APPENDIX J

Traffic Impact Study

Traffic Impact Study for
Robertson Lane Hotel Project
West Hollywood, CA

January 25, 2017

Prepared For:

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1. Introduction

This report documents the traffic study prepared for the proposed mixed use hotel project located at 645-681 N. Robertson Boulevard & 648-668 N. La Peer Drive (hereafter referred to as the Project) in the City of West Hollywood. KOA was retained to study the potential traffic impacts associated with the proposed Project.

The following sections examine the impacts of the Project on traffic operations at select study area intersections during typical weekday morning, midday, and evening peak-hour periods.

The scope and methodologies used for this traffic study were developed in consultation with the City of West Hollywood staff. The project study area, as defined through consultation with City staff, encompasses 18 intersections and five residential street segments. Key tasks undertaken for this traffic analysis include:

- Definition of study approach
- Determination of existing traffic conditions
- Trip generation forecasts of the planned Project land use
- Assignment of Project-generated trips to the study area roadway system
- Evaluation of the impact of Project traffic at the study locations

1.1 Project Location

The Project site is located at 645-681 North Robertson Boulevard & 648-668 North La Peer Drive, between Santa Monica Boulevard and Melrose Avenue within the City of West Hollywood. Figure 1 illustrates the study area and the site location in relation to the surrounding street system. Two full-movement driveways will provide access to and from the site. One of the proposed Project driveways will be located on Robertson Boulevard and the other on La Peer Drive. Figure 2 shows the preliminary site plan.

1.2 Project Description

The proposed project would involve the construction and operation of an approximately 262,315 square foot mixed-use hotel building on a 1.94-acre site located within the City of West Hollywood. The project would consist of a 241-room hotel that would include hotel restaurants, hotel retail, hotel meeting rooms, etc. The project would also include 8,845 square feet of public restaurant on the first floor and 13,770 square feet of public restaurant on the rooftop level; 18,130 square feet of public retail; 3,780 square feet of nightclub space, and 10,325 square feet of design showroom space.

The northern end of the project site along Robertson Boulevard will require the removal of an existing 100+ space public parking lot that is privately owned. The proposed Project would provide 153 surplus parking spaces, which would cover the loss of the public parking lot.

Robertson Lane, a proposed 30-foot wide pedestrian walkway, would extend in a northeast-southwest direction across the project site with entrances at La Peer Drive and Robertson Boulevard. A total of 1,151 off-street parking spaces would be provided.

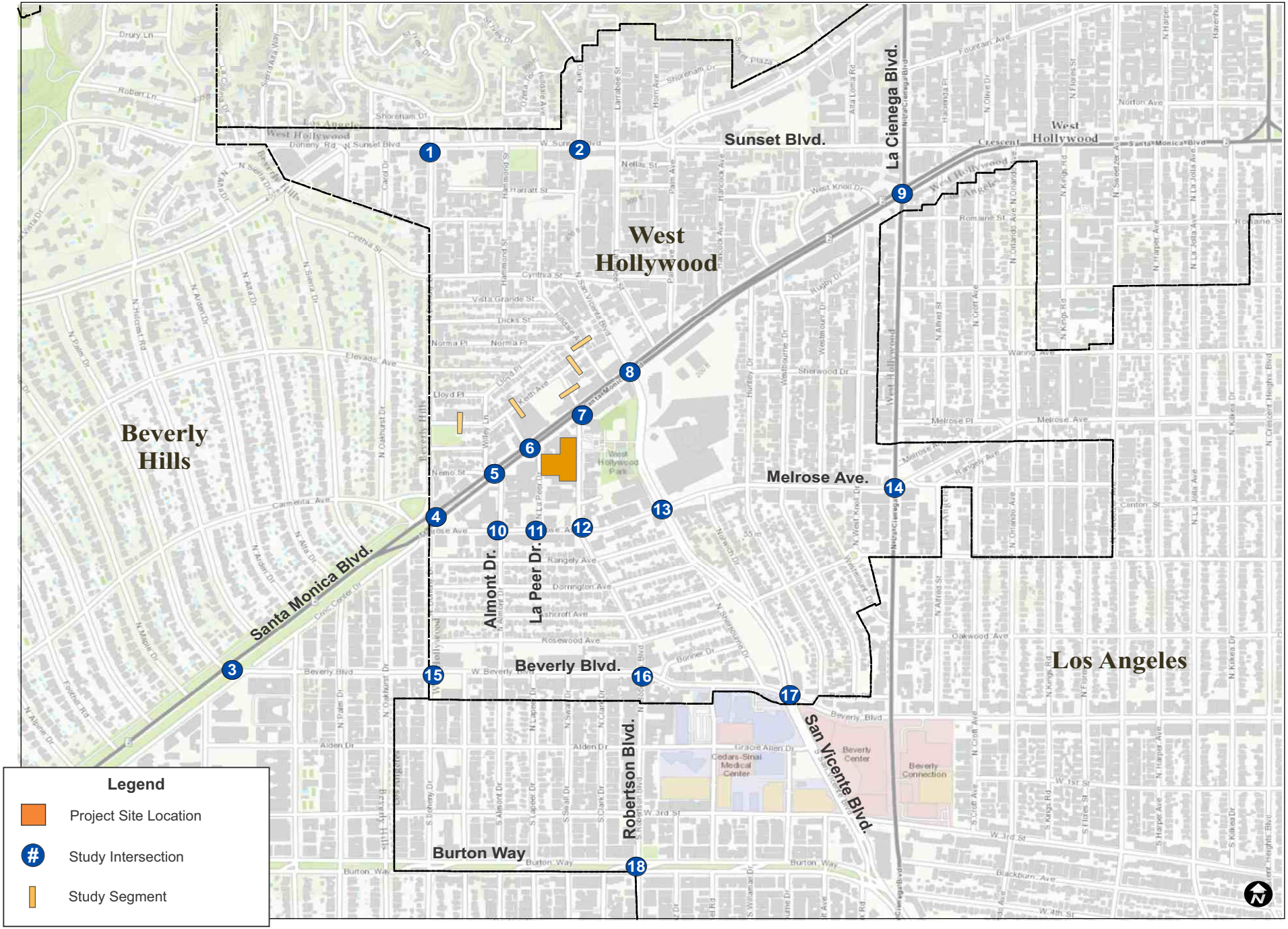

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Figure 1

Study Area

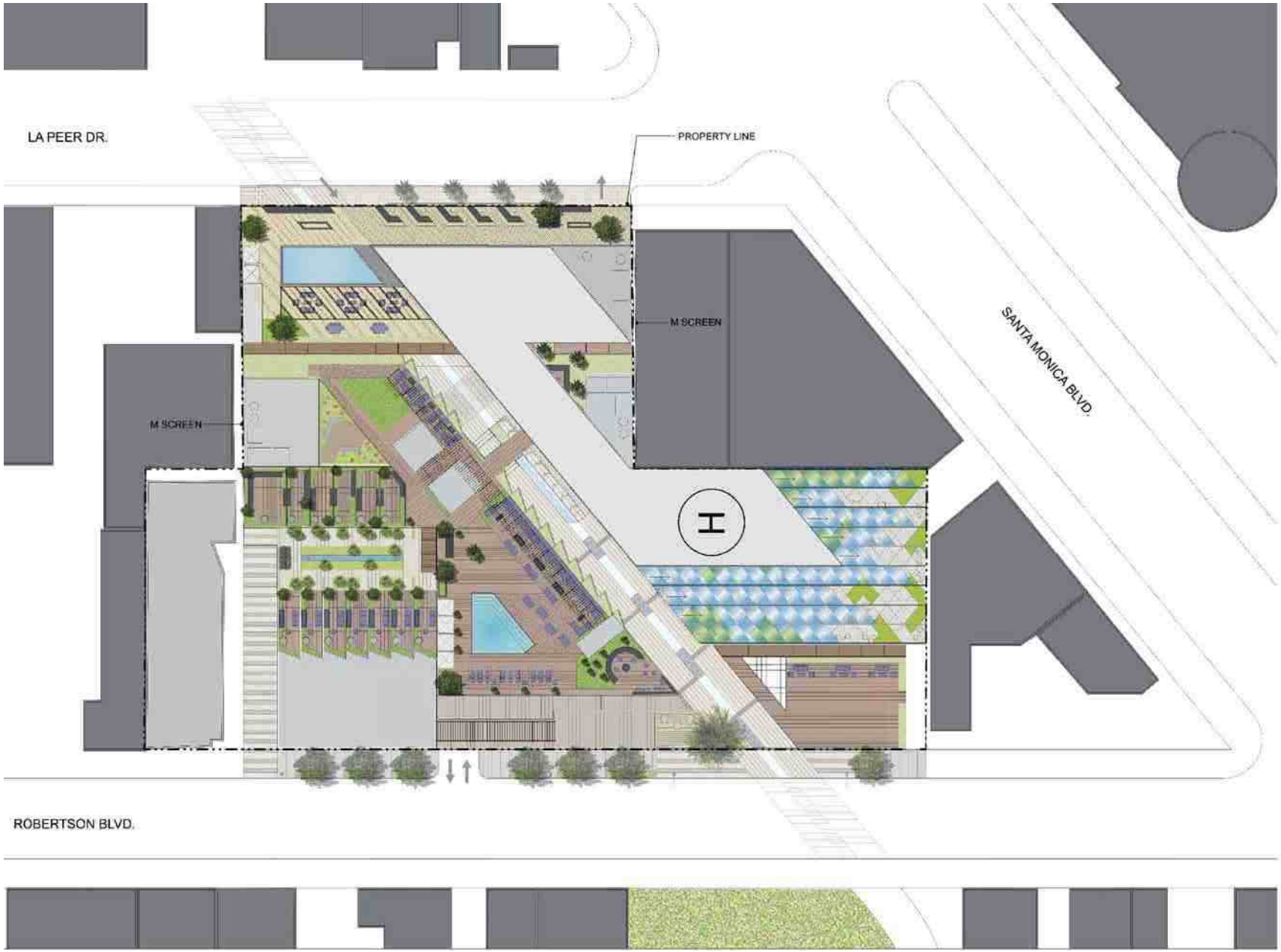

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Figure 2

Preliminary Site Plan

1.3 Project Study Area

Based on consultation with City staff, 18 intersections were defined to be analyzed for this traffic analysis. They are:

1. Doheny Drive & Sunset Boulevard [Signalized]
2. San Vicente Boulevard & Sunset Boulevard [Signalized]
3. Palm Drive/Beverly Boulevard & Santa Monica Boulevard [Signalized] [1]
4. Doheny Drive & Santa Monica Boulevard/Melrose Boulevard [Signalized] [2]
5. Almont Drive & Santa Monica Boulevard [Signalized]
6. La Peer Drive & Santa Monica Boulevard [Stop Controlled]
7. Robertson Boulevard & Santa Monica Boulevard [Signalized]
8. San Vicente Boulevard & Santa Monica Boulevard [Signalized]
9. La Cienega Boulevard & Santa Monica Boulevard [Signalized]
10. Almont Drive & Melrose Avenue [Stop Controlled]
11. La Peer Drive & Melrose Avenue [Stop Controlled]
12. Robertson Boulevard & Melrose Avenue [Signalized]
13. San Vicente Boulevard & Melrose Avenue [Signalized]
14. La Cienega Boulevard & Melrose Avenue [Signalized]
15. Doheny Drive & Beverly Boulevard [Signalized] [2]
16. Robertson Boulevard & Beverly Boulevard [Signalized]
17. San Vicente Boulevard & Beverly Boulevard [Signalized]
18. Robertson Boulevard & Burton Way [Signalized] [3]

1. City of Beverly Hills
2. City of West Hollywood/City of Beverly Hills
3. City of Beverly Hills & City of Los Angeles

As indicated, three of the 18 study intersections are stop-sign controlled while the remaining 15 intersections are signalized.

