(X)	0.62	0.35	0.39	0.74	0.28	0.47	0.70	0.09	0.08	0.77	0.11	0.06
Avail Cap(c_a), veh/h	192	612	568	230	651	582	230	738	628	384	846	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	22.2	19.1	19.2	21.7	18.2	18.7	21.8	8.7	8.7	20.3	7.3	7.1
Incr Delay (d2), s/veh	11.4	1.1	1.4	11.8	0.7	1.7	11.0	0.2	0.3	6.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.9	0.9	1.1	0.8	1.2	0.9	0.5	0.5	2.1	0.7	0.3
LnGrp Delay(d),s/veh	33.6	20.2	20.5	33.5	18.9	20.4	32.9	8.9	9.0	27.1	7.5	7.2
LnGrp LOS	C	C	C	C	B	C	C	A	A	C	A	A
Approach Vol, veh/h		169			221			169			274	
Approach Delay, s/veh		22.9			23.7			16.5			17.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	22.3	6.2	9.0	6.0	25.0	5.3	9.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	17.0	6.0	16.0	6.0	21.0	5.0	17.0
Max Q Clear Time (g_c+I1), s	5.5	3.0	3.6	3.8	3.4	3.4	2.8	4.6
Green Ext Time (p_c), s	0.1	0.9	0.0	1.3	0.0	1.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	30	30	100	140	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	32	105	147	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	279	89	179	0	-	0
Stage 1	163	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	688	951	1394	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	671	951	1394	-	-	-
Mov Cap-2 Maneuver	671	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	874	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1394	-	671	951	-	-
HCM Lane V/C Ratio	0.023	-	0.047	0.033	-	-
HCM Control Delay (s)	7.6	0.1	10.6	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	40	120	90	100	130	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	126	95	105	137	42
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	68	553	516	231	849	818
Arrive On Green	0.04	0.30	0.15	0.15	0.48	0.48
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	42	126	95	105	137	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	0.8	1.8	0.8	2.2	1.6	0.5
Cycle Q Clear(g_c), s	0.8	1.8	0.8	2.2	1.6	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	68	553	516	231	849	818
V/C Ratio(X)	0.62	0.23	0.18	0.45	0.16	0.05
Avail Cap(c_a), veh/h	250	1310	1593	713	849	818
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	16.8	9.4	13.3	13.9	5.2	4.3
Incr Delay (d2), s/veh	8.9	0.2	0.2	1.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.9	0.4	1.0	0.9	0.6
LnGrp Delay(d),s/veh	25.7	9.6	13.5	15.3	5.6	4.4
LnGrp LOS	C	A	B	B	A	A
Approach Vol, veh/h		168	200		179	
Approach Delay, s/veh		13.7	14.4		5.4	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				14.5		21.0	5.4	9.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				25.0		17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s				3.8		3.6	2.8	4.2
Green Ext Time (p_c), s				1.6		0.4	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	160	820	570	280	0	420
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	168	863	707	224		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	350	2546	1323	375		
Arrive On Green	0.20	0.50	0.47	0.47		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	168	863	707	224		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	5.0	6.1	5.4	6.2		
Cycle Q Clear(g_c), s	5.0	6.1	5.4	6.2		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	350	2546	1323	375		
V/C Ratio(X)	0.48	0.34	0.53	0.60		
Avail Cap(c_a), veh/h	621	4746	2887	818		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.98	0.98	0.97	0.97		
Uniform Delay (d), s/veh	21.3	9.0	13.5	13.7		
Incr Delay (d2), s/veh	1.0	0.1	0.3	1.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.6	2.8	2.7	2.8		
LnGrp Delay(d),s/veh	22.4	9.1	13.8	15.2		
LnGrp LOS	C	A	B	B		
Approach Vol, veh/h		1031	931			
Approach Delay, s/veh		11.2	14.1			
Approach LOS		B	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				34.0			15.8	18.2
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			21.0	31.0
Max Q Clear Time (g_c+I1), s				8.1			7.0	8.2
Green Ext Time (p_c), s				8.1			5.6	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	290	130	120	580	300	0	0	0	260	0	440
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	168	305	137	126	611	0				274	0	463
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	260	1196	373	164	920	287				1005	0	897
Arrive On Green	0.15	0.24	0.24	0.09	0.18	0.00				0.28	0.00	0.28
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	168	305	137	126	611	0				274	0	463
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	5.4	2.9	4.3	4.2	6.7	0.0				3.6	0.0	7.4
Cycle Q Clear(g_c), s	5.4	2.9	4.3	4.2	6.7	0.0				3.6	0.0	7.4
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	260	1196	373	164	920	287				1005	0	897
V/C Ratio(X)	0.65	0.25	0.37	0.77	0.66	0.00				0.27	0.00	0.52
Avail Cap(c_a), veh/h	473	1526	475	384	1271	396				1005	0	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	18.7	19.2	26.6	22.9	0.0				16.7	0.0	18.0
Incr Delay (d2), s/veh	2.5	0.1	0.6	7.3	0.8	0.0				0.7	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.4	2.0	2.4	3.2	0.0				1.8	0.0	3.5
LnGrp Delay(d),s/veh	26.7	18.8	19.8	33.9	23.7	0.0				17.4	0.0	20.2
LnGrp LOS	C	B	B	C	C					B		C
Approach Vol, veh/h		610			737						737	
Approach Delay, s/veh		21.2			25.4						19.1	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			9.5	18.1		21.0	12.8	14.9
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			13.0	18.0		17.0	16.0	15.0
Max Q Clear Time (g_c+I1), s			6.2	6.3		9.4	7.4	8.7
Green Ext Time (p_c), s			0.2	2.4		1.9	2.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	330	0	100	60	80	0	0	220	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				347	0	0	63	84	0	0	232	126
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				474	0	423	271	1729	0	0	756	338
Arrive On Green				0.27	0.00	0.00	0.15	0.49	0.00	0.00	0.21	0.21
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				347	0	0	63	84	0	0	232	126
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.8	0.0	0.0	1.0	0.4	0.0	0.0	1.8	2.2
Cycle Q Clear(g_c), s				5.8	0.0	0.0	1.0	0.4	0.0	0.0	1.8	2.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				474	0	423	271	1729	0	0	756	338
V/C Ratio(X)				0.73	0.00	0.00	0.23	0.05	0.00	0.00	0.31	0.37
Avail Cap(c_a), veh/h				867	0	773	271	1729	0	0	756	338
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				10.9	0.0	0.0	12.2	4.4	0.0	0.0	10.8	11.0
Incr Delay (d2), s/veh				2.2	0.0	0.0	0.4	0.1	0.0	0.0	1.0	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
%ile BackOfQ(50%),veh/ln				3.1	0.0	0.0	0.5	0.2	0.0	0.0	1.0	1.2
LnGrp Delay(d),s/veh				13.1	0.0	0.0	12.6	4.4	0.0	0.0	11.9	14.1
LnGrp LOS				B			B	A			B	B
Approach Vol, veh/h					347			147			358	
Approach Delay, s/veh					13.1			8.0			12.7	
Approach LOS					B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			9.0	11.0		12.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		16.0			5.0	7.0		16.0
Max Q Clear Time (g_c+I1), s		2.4			3.0	4.2		7.8
Green Ext Time (p_c), s		0.5			0.1	0.5		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	60	36	134	30	0	55	35	25	15	20	160	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.88			0.92	0.85		0.91				1.00
Flt Protected	0.95	1.00			0.98	1.00		1.00				0.95
Satd. Flow (prot)	1770	1643			1594	1504		3227				1610
Flt Permitted	0.95	1.00			0.98	1.00		1.00				0.95
Satd. Flow (perm)	1770	1643			1594	1504		3227				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	38	141	32	0	58	38	26	16	21	168	88
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	63	179	0	0	66	62	0	47	0	0	0	191
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	12.4	12.4			5.3	5.3		17.2				18.2
Effective Green, g (s)	12.4	12.4			5.3	5.3		17.2				18.2
Actuated g/C Ratio	0.18	0.18			0.08	0.08		0.25				0.26
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	317	294			122	115		803				424
v/s Ratio Prot	0.04	c0.11			c0.04	0.04		c0.01				c0.12
v/s Ratio Perm												
v/c Ratio	0.20	0.61			0.54	0.54		0.06				0.45
Uniform Delay, d1	24.1	26.1			30.7	30.7		19.8				21.3
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.3	3.5			4.8	4.8		0.1				3.4
Delay (s)	24.4	29.7			35.6	35.5		19.9				24.7
Level of Service	C	C			D	D		B				C
Approach Delay (s)		28.3			35.5			19.9				
Approach LOS		C			D			B				

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	69.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	316
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	0.99
Satd. Flow (prot)	3363
Flt Permitted	0.99
Satd. Flow (perm)	3363
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	333
RTOR Reduction (vph)	0
Lane Group Flow (vph)	398
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	18.2
Effective Green, g (s)	18.2
Actuated g/C Ratio	0.26
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	885
v/s Ratio Prot	0.12
v/s Ratio Perm	
v/c Ratio	0.45
Uniform Delay, d1	21.3
Progression Factor	1.00
Incremental Delay, d2	1.7
Delay (s)	22.9
Level of Service	C
Approach Delay (s)	23.5
Approach LOS	C

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	380	90	290	460	50	70	20	220	70	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	400	95	305	484	53	74	21	232	74	42	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	347	810	252	442	950	378	179	615	726	179	615	523
Arrive On Green	0.10	0.16	0.16	0.13	0.19	0.19	0.05	0.33	0.33	0.05	0.33	0.33
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	42	400	95	305	484	53	74	21	232	74	42	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.5	3.5	1.9	4.1	4.1	0.7	1.0	0.4	4.5	1.0	0.7	2.1
Cycle Q Clear(g_c), s	0.5	3.5	1.9	4.1	4.1	0.7	1.0	0.4	4.5	1.0	0.7	2.1
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	347	810	252	442	950	378	179	615	726	179	615	523
V/C Ratio(X)	0.12	0.49	0.38	0.69	0.51	0.14	0.41	0.03	0.32	0.41	0.07	0.18
Avail Cap(c_a), veh/h	347	1679	523	568	2099	736	284	615	726	284	615	523
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	19.8	18.6	10.0	20.2	17.7	5.1	22.3	11.0	8.3	22.3	11.1	11.6
Incr Delay (d2), s/veh	0.2	0.5	0.9	2.4	0.4	0.2	1.5	0.1	1.2	1.5	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.7	1.1	2.1	2.0	0.4	0.5	0.2	2.2	0.5	0.4	1.0
LnGrp Delay(d),s/veh	20.0	19.1	11.0	22.6	18.1	5.3	23.8	11.1	9.5	23.8	11.3	12.3
LnGrp LOS	B	B	B	C	B	A	C	B	A	C	B	B
Approach Vol, veh/h		537			842			327			211	
Approach Delay, s/veh		17.7			19.0			12.8			16.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	20.0	10.2	11.7	6.5	20.0	8.9	13.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	3.0	6.5	6.1	5.5	3.0	4.1	2.5	6.1
Green Ext Time (p_c), s	0.0	0.8	0.2	2.2	0.1	0.3	0.5	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	350	90	140	420	40	70	20	100	40	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	368	95	147	442	42	74	21	105	42	82	68
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	99	764	320	249	848	346	179	734	624	185	734	712
Arrive On Green	0.06	0.15	0.15	0.07	0.17	0.17	0.05	0.39	0.39	0.05	0.39	0.39
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	32	368	95	147	442	42	74	21	105	42	82	68
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.8	3.2	1.5	2.0	3.8	0.0	1.0	0.3	2.1	0.5	1.3	0.3
Cycle Q Clear(g_c), s	0.8	3.2	1.5	2.0	3.8	0.0	1.0	0.3	2.1	0.5	1.3	0.3
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	99	764	320	249	848	346	179	734	624	185	734	712
V/C Ratio(X)	0.32	0.48	0.30	0.59	0.52	0.12	0.41	0.03	0.17	0.23	0.11	0.10
Avail Cap(c_a), veh/h	184	1686	608	357	1686	608	285	734	624	294	734	712
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	21.9	18.8	6.4	21.7	18.3	15.1	22.1	9.0	9.5	21.9	9.3	2.0
Incr Delay (d2), s/veh	1.9	0.5	0.5	2.2	0.5	0.2	1.5	0.1	0.6	0.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.5	0.8	1.0	1.8	0.4	0.5	0.2	1.0	0.3	0.7	0.3
LnGrp Delay(d),s/veh	23.8	19.3	7.0	23.9	18.8	15.3	23.7	9.0	10.1	22.5	9.6	2.3
LnGrp LOS	C	B	A	C	B	B	C	A	B	C	A	A
Approach Vol, veh/h		495			631			200			192	
Approach Delay, s/veh		17.2			19.8			15.0			9.8	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	23.0	7.5	11.2	6.5	23.0	6.7	12.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	4.0	19.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	4.1	4.0	5.2	3.0	3.3	2.8	5.8
Green Ext Time (p_c), s	0.1	0.3	0.1	2.0	0.0	0.6	0.1	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	130	0	170	120	250	0	0	180	70
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				137	0	179	126	263	0	0	189	74
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				282	0	251	694	1319	0	0	628	238
Arrive On Green				0.16	0.00	0.16	0.13	0.23	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1774	0	1583	1774	1863	0	0	2607	951
Grp Volume(v), veh/h				137	0	179	126	263	0	0	131	132
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1863	0	0	1770	1695
Q Serve(g_s), s				4.2	0.0	6.4	3.8	6.8	0.0	0.0	3.6	3.8
Cycle Q Clear(g_c), s				4.2	0.0	6.4	3.8	6.8	0.0	0.0	3.6	3.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h				282	0	251	694	1319	0	0	442	424
V/C Ratio(X)				0.49	0.00	0.71	0.18	0.20	0.00	0.00	0.30	0.31
Avail Cap(c_a), veh/h				591	0	528	694	1319	0	0	442	424
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.0	0.0	23.9	17.6	9.3	0.0	0.0	18.2	18.3
Incr Delay (d2), s/veh				1.3	0.0	3.7	0.1	0.3	0.0	0.0	1.7	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.2	0.0	3.0	1.9	3.7	0.0	0.0	2.0	2.0
LnGrp Delay(d),s/veh				24.3	0.0	27.7	17.7	9.7	0.0	0.0	19.9	20.2
LnGrp LOS				C		C	B	A			B	C
Approach Vol, veh/h					316			389			263	
Approach Delay, s/veh					26.2			12.3			20.1	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		46.5			27.5	19.0		13.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		32.0			13.0	15.0		20.0
Max Q Clear Time (g_c+I1), s		8.8			5.8	5.8		8.4
Green Ext Time (p_c), s		1.9			1.1	1.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	0	40	0	0	0	0	230	190	90	220	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	147	0	42				0	242	200	95	232	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	212	0	189				0	2165	968	122	2645	0
Arrive On Green	0.12	0.00	0.12				0.00	0.20	0.20	0.14	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	147	0	42				0	242	200	95	232	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	4.8	0.0	1.4				0.0	3.4	6.3	3.1	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	1.4				0.0	3.4	6.3	3.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	212	0	189				0	2165	968	122	2645	0
V/C Ratio(X)	0.69	0.00	0.22				0.00	0.11	0.21	0.78	0.09	0.00
Avail Cap(c_a), veh/h	591	0	528				0	2165	968	355	2645	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.98	0.98	0.00
Uniform Delay (d), s/veh	25.4	0.0	23.9				0.0	10.6	11.8	25.4	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.6				0.0	0.1	0.5	9.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.7				0.0	1.7	2.9	1.8	0.0	0.0
LnGrp Delay(d),s/veh	29.4	0.0	24.5				0.0	10.7	12.3	35.3	0.1	0.0
LnGrp LOS	C		C					B	B	D	A	
Approach Vol, veh/h		189						442			327	
Approach Delay, s/veh		28.3						11.4			10.3	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	8.1	40.7		11.2		48.8		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	12.0	16.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	5.1	8.3		6.8		2.0		
Green Ext Time (p_c), s	0.1	2.3		0.7		4.1		

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	120	30	60	20	140	280	50	20	220	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	42	42	126	32	63	21	147	295	53	21	232	74
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	60	134	1338	95	234	105	1206	2678	465	68	1441	449
Arrive On Green	0.03	0.07	0.07	0.03	0.07	0.07	0.12	0.20	0.20	0.02	0.28	0.28
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4361	758	3442	5085	1583
Grp Volume(v), veh/h	42	42	126	32	63	21	147	227	121	21	232	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1729	1721	1695	1583
Q Serve(g_s), s	1.4	1.3	0.2	0.5	1.0	0.6	2.3	3.3	3.4	0.4	2.1	2.1
Cycle Q Clear(g_c), s	1.4	1.3	0.2	0.5	1.0	0.6	2.3	3.3	3.4	0.4	2.1	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	60	134	1338	95	234	105	1206	2082	1062	68	1441	449
V/C Ratio(X)	0.71	0.31	0.09	0.34	0.27	0.20	0.12	0.11	0.11	0.31	0.16	0.16
Avail Cap(c_a), veh/h	148	528	2007	229	944	422	1206	2082	1062	229	1441	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	26.4	4.1	28.6	26.6	18.5	18.3	10.5	10.6	29.0	16.1	16.2
Incr Delay (d2), s/veh	14.1	1.3	0.0	2.1	0.6	0.9	0.0	0.1	0.2	2.6	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.7	0.4	0.3	0.5	0.3	1.1	1.6	1.7	0.2	1.0	1.0
LnGrp Delay(d),s/veh	42.8	27.7	4.1	30.7	27.3	19.5	18.3	10.6	10.8	31.6	16.4	17.0
LnGrp LOS	D	C	A	C	C	B	B	B	B	C	B	B
Approach Vol, veh/h		210			116			495			327	
Approach Delay, s/veh		16.6			26.8			13.0			17.5	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	40.8	5.7	8.3	25.0	21.0	6.0	8.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	17.0	6.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.4	5.4	2.5	3.3	4.3	4.1	3.4	3.0
Green Ext Time (p_c), s	0.0	2.3	0.0	0.6	0.1	1.4	0.1	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	0	80	50	70	140	160	310	0	0	240	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	21	0	84	53	74	147	168	326	0	0	253	126
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	95	133	198	636	3773	0	0	1121	501
Arrive On Green	0.00	0.00	0.00	0.12	0.12	0.12	0.36	0.74	0.00	0.00	0.63	0.63
Sat Flow, veh/h		0		761	1063	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		127	0	147	168	326	0	0	253	126
Grp Sat Flow(s),veh/h/ln				1825	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				3.9	0.0	5.4	4.0	1.1	0.0	0.0	1.8	2.1
Cycle Q Clear(g_c), s				3.9	0.0	5.4	4.0	1.1	0.0	0.0	1.8	2.1
Prop In Lane				0.42		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				228	0	198	636	3773	0	0	1121	501
V/C Ratio(X)				0.56	0.00	0.74	0.26	0.09	0.00	0.00	0.23	0.25
Avail Cap(c_a), veh/h				274	0	237	636	3773	0	0	1121	501
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.7	0.0	25.3	13.6	2.1	0.0	0.0	7.9	7.9
Incr Delay (d2), s/veh				2.1	0.0	9.8	0.2	0.0	0.0	0.0	0.5	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				2.1	0.0	2.9	2.0	0.5	0.0	0.0	0.9	1.0
LnGrp Delay(d),s/veh				26.8	0.0	35.1	13.9	2.2	0.0	0.0	8.3	9.1
LnGrp LOS				C		D	B	A			A	A
Approach Vol, veh/h					274			494			379	
Approach Delay, s/veh					31.3			6.2			8.6	
Approach LOS					C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		48.5			25.5	23.0		11.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		35.0			12.0	19.0		9.0
Max Q Clear Time (g_c+I1), s		3.1			6.0	4.1		7.4
Green Ext Time (p_c), s		2.8			1.4	1.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	460	330	50	590	50	140	30	30	20	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	484	347	53	621	53	147	32	32	21	42	95
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	297	1393	606	135	1090	269	666	819	715	35	528	790
Arrive On Green	0.03	0.07	0.07	0.04	0.17	0.17	0.19	0.46	0.46	0.02	0.28	0.28
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1793	1564	1774	1863	2787
Grp Volume(v), veh/h	168	484	347	53	621	53	147	32	32	21	42	95
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1587	1774	1863	1393
Q Serve(g_s), s	2.9	4.3	4.2	0.9	5.3	1.4	2.2	0.6	0.7	0.7	1.0	1.5
Cycle Q Clear(g_c), s	2.9	4.3	4.2	0.9	5.3	1.4	2.2	0.6	0.7	0.7	1.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Lane Grp Cap(c), veh/h	297	1393	606	135	1090	269	666	809	725	35	528	790
V/C Ratio(X)	0.56	0.35	0.57	0.39	0.57	0.20	0.22	0.04	0.04	0.60	0.08	0.12
Avail Cap(c_a), veh/h	344	1922	836	229	1709	422	666	809	725	118	528	790
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	23.8	8.5	28.1	22.9	14.2	20.4	9.0	9.0	29.2	15.8	16.0
Incr Delay (d2), s/veh	1.6	0.1	0.8	1.9	0.5	0.4	0.2	0.1	0.1	15.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.9	1.7	0.5	2.4	0.6	1.0	0.3	0.3	0.5	0.5	0.6
LnGrp Delay(d),s/veh	29.6	23.9	9.3	30.0	23.3	14.6	20.6	9.1	9.1	44.6	16.1	16.3
LnGrp LOS	C	C	A	C	C	B	C	A	A	D	B	B
Approach Vol, veh/h		999			727			211			158	
Approach Delay, s/veh		19.8			23.2			17.1			20.0	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	31.4	6.3	17.0	15.6	21.0	9.2	14.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	4.0	18.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	2.7	2.9	6.3	4.2	3.5	4.9	7.3
Green Ext Time (p_c), s	0.0	0.7	0.0	4.2	0.0	0.4	0.6	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	140	940	580	190	310	370
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	989	611	200	326	389
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	241	2270	1394	2034	2563	1428
Arrive On Green	0.14	0.71	0.22	0.22	0.51	0.51
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	147	989	611	200	326	389
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	2.4	3.9	4.9	1.3	2.0	4.7
Cycle Q Clear(g_c), s	2.4	3.9	4.9	1.3	2.0	4.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	241	2270	1394	2034	2563	1428
V/C Ratio(X)	0.61	0.44	0.44	0.10	0.13	0.27
Avail Cap(c_a), veh/h	574	3097	1602	2124	2563	1428
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.91	0.91	1.00	1.00
Uniform Delay (d), s/veh	25.0	6.2	20.3	2.4	7.6	8.3
Incr Delay (d2), s/veh	2.4	0.1	0.2	0.0	0.1	0.5
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	1.7	2.2	1.4	1.0	4.9
LnGrp Delay(d),s/veh	27.4	6.3	20.5	2.4	7.7	8.8
LnGrp LOS	C	A	C	A	A	A
Approach Vol, veh/h		1136	811		715	
Approach Delay, s/veh		9.1	16.0		8.3	
Approach LOS		A	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.3		34.7	8.2	17.1
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				29.0		23.0	10.0	15.0
Max Q Clear Time (g_c+I1), s				5.9		6.7	4.4	6.9
Green Ext Time (p_c), s				13.4		2.7	0.2	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	340	0	290	270
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	358	0	305	284
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1111	179			358	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1111	179			358	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			75	
cM capacity (veh/h)	151	833			1197	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	239	119	305	142	142
Volume Left	0	0	305	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1197	1700	1700
Volume to Capacity	0.14	0.07	0.25	0.08	0.08
Queue Length 95th (ft)	0	0	25	0	0
Control Delay (s)	0.0	0.0	9.0	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	290	240	260	410	270	180	30	280	180	0	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	305	253	274	432	284	189	32	295	189	0	105
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	143	738	831	372	924	507	1409	186	580	1411	187	159
Arrive On Green	0.04	0.12	0.12	0.04	0.06	0.06	0.41	0.10	0.10	0.41	0.00	0.10
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	63	305	253	274	432	284	189	32	295	189	0	105
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	1.1	2.7	0.0	4.7	4.9	5.9	2.1	0.9	0.0	2.1	0.0	3.8
Cycle Q Clear(g_c), s	1.1	2.7	0.0	4.7	4.9	5.9	2.1	0.9	0.0	2.1	0.0	3.8
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	143	738	831	372	924	507	1409	186	580	1411	187	159
V/C Ratio(X)	0.44	0.41	0.30	0.74	0.47	0.56	0.13	0.17	0.51	0.13	0.00	0.66
Avail Cap(c_a), veh/h	229	1709	1071	372	1526	836	1409	186	580	1411	528	449
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	24.7	8.1	28.1	25.4	25.9	11.1	24.7	21.0	11.1	0.0	26.0
Incr Delay (d2), s/veh	2.1	0.4	0.2	7.0	0.3	0.9	0.2	2.0	3.2	0.0	0.0	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	0.5	1.2	2.4	2.6	2.4	2.4	1.0	0.6	2.4	1.0	0.0	1.9
LnGrp Delay(d),s/veh	30.2	25.0	8.3	35.1	25.7	26.8	11.3	26.7	24.2	11.1	0.0	30.6
LnGrp LOS	C	C	A	D	C	C	B	C	C	B		C
Approach Vol, veh/h		621			990			516			294	
Approach Delay, s/veh		18.7			28.6			19.6			18.1	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.6	10.0	10.5	10.9	28.6	10.0	6.5	14.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	6.0	6.0	16.0	5.0	17.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	4.1	2.9	6.7	4.7	4.1	5.8	3.1	7.9
Green Ext Time (p_c), s	1.0	0.4	0.0	2.3	0.1	0.2	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	830	200	200	620	180	250
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	874	0	211	653	189	263
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2062	642	367	3122	324	806
Arrive On Green	0.41	0.00	0.11	0.61	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	874	0	211	653	189	263
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	4.9	0.0	2.3	2.2	3.8	2.9
Cycle Q Clear(g_c), s	4.9	0.0	2.3	2.2	3.8	2.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2062	642	367	3122	324	806
V/C Ratio(X)	0.42	0.00	0.57	0.21	0.58	0.33
Avail Cap(c_a), veh/h	2845	886	963	4786	902	1715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	16.7	3.4	14.7	11.0
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.0	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.2	1.0	2.0	1.1
LnGrp Delay(d),s/veh	8.5	0.0	18.1	3.4	16.4	11.2
LnGrp LOS	A		B	A	B	B
Approach Vol, veh/h	874			864	452	
Approach Delay, s/veh	8.5			7.0	13.4	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.2	8.2	19.9				28.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		20.0	11.0	22.0				37.0
Max Q Clear Time (g_c+I1), s		5.8	4.3	6.9				4.2
Green Ext Time (p_c), s		1.4	0.4	9.1				14.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	60	70	70	60	30	40	460	80	30	400	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	63	74	74	63	32	42	484	84	32	421	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	98	116	96	130	66	63	1455	251	29	1466	184
Arrive On Green	0.07	0.13	0.13	0.05	0.11	0.11	0.04	0.48	0.48	0.02	0.46	0.46
Sat Flow, veh/h	1774	782	919	1774	1166	592	1774	3019	521	1774	3166	396
Grp Volume(v), veh/h	95	0	137	74	0	95	42	283	285	32	234	240
Grp Sat Flow(s),veh/h/ln	1774	0	1701	1774	0	1758	1774	1770	1771	1774	1770	1793
Q Serve(g_s), s	2.6	0.0	3.8	2.0	0.0	2.5	1.2	4.9	5.0	0.8	4.1	4.1
Cycle Q Clear(g_c), s	2.6	0.0	3.8	2.0	0.0	2.5	1.2	4.9	5.0	0.8	4.1	4.1
Prop In Lane	1.00		0.54	1.00		0.34	1.00		0.29	1.00		0.22
Lane Grp Cap(c), veh/h	122	0	214	96	0	195	63	853	854	29	820	830
V/C Ratio(X)	0.78	0.00	0.64	0.77	0.00	0.49	0.67	0.33	0.33	1.10	0.29	0.29
Avail Cap(c_a), veh/h	321	0	615	249	0	565	214	853	854	178	820	830
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	22.8	0.0	20.7	23.2	0.0	20.8	23.7	7.9	8.0	24.5	8.3	8.3
Incr Delay (d2), s/veh	10.1	0.0	3.2	12.0	0.0	1.9	11.6	1.0	1.1	105.5	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	4.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.0	1.3	0.0	1.3	0.8	2.6	2.6	1.2	2.2	2.2
LnGrp Delay(d),s/veh	32.9	0.0	23.9	35.2	0.0	22.7	35.3	9.0	9.0	134.5	9.1	9.2
LnGrp LOS	C		C	D		C	D	A	A	F	A	A
Approach Vol, veh/h		232			169			610			506	
Approach Delay, s/veh		27.6			28.2			10.8			17.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	28.0	6.7	10.3	5.8	27.1	7.4	9.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	24.0	7.0	18.0	6.0	23.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	7.0	4.0	5.8	3.2	6.1	4.6	4.5
Green Ext Time (p_c), s	0.0	3.2	0.2	0.5	0.0	2.7	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	120	100	40	80	20	100	70	60	20	60	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	126	105	42	84	21	105	74	63	21	63	63
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	247	392	186	307	80	136	516	439	33	425	425
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.08	0.55	0.55	0.02	0.50	0.50
Sat Flow, veh/h	287	1447	1583	385	1795	470	1774	931	792	1774	856	856
Grp Volume(v), veh/h	168	0	105	75	0	72	105	0	137	21	0	126
Grp Sat Flow(s),veh/h/ln	1733	0	1583	1037	0	1612	1774	0	1723	1774	0	1712
Q Serve(g_s), s	1.5	0.0	2.5	0.3	0.0	1.8	2.7	0.0	1.8	0.6	0.0	1.9
Cycle Q Clear(g_c), s	4.0	0.0	2.5	4.3	0.0	1.8	2.7	0.0	1.8	0.6	0.0	1.9
Prop In Lane	0.25		1.00	0.56		0.29	1.00		0.46	1.00		0.50
Lane Grp Cap(c), veh/h	392	0	392	297	0	275	136	0	955	33	0	850
V/C Ratio(X)	0.43	0.00	0.27	0.25	0.00	0.26	0.77	0.00	0.14	0.63	0.00	0.15
Avail Cap(c_a), veh/h	749	0	729	591	0	619	416	0	955	151	0	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	14.2	17.0	0.0	16.9	21.2	0.0	5.1	22.8	0.0	6.4
Incr Delay (d2), s/veh	0.7	0.0	0.4	0.4	0.0	0.5	8.8	0.0	0.3	17.9	0.0	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	2.0	0.0	1.1	0.9	0.0	0.8	1.6	0.0	0.9	0.4	0.0	1.0
LnGrp Delay(d),s/veh	18.5	0.0	14.6	17.5	0.0	17.4	30.1	0.0	5.4	40.7	0.0	6.8
LnGrp LOS	B		B	B		B	C		A	D		A
Approach Vol, veh/h		273			147			242			147	
Approach Delay, s/veh		17.0			17.4			16.1			11.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	30.0		12.0	7.6	27.3		12.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	26.0		18.0	11.0	19.0		18.0
Max Q Clear Time (g_c+I1), s	2.6	3.8		6.0	4.7	3.9		6.3
Green Ext Time (p_c), s	0.0	0.7		1.7	0.1	0.6		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	20	330	90	20	30	400	500	90	30	540	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	395	95	21	32	421	526	95	32	568	42
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	285	485	124	27	42	960	899	162	368	764	56
Arrive On Green	0.00	0.00	0.15	0.11	0.11	0.11	0.56	0.60	0.60	0.21	0.23	0.23
Sat Flow, veh/h	0	1863	3167	1117	247	376	3442	2998	539	1774	3342	247
Grp Volume(v), veh/h	0	0	395	148	0	0	421	310	311	32	300	310
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1740	0	0	1721	1770	1768	1774	1770	1819
Q Serve(g_s), s	0.0	0.0	8.4	5.8	0.0	0.0	5.0	7.5	7.6	1.0	11.0	11.1
Cycle Q Clear(g_c), s	0.0	0.0	8.4	5.8	0.0	0.0	5.0	7.5	7.6	1.0	11.0	11.1
Prop In Lane	0.00		1.00	0.64		0.22	1.00		0.31	1.00		0.14
Lane Grp Cap(c), veh/h	0	285	485	193	0	0	960	531	530	368	404	416
V/C Ratio(X)	0.00	0.00	0.81	0.77	0.00	0.00	0.44	0.58	0.59	0.09	0.74	0.74
Avail Cap(c_a), veh/h	0	319	543	398	0	0	960	531	530	368	404	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	28.7	30.2	0.0	0.0	12.3	11.3	11.3	22.4	25.1	25.1
Incr Delay (d2), s/veh	0.0	0.0	8.5	6.3	0.0	0.0	0.2	3.7	3.7	0.1	11.7	11.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.3	3.1	0.0	0.0	2.4	4.0	4.2	0.5	6.6	6.8
LnGrp Delay(d),s/veh	0.0	0.0	37.1	36.5	0.0	0.0	12.5	15.0	15.0	22.5	36.7	36.6
LnGrp LOS			D	D			B	B	B	C	D	D
Approach Vol, veh/h		395			148			1042			642	
Approach Delay, s/veh		37.1			36.5			14.0			36.0	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.5	25.0		14.7	23.5	20.0		11.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	21.0		12.0	10.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	3.0	9.6		10.4	7.0	13.1		7.8
Green Ext Time (p_c), s	0.4	3.0		0.3	0.5	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	60	480	440	110	200	260	700	80	30	840	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	85	505	474	205	141	274	737	84	32	884	95
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	279	293	475	638	335	452	253	1052	120	365	1032	462
Arrive On Green	0.16	0.16	0.16	0.18	0.18	0.18	0.14	0.33	0.33	0.21	0.58	0.58
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3203	365	3442	3539	1583
Grp Volume(v), veh/h	79	85	505	474	205	141	274	407	414	32	884	95
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1798	1721	1770	1583
Q Serve(g_s), s	2.7	2.8	11.0	8.9	7.1	0.0	10.0	14.0	14.1	0.5	14.6	2.0
Cycle Q Clear(g_c), s	2.7	2.8	11.0	8.9	7.1	0.0	10.0	14.0	14.1	0.5	14.6	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	279	293	475	638	335	452	253	581	591	365	1032	462
V/C Ratio(X)	0.28	0.29	1.06	0.74	0.61	0.31	1.08	0.70	0.70	0.09	0.86	0.21
Avail Cap(c_a), veh/h	279	293	475	811	426	530	253	581	591	365	1032	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	26.0	26.1	24.5	27.2	26.5	19.6	30.0	20.5	20.5	24.9	13.4	10.7
Incr Delay (d2), s/veh	0.6	0.5	59.1	2.8	1.8	0.4	79.8	6.9	6.8	0.1	7.4	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	1.4	1.5	16.9	4.6	3.8	2.2	10.5	7.9	8.0	0.3	7.9	0.9
LnGrp Delay(d),s/veh	26.6	26.6	83.6	30.0	28.3	20.0	109.8	27.4	27.3	24.9	20.7	11.5
LnGrp LOS	C	C	F	C	C	B	F	C	C	C	C	B
Approach Vol, veh/h		669			820			1095			1011	
Approach Delay, s/veh		69.6			27.8			48.0			20.0	
Approach LOS		E			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.4	27.0		15.0	14.0	24.4		16.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		11.0	10.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.5	16.1		13.0	12.0	16.6		10.9
Green Ext Time (p_c), s	0.9	2.9		0.0	0.0	0.3		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	550	1580	30	0	440	970	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	579	1663		0	463	1021	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1728	1812		0	1358	1951	0
Arrive On Green	0.50	0.50		0.00	0.38	0.38	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	579	1663		0	463	1021	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	7.1	29.8		0.0	6.5	10.8	0.0
Cycle Q Clear(g_c), s	7.1	29.8		0.0	6.5	10.8	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1728	1812		0	1358	1951	0
V/C Ratio(X)	0.34	0.92		0.00	0.34	0.52	0.00
Avail Cap(c_a), veh/h	1770	1857		0	1358	1951	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.4	16.1		0.0	15.3	16.6	0.0
Incr Delay (d2), s/veh	0.1	7.7		0.0	0.7	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	17.3		0.0	3.3	5.2	0.0
LnGrp Delay(d),s/veh	10.5	23.8		0.0	16.0	17.6	0.0
LnGrp LOS	B	C			B	B	
Approach Vol, veh/h	2242				463	1021	
Approach Delay, s/veh	20.3				16.0	17.6	
Approach LOS	C				B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		30.9		39.1		30.9		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		26.0		36.0		18.0		
Max Q Clear Time (g_c+I1), s		8.5		31.8		12.8		
Green Ext Time (p_c), s		9.8		3.4		3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1140	420	80	1180	280	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1200	442	84	1242	295	105
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1891	1160	190	3411	1280	571
Arrive On Green	0.37	0.37	0.11	0.53	0.36	0.36
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1200	442	84	1242	295	105
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	14.5	7.8	3.3	8.4	4.3	3.4
Cycle Q Clear(g_c), s	14.5	7.8	3.3	8.4	4.3	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1891	1160	190	3411	1280	571
V/C Ratio(X)	0.63	0.38	0.44	0.36	0.23	0.18
Avail Cap(c_a), veh/h	2650	1396	284	4709	1280	571
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	3.7	31.3	10.2	16.7	16.4
Incr Delay (d2), s/veh	0.4	0.2	1.6	0.1	0.4	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	6.8	7.9	1.7	3.7	2.2	1.6
LnGrp Delay(d),s/veh	19.7	3.9	32.9	10.2	17.1	17.1
LnGrp LOS	B	A	C	B	B	B
Approach Vol, veh/h	1642			1326	400	
Approach Delay, s/veh	15.4			11.7	17.1	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		31.0	12.0	31.8				43.8
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		27.0	12.0	39.0				55.0
Max Q Clear Time (g_c+I1), s		6.3	5.3	16.5				10.4
Green Ext Time (p_c), s		1.3	4.4	11.3				12.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	70	70	50	70	80	60	150	60	160	140	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	74	74	74	53	74	84	63	158	63	168	147	74
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	95	234	209	76	215	192	86	656	557	215	791	673
Arrive On Green	0.05	0.13	0.13	0.04	0.12	0.12	0.05	0.35	0.35	0.12	0.42	0.42
Sat Flow, veh/h	1774	1772	1581	1774	1770	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	74	74	74	53	74	84	63	158	63	168	147	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1584	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.9	1.7	1.9	1.3	1.7	2.2	1.6	2.7	1.2	4.2	2.2	1.3
Cycle Q Clear(g_c), s	1.9	1.7	1.9	1.3	1.7	2.2	1.6	2.7	1.2	4.2	2.2	1.3
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	95	234	209	76	215	192	86	656	557	215	791	673
V/C Ratio(X)	0.78	0.32	0.35	0.70	0.34	0.44	0.74	0.24	0.11	0.78	0.19	0.11
Avail Cap(c_a), veh/h	156	623	557	156	623	557	234	656	557	312	791	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	17.9	18.0	21.5	18.3	18.5	21.3	10.4	9.9	19.4	8.2	7.9
Incr Delay (d2), s/veh	12.9	0.8	1.0	10.8	0.9	1.6	11.5	0.9	0.4	7.7	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	0.9	0.9	0.9	1.1	1.0	1.6	0.6	2.5	1.3	0.6
LnGrp Delay(d),s/veh	34.2	18.6	19.0	32.3	19.3	20.1	32.9	11.3	10.4	27.1	8.7	8.2
LnGrp LOS	C	B	B	C	B	C	C	B	B	C	A	A
Approach Vol, veh/h		222			211			284			389	
Approach Delay, s/veh		23.9			22.9			15.9			16.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	20.0	6.0	10.0	6.2	23.3	6.4	9.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	16.0	4.0	16.0	6.0	18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	6.2	4.7	3.3	3.9	3.6	4.2	3.9	4.2
Green Ext Time (p_c), s	0.1	1.7	0.0	1.4	0.0	1.8	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	40	40	180	210	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	42	42	189	221	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	416	126	253	0	-	0
Stage 1	237	-	-	-	-	-
Stage 2	179	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	565	901	1309	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	901	1309	-	-	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	804	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1309	-	545	901	-	-
HCM Lane V/C Ratio	0.032	-	0.077	0.047	-	-
HCM Control Delay (s)	7.8	0.1	12.2	9.2	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	120	210	170	130	210	70
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	221	179	137	221	74
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	166	634	591	264	887	939
Arrive On Green	0.09	0.34	0.17	0.17	0.50	0.50
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	126	221	179	137	221	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	3.5	4.4	2.2	3.9	3.6	1.0
Cycle Q Clear(g_c), s	3.5	4.4	2.2	3.9	3.6	1.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	166	634	591	264	887	939
V/C Ratio(X)	0.76	0.35	0.30	0.52	0.25	0.08
Avail Cap(c_a), veh/h	497	1378	1345	602	887	939
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	22.1	12.4	18.3	19.0	7.1	4.3
Incr Delay (d2), s/veh	7.0	0.3	0.3	1.6	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.3	1.1	1.8	1.9	0.0
LnGrp Delay(d),s/veh	29.2	12.7	18.6	20.6	7.8	4.5
LnGrp LOS	C	B	B	C	A	A
Approach Vol, veh/h		347	316		295	
Approach Delay, s/veh		18.7	19.4		7.0	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				21.0		29.0	8.7	12.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				37.0		25.0	14.0	19.0
Max Q Clear Time (g_c+I1), s				6.4		5.6	5.5	5.9
Green Ext Time (p_c), s				3.1		0.8	0.2	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	730	1550	1020	450	0	570
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	768	1632	1204	387		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	930	4727	1871	530		
Arrive On Green	0.52	0.93	0.33	0.33		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	768	1632	1204	387		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	20.6	1.9	10.4	12.2		
Cycle Q Clear(g_c), s	20.6	1.9	10.4	12.2		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	930	4727	1871	530		
V/C Ratio(X)	0.83	0.35	0.64	0.73		
Avail Cap(c_a), veh/h	969	5019	2068	586		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	11.3	0.2	16.0	16.6		
Incr Delay (d2), s/veh	5.8	0.0	0.6	4.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	11.3	0.8	5.3	5.9		
LnGrp Delay(d),s/veh	17.1	0.3	16.6	20.8		
LnGrp LOS	B	A	B	C		
Approach Vol, veh/h		2400	1591			
Approach Delay, s/veh		5.6	17.6			
Approach LOS		A	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				56.7			33.7	23.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				56.0			31.0	21.0
Max Q Clear Time (g_c+I1), s				3.9			22.6	14.2
Green Ext Time (p_c), s				27.3			7.1	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	510	1240	480	200	970	420	0	0	0	430	0	430
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	537	1305	505	211	1021	0				453	0	453
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	597	2244	699	277	1326	413				952	0	850
Arrive On Green	0.34	0.44	0.44	0.16	0.26	0.00				0.27	0.00	0.27
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	537	1305	505	211	1021	0				453	0	453
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	25.8	17.3	23.4	10.2	16.6	0.0				9.6	0.0	10.9
Cycle Q Clear(g_c), s	25.8	17.3	23.4	10.2	16.6	0.0				9.6	0.0	10.9
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	597	2244	699	277	1326	413				952	0	850
V/C Ratio(X)	0.90	0.58	0.72	0.76	0.77	0.00				0.48	0.00	0.53
Avail Cap(c_a), veh/h	912	3013	938	417	1592	496				952	0	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	18.8	20.5	36.1	30.6	0.0				27.4	0.0	27.9
Incr Delay (d2), s/veh	8.1	0.2	1.8	4.5	2.0	0.0				1.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	8.0	10.5	5.3	8.0	0.0				4.9	0.0	5.0
LnGrp Delay(d),s/veh	36.3	19.0	22.3	40.6	32.5	0.0				29.1	0.0	30.3
LnGrp LOS	D	B	C	D	C					C		C
Approach Vol, veh/h		2347			1232						906	
Approach Delay, s/veh		23.7			33.9						29.7	
Approach LOS		C			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			18.0	43.5		28.0	34.1	27.3
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			21.0	53.0		24.0	46.0	28.0
Max Q Clear Time (g_c+I1), s			12.2	25.4		12.9	27.8	18.6
Green Ext Time (p_c), s			1.8	14.1		2.9	2.4	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	50	0	240	170	260	0	0	220	150
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				53	0	0	179	274	0	0	232	158
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				69	0	62	945	2997	0	0	910	407
Arrive On Green				0.04	0.00	0.00	1.00	1.00	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				53	0	0	179	274	0	0	232	158
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				2.1	0.0	0.0	0.0	0.0	0.0	0.0	3.6	5.8
Cycle Q Clear(g_c), s				2.1	0.0	0.0	0.0	0.0	0.0	0.0	3.6	5.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				69	0	62	945	2997	0	0	910	407
V/C Ratio(X)				0.77	0.00	0.00	0.19	0.09	0.00	0.00	0.25	0.39
Avail Cap(c_a), veh/h				558	0	498	945	2997	0	0	910	407
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.66	0.66	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.3	0.0	0.0	0.0	0.0	0.0	0.0	20.7	21.5
Incr Delay (d2), s/veh				16.0	0.0	0.0	0.1	0.0	0.0	0.0	0.7	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
%ile BackOfQ(50%),veh/ln				1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.8
LnGrp Delay(d),s/veh				49.3	0.0	0.0	0.1	0.0	0.0	0.0	21.3	24.2
LnGrp LOS				D			A	A			C	C
Approach Vol, veh/h					53			453			390	
Approach Delay, s/veh					49.3			0.0			22.5	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.3			41.3	22.0		6.7
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		40.0			18.0	18.0		22.0
Max Q Clear Time (g_c+I1), s		2.0			2.0	7.8		4.1
Green Ext Time (p_c), s		2.4			2.0	1.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	190	20	112	38	20	0	59	91	181	279	50	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.97			0.89	0.85		0.90			
Flt Protected	0.95		0.99			0.99	1.00		1.00			
Satd. Flow (prot)	1770		1790			1555	1504		3197			
Flt Permitted	0.95		0.38			0.99	1.00		1.00			
Satd. Flow (perm)	1770		680			1555	1504		3197			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	21	118	40	21	0	62	99	191	294	53	189
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	12	0	0	0
Lane Group Flow (vph)	200	0	179	0	0	77	105	0	526	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	17.0		17.0			5.0	5.0		16.0			
Effective Green, g (s)	17.0		17.0			5.0	5.0		16.0			
Actuated g/C Ratio	0.24		0.24			0.07	0.07		0.23			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	429		165			111	107		730			
v/s Ratio Prot	0.11					0.05	c0.07		c0.16			
v/s Ratio Perm			c0.26									
v/c Ratio	0.47		1.08			0.69	0.98		0.92dr			
Uniform Delay, d1	22.6		26.5			31.8	32.5		24.9			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	0.8		94.5			17.1	80.7		6.1			
Delay (s)	23.4		121.0			48.9	113.2		31.0			
Level of Service	C		F			D	F		C			
Approach Delay (s)			69.5			86.0			31.0			
Approach LOS			E			F			C			