In addition, five residential street segments were included in this study for analysis:

A. Hilldale Avenue, between Norma Place and Keith Avenue
B. Keith Avenue, between Doheny Drive and Willey Lane
C. Keith Avenue, between Ramage Street and Robertson Boulevard
D. Keith Avenue, between Robertson Boulevard and Hilldale Avenue
E. Robertson Boulevard, between Keith Avenue and Santa Monica Boulevard

The locations of the 18 study intersections and five street segments are illustrated in Figure 1.

1.4 Analysis Methodology

KOA discussed this project with the City at the start of this study to achieve consensus on all assumptions and the overall methodology. The following describes the general methodology and approach for this traffic study.

Consistent with the traffic impact study guidelines of the City of West Hollywood, the traffic analysis for the study locations within the City of West Hollywood was conducted during the following peak periods:

- Weekday morning (7:00am – 10:00am)
- Weekday midday (11:00am – 1:00pm)
- Weekday afternoon/evening (4:00pm – 7:00pm)

Consistent with traffic impact study guidelines of the City of Beverly Hills, the traffic analysis for the study locations within the City of Beverly Hills was conducted for the following periods:

- Weekday morning
- Weekday afternoon/evening

Consistent with traffic impact study guidelines of the City of Los Angeles, the traffic analysis for the study locations within the City of Los Angeles was conducted for the following periods:

- Weekday morning
- Weekday afternoon/evening

Level-of-Service Methodology

For analysis of level of service (LOS) at signalized intersections, the City of West Hollywood has designated the Highway Capacity Manual (HCM) methodology as the desired analysis tool. The HCM method takes into account existing signal timing, minimum green times, vehicle volumes, pedestrian and bike movements, user defined saturation flow rates, and storage bay lengths. The resulting intersection delay (seconds) is then utilized for identification of a level of service value for that particular peak hour period. The output for this method is a delay (in seconds) value and a level of service for the intersection as a whole.

The City of Los Angeles has designated the Circular 212 – Critical Movement Analysis (CMA) Planning methodology as the desired analysis tool. The CMA method is a procedure that incorporates the effects of geometry and traffic signal operation and develops a Volume to Capacity ratio (V/C) for each separate movement. The resulting V/C of the critical movements are then utilized for identification of level of service for that particular peak hour period.

The City of Beverly Hills has designated the Intersection Capacity Utilization (ICU) methodology as the desired analysis tool. The concept of roadway level of service under the ICU is calculated as the volume of vehicles that pass through the facility divided by the capacity of that facility. A 10% adjustment to the clearance and loss time factor based on the critical phases of the signalized control were included in the traffic analysis. A facility is "at capacity" (ICU value of 1.00 or greater) when extreme congestion occurs. This value is a function of hourly volumes, signal phasing, and approach lane configurations on each leg of the intersection.

At stop-controlled intersections, the Highway Capacity Manual (HCM) methodology has been designated to determine level of service by the City of West Hollywood. For this methodology,

conditions are based upon intersection delay, defined as the worst-case approach delay experienced by users of the intersection who must stop or yield to free-flow through traffic. This method uses a "gap acceptance" technique to predict driver delay. This methodology is applicable to unsignalized and partially-controlled intersections on major streets where there is potential for crossing difficulty from the minor approaches due to heavy traffic volumes on the major approaches. There are no unsignalized study intersections in the City of Beverly Hills or City of Los Angeles.

Level of service (LOS) values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating "capacity" of a roadway. Typically, LOS D is the lowest acceptable operating condition.

Table 1 summarizes the LOS definitions for West Hollywood. Table 2 summarizes the LOS definitions for Los Angeles and Beverly Hills.

SB-743 Status and Application

On September 27, 2013, California Governor Jerry Brown signed Senate Bill (SB) 743 into law, which creates a process to change the way that transportation impacts are analyzed under CEQA. SB 743 requires that the Governor's Office of Planning and Research (OPR) amend the CEQA guidelines to provide an alternative to Level of Service (LOS) for evaluating transportation impacts. Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." (New Public Resources Code Section, 21099(b)(1)).

Under the guideline changes, LOS will no longer be considered as a basis for determining significant impacts in many parts of California. Furthermore, parking impacts will also not be considered significant impacts under CEQA for select development projects within infill areas nearby frequent transit service.

As of February 2016, OPR has incorporated comments received by stakeholders on their first draft of the updated guidelines. The second set of guidelines was released on January 20, 2016 which recommends that transportation impacts under CEQA will be evaluated using Vehicle Miles Traveled (VMT). Local jurisdictions will still be allowed to assess impacts using methodologies in addition to VMT. Once the guidelines are officially adopted, jurisdictions will have a two-year opt-in period to incorporate VMT thresholds into their CEQA-related transportation impact review for projects.

Public comment on the second set of guidelines has been completed and OPR will make a second and final set of revisions and submit the final guidelines to begin the 6-month "rulemaking" process. Once that process is completed, there is a 60-day administrative law review before the guidelines officially become law. Cities and other lead agencies will have approximately 120 days to update their respective guidance to comply with the law and implementation required.

The City of West Hollywood has not adopted new traffic study guidelines in accordance with SB 743 – as the guidelines are still being finalized. As such, this analysis is based on their current traffic study guidelines, which use LOS and delay as a measure for significant transportation impacts under CEQA.

Table 1: Level of Service Definition (West Hollywood)

LOS	Interpretation	Signalized Intersection (HCM) Delay (sec.)	Stop-Controlled Intersection (HCM) Delay (sec.)
A	Free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.	**≤ 10**	**0 - 10**
B	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.	**> 10 - 20**	**> 10 - 15**
C	Stable operation. The ability to maneuver and change lanes at midsegment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.	**> 20 - 35**	**> 15 - 25**
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.	**> 35 - 55**	**> 25 - 35**
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.	**> 55 - 60**	**> 35 - 50**
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.	**> 80**	**> 50**

Source: Highway Capacity Manual, Transportation Research Board of The National Academies, Washington DC, 2010

Table 2: Level of Service Definition (City of Beverly Hills and Los Angeles)

LOS	Definition	Volume to Capacity Ratio (CMA)/(ICU)
A	LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.	0.000 - 0.600
B	LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.	0.601 - 0.700
C	LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.	0.701 - 0.800
D	LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.	0.801 - 0.900
E	LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.	0.901 - 1.000
F	LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.	Greater than 1.000

Study Scenarios

Weekday morning, midday and afternoon peak hour traffic operations were evaluated at the 18 study intersections and daily traffic assessed at five street segments for each of the following traffic scenarios:

- Existing (Year 2015)
- Existing Plus Project
- Future (Year 2019) without Project
- Future (Year 2019) with Proposed Project

Existing Conditions

In order to define existing traffic conditions, new peak period turning movement counts were collected on Wednesday, March 18, 2015 at the study intersections. New 24-hour counts were collected at the study street segments on the same day. The analysis of existing traffic volumes used for this traffic analysis is discussed in Chapter 2 of this report. The peak-hour and Average Daily Traffic (ADT) traffic volume counts are provided in Appendix A.

Fieldwork within the Project study area was undertaken to identify the lane characteristics of major roadways, to identify traffic control and lane configuration at each study intersection, and to identify the location of on-street parking and transit stops.

The existing conditions at each of the study intersections and street segments is further discussed in Chapter 2 of this report.

Project Trip Generation and Distribution

Project trip generation calculations included rates established by *Trip Generation (9th edition)*, published by the Institute of Transportation Engineers (ITE). Former use trip generation credits were also applied.

The methodology utilized for Project trip generation and distribution calculations is discussed in Chapter 3 of this report.

Existing Plus Project Conditions

Based on the traffic from the proposed Project, the Existing Plus Project conditions were analyzed. The levels of service for Existing Plus Project conditions for the study area is discussed in Chapter 4 of this report.

Future Without Project Conditions

In order to define regional traffic growth that would affect operations at the study intersections during the project buildout year (2019), an ambient/background traffic growth rate was defined to account for increase in area-wide traffic. An annual growth rate of 1% was utilized to increase existing (year 2015) traffic volumes to establish future (year 2019) base traffic volumes.

In addition to future ambient growth, traffic from area related projects (approved and pending) was also included in the analysis. KOA researched information collected by the City of West Hollywood, City of Los Angeles, and City of Beverly Hills pertaining to approved projects and projects pending approval within 1.5-miles of the Project site. Daily and peak hour trips that would be generated from each of the related projects were computed. The trip rates are generally based on the Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition* published in 2012.

The level of service for future without-Project area is discussed in Chapter 5 of this report.

Future With Project Conditions

Based on the inclusion of future ambient growth, traffic from area related projects (approved and pending), and traffic from the proposed Project, future with Project conditions were analyzed. The levels of service for future with Project conditions within the study area is discussed in Chapter 6 of this report.

Level-of-Service Analysis and Impacts

KOA quantitatively assessed weekday morning, midday, and evening peak-hour traffic impacts at the study intersections. As established by the Cities of West Hollywood, Los Angeles, and Beverly Hills, significant impacts of a proposed project at study intersections are determined based on thresholds of significance for incremental impact and the level of service.

The levels of service for future conditions with Project traffic, and the potential project impacts, are discussed in Chapter 7 of this report.

2. Existing 2015 Conditions

This chapter documents the existing conditions in the study area. Per CEQA, existing conditions is established at the time the Notice of Preparation is issued. As such, Existing Conditions reflect Year 2015 conditions. The discussion presented here is limited to specific roadways in the project vicinity. Figure 3 depicts the lane configurations and traffic control at the study intersections.