Intersection Summary			
HCM 2000 Control Delay	45.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	68	22
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.96
Satd. Flow (prot)	1610	3269
Flt Permitted	0.95	0.96
Satd. Flow (perm)	1610	3269
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	72	23
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	196	88
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	368	747
v/s Ratio Prot	c0.12	0.03
v/s Ratio Perm		
v/c Ratio	0.53	0.12
Uniform Delay, d1	23.7	21.4
Progression Factor	0.54	0.51
Incremental Delay, d2	5.4	0.3
Delay (s)	18.1	11.3
Level of Service	B	B
Approach Delay (s)		16.0
Approach LOS		B

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	1220	310	680	790	110	260	30	740	100	40	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	1284	326	716	832	116	274	32	779	105	42	105
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	186	1639	510	1065	2938	988	341	325	766	160	227	193
Arrive On Green	0.05	0.32	0.32	0.31	0.58	0.58	0.10	0.17	0.17	0.05	0.12	0.12
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	126	1284	326	716	832	116	274	32	779	105	42	105
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.9	24.9	14.2	19.7	9.0	3.2	8.5	1.6	11.5	3.3	2.2	6.8
Cycle Q Clear(g_c), s	3.9	24.9	14.2	19.7	9.0	3.2	8.5	1.6	11.5	3.3	2.2	6.8
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	186	1639	510	1065	2938	988	341	325	766	160	227	193
V/C Ratio(X)	0.68	0.78	0.64	0.67	0.28	0.12	0.80	0.10	1.02	0.66	0.18	0.54
Avail Cap(c_a), veh/h	285	1870	582	1867	4208	1384	443	325	766	190	227	193
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	50.5	33.4	17.5	32.7	11.6	8.3	47.9	37.7	14.8	51.0	42.9	44.9
Incr Delay (d2), s/veh	4.3	2.0	1.9	0.7	0.1	0.1	7.9	0.6	36.6	6.2	1.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	12.0	6.8	9.5	4.2	1.4	4.4	0.9	26.8	1.7	1.2	3.5
LnGrp Delay(d),s/veh	54.8	35.4	19.4	33.5	11.6	8.3	55.8	38.3	51.5	57.2	44.7	55.5
LnGrp LOS	D	D	B	C	B	A	E	D	F	E	D	E
Approach Vol, veh/h		1736			1664			1085			252	
Approach Delay, s/veh		33.8			20.8			52.2			54.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	23.0	37.7	39.1	14.8	17.3	9.9	66.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	19.0	59.0	40.0	14.0	11.0	9.0	90.0
Max Q Clear Time (g_c+I1), s	5.3	13.5	21.7	26.9	10.5	8.8	5.9	11.0
Green Ext Time (p_c), s	0.0	2.2	11.9	8.2	0.3	1.0	0.1	13.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	1030	380	240	810	70	340	40	510	50	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	1084	400	253	853	74	358	42	537	53	79	64
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	159	1397	691	333	1434	500	557	761	647	119	522	585
Arrive On Green	0.09	0.27	0.27	0.10	0.28	0.28	0.16	0.41	0.41	0.03	0.28	0.28
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	126	1084	400	253	853	74	358	42	537	53	79	64
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.0	16.8	4.2	6.1	12.4	2.9	8.3	1.2	26.0	1.3	2.7	1.2
Cycle Q Clear(g_c), s	6.0	16.8	4.2	6.1	12.4	2.9	8.3	1.2	26.0	1.3	2.7	1.2
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	159	1397	691	333	1434	500	557	761	647	119	522	585
V/C Ratio(X)	0.79	0.78	0.58	0.76	0.59	0.15	0.64	0.06	0.83	0.45	0.15	0.11
Avail Cap(c_a), veh/h	248	1483	718	402	1434	500	602	761	647	166	522	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	28.6	7.3	37.7	26.5	21.1	33.6	15.3	22.7	40.6	23.2	6.8
Incr Delay (d2), s/veh	9.1	2.5	1.1	6.8	0.7	0.1	2.1	0.1	11.8	2.6	0.6	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	3.3	8.2	4.2	3.2	5.9	1.3	4.1	0.6	13.4	0.7	1.5	0.7
LnGrp Delay(d),s/veh	47.3	31.2	8.4	44.5	27.2	21.2	35.7	15.5	34.5	43.3	23.8	7.1
LnGrp LOS	D	C	A	D	C	C	D	B	C	D	C	A
Approach Vol, veh/h		1610			1180			937			196	
Approach Delay, s/veh		26.8			30.5			34.1			23.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	39.0	12.3	27.5	17.9	28.0	11.7	28.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	10.0	25.0	15.0	24.0	12.0	23.0
Max Q Clear Time (g_c+I1), s	3.3	28.0	8.1	18.8	10.3	4.7	8.0	14.4
Green Ext Time (p_c), s	0.0	2.3	0.2	4.7	1.7	0.5	0.1	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	240	0	180	250	460	0	0	820	340
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				221	45	189	263	484	0	0	863	358
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				317	56	236	301	1317	0	0	1174	485
Arrive On Green				0.18	0.18	0.18	0.34	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1774	314	1317	1774	1863	0	0	2538	1010
Grp Volume(v), veh/h				221	0	234	263	484	0	0	624	597
Grp Sat Flow(s),veh/h/ln				1774	0	1630	1774	1863	0	0	1770	1685
Q Serve(g_s), s				8.2	0.0	9.6	9.8	0.0	0.0	0.0	19.8	20.0
Cycle Q Clear(g_c), s				8.2	0.0	9.6	9.8	0.0	0.0	0.0	19.8	20.0
Prop In Lane				1.00		0.81	1.00		0.00	0.00		0.60
Lane Grp Cap(c), veh/h				317	0	292	301	1317	0	0	850	809
V/C Ratio(X)				0.70	0.00	0.80	0.87	0.37	0.00	0.00	0.73	0.74
Avail Cap(c_a), veh/h				405	0	373	355	1317	0	0	850	809
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.75	0.75	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.0	0.0	27.6	22.4	0.0	0.0	0.0	14.6	14.6
Incr Delay (d2), s/veh				3.6	0.0	9.4	14.7	0.6	0.0	0.0	5.6	6.0
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				4.3	0.0	5.1	5.9	0.2	0.0	0.0	10.8	10.5
LnGrp Delay(d),s/veh				30.6	0.0	37.0	37.2	0.6	0.0	0.0	20.2	20.6
LnGrp LOS				C		D	D	A			C	C
Approach Vol, veh/h					455			747			1221	
Approach Delay, s/veh					33.9			13.5			20.4	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		53.5			15.9	37.6		16.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		46.0			14.0	28.0		16.0
Max Q Clear Time (g_c+I1), s		2.0			11.8	22.0		11.6
Green Ext Time (p_c), s		17.8			0.2	4.7		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	0	90	0	0	0	0	500	410	550	510	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	221	0	95				0	526	432	579	537	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	282	0	251				0	708	317	833	2573	0
Arrive On Green	0.16	0.00	0.16				0.00	0.07	0.07	0.78	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	221	0	95				0	526	432	579	537	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	8.4	0.0	3.8				0.0	10.2	14.0	10.8	0.0	0.0
Cycle Q Clear(g_c), s	8.4	0.0	3.8				0.0	10.2	14.0	10.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	282	0	251				0	708	317	833	2573	0
V/C Ratio(X)	0.78	0.00	0.38				0.00	0.74	1.36	0.69	0.21	0.00
Avail Cap(c_a), veh/h	405	0	362				0	708	317	833	2573	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	1.67	1.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.55	0.55	0.00
Uniform Delay (d), s/veh	28.3	0.0	26.3				0.0	30.9	32.7	5.2	0.0	0.0
Incr Delay (d2), s/veh	6.3	0.0	0.9				0.0	6.5	181.9	1.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	1.7				0.0	5.7	22.1	5.1	0.0	0.0
LnGrp Delay(d),s/veh	34.6	0.0	27.3				0.0	37.4	214.5	6.6	0.1	0.0
LnGrp LOS	C		C					D	F	A	A	
Approach Vol, veh/h		316						958			1116	
Approach Delay, s/veh		32.4						117.3			3.4	
Approach LOS		C						F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	36.9	18.0		15.1		54.9		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	28.0	14.0		16.0		46.0		
Max Q Clear Time (g_c+I1), s	12.8	16.0		10.4		2.0		
Green Ext Time (p_c), s	5.1	0.0		0.8		6.6		

Intersection Summary	
HCM 2010 Ctrl Delay	52.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	180	450	100	80	50	180	670	110	40	690	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	189	474	105	84	53	189	705	116	42	726	158
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	245	377	900	176	408	183	281	1259	205	799	2218	691
Arrive On Green	0.14	0.20	0.20	0.05	0.12	0.12	0.08	0.29	0.29	0.46	0.87	0.87
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4408	718	3442	5085	1583
Grp Volume(v), veh/h	200	189	474	105	84	53	189	541	280	42	726	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1736	1721	1695	1583
Q Serve(g_s), s	7.7	6.3	8.8	2.1	1.5	1.3	3.7	9.5	9.6	0.5	1.8	1.1
Cycle Q Clear(g_c), s	7.7	6.3	8.8	2.1	1.5	1.3	3.7	9.5	9.6	0.5	1.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	245	377	900	176	408	183	281	969	496	799	2218	691
V/C Ratio(X)	0.82	0.50	0.53	0.60	0.21	0.29	0.67	0.56	0.57	0.05	0.33	0.23
Avail Cap(c_a), veh/h	355	665	1390	246	809	362	393	969	496	799	2218	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.98	0.98	0.98
Uniform Delay (d), s/veh	29.3	24.8	21.1	32.5	28.1	10.5	31.2	21.2	21.3	14.5	2.6	2.6
Incr Delay (d2), s/veh	9.2	1.0	0.5	3.2	0.2	0.9	2.6	2.2	4.4	0.0	0.4	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	4.4	3.4	3.9	1.1	0.7	0.6	1.9	4.7	5.2	0.2	0.7	0.5
LnGrp Delay(d),s/veh	38.5	25.8	21.6	35.7	28.3	11.4	33.9	23.4	25.7	14.6	3.0	3.3
LnGrp LOS	D	C	C	D	C	B	C	C	C	B	A	A
Approach Vol, veh/h		863			242			1010			926	
Approach Delay, s/veh		26.4			27.8			26.0			3.6	
Approach LOS		C			C			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	24.0	7.6	18.2	9.7	34.5	13.7	12.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	5.0	25.0	8.0	16.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	11.6	4.1	10.8	5.7	3.8	9.7	3.5
Green Ext Time (p_c), s	0.4	3.4	0.0	3.4	0.1	4.6	0.2	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	550	70	180	240	510	640	0	0	840	390
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	579	74	189	253	537	674	0	0	884	411
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	80	205	246	749	3842	0	0	1022	457
Arrive On Green	0.00	0.00	0.00	0.16	0.16	0.16	0.42	0.76	0.00	0.00	0.29	0.29
Sat Flow, veh/h		0		517	1320	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		263	0	253	537	674	0	0	884	411
Grp Sat Flow(s),veh/h/ln				1837	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				12.7	0.0	14.0	22.6	3.4	0.0	0.0	21.3	22.4
Cycle Q Clear(g_c), s				12.7	0.0	14.0	22.6	3.4	0.0	0.0	21.3	22.4
Prop In Lane				0.28		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				286	0	246	749	3842	0	0	1022	457
V/C Ratio(X)				0.92	0.00	1.03	0.72	0.18	0.00	0.00	0.86	0.90
Avail Cap(c_a), veh/h				286	0	246	749	3842	0	0	1022	457
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.94	0.94
Uniform Delay (d), s/veh				37.5	0.0	38.0	21.5	3.1	0.0	0.0	30.3	30.7
Incr Delay (d2), s/veh				33.1	0.0	64.6	3.3	0.1	0.0	0.0	9.2	22.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.1	0.0	10.5	11.7	1.6	0.0	0.0	11.6	12.6
LnGrp Delay(d),s/veh				70.6	0.0	102.6	24.8	3.2	0.0	0.0	39.5	52.8
LnGrp LOS				E		F	C	A			D	D
Approach Vol, veh/h					516			1211			1295	
Approach Delay, s/veh					86.3			12.8			43.7	
Approach LOS					F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.0			42.0	30.0		18.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		59.0			29.0	26.0		14.0
Max Q Clear Time (g_c+I1), s		5.4			24.6	24.4		16.0
Green Ext Time (p_c), s		8.0			2.5	1.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	1400	570	130	1530	80	540	60	160	50	40	270
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	1474	600	137	1611	84	568	63	168	53	42	284
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	302	2111	918	218	1955	483	910	603	540	67	213	318
Arrive On Green	0.12	0.44	0.44	0.06	0.31	0.31	0.26	0.34	0.34	0.04	0.11	0.11
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	211	1474	600	137	1611	84	568	63	168	53	42	284
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	4.1	13.0	5.2	2.7	16.3	2.1	10.2	1.7	5.5	2.1	1.4	7.0
Cycle Q Clear(g_c), s	4.1	13.0	5.2	2.7	16.3	2.1	10.2	1.7	5.5	2.1	1.4	7.0
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	302	2111	918	218	1955	483	910	603	540	67	213	318
V/C Ratio(X)	0.70	0.70	0.65	0.63	0.82	0.17	0.62	0.10	0.31	0.80	0.20	0.89
Avail Cap(c_a), veh/h	344	2111	918	295	2014	498	910	603	540	152	213	318
HCM Platoon Ratio	1.33	1.33	1.33	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	16.8	3.1	32.0	22.6	10.9	22.7	15.8	17.0	33.4	28.1	30.6
Incr Delay (d2), s/veh	4.3	0.8	1.3	3.0	2.9	0.2	1.3	0.3	1.5	18.8	2.1	29.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.8	2.0	1.4	7.5	1.0	5.0	0.9	2.6	1.4	0.9	4.0
LnGrp Delay(d),s/veh	34.3	17.7	4.5	34.9	25.4	11.1	24.0	16.1	18.5	52.3	30.2	59.7
LnGrp LOS	C	B	A	C	C	B	C	B	B	D	C	E
Approach Vol, veh/h		2285			1832			799			379	
Approach Delay, s/veh		15.7			25.5			22.2			55.4	
Approach LOS		B			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	27.9	8.4	27.1	22.5	12.0	10.1	25.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	19.0	6.0	23.0	17.0	8.0	7.0	22.0
Max Q Clear Time (g_c+I1), s	4.1	7.5	4.7	15.0	12.2	9.0	6.1	18.3
Green Ext Time (p_c), s	0.0	2.9	0.0	6.6	1.6	0.0	0.1	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	760	2140	1560	760	680	1010
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	800	2253	1642	800	716	1063
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	872	3832	1842	1603	1439	802
Arrive On Green	0.51	1.00	0.29	0.29	0.29	0.29
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	800	2253	1642	800	716	1063
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	15.0	0.0	17.2	12.0	8.3	20.1
Cycle Q Clear(g_c), s	15.0	0.0	17.2	12.0	8.3	20.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	872	3832	1842	1603	1439	802
V/C Ratio(X)	0.92	0.59	0.89	0.50	0.50	1.33
Avail Cap(c_a), veh/h	934	3936	1842	1603	1439	802
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.60	0.60	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	23.9	8.9	20.7	24.9
Incr Delay (d2), s/veh	5.1	0.1	3.7	0.1	1.2	155.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.0	8.0	7.7	4.0	30.5
LnGrp Delay(d),s/veh	21.7	0.1	27.6	9.0	22.0	180.2
LnGrp LOS	C	A	C	A	C	F
Approach Vol, veh/h		3053	2442		1779	
Approach Delay, s/veh		5.7	21.5		116.5	
Approach LOS		A	C		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				45.9		24.1	21.7	24.1
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				43.0		19.0	19.0	20.0
Max Q Clear Time (g_c+I1), s				2.0		22.1	17.0	19.2
Green Ext Time (p_c), s				39.9		0.0	0.7	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	940	0	410	340
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	989	0	432	358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2032	495			989	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2032	495			989	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			38	
cM capacity (veh/h)	19	520			694	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	660	330	432	179	179
Volume Left	0	0	432	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	694	1700	1700
Volume to Capacity	0.39	0.19	0.62	0.11	0.11
Queue Length 95th (ft)	0	0	109	0	0
Control Delay (s)	0.0	0.0	18.3	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		10.0		
Approach LOS					

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	1540	990	490	1490	740	400	50	470	240	20	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	1621	1042	516	1568	779	421	53	495	253	21	105
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	197	1465	843	492	1598	876	1046	545	1213	370	179	152
Arrive On Green	0.06	0.23	0.23	0.05	0.10	0.10	0.30	0.29	0.29	0.11	0.10	0.10
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	1621	1042	516	1568	779	421	53	495	253	21	105
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	3.6	16.0	16.0	10.0	21.5	13.1	6.8	1.5	2.5	5.0	0.7	4.5
Cycle Q Clear(g_c), s	3.6	16.0	16.0	10.0	21.5	13.1	6.8	1.5	2.5	5.0	0.7	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	197	1465	843	492	1598	876	1046	545	1213	370	179	152
V/C Ratio(X)	0.91	1.11	1.24	1.05	0.98	0.89	0.40	0.10	0.41	0.68	0.12	0.69
Avail Cap(c_a), veh/h	197	1465	843	492	1598	876	1046	545	1213	787	426	362
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	27.0	16.4	33.4	31.2	13.8	19.3	18.0	4.6	30.1	28.9	30.6
Incr Delay (d2), s/veh	40.0	58.5	116.5	41.4	11.2	5.6	1.2	0.4	1.0	2.2	0.3	5.5
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	13.0	33.8	7.6	11.8	5.7	3.4	0.8	1.8	2.5	0.4	2.2
LnGrp Delay(d),s/veh	72.9	85.5	132.8	74.8	42.4	19.4	20.5	18.4	5.6	32.3	29.2	36.1
LnGrp LOS	E	F	F	F	D	B	C	B	A	C	C	D
Approach Vol, veh/h		2842			2863			969			379	
Approach Delay, s/veh		102.1			42.0			12.8			33.2	
Approach LOS		F			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	24.5	14.0	20.0	25.3	10.7	8.0	26.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	12.0	10.0	16.0	12.0	16.0	4.0	22.0
Max Q Clear Time (g_c+I1), s	7.0	4.5	12.0	18.0	8.8	6.5	5.6	23.5
Green Ext Time (p_c), s	0.6	2.6	0.0	0.0	1.4	0.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.7
HCM 2010 LOS	E

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	985	435	200	625	185	250
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1037	0	211	658	195	263
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2382	742	350	3330	312	773
Arrive On Green	0.47	0.00	0.10	0.65	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	1037	0	211	658	195	263
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	6.4	0.0	2.8	2.4	4.8	3.6
Cycle Q Clear(g_c), s	6.4	0.0	2.8	2.4	4.8	3.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2382	742	350	3330	312	773
V/C Ratio(X)	0.44	0.00	0.60	0.20	0.63	0.34
Avail Cap(c_a), veh/h	3556	1107	802	5173	902	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	20.3	3.2	18.0	13.6
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	2.1	0.3
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	0.0	1.4	1.1	2.5	1.4
LnGrp Delay(d),s/veh	8.5	0.0	22.0	3.3	20.1	13.9
LnGrp LOS	A		C	A	C	B
Approach Vol, veh/h	1037			869	458	
Approach Delay, s/veh	8.5			7.8	16.5	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		12.3	8.8	26.1				34.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	11.0	33.0				48.0
Max Q Clear Time (g_c+I1), s		6.8	4.8	8.4				4.4
Green Ext Time (p_c), s		1.5	0.3	13.7				18.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	60	535	70	60	30	40	465	80	30	635	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	63	563	74	63	32	42	489	84	32	668	53
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	695	66	592	93	82	42	54	968	165	197	1332	106
Arrive On Green	0.39	0.41	0.41	0.05	0.07	0.07	0.03	0.32	0.32	0.11	0.40	0.40
Sat Flow, veh/h	1774	162	1446	1774	1166	592	1774	3024	517	1774	3322	263
Grp Volume(v), veh/h	95	0	626	74	0	95	42	285	288	32	356	365
Grp Sat Flow(s),veh/h/ln	1774	0	1608	1774	0	1758	1774	1770	1772	1774	1770	1816
Q Serve(g_s), s	5.2	0.0	56.5	6.2	0.0	8.0	3.5	19.6	19.8	2.4	22.6	22.6
Cycle Q Clear(g_c), s	5.2	0.0	56.5	6.2	0.0	8.0	3.5	19.6	19.8	2.4	22.6	22.6
Prop In Lane	1.00		0.90	1.00		0.34	1.00		0.29	1.00		0.15
Lane Grp Cap(c), veh/h	695	0	658	93	0	124	54	566	567	197	709	728
V/C Ratio(X)	0.14	0.00	0.95	0.80	0.00	0.77	0.78	0.50	0.51	0.16	0.50	0.50
Avail Cap(c_a), veh/h	695	0	718	142	0	750	106	566	567	197	709	728
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	0.89	0.89	0.89
Uniform Delay (d), s/veh	29.3	0.0	42.8	70.3	0.0	68.5	72.2	41.3	41.4	60.3	33.7	33.7
Incr Delay (d2), s/veh	0.1	0.0	21.4	16.0	0.0	9.6	20.6	3.2	3.2	0.3	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	29.0	3.5	0.0	4.2	2.0	10.1	10.2	1.2	11.5	11.8
LnGrp Delay(d),s/veh	29.4	0.0	64.2	86.2	0.0	78.1	92.8	44.5	44.6	60.7	35.9	35.9
LnGrp LOS	C		E	F		E	F	D	D	E	D	D
Approach Vol, veh/h		721			169			615			753	
Approach Delay, s/veh		59.7			81.7			47.9			37.0	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	52.0	11.9	65.4	8.6	64.1	62.8	14.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	48.0	12.0	67.0	9.0	46.0	15.0	64.0
Max Q Clear Time (g_c+I1), s	4.4	21.8	8.2	58.5	5.5	24.6	7.2	10.0
Green Ext Time (p_c), s	0.0	3.7	0.1	3.0	0.0	4.7	0.3	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	585	1030	40	80	20	130	70	60	20	60	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	616	1084	42	84	21	137	74	63	21	63	63
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	775	1267	87	585	146	627	403	343	71	103	103
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.35	0.43	0.43	0.04	0.12	0.12
Sat Flow, veh/h	88	1735	1583	87	1310	327	1774	931	792	1774	856	856
Grp Volume(v), veh/h	658	0	1084	42	0	105	137	0	137	21	0	126
Grp Sat Flow(s),veh/h/ln	1823	0	1583	87	0	1637	1774	0	1723	1774	0	1712
Q Serve(g_s), s	30.7	0.0	12.1	20.3	0.0	5.7	8.1	0.0	7.3	1.7	0.0	10.5
Cycle Q Clear(g_c), s	46.7	0.0	12.1	67.0	0.0	5.7	8.1	0.0	7.3	1.7	0.0	10.5
Prop In Lane	0.06		1.00	1.00		0.20	1.00		0.46	1.00		0.50
Lane Grp Cap(c), veh/h	840	0	1267	87	0	731	627	0	747	71	0	205
V/C Ratio(X)	0.78	0.00	0.86	0.48	0.00	0.14	0.22	0.00	0.18	0.30	0.00	0.61
Avail Cap(c_a), veh/h	840	0	1267	87	0	731	627	0	747	71	0	205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	9.5	65.6	0.0	24.5	34.0	0.0	26.2	69.9	0.0	62.7
Incr Delay (d2), s/veh	4.9	0.0	6.0	4.1	0.0	0.1	0.2	0.0	0.5	2.3	0.0	12.9
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	24.7	0.0	6.5	1.8	0.0	2.6	4.0	0.0	3.6	0.9	0.0	5.7
LnGrp Delay(d),s/veh	40.6	0.0	15.5	69.7	0.0	24.6	34.2	0.0	26.7	72.2	0.0	75.6
LnGrp LOS	D		B	E		C	C		C	E		E
Approach Vol, veh/h		1742			147			274			147	
Approach Delay, s/veh		25.0			37.5			30.4			75.2	
Approach LOS		C			D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	69.0		71.0	57.0	22.0		71.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	65.0		67.0	53.0	18.0		67.0
Max Q Clear Time (g_c+I1), s	3.7	9.3		48.7	10.1	12.5		69.0
Green Ext Time (p_c), s	0.1	0.9		11.6	0.5	0.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	20	1260	90	20	30	430	505	90	30	1240	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	1374	95	21	32	453	532	95	32	1305	42
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	683	1161	109	24	37	367	1220	217	41	1128	36
Arrive On Green	0.00	0.00	0.37	0.10	0.10	0.10	0.04	0.13	0.13	0.02	0.32	0.32
Sat Flow, veh/h	0	1863	3167	1117	247	376	3442	3004	534	1774	3500	113
Grp Volume(v), veh/h	0	0	1374	148	0	0	453	313	314	32	659	688
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1740	0	0	1721	1770	1768	1774	1770	1843
Q Serve(g_s), s	0.0	0.0	55.0	12.6	0.0	0.0	16.0	24.4	24.5	2.7	48.4	48.4
Cycle Q Clear(g_c), s	0.0	0.0	55.0	12.6	0.0	0.0	16.0	24.4	24.5	2.7	48.4	48.4
Prop In Lane	0.00		1.00	0.64		0.22	1.00		0.30	1.00		0.06
Lane Grp Cap(c), veh/h	0	683	1161	170	0	0	367	718	718	41	570	594
V/C Ratio(X)	0.00	0.00	1.18	0.87	0.00	0.00	1.23	0.44	0.44	0.78	1.16	1.16
Avail Cap(c_a), veh/h	0	683	1161	186	0	0	367	718	718	71	570	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	47.5	66.7	0.0	0.0	72.4	49.1	49.2	72.9	50.8	50.8
Incr Delay (d2), s/veh	0.0	0.0	91.5	31.6	0.0	0.0	125.1	1.7	1.8	26.8	88.6	88.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	38.8	7.5	0.0	0.0	14.0	12.3	12.4	1.6	37.6	39.2
LnGrp Delay(d),s/veh	0.0	0.0	139.0	98.4	0.0	0.0	197.4	50.9	51.0	99.7	139.4	139.5
LnGrp LOS			F	F			F	D	D	F	F	F
Approach Vol, veh/h		1374			148			1080			1379	
Approach Delay, s/veh		139.0			98.4			112.4			138.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	64.9		59.0	20.0	52.4		18.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	57.0		55.0	16.0	47.0		16.0
Max Q Clear Time (g_c+I1), s	4.7	26.5		57.0	18.0	50.4		14.6
Green Ext Time (p_c), s	0.0	17.6		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	130.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	60	715	440	110	225	265	715	80	30	2470	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	85	753	478	214	158	279	753	84	32	2600	95
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	1
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	319	335	443	426	224	221	177	1842	205	68	1746	781
Arrive On Green	0.18	0.18	0.18	0.12	0.12	0.12	0.10	0.57	0.57	0.02	0.49	0.49
Sat Flow, veh/h	1774	1863	1583	3548	1863	1583	1774	3211	358	3442	3539	1583
Grp Volume(v), veh/h	79	85	753	478	214	158	279	415	422	32	2600	95
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1800	1721	1770	1583
Q Serve(g_s), s	5.7	5.9	27.0	18.0	17.1	14.3	15.0	19.6	19.6	1.4	74.0	4.9
Cycle Q Clear(g_c), s	5.7	5.9	27.0	18.0	17.1	14.3	15.0	19.6	19.6	1.4	74.0	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	319	335	443	426	224	221	177	1015	1032	68	1746	781
V/C Ratio(X)	0.25	0.25	1.70	1.12	0.96	0.71	1.57	0.41	0.41	0.47	1.49	0.12
Avail Cap(c_a), veh/h	319	335	443	426	224	221	177	1015	1032	252	1746	781
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	0.09	0.09	0.09
Uniform Delay (d), s/veh	52.8	52.8	54.0	66.0	65.6	61.7	67.5	17.8	17.8	72.8	38.0	20.5
Incr Delay (d2), s/veh	0.4	0.4	323.9	81.4	48.1	10.4	283.1	1.2	1.2	0.5	220.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.1	58.2	13.6	11.8	6.9	21.3	9.9	10.1	0.7	89.6	2.1
LnGrp Delay(d),s/veh	53.2	53.2	377.9	147.4	113.7	72.1	350.6	19.0	19.0	73.2	258.4	20.5
LnGrp LOS	D	D	F	F	F	E	F	B	B	E	F	C
Approach Vol, veh/h		917			850			1116			2727	
Approach Delay, s/veh		319.8			124.9			101.9			247.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	90.1		31.0	19.0	78.0		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	11.0	78.0		27.0	15.0	74.0		18.0
Max Q Clear Time (g_c+I1), s	3.4	21.6		29.0	17.0	76.0		20.0
Green Ext Time (p_c), s	0.0	52.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	212.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	565	1580	30	0	445	1125	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	595	1663		0	468	1184	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	1749	1835		0	1552	2230	0
Arrive On Green	0.51	0.51		0.00	0.44	0.44	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	595	1663		0	468	1184	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	15.4	63.0		0.0	12.8	25.6	0.0
Cycle Q Clear(g_c), s	15.4	63.0		0.0	12.8	25.6	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	1749	1835		0	1552	2230	0
V/C Ratio(X)	0.34	0.91		0.00	0.30	0.53	0.00
Avail Cap(c_a), veh/h	1950	2046		0	1552	2230	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.9	33.6		0.0	27.3	30.8	0.0
Incr Delay (d2), s/veh	0.1	5.9		0.0	0.5	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	35.3		0.0	6.3	12.1	0.0
LnGrp Delay(d),s/veh	22.0	39.5		0.0	27.8	31.7	0.0
LnGrp LOS	C	D			C	C	
Approach Vol, veh/h	2258				468	1184	
Approach Delay, s/veh	34.9				27.8	31.7	
Approach LOS	C				C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		69.8		80.2		69.8		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		57.0		85.0		47.0		
Max Q Clear Time (g_c+I1), s		14.8		65.0		27.6		
Green Ext Time (p_c), s		17.2		11.2		11.6		