2.1 Existing Roadway System

Major roadways within the study area include:

- Sunset Boulevard
- Santa Monica Boulevard
- Melrose Avenue
- Beverly Boulevard
- Burton Way
- Doheny Drive
- La Peer Drive
- Robertson Boulevard
- San Vicente Boulevard
- La Cienega Boulevard

Table 3 summarizes the characteristics of the major roadways.

Table 3: Study Area Roadway Descriptions

Roadway	Classification	# Lanes		Median Type	Parking Restrictions		Posted Speed Limit (mph)	General Land Use
		NB/ EB	SB/ WB		North Side / East Side	South Side / West Side		
North - South Streets								
Doheny Drive	Collector Street	1	1	TL	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	No Parking (Permit Only)	35	Residential/Commercial
Almont Drive	Local Street	1	1	NS	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	25	Commercial
La Peer Drive	Local Street	1	1	NS	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	25	Commercial
Robertson Boulevard	Collector Street	1	1	DY	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	30	Commercial
San Vicente Boulevard (n. of Santa Monica Blvd.)	Collector Street	2	2	DY	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	No Parking (9 PM - 7 AM)	35	Residential/Commercial
San Vicente Boulevard (s. of Santa Monica Blvd.)	Arterial Street	2	2	RM	No Parking	No Parking	35	Commercial
La Cienega Boulevard	Arterial Street	2	2	TL	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	30	Commercial
East - West Streets								
Sunset Boulevard	Arterial Street	2	2	TL	2 Hour 8 AM - 10 PM (M - Sat), 11 AM - 8 PM (Sun); 4 Hours (10 PM - 2 AM); NS 4 PM - 7 PM	2 Hour 8 AM - 10 PM (M - Sat), 11 AM - 8 PM (Sun); 4 Hours (10 PM - 2 AM); NS 4 PM - 7 PM	35	Commercial
Santa Monica Boulevard	Arterial Street	2	2	TL	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	35	Commercial
Melrose Avenue	Collector Street	1	1	DY	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	25	Commercial
Beverly Boulevard	Arterial Street	2	2	TL	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 11 AM - 8 PM (Sat)	30	Residential/Commercial
Burton Way	Secondary Highway	3	3	RM	No Limit	2/4 Hours 8 AM - 6 PM	35	Residential/Commercial

DY - Double Yellow
RM - Raised Median
TL - Center Turn Lane
ST - Striped
NSAT - No Stopping Any Time
NS - No Stopping

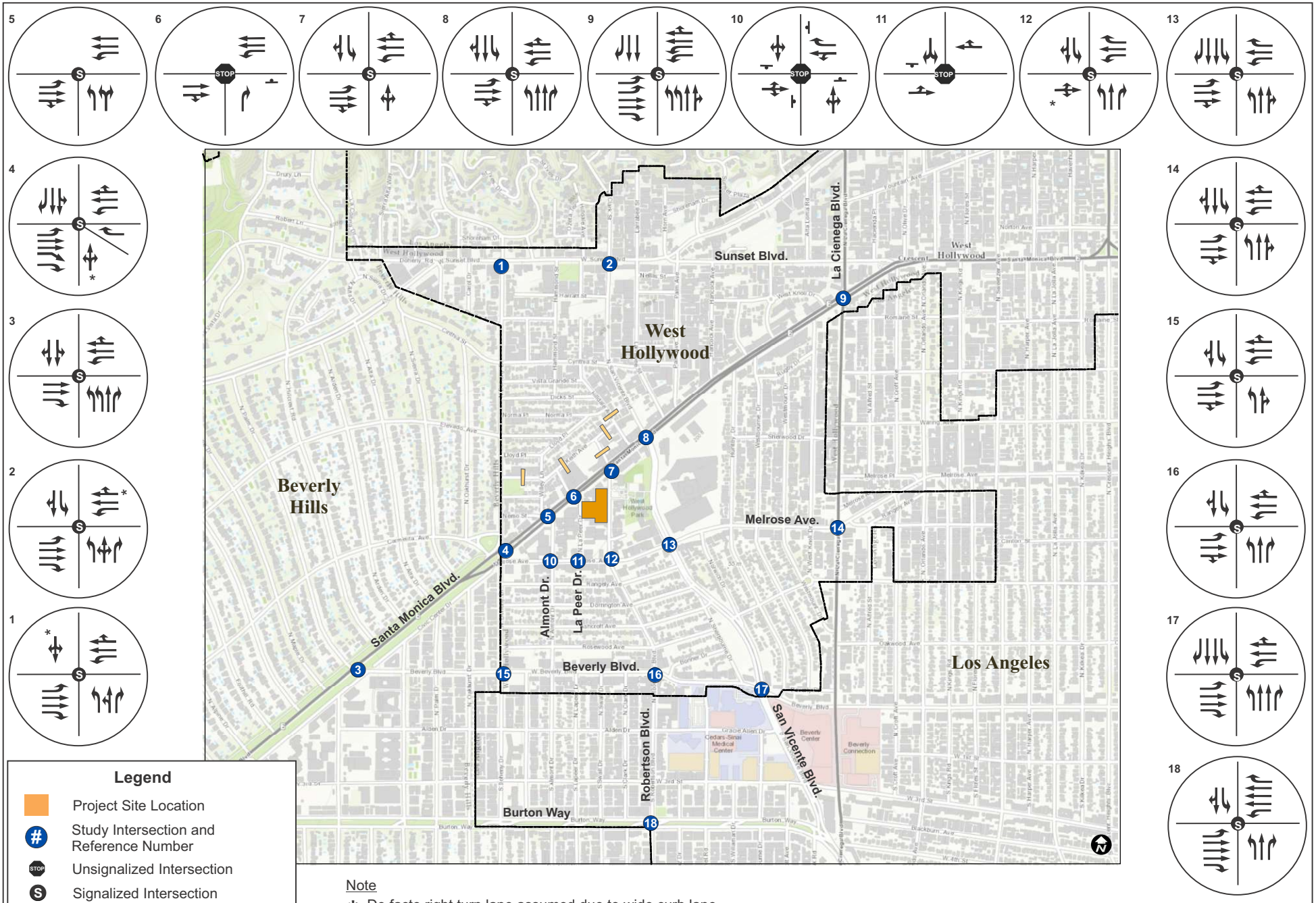
2.2 Existing Transit Service

As summarized in Table 4, the Project study area is served by bus transit lines operated by the City of West Hollywood, the Los Angeles County Metropolitan Transportation Authority (Metro), and the City of Los Angeles (LADOT - DASH).

Figure 4 illustrates the routes of the transit services that serve the Project study area.

Table 4: Transit Service

Agency	Line	From	To	Via	Peak Frequency
Metro	4	Downtown Los Angeles	Santa Monica	Santa Monica Boulevard	9 - 12 Minutes
Metro	10	Downtown Los Angeles	West Hollywood	Melrose Boulevard	8 - 15 Minutes
Metro	14	Downtown Los Angeles	Beverly Hills	Beverly Boulevard	5 - 8 Minutes
Metro	220	Beverly Center	Culver City	Robertson Boulevard	60 Minutes
Metro	30/330	Downtown Los Angeles	West Hollywood	San Vicente Boulevard / Pico Boulevard	6 - 12 Minutes
Metro	704	Downtown Los Angeles	Santa Monica	Santa Monica Boulevard	10 - 15 Minutes
West Hollywood	CityLine Blue / Orange	Neighborhood Shuttle		Santa Monica Boulevard / San Vicente Boulevard	30 Minutes



Note

* De facto right turn lane assumed due to wide curb lane

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Figure 3

Existing Intersection Lane Configuration

Source: Metro, 2015

2.3 Existing Traffic Volumes

KOA compiled new manual intersection turn movement and machine roadway segment counts. These counts were collected on March 18, 2015 (Wednesday). The turning movement counts were collected during the morning (7-9 AM), midday (11 AM-1 PM) and evening (4-7 PM) periods. The machine counts were collected for 24 hours on the same day.

Traffic count summaries are provided in Appendix A of this report.

2.4 Existing Intersection Levels of Service

Based on the traffic count data conducted at the study area intersections, a volume-to-capacity (V/C) ratio or average vehicle delay and corresponding level of service (LOS) was determined for all of the study area intersections under weekday morning, midday and evening peak hours. The V/C or delay and LOS was determined per the jurisdiction intersection methodology.

Based on information provided by LADOT, the signalized study intersection of Robertson Boulevard & Burton Way is currently equipped with Automated Traffic Surveillance And Control (ATSAC) and Adaptive Traffic Control System (ATCS).

The analysis of the study intersection under the jurisdiction of LADOT included an overall volume-to-capacity reduction of 0.1 to reflect the ATSAC and ATCS enhancements.

Table 5 provides the volume/capacity ratios or delay and LOS values for existing conditions.

Table 5: Existing 2015 Level of Service Summary

Study Intersections		AM Peak		Mid-Day		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Doheny Drive & Sunset Boulevard	27.6	C	29.6	C	46.2	D
2	San Vicente Boulevard & Sunset Boulevard	33.7	C	21.2	C	69.6	**E**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	115.9	**F**	77.1	**E**	78.2	**E**
5	Almont Drive & Santa Monica Boulevard	11.1	B	13.4	B	15.5	B
6	La Peer Drive & Santa Monica Boulevard *	0.4	A	0.7	A	0.6	A
7	Robertson Boulevard & Santa Monica Boulevard	25.8	C	24.4	C	53.3	D
8	San Vicente Boulevard & Santa Monica Boulevard	31.5	C	22.9	C	32.0	C
9	La Cienega Boulevard & Santa Monica Boulevard	50.1	D	39.1	D	44.9	D
10	Almont Drive & Melrose Avenue *	10.6	B	12.2	B	21.7	C
11	La Peer Drive & Melrose Avenue *	1.3	A	1.8	A	1.6	A
12	Robertson Boulevard & Melrose Avenue	19.6	B	17.2	B	23.5	C
13	San Vicente Boulevard & Melrose Avenue	30.2	C	16.5	B	21.5	C
14	La Cienega Boulevard & Melrose Avenue	84.5	**F**	48.9	D	83.3	**F**
15	Doheny Drive & Beverly Boulevard (A)	53.7	D	36.8	D	53.1	D
16	Robertson Boulevard & Beverly Boulevard	38.6	D	26.7	C	24.0	C
17	San Vicente Boulevard & Beverly Boulevard	26.3	C	24.5	C	28.2	C
City of Beverly Hills							
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	0.919	**E**	-	-	0.975	**E**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	1.006	**F**	-	-	0.941	**E**
15	Doheny Drive & Beverly Boulevard (A)	1.022	**F**	-	-	1.030	**F**
18	Robertson Boulevard & Burton Way (A)	0.992	**E**	-	-	0.926	**E**
City of Los Angeles							
18	Robertson Boulevard & Burton Way (A)	0.725	C	-	-	0.692	B

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

** Unsignalized Intersection*

(A) Shared Intersection

The results in Table 5 indicate that 12 of the 18 study intersections operate at good levels of service (LOS D or better) under existing 2015 conditions. The following intersections operate at poor LOS values of E or F during at least one of the peak hours:

- San Vicente Boulevard & Sunset Boulevard (PM peak hour)
- Doheny Drive & Santa Monica Boulevard (AM, midday, and PM peak hours)
- La Cienega Boulevard & Melrose Avenue (AM and PM peak hours)
- Palm Drive/Beverly Boulevard & Santa Monica Boulevard (AM and PM peak hours)
- Doheny Drive & Beverly Boulevard (AM and PM peak hours)
- Robertson Boulevard & Burton Way (AM and PM peak hours)

The existing 2015 AM, midday, and PM peak-hour turn movement volumes at the study intersections are provided in Figures 5, 6, and 7, respectively. Existing level of service worksheets are provided in Appendix B.