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1530	425	80	1190	515	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1611	447	84	1253	542	105
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2404	1259	108	3727	1145	511
Arrive On Green	0.47	0.47	0.06	0.58	0.32	0.32
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1611	447	84	1253	542	105
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	20.5	6.7	3.9	8.5	10.2	4.0
Cycle Q Clear(g_c), s	20.5	6.7	3.9	8.5	10.2	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2404	1259	108	3727	1145	511
V/C Ratio(X)	0.67	0.35	0.77	0.34	0.47	0.21
Avail Cap(c_a), veh/h	2492	1287	212	4213	1145	511
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	17.0	2.4	38.7	9.1	22.6	20.5
Incr Delay (d2), s/veh	0.7	0.2	11.1	0.1	1.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	7.6	2.2	3.8	5.2	1.9
LnGrp Delay(d),s/veh	17.7	2.6	49.8	9.2	24.0	21.5
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	2058			1337	647	
Approach Delay, s/veh	14.4			11.7	23.6	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		31.0	9.1	43.5				52.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		27.0	10.0	41.0				55.0
Max Q Clear Time (g_c+I1), s		12.2	5.9	22.5				10.5
Green Ext Time (p_c), s		2.1	0.1	17.1				37.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	1470	70	50	100	80	60	305	60	160	145	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	158	1547	74	53	105	84	63	321	63	168	153	74
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	194	1612	77	67	774	570	81	376	319	199	500	425
Arrive On Green	0.11	0.47	0.47	0.04	0.40	0.40	0.05	0.20	0.20	0.11	0.27	0.27
Sat Flow, veh/h	1774	3439	164	1774	1947	1433	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	158	793	828	53	95	94	63	321	63	168	153	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1834	1774	1770	1610	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.8	38.5	39.0	2.6	3.0	3.3	3.1	14.8	3.0	8.3	5.8	3.2
Cycle Q Clear(g_c), s	7.8	38.5	39.0	2.6	3.0	3.3	3.1	14.8	3.0	8.3	5.8	3.2
Prop In Lane	1.00		0.09	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	829	860	67	703	640	81	376	319	199	500	425
V/C Ratio(X)	0.82	0.96	0.96	0.79	0.13	0.15	0.78	0.85	0.20	0.84	0.31	0.17
Avail Cap(c_a), veh/h	298	833	863	80	703	640	159	376	319	199	500	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	22.8	22.9	42.5	17.1	17.2	42.1	34.3	29.6	38.8	26.0	25.1
Incr Delay (d2), s/veh	9.6	21.2	22.0	34.3	0.1	0.1	14.6	21.2	1.4	26.9	1.6	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	4.3	23.6	24.8	1.9	1.5	1.5	1.9	9.8	1.4	5.5	3.2	1.5
LnGrp Delay(d),s/veh	48.5	44.0	44.9	76.8	17.2	17.3	56.7	55.5	31.0	65.7	27.6	26.0
LnGrp LOS	D	D	D	E	B	B	E	E	C	E	C	C
Approach Vol, veh/h		1779			242			447			395	
Approach Delay, s/veh		44.8			30.3			52.2			43.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	22.0	7.4	45.8	8.1	27.9	13.7	39.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	18.0	4.0	42.0	8.0	20.0	15.0	31.0
Max Q Clear Time (g_c+I1), s	10.3	16.8	4.6	41.0	5.1	7.8	9.8	5.3
Green Ext Time (p_c), s	0.0	0.4	0.0	0.8	0.0	2.7	0.2	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	195	275	45	180	210	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	205	289	47	189	221	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	428	129	258	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	555	897	1304	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	533	897	1304	-	-	-
Mov Cap-2 Maneuver	533	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1304	-	533	897	-	-
HCM Lane V/C Ratio	0.036	-	0.385	0.323	-	-
HCM Control Delay (s)	7.9	0.1	15.9	10.9	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.8	1.4	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	120	210	170	135	445	70
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	221	179	142	468	74
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	163	583	539	241	975	1016
Arrive On Green	0.09	0.31	0.15	0.15	0.55	0.55
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	126	221	179	142	468	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	4.0	5.4	2.6	4.9	9.4	1.0
Cycle Q Clear(g_c), s	4.0	5.4	2.6	4.9	9.4	1.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	163	583	539	241	975	1016
V/C Ratio(X)	0.77	0.38	0.33	0.59	0.48	0.07
Avail Cap(c_a), veh/h	305	960	973	435	975	1016
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	25.8	15.6	22.0	23.0	8.0	3.9
Incr Delay (d2), s/veh	7.6	0.4	0.4	2.3	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.8	1.3	2.3	5.0	1.7
LnGrp Delay(d),s/veh	33.5	16.0	22.4	25.3	9.7	4.1
LnGrp LOS	C	B	C	C	A	A
Approach Vol, veh/h		347	321		542	
Approach Delay, s/veh		22.3	23.7		8.9	
Approach LOS		C	C		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.2		36.0	9.3	12.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				30.0		32.0	10.0	16.0
Max Q Clear Time (g_c+I1), s				7.4		11.4	6.0	6.9
Green Ext Time (p_c), s				2.9		1.7	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2675	1940	1030	605	0	590
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	2816	2042	1394	430		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1277	4950	1267	359		
Arrive On Green	0.72	0.97	0.23	0.23		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	2816	2042	1394	430		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	108.0	2.7	34.0	34.0		
Cycle Q Clear(g_c), s	108.0	2.7	34.0	34.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	1277	4950	1267	359		
V/C Ratio(X)	2.20	0.41	1.10	1.20		
Avail Cap(c_a), veh/h	1277	4950	1267	359		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.09	0.09	0.93	0.93		
Uniform Delay (d), s/veh	21.0	0.1	58.0	58.0		
Incr Delay (d2), s/veh	542.3	0.0	56.8	111.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	244.6	1.1	24.1	26.0		
LnGrp Delay(d),s/veh	563.3	0.1	114.8	169.7		
LnGrp LOS	F	A	F	F		
Approach Vol, veh/h		4858	1824			
Approach Delay, s/veh		326.6	127.7			
Approach LOS		F	F			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				150.0			112.0	38.0
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				146.0			108.0	34.0
Max Q Clear Time (g_c+I1), s				4.7			110.0	36.0
Green Ext Time (p_c), s				111.8			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	272.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	510	3570	1410	200	1000	420	0	0	0	435	0	475
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	537	3758	1484	211	1053	0				458	0	500
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	930	3492	1087	177	1335	416				473	0	422
Arrive On Green	0.52	0.69	0.69	0.10	0.26	0.00				0.13	0.00	0.13
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	537	3758	1484	211	1053	0				458	0	500
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	31.0	103.0	103.0	15.0	28.9	0.0				19.3	0.0	20.0
Cycle Q Clear(g_c), s	31.0	103.0	103.0	15.0	28.9	0.0				19.3	0.0	20.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	930	3492	1087	177	1335	416				473	0	422
V/C Ratio(X)	0.58	1.08	1.36	1.19	0.79	0.00				0.97	0.00	1.18
Avail Cap(c_a), veh/h	930	3492	1087	177	1932	602				473	0	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	23.5	23.5	67.5	51.4	0.0				64.7	0.0	65.0
Incr Delay (d2), s/veh	0.4	37.5	167.1	90.6	0.1	0.0				34.2	0.0	104.6
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	15.2	59.6	94.9	11.8	13.6	0.0				11.7	0.0	14.9
LnGrp Delay(d),s/veh	24.8	61.0	190.6	158.1	51.6	0.0				98.9	0.0	169.6
LnGrp LOS	C	F	F	F	D					F		F
Approach Vol, veh/h		5779			1264						958	
Approach Delay, s/veh		90.9			69.4						135.8	
Approach LOS		F			E						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			19.0	107.0		24.0	82.6	43.4
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			15.0	103.0		20.0	61.0	57.0
Max Q Clear Time (g_c+I1), s			17.0	105.0		22.0	33.0	30.9
Green Ext Time (p_c), s			0.0	0.0		0.0	2.5	8.5

Intersection Summary	
HCM 2010 Ctrl Delay	92.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	70	0	240	1180	260	0	0	300	150
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				74	0	0	1242	274	0	0	316	158
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				95	0	85	1351	3131	0	0	327	146
Arrive On Green				0.05	0.00	0.00	0.76	0.88	0.00	0.00	0.09	0.09
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				74	0	0	1242	274	0	0	316	158
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.4	0.0	0.0	72.4	1.3	0.0	0.0	11.6	12.0
Cycle Q Clear(g_c), s				5.4	0.0	0.0	72.4	1.3	0.0	0.0	11.6	12.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				95	0	85	1351	3131	0	0	327	146
V/C Ratio(X)				0.78	0.00	0.00	0.92	0.09	0.00	0.00	0.97	1.08
Avail Cap(c_a), veh/h				218	0	195	1351	3131	0	0	327	146
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				60.7	0.0	0.0	12.3	0.9	0.0	0.0	58.8	59.0
Incr Delay (d2), s/veh				12.5	0.0	0.0	1.2	0.0	0.0	0.0	42.2	97.8
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				3.0	0.0	0.0	35.3	0.6	0.0	0.0	7.6	9.2
LnGrp Delay(d),s/veh				73.2	0.0	0.0	13.5	0.9	0.0	0.0	101.0	156.8
LnGrp LOS				E			B	A			F	F
Approach Vol, veh/h					74			1516			474	
Approach Delay, s/veh					73.2			11.2			119.6	
Approach LOS					E			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		119.0			103.0	16.0		11.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		106.0			90.0	12.0		16.0
Max Q Clear Time (g_c+I1), s		3.3			74.4	14.0		7.4
Green Ext Time (p_c), s		11.6			7.6	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	190	20	109	66	35	0	78	72	1172	1073	670	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0	4.0		4.0			
Lane Util. Factor	1.00		1.00			0.95	0.95		0.95			
Frt	1.00		0.95			0.91	0.85		0.91			
Flt Protected	0.95		0.99			0.98	1.00		1.00			
Satd. Flow (prot)	1770		1760			1573	1504		3222			
Flt Permitted	0.95		0.33			0.98	1.00		1.00			
Satd. Flow (perm)	1770		581			1573	1504		3222			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	21	115	69	37	0	82	78	1234	1129	705	274
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	200	0	205	0	0	100	97	0	3049	0	0	0
Turn Type	Split	Perm	NA		Split	NA	Prot		NA			Split
Protected Phases	4		4		8	8	8		2			6
Permitted Phases		4										
Actuated Green, G (s)	32.0		32.0			6.0	6.0		76.0			
Effective Green, g (s)	32.0		32.0			6.0	6.0		76.0			
Actuated g/C Ratio	0.21		0.21			0.04	0.04		0.51			
Clearance Time (s)	4.0		4.0			4.0	4.0		4.0			
Vehicle Extension (s)	3.0		3.0			3.0	3.0		3.0			
Lane Grp Cap (vph)	377		123			62	60		1632			
v/s Ratio Prot	0.11					0.06	c0.06		c0.95			
v/s Ratio Perm			c0.35									
v/c Ratio	0.53		1.67			1.61	1.62		2.20dr			
Uniform Delay, d1	52.3		59.0			72.0	72.0		37.0			
Progression Factor	1.00		1.00			1.00	1.00		1.00			
Incremental Delay, d2	1.4		333.0			338.1	341.4		393.1			
Delay (s)	53.8		392.0			410.1	413.4		430.1			
Level of Service	D		F			F	F		F			
Approach Delay (s)			225.0			411.7			430.1			
Approach LOS			F			F			F			

Intersection Summary			
HCM 2000 Control Delay	379.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	134.0%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SBL	SBT
Lane Configurations		
Volume (vph)	71	39
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.91	0.91
Frt	1.00	1.00
Flt Protected	0.95	0.97
Satd. Flow (prot)	1610	3288
Flt Permitted	0.95	0.97
Satd. Flow (perm)	1610	3288
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	75	41
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	281	109
Turn Type	Split	NA
Protected Phases	6	6
Permitted Phases		
Actuated Green, G (s)	20.0	20.0
Effective Green, g (s)	20.0	20.0
Actuated g/C Ratio	0.13	0.13
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	214	438
v/s Ratio Prot	c0.17	0.03
v/s Ratio Perm		
v/c Ratio	1.31	0.25
Uniform Delay, d1	65.0	58.3
Progression Factor	0.16	0.11
Incremental Delay, d2	160.6	0.9
Delay (s)	171.0	7.3
Level of Service	F	A
Approach Delay (s)		125.2
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	1285	310	680	3510	110	260	30	740	100	40	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	1353	326	716	3695	116	274	32	779	105	42	105
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	138	2643	823	804	3628	1182	321	199	539	115	87	74
Arrive On Green	0.04	0.52	0.52	0.23	0.71	0.71	0.09	0.11	0.11	0.03	0.05	0.05
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	126	1353	326	716	3695	116	274	32	779	105	42	105
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.5	26.1	13.0	30.2	107.0	0.0	11.8	2.3	16.0	4.6	3.3	7.0
Cycle Q Clear(g_c), s	5.5	26.1	13.0	30.2	107.0	0.0	11.8	2.3	16.0	4.6	3.3	7.0
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	138	2643	823	804	3628	1182	321	199	539	115	87	74
V/C Ratio(X)	0.92	0.51	0.40	0.89	1.02	0.10	0.85	0.16	1.45	0.92	0.48	1.42
Avail Cap(c_a), veh/h	138	2643	823	1354	3628	1182	321	199	539	115	87	74
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)	0.46	0.46	0.46	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.7	23.6	10.5	55.6	21.5	5.2	67.0	60.9	39.0	72.3	69.7	71.5
Incr Delay (d2), s/veh	31.1	0.1	0.1	2.9	16.9	0.0	19.4	1.7	211.1	58.2	18.0	251.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	12.2	5.6	14.6	55.0	1.3	6.5	1.3	52.1	3.1	2.1	8.2
LnGrp Delay(d),s/veh	102.9	23.6	10.6	58.5	38.4	5.2	86.3	62.6	250.1	130.5	87.7	322.9
LnGrp LOS	F	C	B	E	F	A	F	E	F	F	F	F
Approach Vol, veh/h		1805			4527			1085			252	
Approach Delay, s/veh		26.8			40.7			203.2			203.5	
Approach LOS		C			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	20.0	39.0	82.0	18.0	11.0	10.0	111.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	16.0	59.0	54.0	14.0	7.0	6.0	107.0
Max Q Clear Time (g_c+I1), s	6.6	18.0	32.2	28.1	13.8	9.0	7.5	109.0
Green Ext Time (p_c), s	0.0	0.0	2.8	13.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	1095	380	240	3530	70	340	40	510	50	30	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	1153	400	253	3716	74	358	42	537	53	79	64
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	95	1576	649	1228	3119	1013	344	373	317	95	236	285
Arrive On Green	0.05	0.31	0.31	0.47	0.82	0.82	0.10	0.20	0.20	0.03	0.13	0.13
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	126	1153	400	253	3716	74	358	42	537	53	79	64
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	8.0	30.4	14.9	6.4	92.0	0.3	15.0	2.8	30.0	2.2	5.8	4.0
Cycle Q Clear(g_c), s	8.0	30.4	14.9	6.4	92.0	0.3	15.0	2.8	30.0	2.2	5.8	4.0
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	95	1576	649	1228	3119	1013	344	373	317	95	236	285
V/C Ratio(X)	1.33	0.73	0.62	0.21	1.19	0.07	1.04	0.11	1.70	0.56	0.33	0.22
Avail Cap(c_a), veh/h	95	2814	1034	1228	3119	1013	344	373	317	95	236	285
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	46.2	34.9	27.0	13.8	2.1	67.5	49.1	60.0	72.1	59.7	33.3
Incr Delay (d2), s/veh	204.9	0.7	1.0	0.0	86.5	0.0	59.3	0.6	326.4	7.3	3.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	14.3	6.6	3.0	66.4	0.3	10.0	1.5	41.8	1.2	3.2	1.9
LnGrp Delay(d),s/veh	275.9	46.9	35.9	27.0	100.3	2.1	126.8	49.7	386.4	79.4	63.5	35.1
LnGrp LOS	F	D	D	C	F	A	F	D	F	E	E	D
Approach Vol, veh/h		1679			4043			937			196	
Approach Delay, s/veh		61.4			93.9			272.1			58.5	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	34.0	57.5	50.5	19.0	23.0	12.0	96.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	17.0	83.0	15.0	19.0	8.0	92.0
Max Q Clear Time (g_c+I1), s	4.2	32.0	8.4	32.4	17.0	7.8	10.0	94.0
Green Ext Time (p_c), s	0.0	0.0	8.5	14.1	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	109.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	1560	0	180	250	460	0	0	820	340
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				1818	0	0	263	484	0	0	863	358
Adj No. of Lanes				2	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				1679	882	0	225	882	0	0	782	323
Arrive On Green				0.47	0.00	0.00	0.25	0.95	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	2538	1010
Grp Volume(v), veh/h				1818	0	0	263	484	0	0	624	597
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1770	1685
Q Serve(g_s), s				71.0	0.0	0.0	19.0	4.3	0.0	0.0	48.0	48.0
Cycle Q Clear(g_c), s				71.0	0.0	0.0	19.0	4.3	0.0	0.0	48.0	48.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.60
Lane Grp Cap(c), veh/h				1679	882	0	225	882	0	0	566	539
V/C Ratio(X)				1.08	0.00	0.00	1.17	0.55	0.00	0.00	1.10	1.11
Avail Cap(c_a), veh/h				1679	882	0	225	882	0	0	566	539
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.87	0.87	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				39.5	0.0	0.0	56.0	2.2	0.0	0.0	51.0	51.0
Incr Delay (d2), s/veh				48.0	0.0	0.0	110.1	2.1	0.0	0.0	68.6	71.8
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				46.0	0.0	0.0	16.1	2.4	0.0	0.0	34.2	33.1
LnGrp Delay(d),s/veh				87.5	0.0	0.0	166.1	4.4	0.0	0.0	119.6	122.8
LnGrp LOS				F			F	A			F	F
Approach Vol, veh/h					1818			747			1221	
Approach Delay, s/veh					87.5			61.3			121.2	
Approach LOS					F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		75.0			23.0	52.0		75.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		71.0			19.0	48.0		71.0
Max Q Clear Time (g_c+I1), s		6.3			21.0	50.0		73.0
Green Ext Time (p_c), s		19.8			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	0	90	0	0	0	0	500	440	550	1830	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	221	0	95				0	526	463	579	1926	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	252	0	225				0	967	433	895	2847	0
Arrive On Green	0.14	0.00	0.14				0.00	0.09	0.09	1.00	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	221	0	95				0	526	463	579	1926	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	18.3	0.0	8.2				0.0	21.3	41.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.3	0.0	8.2				0.0	21.3	41.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	252	0	225				0	967	433	895	2847	0
V/C Ratio(X)	0.88	0.00	0.42				0.00	0.54	1.07	0.65	0.68	0.00
Avail Cap(c_a), veh/h	343	0	306				0	967	433	895	2847	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.09	0.09	0.00
Uniform Delay (d), s/veh	63.0	0.0	58.7				0.0	59.3	68.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	17.1	0.0	1.3				0.0	2.1	61.9	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.0	3.7				0.0	10.8	25.4	0.0	0.0	0.0
LnGrp Delay(d),s/veh	80.1	0.0	60.0				0.0	61.4	130.2	0.1	0.1	0.0
LnGrp LOS	F		E					E	F	A	A	
Approach Vol, veh/h		316						989			2505	
Approach Delay, s/veh		74.0						93.6			0.1	
Approach LOS		E						F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	79.7	45.0		25.3		124.7		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	68.0	41.0		29.0		113.0		
Max Q Clear Time (g_c+I1), s	2.0	43.0		20.3		2.0		
Green Ext Time (p_c), s	38.4	0.0		1.0		48.3		

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	180	450	100	80	50	180	700	110	40	2010	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	200	189	474	105	84	53	189	737	116	42	2116	158
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	246	264	1045	149	163	73	649	3047	475	76	2644	823
Arrive On Green	0.14	0.14	0.14	0.04	0.05	0.05	0.06	0.23	0.23	0.03	0.69	0.69
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4438	693	3442	5085	1583
Grp Volume(v), veh/h	200	189	474	105	84	53	189	561	292	42	2116	158
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1741	1721	1695	1583
Q Serve(g_s), s	16.4	14.5	1.8	4.5	3.5	4.6	7.9	20.3	20.6	1.8	43.1	5.3
Cycle Q Clear(g_c), s	16.4	14.5	1.8	4.5	3.5	4.6	7.9	20.3	20.6	1.8	43.1	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	246	264	1045	149	163	73	649	2327	1195	76	2644	823
V/C Ratio(X)	0.81	0.72	0.45	0.71	0.51	0.72	0.29	0.24	0.24	0.55	0.80	0.19
Avail Cap(c_a), veh/h	308	410	1293	206	378	169	649	2327	1195	115	2644	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	0.69	0.69	0.69
Uniform Delay (d), s/veh	62.7	61.5	26.8	70.8	69.9	59.9	60.8	26.1	26.1	72.1	17.7	11.9
Incr Delay (d2), s/veh	12.5	3.6	0.3	6.3	2.5	12.7	0.2	0.2	0.4	4.3	1.8	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	8.9	7.8	6.3	2.3	1.8	2.3	3.8	9.6	10.1	0.9	20.2	2.4
LnGrp Delay(d),s/veh	75.2	65.1	27.1	77.1	72.4	72.6	61.0	26.3	26.6	76.4	19.6	12.3
LnGrp LOS	E	E	C	E	E	E	E	C	C	E	B	B
Approach Vol, veh/h		863			242			1042			2316	
Approach Delay, s/veh		46.6			74.5			32.7			20.1	
Approach LOS		D			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	107.0	10.5	25.2	32.3	82.0	24.8	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	87.0	9.0	33.0	14.0	78.0	26.0	16.0
Max Q Clear Time (g_c+I1), s	3.8	22.6	6.5	16.5	9.9	45.1	18.4	6.6
Green Ext Time (p_c), s	0.0	8.0	0.1	3.5	2.3	23.3	2.4	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	0	550	70	180	240	510	670	0	0	920	1635
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	84	0	579	74	189	253	537	705	0	0	968	1721
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	41	106	127	414	4407	0	0	2147	961
Arrive On Green	0.00	0.00	0.00	0.08	0.08	0.08	0.23	0.87	0.00	0.00	1.00	1.00
Sat Flow, veh/h		0		517	1320	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		263	0	253	537	705	0	0	968	1721
Grp Sat Flow(s),veh/h/ln				1837	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				12.0	0.0	12.0	35.0	3.2	0.0	0.0	0.0	91.0
Cycle Q Clear(g_c), s				12.0	0.0	12.0	35.0	3.2	0.0	0.0	0.0	91.0
Prop In Lane				0.28		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				147	0	127	414	4407	0	0	2147	961
V/C Ratio(X)				1.79	0.00	2.00	1.30	0.16	0.00	0.00	0.45	1.79
Avail Cap(c_a), veh/h				147	0	127	414	4407	0	0	2147	961
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.67	0.67
Uniform Delay (d), s/veh				69.0	0.0	69.0	57.5	1.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				381.2	0.0	475.7	150.6	0.1	0.0	0.0	0.5	359.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.6	0.0	22.0	34.5	1.5	0.0	0.0	0.1	95.8
LnGrp Delay(d),s/veh				450.2	0.0	544.7	208.1	1.6	0.0	0.0	0.5	359.1
LnGrp LOS				F		F	F	A			A	F
Approach Vol, veh/h					516			1242			2689	
Approach Delay, s/veh					496.5			90.9			230.0	
Approach LOS					F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		134.0			39.0	95.0		16.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		121.0			26.0	91.0		12.0
Max Q Clear Time (g_c+I1), s		5.2			37.0	93.0		14.0
Green Ext Time (p_c), s		8.5			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	222.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	1430	570	130	2930	80	540	60	160	50	40	270
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	211	1505	600	137	3084	84	568	63	168	53	42	284
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	255	2249	978	845	3349	828	723	389	348	136	161	242
Arrive On Green	0.10	0.47	0.47	0.25	0.52	0.52	0.21	0.22	0.22	0.08	0.09	0.09
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1770	1583	1774	1863	2787
Grp Volume(v), veh/h	211	1505	600	137	3084	84	568	63	168	53	42	284
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1583	1774	1863	1393
Q Serve(g_s), s	9.0	27.3	24.1	4.7	66.4	2.9	23.4	4.3	13.9	4.3	3.2	11.2
Cycle Q Clear(g_c), s	9.0	27.3	24.1	4.7	66.4	2.9	23.4	4.3	13.9	4.3	3.2	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	255	2249	978	845	3349	828	723	389	348	136	161	242
V/C Ratio(X)	0.83	0.67	0.61	0.16	0.92	0.10	0.79	0.16	0.48	0.39	0.26	1.18
Avail Cap(c_a), veh/h	275	3418	1486	845	3375	834	723	389	348	136	161	242
HCM Platoon Ratio	1.33	1.33	1.33	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	33.2	32.4	44.4	32.9	9.6	56.1	47.3	51.0	65.9	64.0	50.7
Incr Delay (d2), s/veh	15.1	0.3	0.5	0.1	4.8	0.1	5.7	0.9	4.7	1.8	3.9	113.8
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	4.8	12.1	9.3	2.2	30.4	1.3	11.7	2.2	6.5	2.2	1.8	8.1
LnGrp Delay(d),s/veh	81.8	33.5	32.9	44.5	37.7	9.6	61.8	48.2	55.8	67.7	67.9	164.6
LnGrp LOS	F	C	C	D	D	A	E	D	E	E	E	F
Approach Vol, veh/h		2316			3305			799			379	
Approach Delay, s/veh		37.8			37.3			59.4			140.3	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	37.0	40.8	56.7	35.5	17.0	15.1	82.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	33.0	11.0	80.0	30.0	13.0	12.0	79.0
Max Q Clear Time (g_c+I1), s	6.3	15.9	6.7	29.3	25.4	13.2	11.0	68.4
Green Ext Time (p_c), s	0.9	1.2	4.3	23.3	1.1	0.0	0.1	10.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.8
HCM 2010 LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	760	2150	2650	1070	700	1010
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	800	2263	2789	1126	737	1063
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	848	4611	2862	1877	1136	633
Arrive On Green	0.49	1.00	0.45	0.45	0.23	0.23
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	800	2263	2789	1126	737	1063
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	33.1	0.0	64.0	33.2	20.0	34.1
Cycle Q Clear(g_c), s	33.1	0.0	64.0	33.2	20.0	34.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	848	4611	2862	1877	1136	633
V/C Ratio(X)	0.94	0.49	0.97	0.60	0.65	1.68
Avail Cap(c_a), veh/h	849	4614	2862	1877	1136	633
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.36	0.36	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	40.7	13.4	52.6	58.0
Incr Delay (d2), s/veh	11.1	0.0	5.6	0.2	2.9	312.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	0.0	29.4	21.6	9.5	50.8
LnGrp Delay(d),s/veh	48.2	0.0	46.3	13.6	55.4	370.9
LnGrp LOS	D	A	D	B	E	F
Approach Vol, veh/h		3063	3915		1800	
Approach Delay, s/veh		12.6	36.9		241.7	
Approach LOS		B	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				111.9		38.1	40.9	71.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				108.0		34.0	37.0	67.0
Max Q Clear Time (g_c+I1), s				2.0		36.1	35.1	66.0
Green Ext Time (p_c), s				64.8		0.0	1.9	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	70.4
HCM 2010 LOS	E

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	940	0	410	340
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	989	0	432	358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	2032	495			989	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2032	495			989	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			38	
cM capacity (veh/h)	19	520			694	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	660	330	432	179	179
Volume Left	0	0	432	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	694	1700	1700
Volume to Capacity	0.39	0.19	0.62	0.11	0.11
Queue Length 95th (ft)	0	0	109	0	0
Control Delay (s)	0.0	0.0	18.3	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		10.0		
Approach LOS					

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	1545	990	490	1645	740	400	50	475	240	20	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	1626	1042	516	1732	779	421	53	500	253	21	105
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	184	1666	1046	551	1864	1022	1378	671	1449	390	136	115
Arrive On Green	0.05	0.26	0.26	0.32	0.73	0.73	0.40	0.36	0.36	0.11	0.07	0.07
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	179	1626	1042	516	1732	779	421	53	500	253	21	105
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	7.8	37.7	38.0	21.8	42.7	18.7	12.5	2.8	0.0	10.6	1.6	8.7
Cycle Q Clear(g_c), s	7.8	37.7	38.0	21.8	42.7	18.7	12.5	2.8	0.0	10.6	1.6	8.7
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	184	1666	1046	551	1864	1022	1378	671	1449	390	136	115
V/C Ratio(X)	0.98	0.98	1.00	0.94	0.93	0.76	0.31	0.08	0.35	0.65	0.15	0.91
Avail Cap(c_a), veh/h	184	1666	1046	551	1865	1022	1378	671	1449	390	224	190
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.19	0.19	0.19	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	55.0	25.3	50.3	18.4	8.7	30.7	31.6	21.1	63.6	65.2	54.1
Incr Delay (d2), s/veh	59.0	16.6	26.9	6.8	2.0	0.7	0.6	0.2	0.7	3.7	0.5	27.8
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	5.2	18.6	24.0	10.8	19.6	7.0	6.1	1.5	6.2	5.2	0.8	4.7
LnGrp Delay(d),s/veh	129.9	71.7	52.2	57.0	20.4	9.4	31.3	31.8	21.7	67.4	65.7	81.8
LnGrp LOS	F	E	D	E	C	A	C	C	C	E	E	F
Approach Vol, veh/h		2847			3027			974			379	
Approach Delay, s/veh		68.2			23.8			26.4			71.3	
Approach LOS		E			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	58.0	28.0	43.0	64.1	14.9	12.0	59.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	54.0	24.0	39.0	53.0	18.0	8.0	55.0
Max Q Clear Time (g_c+I1), s	12.6	4.8	23.8	40.0	14.5	10.7	9.8	44.7
Green Ext Time (p_c), s	0.4	2.5	0.2	0.0	2.6	0.2	0.0	9.3

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Notes

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	350	80	140	500	155	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	368	0	147	526	163	179
Adj No. of Lanes	3	1	2	3	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1663	518	324	2822	315	758
Arrive On Green	0.33	0.00	0.09	0.55	0.18	0.18
Sat Flow, veh/h	5253	1583	3442	5253	1774	2787
Grp Volume(v), veh/h	368	0	147	526	163	179
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	1695	1774	1393
Q Serve(g_s), s	1.6	0.0	1.2	1.5	2.5	1.5
Cycle Q Clear(g_c), s	1.6	0.0	1.2	1.5	2.5	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1663	518	324	2822	315	758
V/C Ratio(X)	0.22	0.00	0.45	0.19	0.52	0.24
Avail Cap(c_a), veh/h	4079	1270	1725	7308	1719	2964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	12.8	3.3	11.1	8.5
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.0	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.6	0.7	1.3	0.6
LnGrp Delay(d),s/veh	7.4	0.0	13.8	3.3	12.5	8.6
LnGrp LOS	A		B	A	B	A
Approach Vol, veh/h	368			673	342	
Approach Delay, s/veh	7.4			5.6	10.5	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.3	6.8	13.8				20.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		29.0	15.0	24.0				43.0
Max Q Clear Time (g_c+I1), s		4.5	3.2	3.6				3.5
Green Ext Time (p_c), s		1.2	0.3	6.2				7.4

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	40	70	60	20	40	275	50	20	190	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	53	42	74	63	21	42	289	53	21	200	42
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	92	73	101	142	47	63	1548	280	22	1444	297
Arrive On Green	0.05	0.10	0.10	0.06	0.11	0.11	0.04	0.52	0.52	0.01	0.49	0.49
Sat Flow, veh/h	1774	964	764	1774	1338	446	1774	2995	542	1774	2924	602
Grp Volume(v), veh/h	63	0	95	74	0	84	42	169	173	21	119	123
Grp Sat Flow(s),veh/h/ln	1774	0	1728	1774	0	1784	1774	1770	1767	1774	1770	1756
Q Serve(g_s), s	1.8	0.0	2.6	2.1	0.0	2.2	1.2	2.6	2.6	0.6	1.8	1.9
Cycle Q Clear(g_c), s	1.8	0.0	2.6	2.1	0.0	2.2	1.2	2.6	2.6	0.6	1.8	1.9
Prop In Lane	1.00		0.44	1.00		0.25	1.00		0.31	1.00		0.34
Lane Grp Cap(c), veh/h	83	0	166	101	0	189	63	915	913	22	874	868
V/C Ratio(X)	0.76	0.00	0.57	0.73	0.00	0.44	0.67	0.19	0.19	0.95	0.14	0.14
Avail Cap(c_a), veh/h	388	0	653	458	0	745	317	915	913	212	874	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(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	23.7	0.0	21.8	23.3	0.0	21.1	24.0	6.5	6.5	24.8	6.9	6.9
Incr Delay (d2), s/veh	13.5	0.0	3.1	9.9	0.0	1.6	11.7	0.4	0.5	76.9	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.4	1.3	0.0	1.2	0.8	1.3	1.4	0.8	1.0	1.0
LnGrp Delay(d),s/veh	37.2	0.0	24.9	33.2	0.0	22.7	35.7	6.9	7.0	101.7	7.2	7.3
LnGrp LOS	D		C	C		C	D	A	A	F	A	A
Approach Vol, veh/h		158			158			384			263	
Approach Delay, s/veh		29.8			27.6			10.1			14.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	30.0	6.9	8.8	5.8	28.8	6.3	9.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	13.0	19.0	9.0	23.0	11.0	21.0
Max Q Clear Time (g_c+I1), s	2.6	4.6	4.1	4.6	3.2	3.9	3.8	4.2
Green Ext Time (p_c), s	0.0	1.9	0.4	0.3	0.0	1.3	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	100	120	30	60	20	395	60	50	20	50	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	105	126	32	63	21	416	63	53	21	53	32
Adj No. of Lanes	0	1	1	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	180	1110	96	198	71	990	696	586	29	220	133
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.56	0.74	0.74	0.02	0.20	0.20
Sat Flow, veh/h	351	1257	1583	336	1389	500	1774	936	788	1774	1089	658
Grp Volume(v), veh/h	147	0	126	48	0	68	416	0	116	21	0	85
Grp Sat Flow(s),veh/h/ln	1608	0	1583	618	0	1607	1774	0	1724	1774	0	1747
Q Serve(g_s), s	6.3	0.0	0.0	2.9	0.0	4.7	16.7	0.0	2.3	1.5	0.0	5.0
Cycle Q Clear(g_c), s	10.9	0.0	0.0	13.8	0.0	4.7	16.7	0.0	2.3	1.5	0.0	5.0
Prop In Lane	0.29		1.00	0.66		0.31	1.00		0.46	1.00		0.38
Lane Grp Cap(c), veh/h	267	0	1110	136	0	229	990	0	1282	29	0	353
V/C Ratio(X)	0.55	0.00	0.11	0.36	0.00	0.29	0.42	0.00	0.09	0.71	0.00	0.24
Avail Cap(c_a), veh/h	513	0	1344	332	0	468	1104	0	1282	143	0	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.1	0.0	6.0	52.8	0.0	47.5	15.8	0.0	4.4	60.5	0.0	41.4
Incr Delay (d2), s/veh	1.8	0.0	0.0	1.6	0.0	0.7	0.3	0.0	0.1	27.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	1.4	1.7	0.0	2.1	8.3	0.0	1.1	0.9	0.0	2.6
LnGrp Delay(d),s/veh	51.9	0.0	6.1	54.4	0.0	48.2	16.1	0.0	4.5	87.5	0.0	43.0
LnGrp LOS	D		A	D		D	B		A	F		D
Approach Vol, veh/h		273			116			532			106	
Approach Delay, s/veh		30.7			50.8			13.5			51.8	
Approach LOS		C			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	96.0		21.7	73.1	29.0		21.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	92.0		36.0	77.0	25.0		36.0
Max Q Clear Time (g_c+I1), s	3.5	4.3		12.9	18.7	7.0		15.8
Green Ext Time (p_c), s	0.0	2.1		2.0	2.1	0.3		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	20	230	190	0	0	585	355	60	30	240	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	278	200	0	0	616	374	63	32	253	21
Adj No. of Lanes	0	1	2	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	225	382	255	0	0	819	1420	237	48	849	70
Arrive On Green	0.00	0.00	0.12	0.14	0.00	0.00	0.24	0.47	0.47	0.03	0.26	0.26
Sat Flow, veh/h	0	1863	3167	1774	0	0	3442	3036	507	1774	3311	273
Grp Volume(v), veh/h	0	0	278	200	0	0	616	217	220	32	134	140
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	0	0	1721	1770	1773	1774	1770	1815
Q Serve(g_s), s	0.0	0.0	5.6	7.2	0.0	0.0	11.0	4.9	5.0	1.2	4.1	4.1
Cycle Q Clear(g_c), s	0.0	0.0	5.6	7.2	0.0	0.0	11.0	4.9	5.0	1.2	4.1	4.1
Prop In Lane	0.00		1.00	1.00		0.00	1.00		0.29	1.00		0.15
Lane Grp Cap(c), veh/h	0	225	382	255	0	0	819	827	829	48	454	465
V/C Ratio(X)	0.00	0.00	0.73	0.78	0.00	0.00	0.75	0.26	0.27	0.67	0.30	0.30
Avail Cap(c_a), veh/h	0	337	573	428	0	0	986	827	829	134	454	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)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	28.1	27.4	0.0	0.0	23.4	10.7	10.7	32.0	19.8	19.9
Incr Delay (d2), s/veh	0.0	0.0	2.7	5.3	0.0	0.0	2.7	0.8	0.8	15.1	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.6	3.9	0.0	0.0	5.5	2.6	2.6	0.8	2.2	2.3
LnGrp Delay(d),s/veh	0.0	0.0	30.8	32.7	0.0	0.0	26.1	11.5	11.5	47.1	21.5	21.5
LnGrp LOS			C	C			C	B	B	D	C	C
Approach Vol, veh/h		278			200			1053			306	
Approach Delay, s/veh		30.8			32.7			20.0			24.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	35.0		12.0	19.8	21.0		13.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	31.0		12.0	19.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	3.2	7.0		7.6	13.0	6.1		9.2
Green Ext Time (p_c), s	0.5	2.7		0.4	1.4	1.1		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	50	210	230	115	385	170	515	220	40	510	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	58	60	221	161	201	427	179	542	232	42	537	74
Adj No. of Lanes	1	1	1	1	1	2	1	2	0	2	2	1
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	136	143	322	326	342	801	225	880	376	239	1085	485
Arrive On Green	0.08	0.08	0.08	0.18	0.18	0.18	0.13	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1774	2418	1032	3442	3539	1583
Grp Volume(v), veh/h	58	60	221	161	201	427	179	396	378	42	537	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1681	1721	1770	1583
Q Serve(g_s), s	1.6	1.6	4.0	4.3	5.2	2.5	5.1	9.6	9.6	0.6	6.5	1.8
Cycle Q Clear(g_c), s	1.6	1.6	4.0	4.3	5.2	2.5	5.1	9.6	9.6	0.6	6.5	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	136	143	322	326	342	801	225	644	612	239	1085	485
V/C Ratio(X)	0.43	0.42	0.69	0.49	0.59	0.53	0.80	0.62	0.62	0.18	0.50	0.15
Avail Cap(c_a), veh/h	136	143	322	544	571	1190	272	644	612	330	1085	485
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	23.0	23.0	19.2	19.1	19.5	16.8	22.1	13.6	13.6	22.9	14.8	13.2
Incr Delay (d2), s/veh	2.1	2.0	5.9	1.2	1.6	0.6	12.7	4.4	4.6	0.3	1.6	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	0.9	0.9	3.5	2.2	2.8	2.5	3.3	5.4	5.2	0.3	3.4	0.9
LnGrp Delay(d),s/veh	25.1	25.0	25.2	20.3	21.1	17.4	34.8	18.0	18.3	23.2	16.4	13.8
LnGrp LOS	C	C	C	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h		339			789			953			653	
Approach Delay, s/veh		25.1			18.9			21.2			16.6	
Approach LOS		C			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	23.0		8.0	10.6	20.0		13.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	19.0		4.0	8.0	16.0		16.0
Max Q Clear Time (g_c+I1), s	2.6	11.6		6.0	7.1	8.5		7.2
Green Ext Time (p_c), s	1.0	2.9		0.0	0.0	2.4		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	485	600	60	0	390	410	0
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		0	1863	1863	0
Adj Flow Rate, veh/h	511	632		0	411	432	0
Adj No. of Lanes	2	3		0	2	3	0
Peak Hour Factor	0.95	0.95		0.94	0.95	0.95	0.95
Percent Heavy Veh, %	2	2		0	2	2	0
Cap, veh/h	808	848		0	2430	3492	0
Arrive On Green	0.23	0.23		0.00	0.69	0.69	0.00
Sat Flow, veh/h	3442	3610		0	3725	5421	0
Grp Volume(v), veh/h	511	632		0	411	432	0
Grp Sat Flow(s),veh/h/ln	1721	1203		0	1770	1695	0
Q Serve(g_s), s	13.6	16.6		0.0	4.2	3.0	0.0
Cycle Q Clear(g_c), s	13.6	16.6		0.0	4.2	3.0	0.0
Prop In Lane	1.00	1.00		0.00			0.00
Lane Grp Cap(c), veh/h	808	848		0	2430	3492	0
V/C Ratio(X)	0.63	0.75		0.00	0.17	0.12	0.00
Avail Cap(c_a), veh/h	2431	2550		0	2430	3492	0
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.0	36.2		0.0	5.7	5.5	0.0
Incr Delay (d2), s/veh	0.8	1.3		0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	10.6		0.0	2.1	1.4	0.0
LnGrp Delay(d),s/veh	35.9	37.5		0.0	5.8	5.5	0.0
LnGrp LOS	D	D			A	A	
Approach Vol, veh/h	1143				411	432	
Approach Delay, s/veh	36.8				5.8	5.5	
Approach LOS	D				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		74.0		27.9		74.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		70.0		72.0		41.0		
Max Q Clear Time (g_c+I1), s		6.2		18.6		5.0		
Green Ext Time (p_c), s		7.0		5.4		6.7		