2.5 Existing Street Segment Volumes

Table 6 summarizes the five street segments where 24-hour automatic (machine) traffic counts were conducted. These streets were chosen for specific review as they primarily serve the residential areas surrounding the Project site.

Figure 8 illustrates the locations of the study street segments and existing weekday daily traffic volumes on these facilities.

Table 6: Existing 2015 Daily Traffic Volumes on Study Street Segments

Segment			No. of Lanes	Existing Daily Traffic Volumes
1	Hilldale Avenue	Between Norma Place & Keith Avenue	2	3,239
2	Keith Avenue	Between Doheny Drive & Willey Lane	2	2,010
3	Keith Avenue	Ramage Street & Robertson Boulevard	2	3,768
4	Keith Avenue	Robertson Boulevard & Hilldale Avenue	2	3,860
5	Robertson Boulevard	Keith Avenue & Santa Monica Boulevard	2	5,058

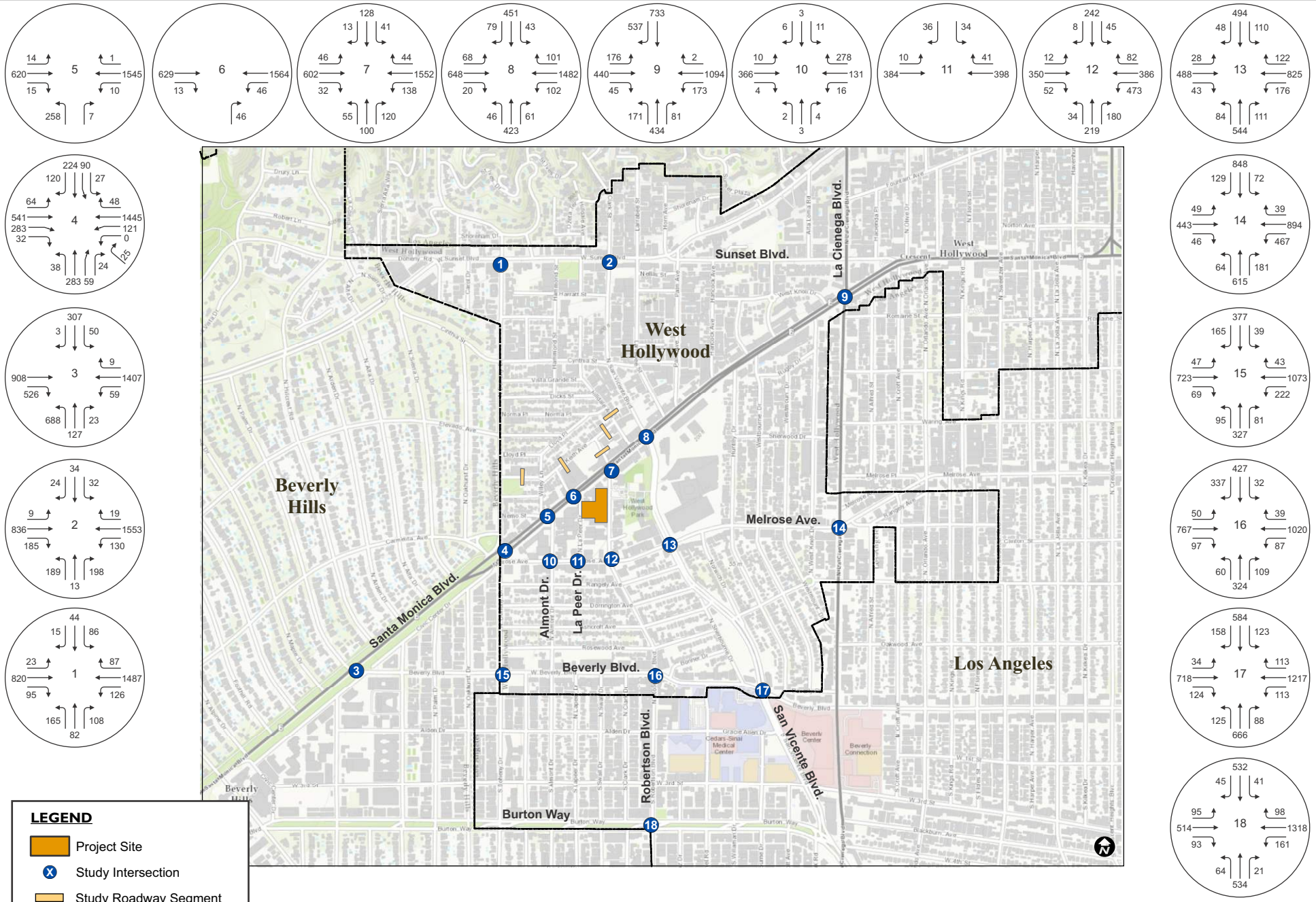

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Figure 5

Existing 2015 Weekday AM Peak Hour Traffic Volumes

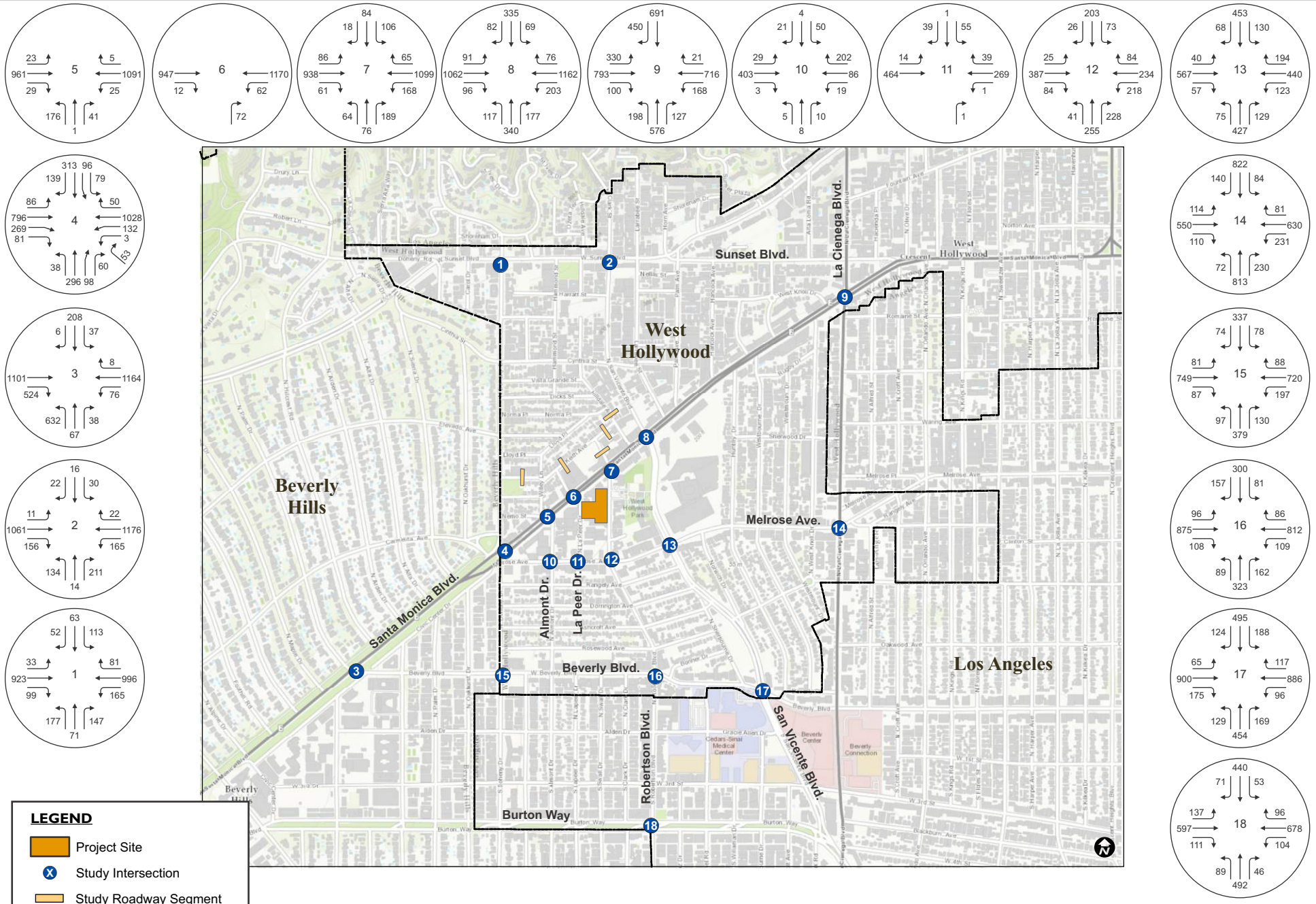

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Figure 6

Existing 2015 Weekday Midday Peak Hour Traffic Volumes

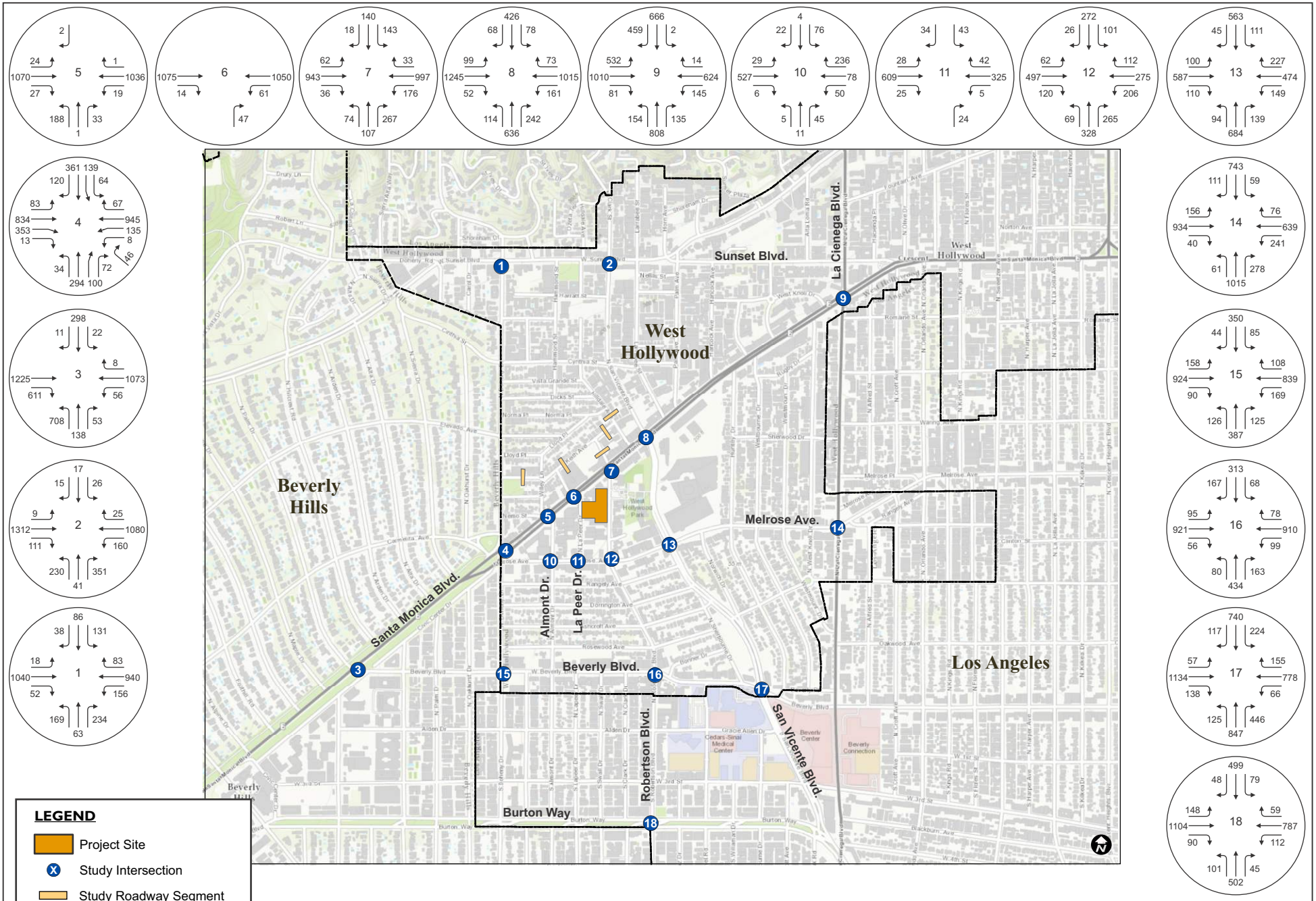

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Figure 7

Existing 2015 Weekday PM Peak Hour Traffic Volumes

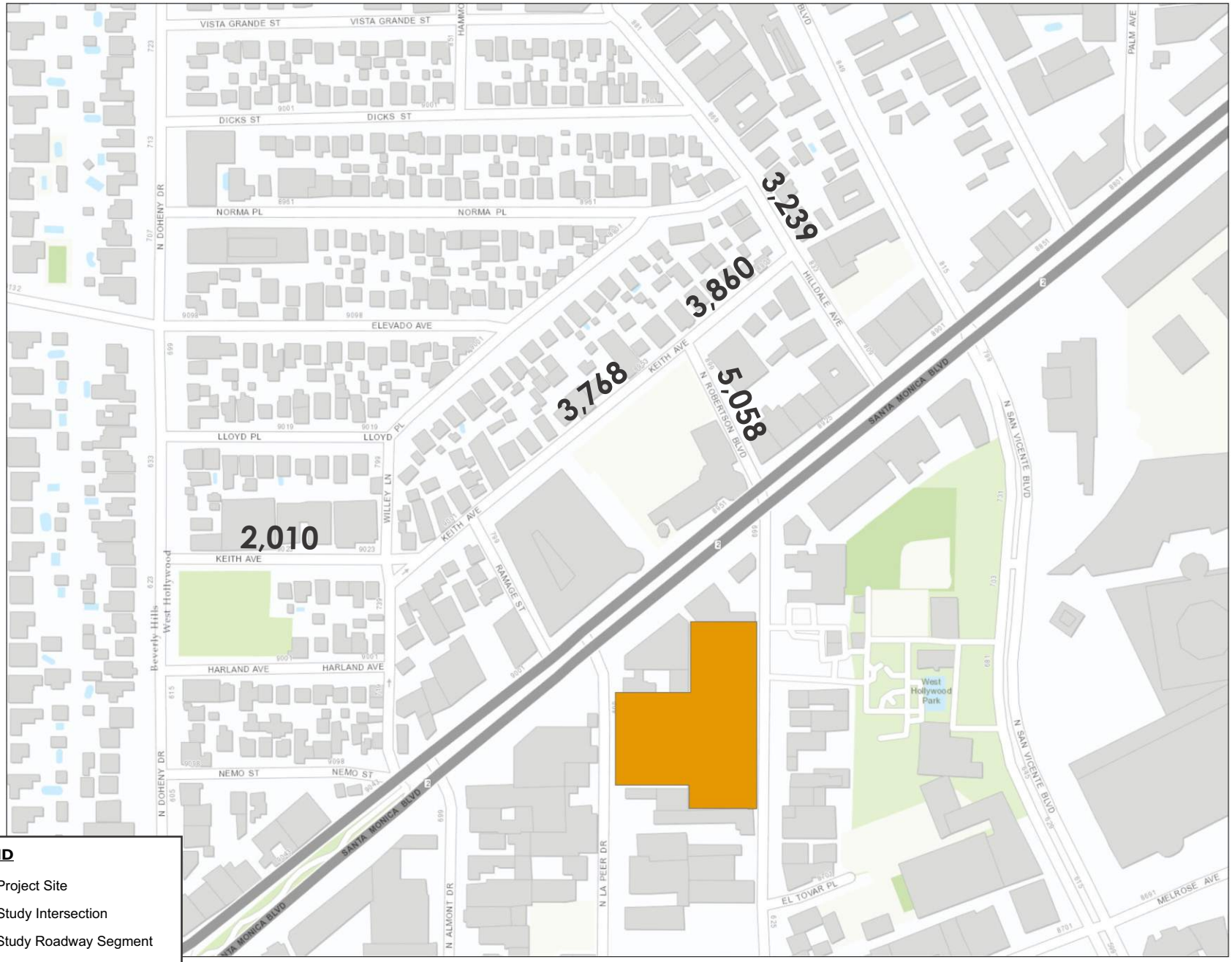

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Figure 8

Existing 2015 Weekday Street Segment Daily Volumes

3. Project Traffic

This section defines the estimated traffic generated by the proposed Project in a three-step process including trip generation, trip distribution, and trip assignment.

3.1 Project Trip Generation

The proposed Project would replace existing retail and nightclub uses with the following proposed uses:

- Restaurant – 22,615 square feet (public restaurant uses were used)
- Specialty Retail – 18,130 square feet (public retail uses were used)
- Wholesale Design Showroom – 10,325 square feet
- Nightclub – 3,780 square feet
- Hotel – 241 rooms (which includes associated amenities such as retail, restaurants, meeting rooms, gyms, spas, and pools)