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	520	345	50	750	180	60
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	547	363	53	789	189	63
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1371	1255	67	2332	1855	828
Arrive On Green	0.27	0.27	0.04	0.36	0.52	0.52
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	547	363	53	789	189	63
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	6.2	4.4	2.1	6.3	1.9	1.4
Cycle Q Clear(g_c), s	6.2	4.4	2.1	6.3	1.9	1.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1371	1255	67	2332	1855	828
V/C Ratio(X)	0.40	0.29	0.79	0.34	0.10	0.08
Avail Cap(c_a), veh/h	2012	1455	326	4075	1855	828
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	21.2	2.0	33.8	16.3	8.5	8.4
Incr Delay (d2), s/veh	0.2	0.1	18.0	0.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.7	1.4	2.8	0.9	0.6
LnGrp Delay(d),s/veh	21.3	2.1	51.8	16.4	8.6	8.6
LnGrp LOS	C	A	D	B	A	A
Approach Vol, veh/h	910			842	252	
Approach Delay, s/veh	13.7			18.6	8.6	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		41.0	6.7	23.1				29.8
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		37.0	13.0	28.0				45.0
Max Q Clear Time (g_c+I1), s		3.9	4.1	8.2				8.3
Green Ext Time (p_c), s		0.9	0.1	10.8				14.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	80	50	60	345	90	50	60	50	130	120	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	84	53	63	363	95	53	63	53	137	126	58
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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	48	396	232	80	563	146	68	783	666	179	900	765
Arrive On Green	0.03	0.18	0.18	0.05	0.20	0.20	0.04	0.42	0.42	0.10	0.48	0.48
Sat Flow, veh/h	1774	2151	1259	1774	2785	720	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	32	68	69	63	229	229	53	63	53	137	126	58
Grp Sat Flow(s),veh/h/ln	1774	1770	1641	1774	1770	1736	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.1	2.1	2.3	2.3	7.6	7.8	1.9	1.3	1.3	4.8	2.4	1.3
Cycle Q Clear(g_c), s	1.1	2.1	2.3	2.3	7.6	7.8	1.9	1.3	1.3	4.8	2.4	1.3
Prop In Lane	1.00		0.77	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	326	302	80	358	351	68	783	666	179	900	765
V/C Ratio(X)	0.67	0.21	0.23	0.78	0.64	0.65	0.78	0.08	0.08	0.77	0.14	0.08
Avail Cap(c_a), veh/h	221	579	537	332	690	676	277	783	666	525	900	765
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	30.9	22.2	22.3	30.3	23.5	23.5	30.6	11.2	11.1	28.1	9.2	8.9
Incr Delay (d2), s/veh	14.7	0.3	0.4	15.1	1.9	2.1	17.7	0.2	0.2	6.7	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	1.1	1.4	3.9	3.9	1.3	0.7	0.6	2.7	1.3	0.6
LnGrp Delay(d),s/veh	45.6	22.5	22.7	45.4	25.4	25.6	48.3	11.4	11.4	34.8	9.5	9.1
LnGrp LOS	D	C	C	D	C	C	D	B	B	C	A	A
Approach Vol, veh/h		169			521			169			321	
Approach Delay, s/veh		27.0			27.9			22.9			20.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	31.0	6.9	15.8	6.4	35.0	5.7	17.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	19.0	22.0	12.0	21.0	10.0	31.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	6.8	3.3	4.3	4.3	3.9	4.4	3.1	9.8
Green Ext Time (p_c), s	0.3	1.3	0.1	3.3	0.0	1.4	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	30	75	100	140	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	79	105	147	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	390	105	211	0	-	0
Stage 1	179	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	586	929	1357	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	804	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	550	929	1357	-	-	-
Mov Cap-2 Maneuver	550	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	3.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1357	-	550	929	-	-
HCM Lane V/C Ratio	0.058	-	0.057	0.034	-	-
HCM Control Delay (s)	7.8	0.1	11.9	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	0.1	-	-

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	40	120	90	145	130	40
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	126	95	153	137	42
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	64	529	580	259	971	924
Arrive On Green	0.04	0.28	0.16	0.16	0.55	0.55
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	42	126	95	153	137	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	1.1	2.5	1.1	4.2	1.8	0.5
Cycle Q Clear(g_c), s	1.1	2.5	1.1	4.2	1.8	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	64	529	580	259	971	924
V/C Ratio(X)	0.66	0.24	0.16	0.59	0.14	0.05
Avail Cap(c_a), veh/h	374	1412	1640	734	971	924
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	22.6	13.1	17.1	18.4	5.3	4.2
Incr Delay (d2), s/veh	11.1	0.2	0.1	2.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	0.5	2.0	1.0	0.8
LnGrp Delay(d),s/veh	33.7	13.3	17.2	20.5	5.6	4.3
LnGrp LOS	C	B	B	C	A	A
Approach Vol, veh/h		168	248		179	
Approach Delay, s/veh		18.4	19.2		5.3	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.5		30.0	5.7	11.8
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				36.0		26.0	10.0	22.0
Max Q Clear Time (g_c+I1), s				4.5		3.8	3.1	6.2
Green Ext Time (p_c), s				1.9		0.5	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	160	850	650	280	0	610
Number	7	4	8	18		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	168	895	759	245		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	229	4482	3542	1004		
Arrive On Green	0.13	0.88	0.63	0.63		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	168	895	759	245		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	3.1	0.9	1.9	2.3		
Cycle Q Clear(g_c), s	3.1	0.9	1.9	2.3		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	229	4482	3542	1004		
V/C Ratio(X)	0.73	0.20	0.21	0.24		
Avail Cap(c_a), veh/h	1262	9949	6295	1784		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.1	0.3	2.6	2.7		
Incr Delay (d2), s/veh	4.5	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.8	0.3	1.0	1.0		
LnGrp Delay(d),s/veh	18.7	0.3	2.6	2.8		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		1063	1004			
Approach Delay, s/veh		3.2	2.7			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4			7	8
Phs Duration (G+Y+Rc), s				33.7			8.4	25.4
Change Period (Y+Rc), s				4.0			4.0	4.0
Max Green Setting (Gmax), s				66.0			24.0	38.0
Max Q Clear Time (g_c+I1), s				2.9			5.1	4.3
Green Ext Time (p_c), s				21.6			0.4	17.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.0
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	290	130	120	830	300	0	0	0	290	0	835
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	168	305	137	126	874	0				305	0	879
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	203	646	201	407	1230	383				1880	0	1678
Arrive On Green	0.11	0.13	0.13	0.23	0.24	0.00				0.53	0.00	0.53
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3548	0	3167
Grp Volume(v), veh/h	168	305	137	126	874	0				305	0	879
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1774	0	1583
Q Serve(g_s), s	9.8	5.9	8.7	6.2	16.6	0.0				4.7	0.0	19.1
Cycle Q Clear(g_c), s	9.8	5.9	8.7	6.2	16.6	0.0				4.7	0.0	19.1
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	203	646	201	407	1230	383				1880	0	1678
V/C Ratio(X)	0.83	0.47	0.68	0.31	0.71	0.00				0.16	0.00	0.52
Avail Cap(c_a), veh/h	504	2310	719	407	2021	629				1880	0	1678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	45.8	42.8	44.1	33.8	36.7	0.0				12.8	0.0	16.2
Incr Delay (d2), s/veh	8.2	0.5	4.0	0.4	0.8	0.0				0.2	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	5.3	2.8	4.0	3.1	7.9	0.0				2.3	0.0	8.5
LnGrp Delay(d),s/veh	54.0	43.4	48.1	34.2	37.4	0.0				13.0	0.0	17.3
LnGrp LOS	D	D	D	C	D					B		B
Approach Vol, veh/h		610			1000						1184	
Approach Delay, s/veh		47.4			37.0						16.2	
Approach LOS		D			D						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			28.2	17.4		60.0	16.1	29.6
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s			24.0	48.0		56.0	30.0	42.0
Max Q Clear Time (g_c+I1), s			8.2	10.7		21.1	11.8	18.6
Green Ext Time (p_c), s			5.9	2.7		5.7	0.4	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	485	0	115	60	80	0	0	220	120
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				511	0	0	63	84	0	0	232	126
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				629	0	561	315	1828	0	0	971	434
Arrive On Green				0.35	0.00	0.00	0.18	0.52	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				511	0	0	63	84	0	0	232	126
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				16.2	0.0	0.0	1.9	0.7	0.0	0.0	3.2	3.9
Cycle Q Clear(g_c), s				16.2	0.0	0.0	1.9	0.7	0.0	0.0	3.2	3.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				629	0	561	315	1828	0	0	971	434
V/C Ratio(X)				0.81	0.00	0.00	0.20	0.05	0.00	0.00	0.24	0.29
Avail Cap(c_a), veh/h				1431	0	1278	315	1828	0	0	971	434
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.1	0.0	0.0	21.7	7.4	0.0	0.0	17.5	17.7
Incr Delay (d2), s/veh				2.6	0.0	0.0	0.3	0.0	0.0	0.0	0.6	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	0.0	0.0	0.9	0.4	0.0	0.0	1.6	1.9
LnGrp Delay(d),s/veh				20.7	0.0	0.0	22.0	7.5	0.0	0.0	18.0	19.4
LnGrp LOS				C			C	A			B	B
Approach Vol, veh/h					511			147			358	
Approach Delay, s/veh					20.7			13.7			18.5	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		36.0			15.0	21.0		26.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		32.0			11.0	17.0		50.0
Max Q Clear Time (g_c+I1), s		2.7			3.9	5.9		18.2
Green Ext Time (p_c), s		0.7			0.3	1.4		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
15: Main Gate/Mission Village Dr & San Diego Mission Rd

7/27/2015

Movement	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	60	48	327	155	0	55	35	25	15	20	160	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Lane Util. Factor	1.00	1.00			0.95	0.95		0.95				0.91
Frt	1.00	0.87			0.99	0.85		0.91				1.00
Flt Protected	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (prot)	1770	1619			1679	1504		3227				1610
Flt Permitted	0.95	1.00			0.95	1.00		1.00				0.95
Satd. Flow (perm)	1770	1619			1679	1504		3227				1610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	51	344	163	0	58	38	26	16	21	168	76
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	63	395	0	0	169	90	0	45	0	0	0	236
Turn Type	Split	NA		Split	NA	Prot		NA			Split	Split
Protected Phases	4	4		8	8	8		2			6	6
Permitted Phases												
Actuated Green, G (s)	36.2	36.2			17.6	17.6		19.3				36.6
Effective Green, g (s)	36.2	36.2			17.6	17.6		19.3				36.6
Actuated g/C Ratio	0.29	0.29			0.14	0.14		0.15				0.29
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	509	466			235	210		495				468
v/s Ratio Prot	0.04	c0.24			c0.10	0.06		c0.01				0.15
v/s Ratio Perm												
v/c Ratio	0.12	0.85			0.72	0.43		0.09				0.50
Uniform Delay, d1	33.0	42.2			51.7	49.4		45.7				37.0
Progression Factor	1.00	1.00			1.00	1.00		1.00				1.00
Incremental Delay, d2	0.1	13.4			10.1	1.4		0.4				3.8
Delay (s)	33.2	55.5			61.8	50.9		46.0				40.9
Level of Service	C	E			E	D		D				D
Approach Delay (s)		52.5			58.0			46.0				
Approach LOS		D			E			D				

Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	125.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT
Lane Configurations	
Volume (vph)	483
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.91
Frt	1.00
Flt Protected	1.00
Satd. Flow (prot)	3388
Flt Permitted	1.00
Satd. Flow (perm)	3388
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	508
RTOR Reduction (vph)	0
Lane Group Flow (vph)	516
Turn Type	NA
Protected Phases	6
Permitted Phases	
Actuated Green, G (s)	36.6
Effective Green, g (s)	36.6
Actuated g/C Ratio	0.29
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	986
v/s Ratio Prot	c0.15
v/s Ratio Perm	
v/c Ratio	0.52
Uniform Delay, d1	37.3
Progression Factor	1.00
Incremental Delay, d2	2.0
Delay (s)	39.2
Level of Service	D
Approach Delay (s)	39.7
Approach LOS	D