Traffic volumes that are expected to be generated by the Project during the weekday a.m., midday, and p.m. peak hours and daily periods were estimated based on trip rates defined in the Institute of Transportation Engineers *Trip Generation (9th Edition)*. San Diego Association of Governments (SANDAG) *Traffic Generators* rates were also used where applicable. Vehicle trips generated by existing uses that are currently active were applied to the gross trip generation estimates as trip credits. The trip rates and the traffic generation forecast for the proposed project are provided in Table 7.

Table 7: Project Trip Generation Estimates

Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak			Midday Peak			PM Peak		
					Total	In	Out	Total	In	Out	Total	In	Out
Trip Generation Rates													
Quality Restaurant [1]	931	-	-	89.95	0.81	82%	18%	5.57	82%	18%	7.49	67%	33%
Specialty Retail [2]	826	-	-	44.32	1.33	60%	40%	5.02	56%	44%	2.71	44%	56%
Design Showroom	890	-	-	5.06	0.17	69%	31%	0.53	50%	50%	0.45	48%	52%
Gym	492	-	-	32.93	1.41	50%	50%	1.41	50%	50%	3.53	57%	43%
Hotel	310	-	-	8.17	0.53	59%	41%	0.61	58%	42%	0.60	51%	49%
Nightclub [3]	925	-	-	136.20	-	-	-	-	-	-	11.34	66%	34%
Proposed Project Trip Generation Estimates													
Quality Restaurant	931	8.845	k.s.f	796	7	5	2	49	40	9	66	44	22
Rooftop Restaurant	931	13.770	k.s.f	1,239	-	-	-	-	-	-	103	69	34
Specialty Retail	826	18.130	k.s.f	803	24	14	10	91	51	40	49	22	27
Design Showroom	890	10.325	k.s.f	52	2	1	1	5	3	2	4	2	2
Hotel	310	241	rooms	1,969	128	75	53	147	85	62	145	74	71
Nightclub	925	3.780	k.s.f	515	-	-	-	-	-	-	43	28	15
Proposed Project Subtotal				5,373	161	96	65	292	179	113	411	239	172
Former Use Trip Credit													
Retail	826	5.802	k.s.f	-257	-8	-5	-3	-29	-16	-13	-16	-7	-9
Gym	492	12.950	k.s.f	-426	-18	-9	-9	-18	-9	-9	-46	-26	-20
Restaurant	931	6.764	k.s.f	-608	-5	-4	-1	-38	-31	-7	-51	-34	-17
Design Showroom	890	10.325	k.s.f	-52	-2	-1	-1	-5	-3	-2	-5	-2	-3
Nightclub	925	12.040	k.s.f	-1,640	-	-	-	-	-	-	-137	-90	-46
Former Use Trip Credit				-2,983	-33	-19	-14	-90	-59	-31	-254	-159	-95
Total				**2,390**	**128**	**77**	**51**	**202**	**120**	**82**	**157**	**80**	**77**

Trip generation rates based on ITE Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012, unless otherwise noted. Midday Peak rates from Peak Hour of Generator.

1. Quality Restaurant AM In/Out ratio from AM Peak Hour of Generator.

2. AM Peak Hour retail rates from San Diego Traffic Generators (2002).

3. Daily rate for Nightclub taken from ratio of ITE 931 between Daily and PM rates.

The Project is estimated to gross 5,373 weekday daily trips, including 161 weekday AM peak-hour trips, 292 weekday midday peak-hour trips, and 411 weekday PM peak-hour trips. Taking into consideration existing uses that would be removed, the Project is estimated to generate a net total of 2,390 weekday daily trips including 128 weekday AM peak-hour trips, 202 weekday midday peak-hour trips and 157 weekday PM peak-hour trips.

3.2 Project Trip Distribution

Trip distribution is the process of assigning the trips by direction to and from a project site. Trip distribution is dependent upon the land use characteristics of the project and the general locations of land uses to which project trips would originate or terminate. Project trip distribution was based on the general geographic distribution of population and employment from which the project trips would originate or terminate as well as development trends in the area, local and sub-regional traffic routes, and regional traffic flows.

Figure 9 illustrates the intersection trip distribution percentages for the proposed Project during the peak hour study periods.

3.3 Project Trip Assignment

The final product is the trip assignment process, which takes a full accounting of project trips by direction and turning movement at the study intersections.

Figures 10, 11, and 12 illustrate the project trip assignment to the study intersections for the weekday AM, midday and PM peak hours, respectively. Figure 13 provides the project trip assignment on the study street segments.