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	930	90	290	460	50	70	20	220	70	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	979	95	305	484	53	74	21	232	74	42	95
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
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	906	1535	478	421	819	318	137	635	734	137	635	540
Arrive On Green	0.26	0.30	0.30	0.12	0.16	0.16	0.04	0.34	0.34	0.04	0.34	0.34
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	42	979	95	305	484	53	74	21	232	74	42	95
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	0.7	13.7	2.9	7.0	7.2	0.0	1.7	0.6	4.9	1.7	1.2	3.5
Cycle Q Clear(g_c), s	0.7	13.7	2.9	7.0	7.2	0.0	1.7	0.6	4.9	1.7	1.2	3.5
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	906	1535	478	421	819	318	137	635	734	137	635	540
V/C Ratio(X)	0.05	0.64	0.20	0.72	0.59	0.17	0.54	0.03	0.32	0.54	0.07	0.18
Avail Cap(c_a), veh/h	906	3716	1157	1383	5203	1683	545	635	734	545	635	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	24.8	13.7	34.7	31.9	27.1	38.7	18.0	6.3	38.7	18.2	19.0
Incr Delay (d2), s/veh	0.0	0.4	0.2	2.4	0.7	0.2	3.3	0.1	1.1	3.3	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.4	1.5	3.5	3.5	1.0	0.9	0.3	2.5	0.9	0.7	1.6
LnGrp Delay(d),s/veh	22.6	25.2	13.9	37.1	32.6	27.4	42.0	18.1	7.4	42.0	18.4	19.7
LnGrp LOS	C	C	B	D	C	C	D	B	A	D	B	B
Approach Vol, veh/h		1116			842			327			211	
Approach Delay, s/veh		24.2			33.9			15.9			27.2	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	32.0	14.0	28.8	7.3	32.0	25.6	17.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	28.0	33.0	60.0	13.0	28.0	9.0	84.0
Max Q Clear Time (g_c+I1), s	3.7	6.9	9.0	15.7	3.7	5.5	2.7	9.2
Green Ext Time (p_c), s	0.3	0.8	1.1	9.1	0.3	0.5	3.6	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	900	90	140	420	40	70	20	100	40	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	947	95	147	442	42	74	21	105	42	82	68
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
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	44	1466	517	339	1842	620	131	746	634	104	730	659
Arrive On Green	0.02	0.29	0.29	0.10	0.36	0.36	0.04	0.40	0.40	0.03	0.39	0.39
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3548	1863	1583
Grp Volume(v), veh/h	32	947	95	147	442	42	74	21	105	42	82	68
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.6	14.2	2.4	3.5	5.3	1.4	1.8	0.6	2.5	1.0	2.4	2.3
Cycle Q Clear(g_c), s	1.6	14.2	2.4	3.5	5.3	1.4	1.8	0.6	2.5	1.0	2.4	2.3
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	44	1466	517	339	1842	620	131	746	634	104	730	659
V/C Ratio(X)	0.73	0.65	0.18	0.43	0.24	0.07	0.56	0.03	0.17	0.40	0.11	0.10
Avail Cap(c_a), veh/h	305	3842	1257	867	4250	1370	591	746	634	447	730	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	27.2	9.9	37.1	19.5	16.6	41.3	15.9	7.8	41.6	16.9	15.5
Incr Delay (d2), s/veh	20.5	0.5	0.2	0.9	0.1	0.0	3.7	0.1	0.6	2.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.7	1.2	1.7	2.5	0.6	0.9	0.3	1.6	0.5	1.3	1.1
LnGrp Delay(d),s/veh	62.8	27.7	10.0	38.0	19.5	16.7	45.0	15.9	8.4	44.2	17.2	15.9
LnGrp LOS	E	C	B	D	B	B	D	B	A	D	B	B
Approach Vol, veh/h		1074			631			200			192	
Approach Delay, s/veh		27.1			23.6			22.7			22.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	39.0	12.6	29.2	7.3	38.2	6.2	35.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	35.0	22.0	66.0	15.0	31.0	15.0	73.0
Max Q Clear Time (g_c+I1), s	3.0	4.5	5.5	16.2	3.8	4.4	3.6	7.3
Green Ext Time (p_c), s	0.0	1.1	3.3	9.0	0.1	1.1	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	130	0	170	120	250	0	0	180	70
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				137	0	179	126	263	0	0	189	74
Adj No. of Lanes				1	1	0	1	1	0	0	2	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				282	0	251	166	1319	0	0	1377	521
Arrive On Green				0.16	0.00	0.16	0.03	0.23	0.00	0.00	0.55	0.55
Sat Flow, veh/h				1774	0	1583	1774	1863	0	0	2607	951
Grp Volume(v), veh/h				137	0	179	126	263	0	0	131	132
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1863	0	0	1770	1695
Q Serve(g_s), s				4.2	0.0	6.4	4.2	6.8	0.0	0.0	2.2	2.3
Cycle Q Clear(g_c), s				4.2	0.0	6.4	4.2	6.8	0.0	0.0	2.2	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h				282	0	251	166	1319	0	0	970	929
V/C Ratio(X)				0.49	0.00	0.71	0.76	0.20	0.00	0.00	0.14	0.14
Avail Cap(c_a), veh/h				591	0	528	384	1319	0	0	970	929
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.0	0.0	23.9	28.4	9.3	0.0	0.0	6.6	6.6
Incr Delay (d2), s/veh				1.3	0.0	3.7	7.0	0.3	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.2	0.0	3.0	2.4	3.7	0.0	0.0	1.1	1.1
LnGrp Delay(d),s/veh				24.3	0.0	27.7	35.4	9.7	0.0	0.0	6.9	7.0
LnGrp LOS				C		C	D	A			A	A
Approach Vol, veh/h					316			389			263	
Approach Delay, s/veh					26.2			18.0			6.9	
Approach LOS					C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		46.5			9.6	36.9		13.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		32.0			13.0	15.0		20.0
Max Q Clear Time (g_c+I1), s		8.8			6.2	4.3		8.4
Green Ext Time (p_c), s		3.2			0.2	2.3		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	0	40	0	0	0	0	230	455	90	220	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	147	0	42				0	242	479	95	232	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	208	0	186				0	2174	973	121	2652	0
Arrive On Green	0.12	0.00	0.12				0.00	1.00	1.00	0.14	1.00	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	147	0	42				0	242	479	95	232	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	4.8	0.0	1.4				0.0	0.0	0.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	1.4				0.0	0.0	0.0	3.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	208	0	186				0	2174	973	121	2652	0
V/C Ratio(X)	0.71	0.00	0.23				0.00	0.11	0.49	0.78	0.09	0.00
Avail Cap(c_a), veh/h	473	0	422				0	2174	973	237	2652	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.67	1.67	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.99	0.99	0.99	0.99	0.00
Uniform Delay (d), s/veh	25.5	0.0	24.0				0.0	0.0	0.0	25.5	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.0	0.6				0.0	0.1	1.8	10.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.7				0.0	0.0	0.5	1.8	0.0	0.0
LnGrp Delay(d),s/veh	29.8	0.0	24.6				0.0	0.1	1.8	35.9	0.1	0.0
LnGrp LOS	C		C					A	A	D	A	
Approach Vol, veh/h		189						721			327	
Approach Delay, s/veh		28.7						1.2			10.5	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	8.1	40.9		11.0		49.0		
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		
Max Green Setting (Gmax), s	8.0	24.0		16.0		36.0		
Max Q Clear Time (g_c+I1), s	5.1	2.0		6.8		2.0		
Green Ext Time (p_c), s	0.0	5.1		0.6		5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	40	120	30	60	20	140	545	50	20	220	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	42	42	126	32	63	21	147	574	53	21	232	74
Adj No. of Lanes	1	1	2	2	2	1	2	3	0	2	3	1
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	60	154	478	95	272	122	235	1502	137	1054	2821	878
Arrive On Green	0.03	0.08	0.08	0.03	0.08	0.08	0.14	0.63	0.63	0.31	0.55	0.55
Sat Flow, veh/h	1774	1863	3167	3442	3539	1583	3442	4743	434	3442	5085	1583
Grp Volume(v), veh/h	42	42	126	32	63	21	147	409	218	21	232	74
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1583	1721	1695	1786	1721	1695	1583
Q Serve(g_s), s	1.4	1.3	2.1	0.5	1.0	0.4	2.4	3.5	3.6	0.3	1.3	1.3
Cycle Q Clear(g_c), s	1.4	1.3	2.1	0.5	1.0	0.4	2.4	3.5	3.6	0.3	1.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	60	154	478	95	272	122	235	1074	566	1054	2821	878
V/C Ratio(X)	0.71	0.27	0.26	0.34	0.23	0.17	0.63	0.38	0.39	0.02	0.08	0.08
Avail Cap(c_a), veh/h	148	528	1113	229	944	422	344	1074	566	1054	2821	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	25.8	22.5	28.6	26.0	7.1	25.2	8.2	8.2	14.5	6.2	6.2
Incr Delay (d2), s/veh	14.1	0.9	0.3	2.1	0.4	0.7	2.7	1.0	2.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.7	0.9	0.3	0.5	0.2	1.2	1.7	2.0	0.1	0.6	0.6
LnGrp Delay(d),s/veh	42.8	26.8	22.8	30.7	26.5	7.8	27.9	9.2	10.1	14.5	6.3	6.4
LnGrp LOS	D	C	C	C	C	A	C	A	B	B	A	A
Approach Vol, veh/h		210			116			774			327	
Approach Delay, s/veh		27.6			24.3			13.0			6.9	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.4	23.0	5.7	9.0	8.1	37.3	6.0	8.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	17.0	6.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	5.6	2.5	4.1	4.4	3.3	3.4	3.0
Green Ext Time (p_c), s	0.3	3.4	0.0	0.9	0.1	1.5	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	0	80	50	70	140	160	575	0	0	240	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h	21	0	84	53	74	147	168	605	0	0	253	126
Adj No. of Lanes	1	0	1	0	1	1	1	3	0	0	2	1
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	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	95	133	198	214	3773	0	0	1964	878
Arrive On Green	0.00	0.00	0.00	0.12	0.12	0.12	0.12	0.74	0.00	0.00	0.18	0.18
Sat Flow, veh/h		0		761	1063	1583	1774	5253	0	0	3632	1583
Grp Volume(v), veh/h		0.0		127	0	147	168	605	0	0	253	126
Grp Sat Flow(s),veh/h/ln				1825	0	1583	1774	1695	0	0	1770	1583
Q Serve(g_s), s				3.9	0.0	5.4	5.5	2.1	0.0	0.0	3.6	4.0
Cycle Q Clear(g_c), s				3.9	0.0	5.4	5.5	2.1	0.0	0.0	3.6	4.0
Prop In Lane				0.42		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				228	0	198	214	3773	0	0	1964	878
V/C Ratio(X)				0.56	0.00	0.74	0.79	0.16	0.00	0.00	0.13	0.14
Avail Cap(c_a), veh/h				274	0	237	355	3773	0	0	1964	878
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.7	0.0	25.3	25.6	2.3	0.0	0.0	12.4	12.5
Incr Delay (d2), s/veh				2.1	0.0	9.8	6.3	0.1	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.1	0.0	2.9	3.1	1.0	0.0	0.0	1.8	1.8
LnGrp Delay(d),s/veh				26.8	0.0	35.1	31.9	2.4	0.0	0.0	12.5	12.9
LnGrp LOS				C		D	C	A			B	B
Approach Vol, veh/h					274			773			379	
Approach Delay, s/veh					31.3			8.8			12.6	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		48.5			11.2	37.3		11.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		35.0			12.0	19.0		9.0
Max Q Clear Time (g_c+I1), s		4.1			7.5	6.0		7.4
Green Ext Time (p_c), s		7.2			0.2	5.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	745	330	50	590	50	140	30	30	20	40	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	784	347	53	621	53	147	32	32	21	42	95
Adj No. of Lanes	2	4	2	2	4	1	2	2	0	1	1	2
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	260	1342	584	135	1109	274	237	834	727	35	775	1159
Arrive On Green	0.15	0.42	0.42	0.04	0.17	0.17	0.07	0.47	0.47	0.02	0.42	0.42
Sat Flow, veh/h	3442	6408	2787	3442	6408	1583	3442	1793	1564	1774	1863	2787
Grp Volume(v), veh/h	168	784	347	53	621	53	147	32	32	21	42	95
Grp Sat Flow(s),veh/h/ln	1721	1602	1393	1721	1602	1583	1721	1770	1587	1774	1863	1393
Q Serve(g_s), s	2.8	5.6	4.3	0.9	5.3	1.7	2.5	0.6	0.7	0.7	0.8	1.2
Cycle Q Clear(g_c), s	2.8	5.6	4.3	0.9	5.3	1.7	2.5	0.6	0.7	0.7	0.8	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Lane Grp Cap(c), veh/h	260	1342	584	135	1109	274	237	823	738	35	775	1159
V/C Ratio(X)	0.65	0.58	0.59	0.39	0.56	0.19	0.62	0.04	0.04	0.60	0.05	0.08
Avail Cap(c_a), veh/h	344	1922	836	229	1709	422	287	823	738	118	775	1159
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)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	15.4	8.6	28.1	22.7	21.2	27.2	8.7	8.8	29.2	10.5	10.6
Incr Delay (d2), s/veh	2.5	0.4	0.9	1.9	0.4	0.3	2.9	0.1	0.1	15.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.4	1.6	0.5	2.4	0.8	1.3	0.3	0.3	0.5	0.4	0.5
LnGrp Delay(d),s/veh	27.3	15.8	9.5	30.0	23.2	21.6	30.1	8.8	8.9	44.6	10.6	10.7
LnGrp LOS	C	B	A	C	C	C	C	A	A	D	B	B
Approach Vol, veh/h		1299			727			211			158	
Approach Delay, s/veh		15.6			23.5			23.6			15.2	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	31.9	6.3	16.6	8.1	29.0	8.5	14.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	4.0	18.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	2.7	2.9	7.6	4.5	3.2	4.8	7.3
Green Ext Time (p_c), s	0.0	0.8	0.5	4.9	0.0	0.7	0.1	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	140	1035	580	190	500	370
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	1089	611	200	526	389
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	387	2244	1096	1916	2584	1439
Arrive On Green	0.11	0.35	0.17	0.17	0.52	0.52
Sat Flow, veh/h	3442	6669	6669	2787	5003	2787
Grp Volume(v), veh/h	147	1089	611	200	526	389
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1393	1668	1393
Q Serve(g_s), s	2.4	8.0	5.2	1.4	3.4	4.7
Cycle Q Clear(g_c), s	2.4	8.0	5.2	1.4	3.4	4.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	387	2244	1096	1916	2584	1439
V/C Ratio(X)	0.38	0.49	0.56	0.10	0.20	0.27
Avail Cap(c_a), veh/h	516	2990	1602	2136	2584	1439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.93	0.93	1.00	1.00
Uniform Delay (d), s/veh	24.7	15.3	22.8	3.2	7.8	8.2
Incr Delay (d2), s/veh	0.6	0.2	0.4	0.0	0.2	0.5
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	3.5	2.3	1.5	1.6	4.8
LnGrp Delay(d),s/veh	25.3	15.4	23.2	3.2	8.0	8.6
LnGrp LOS	C	B	C	A	A	A
Approach Vol, veh/h		1236	811		915	
Approach Delay, s/veh		16.6	18.3		8.3	
Approach LOS		B	B		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.0		35.0	10.8	14.3
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				28.0		24.0	9.0	15.0
Max Q Clear Time (g_c+I1), s				10.0		6.7	4.4	7.2
Green Ext Time (p_c), s				8.0		3.5	3.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

HCM Unsignalized Intersection Capacity Analysis
24: Ulric St & SR-163 SB On-Ramp

7/27/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	340	0	290	270
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	358	0	305	284
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			314			
pX, platoon unblocked						
vC, conflicting volume	1111	179			358	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1111	179			358	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			75	
cM capacity (veh/h)	151	833			1197	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	239	119	305	142	142
Volume Left	0	0	305	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1197	1700	1700
Volume to Capacity	0.14	0.07	0.25	0.08	0.08
Queue Length 95th (ft)	0	0	25	0	0
Control Delay (s)	0.0	0.0	9.0	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		4.7		
Approach LOS					

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	320	240	260	410	270	180	30	345	180	0	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	337	253	274	432	284	189	32	363	189	0	105
Adj No. of Lanes	2	4	1	2	3	2	2	1	2	2	1	1
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	237	746	902	408	844	462	1560	858	1613	302	177	150
Arrive On Green	0.07	0.12	0.12	0.12	0.17	0.17	0.45	0.46	0.46	0.09	0.00	0.09
Sat Flow, veh/h	3442	6408	1583	3442	5085	2787	3442	1863	2787	3442	1863	1583
Grp Volume(v), veh/h	63	337	253	274	432	284	189	32	363	189	0	105
Grp Sat Flow(s),veh/h/ln	1721	1602	1583	1721	1695	1393	1721	1863	1393	1721	1863	1583
Q Serve(g_s), s	1.3	3.6	0.0	5.6	5.7	5.3	2.3	0.7	1.6	3.9	0.0	4.7
Cycle Q Clear(g_c), s	1.3	3.6	0.0	5.6	5.7	5.3	2.3	0.7	1.6	3.9	0.0	4.7
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	237	746	902	408	844	462	1560	858	1613	302	177	150
V/C Ratio(X)	0.27	0.45	0.28	0.67	0.51	0.61	0.12	0.04	0.23	0.62	0.00	0.70
Avail Cap(c_a), veh/h	513	2083	1233	1398	2962	1623	1560	858	1613	1212	681	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	30.4	8.1	31.2	28.1	16.7	11.7	10.9	2.1	32.5	0.0	32.4
Incr Delay (d2), s/veh	0.6	0.4	0.2	1.9	0.5	1.3	0.2	0.1	0.3	2.1	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.6	2.6	2.8	2.7	2.5	1.1	0.4	0.9	2.0	0.0	2.3
LnGrp Delay(d),s/veh	33.2	30.8	8.3	33.1	28.5	18.1	11.8	11.0	2.4	34.6	0.0	38.1
LnGrp LOS	C	C	A	C	C	B	B	B	A	C		D
Approach Vol, veh/h		653			990			584			294	
Approach Delay, s/veh		22.3			26.8			5.9			35.9	
Approach LOS		C			C			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	38.0	12.7	12.6	37.5	11.0	9.1	16.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	26.0	34.0	30.0	24.0	33.0	27.0	11.0	43.0
Max Q Clear Time (g_c+I1), s	5.9	3.6	7.6	5.6	4.3	6.7	3.3	7.7
Green Ext Time (p_c), s	0.6	2.4	1.1	3.0	2.4	0.3	0.7	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

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

APPENDIX F

PROJECT IMPACT MITIGATION
INTERSECTION ANALYSIS WORKSHEETS

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Intersection	
Intersection Delay, s/veh	16.5
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	60	60	0	230	390	0	530	195
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	63	63	0	242	411	0	558	205
Number of Lanes	0	1	1	0	0	2	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	11.3	17.4	16.6
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	64%	0%	100%	0%	0%	0%
Vol Thru, %	36%	100%	0%	0%	100%	48%
Vol Right, %	0%	0%	0%	100%	0%	52%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	360	260	60	60	353	372
LT Vol	230	0	60	0	0	0
Through Vol	130	260	0	0	353	177
RT Vol	0	0	0	60	0	195
Lane Flow Rate	379	274	63	63	372	391
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.658	0.451	0.141	0.12	0.604	0.595
Departure Headway (Hd)	6.249	5.926	8.053	6.826	5.847	5.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	580	608	445	524	617	657
Service Time	3.99	3.667	5.807	4.58	3.587	3.215
HCM Lane V/C Ratio	0.653	0.451	0.142	0.12	0.603	0.595
HCM Control Delay	20.3	13.5	12.1	10.5	17.2	16
HCM Lane LOS	C	B	B	B	C	C
HCM 95th-tile Q	4.8	2.3	0.5	0.4	4	3.9

Intersection	
Intersection Delay, s/veh	20.5
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	100	100	0	255	390	0	530	225
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95	0.92	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	105	105	0	268	411	0	558	237
Number of Lanes	0	1	1	0	0	2	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	12.7	22.6	20.7
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	66%	0%	100%	0%	0%	0%
Vol Thru, %	34%	100%	0%	0%	100%	44%
Vol Right, %	0%	0%	0%	100%	0%	56%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	385	260	100	100	353	402
LT Vol	255	0	100	0	0	0
Through Vol	130	260	0	0	353	177
RT Vol	0	0	0	100	0	225
Lane Flow Rate	405	274	105	105	372	423
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.757	0.486	0.242	0.206	0.651	0.693
Departure Headway (Hd)	6.723	6.387	8.271	7.041	6.303	5.904
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	561	433	507	569	609
Service Time	4.495	4.158	6.053	4.823	4.073	3.674
HCM Lane V/C Ratio	0.757	0.488	0.242	0.207	0.654	0.695
HCM Control Delay	27.6	15.1	13.7	11.7	20.2	21.1
HCM Lane LOS	D	C	B	B	C	C
HCM 95th-tile Q	6.6	2.6	0.9	0.8	4.7	5.5