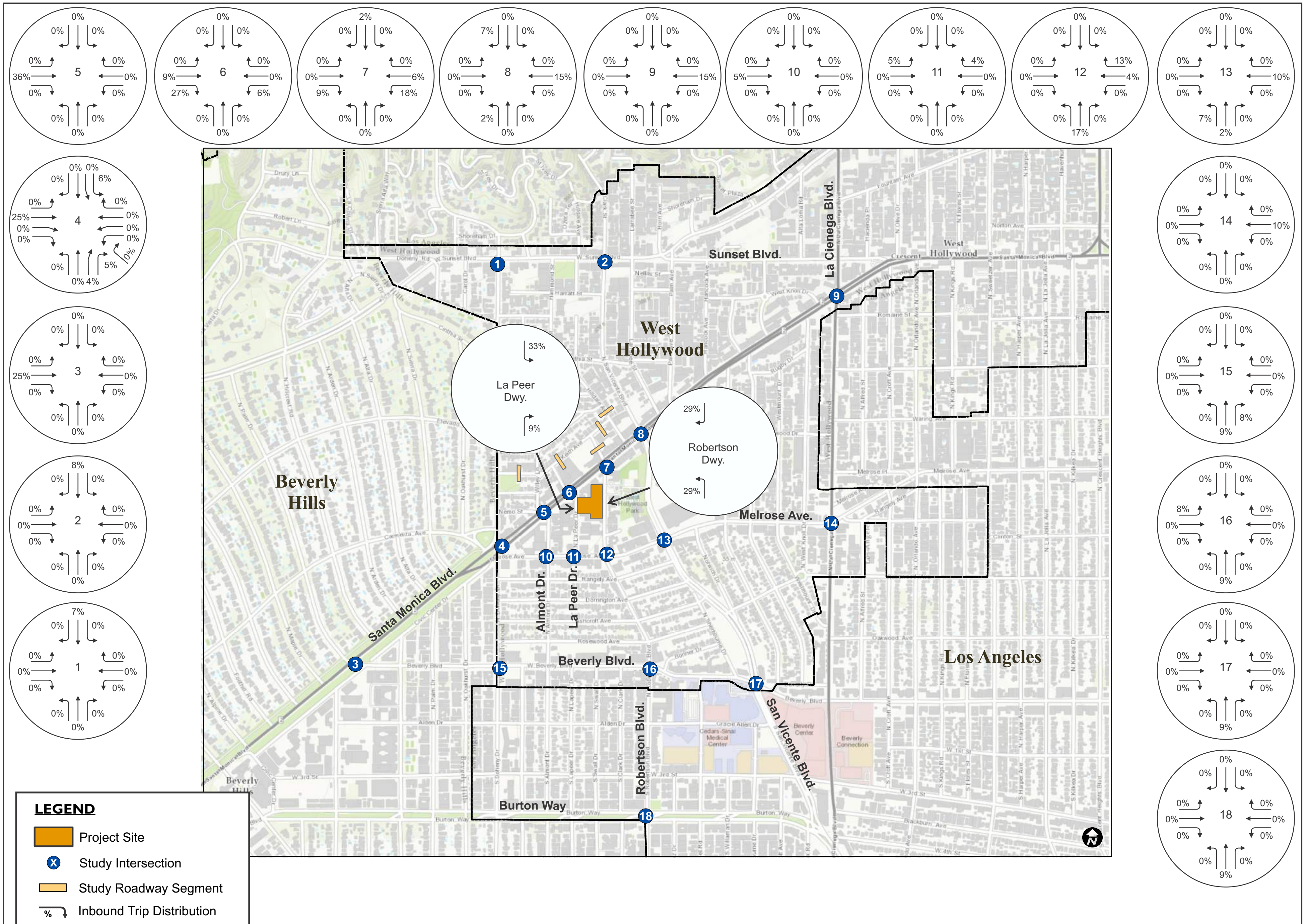

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Figure 9A

Project Trip Distribution - Inbound Trips

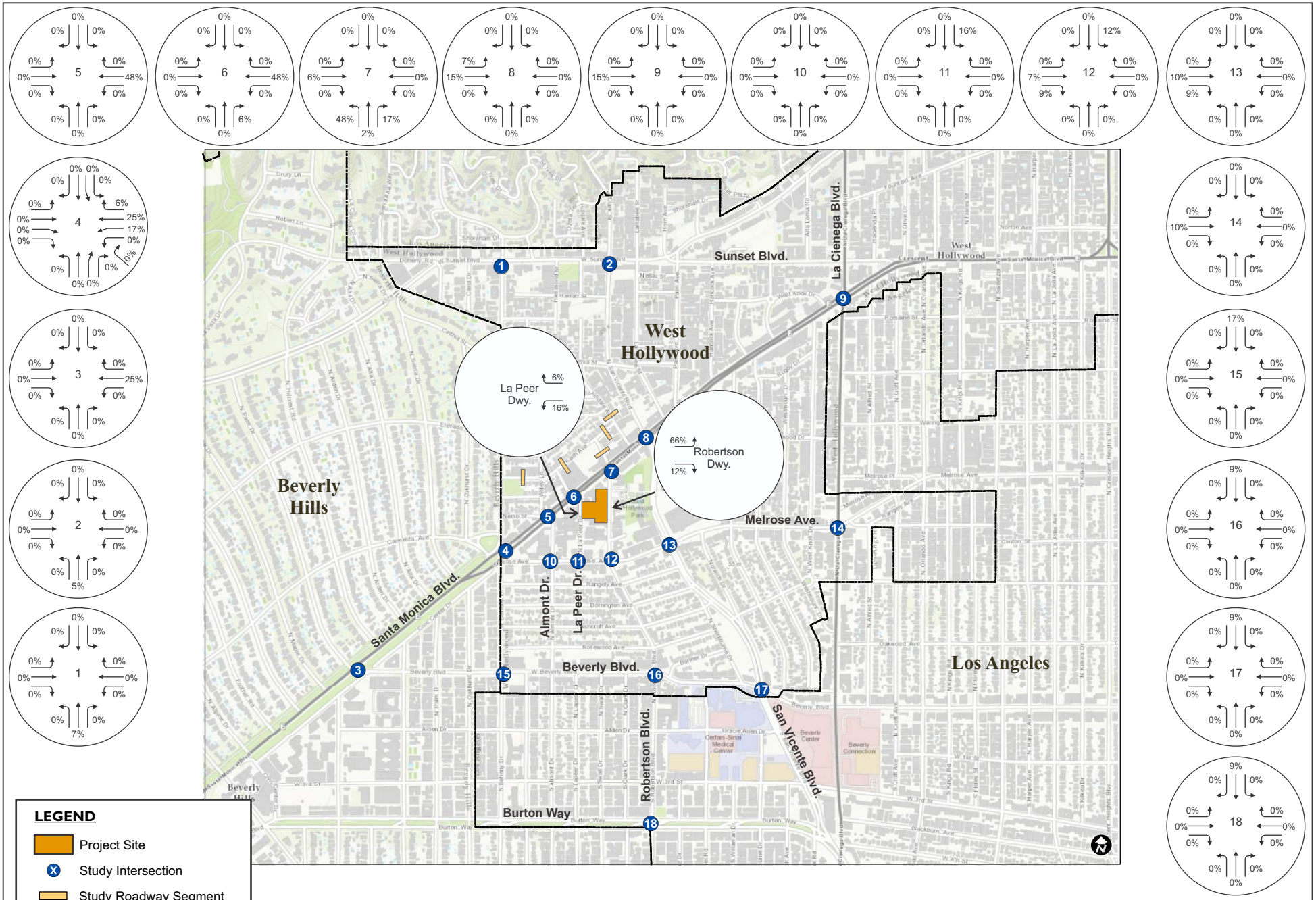

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Figure 9B

Project Trip Distribution - Outbound Trips

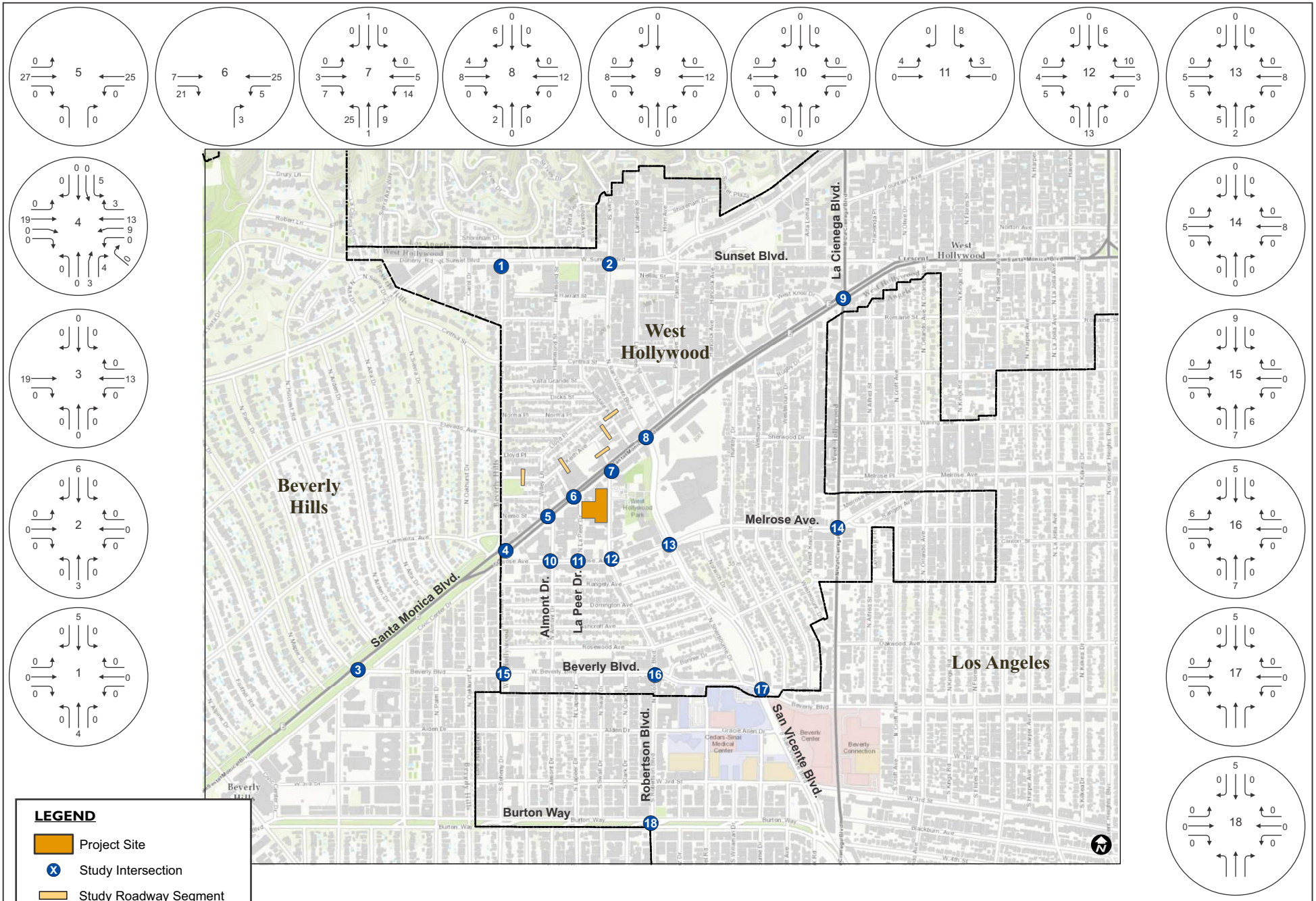

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Figure 10

Weekday AM Peak Hour Project Only Traffic Volumes

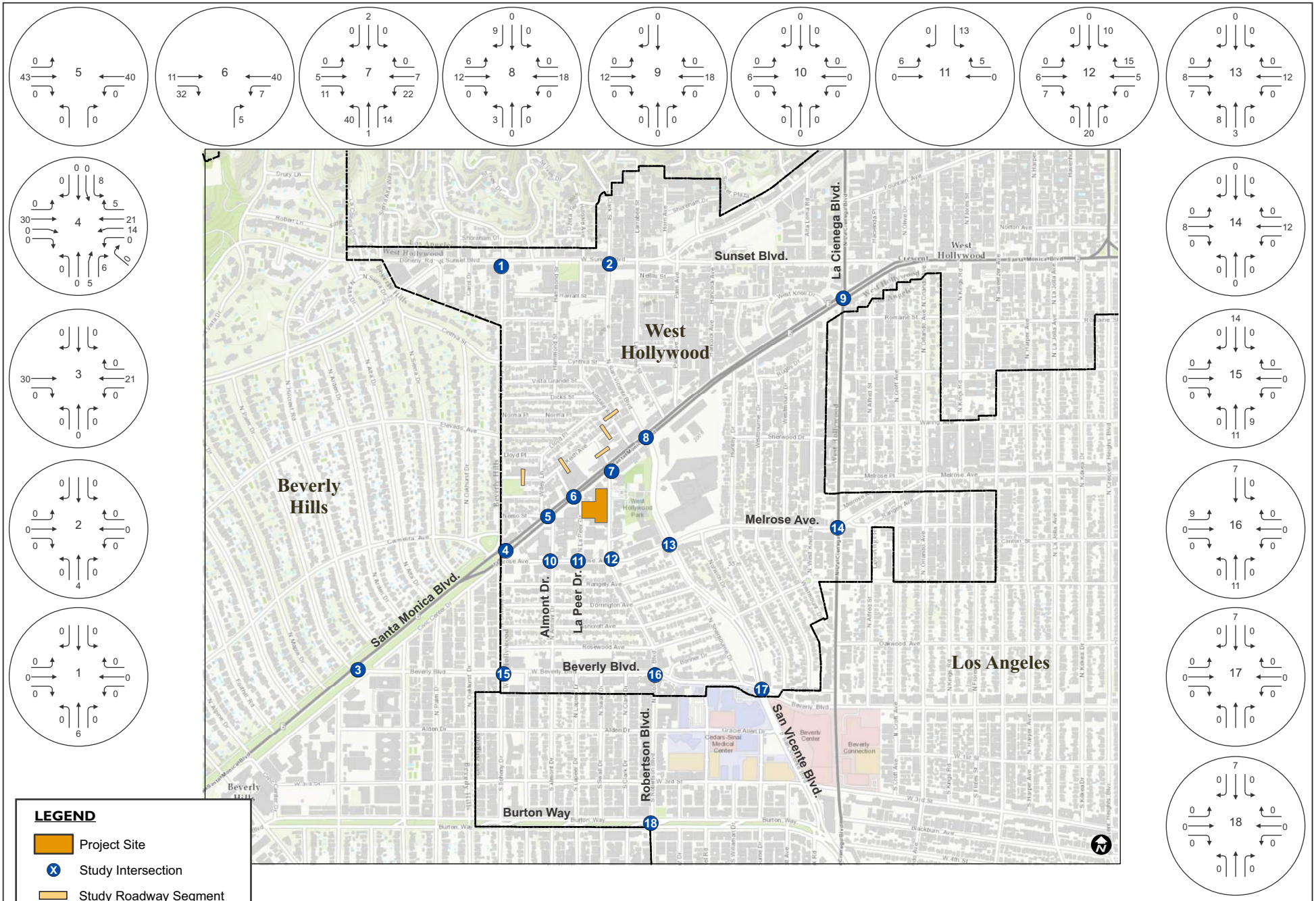

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Figure 11

Weekday Midday Peak Hour Project Only Traffic Volumes

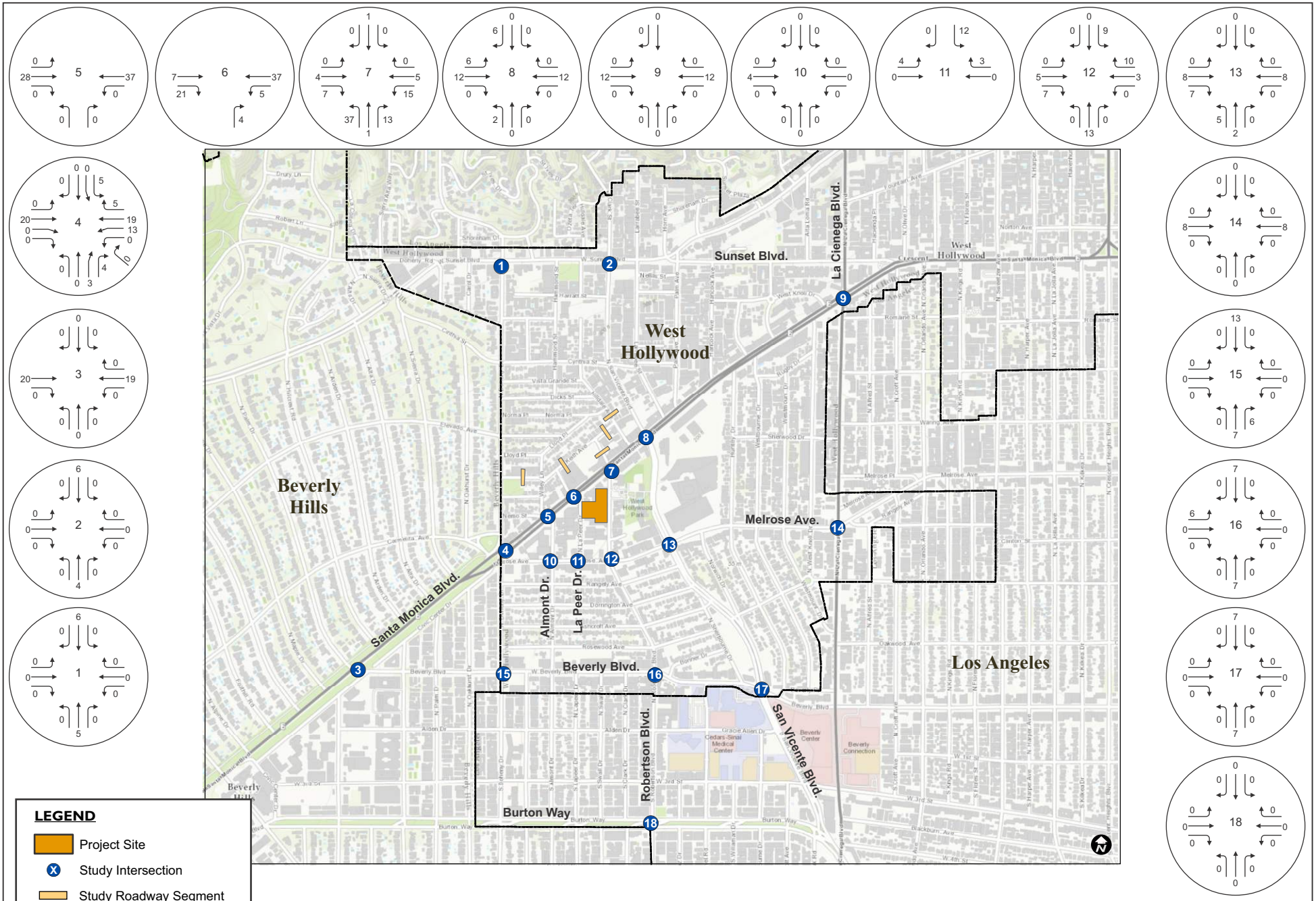

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Figure 12

Weekday PM Peak Hour Project Only Traffic Volumes

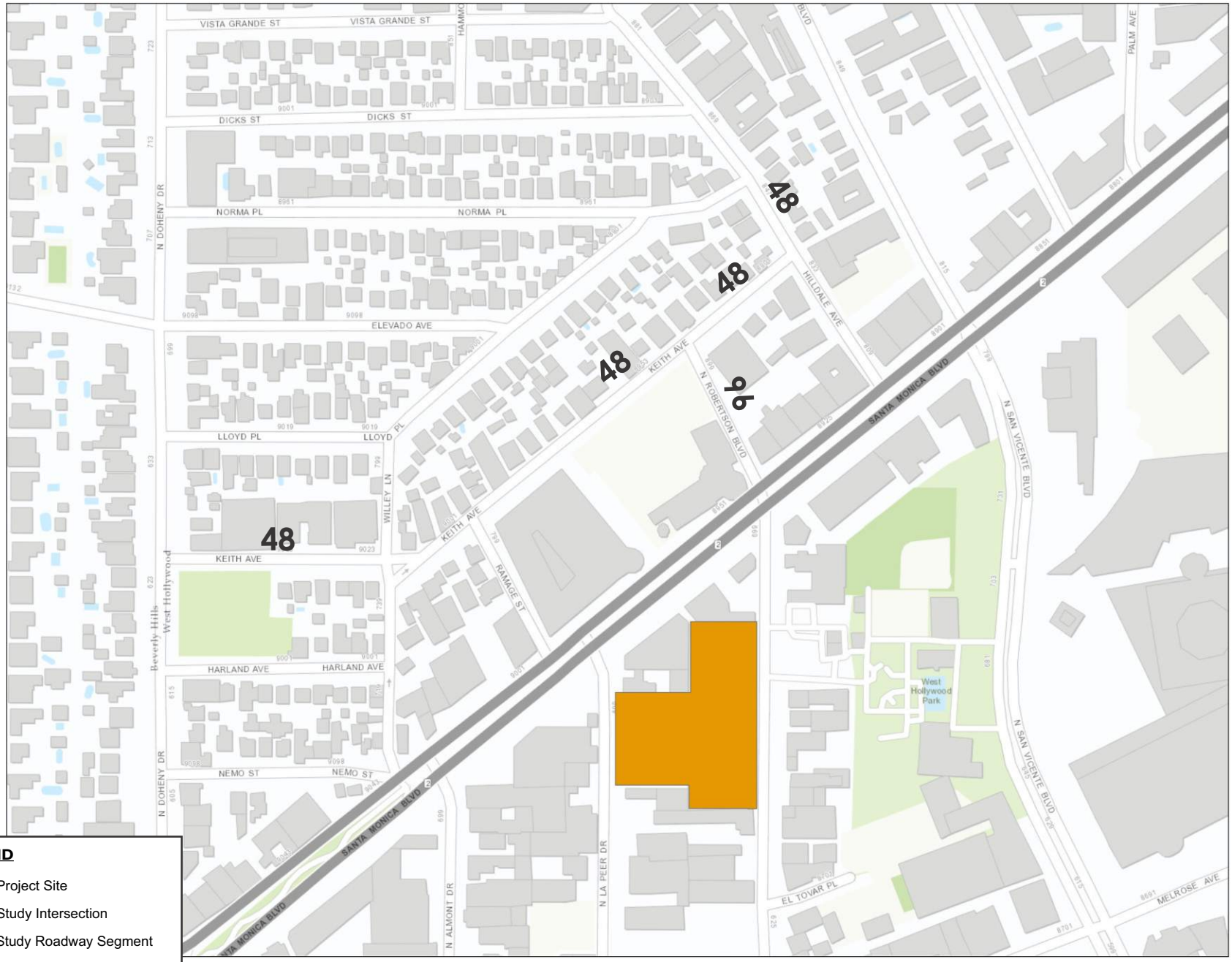

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Figure 13

Project Only Street Segment Daily Traffic Volumes

4. Existing Plus Project Conditions

This section documents existing traffic conditions at the study intersections and street segments with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the existing traffic volumes.

4.1 Peak Hour Intersection Level of Service

Table 8 summarizes the level of service values for this scenario at the study intersections.

Table 8: Existing Plus Project Level of Service Summary

	Study Intersections	AM Peak		Mid-Day		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Doheny Drive & Sunset Boulevard	28.4	C	30.8	C	47.7	D
2	San Vicente Boulevard & Sunset Boulevard	34.4	C	21.3	C	72.0	**E**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	118.9	**F**	80.6	**F**	81.4	**F**
5	Almont Drive & Santa Monica Boulevard	11.1	B	13.6	B	15.5	B
6	La Peer Drive & Santa Monica Boulevard *	0.4	A	0.8	A	0.7	A
7	Robertson Boulevard & Santa Monica Boulevard	30.2	C	30.0	C	76.5	**E**
8	San Vicente Boulevard & Santa Monica Boulevard	32.2	C	23.3	C	32.1	C
9	La Cienega Boulevard & Santa Monica Boulevard	50.7	D	39.6	D	45.3	D
10	Almont Drive & Melrose Avenue *	10.7	B	12.3	B	22.1	C
11	La Peer Drive & Melrose Avenue *	1.5	A	2.2	A	2.0	A
12	Robertson Boulevard & Melrose Avenue	19.9	B	17.3	B	24.9	C
13	San Vicente Boulevard & Melrose Avenue	30.8	C	16.6	B	21.6	C
14	La Cienega Boulevard & Melrose Avenue	85.4	**F**	49.6	D	84.6	**F**
15	Doheny Drive & Beverly Boulevard (A)	55.2	**E**	39.0	D	54.0	D
16	Robertson Boulevard & Beverly Boulevard	39.2	D	26.8	C	24.1	C
17	San Vicente Boulevard & Beverly Boulevard	26.4	C	24.5	C	28.5	C
City of Beverly Hills							
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	0.923	**E**	-	-	0.982	**E**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	1.013	**F**	-	-	0.951	**E**
15	Doheny Drive & Beverly Boulevard (A)	1.027	**F**	-	-	1.038	**F**
18	Robertson Boulevard & Burton Way (A)	0.995	**E**	-	-	0.930	**E**
City of Los Angeles							
18	Robertson Boulevard & Burton Way (A)	0.728	C	-	-	0.696	B

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

** Unsignalized Intersection*

(A) Shared Intersection

Under Existing Plus Project conditions, seven study intersections would operate under LOS E or F conditions.

- San Vicente Boulevard & Sunset Boulevard (PM peak hour)
- Doheny Drive & Santa Monica Boulevard (AM, midday, and PM peak hours)

- Robertson Boulevard & Santa Monica Boulevard (PM peak hour)
- La Cienega Boulevard & Melrose Avenue (AM and PM peak hours)
- Palm Drive/Beverly Boulevard & Santa Monica Boulevard (AM and PM peak hours)
- Doheny Drive & Beverly Boulevard (AM and PM peak hours)
- Robertson Boulevard & Burton Way (AM and PM peak hours)

The remaining 11 intersections would continue to operate at LOS D or better. The traffic analysis worksheets for this scenario are included in Appendix C of this report.

Figures 14, 15, and 16 illustrate the Existing Plus Project traffic volumes for the weekday AM, midday, and PM peak hour intersection traffic volumes, respectively.

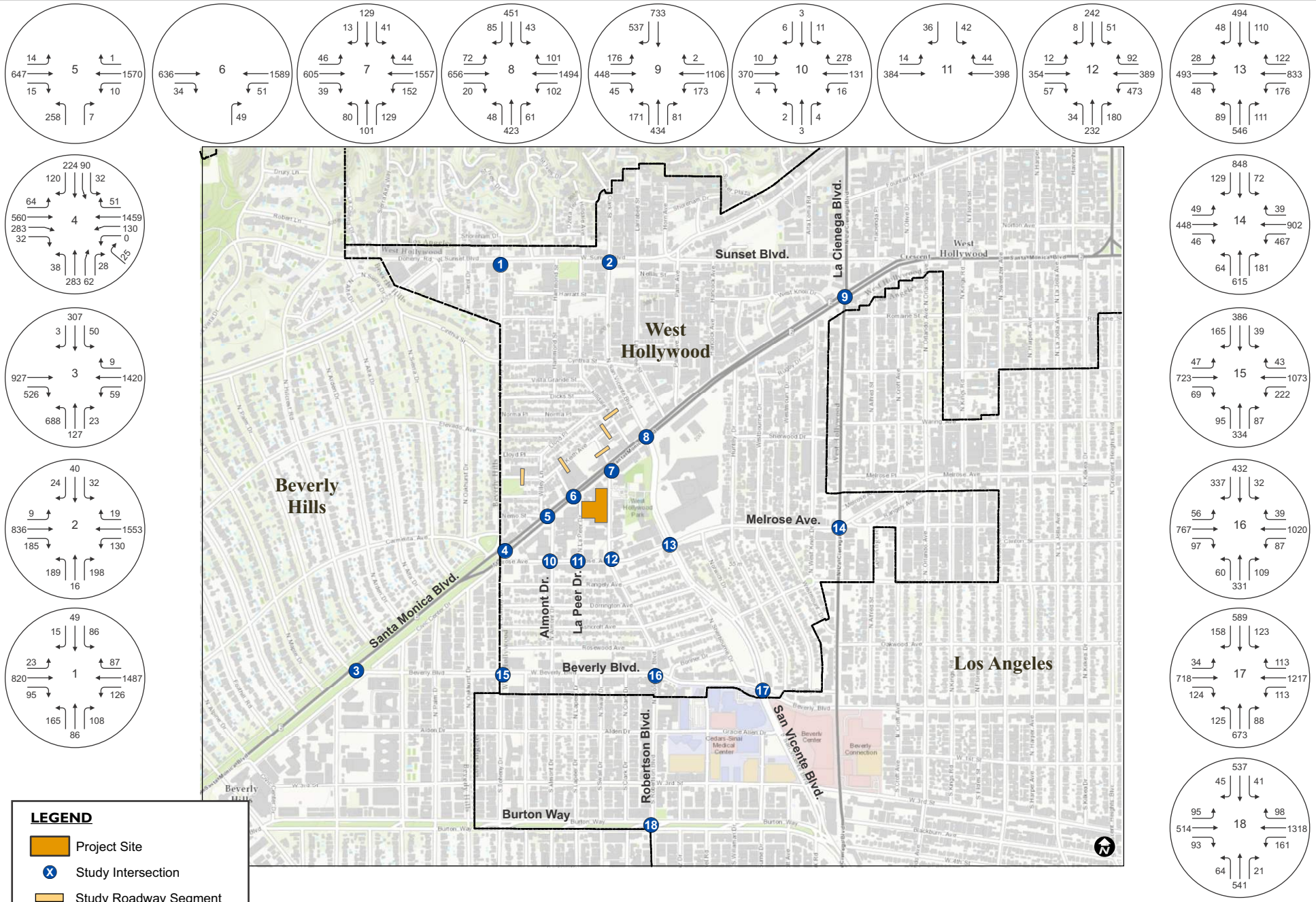

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Figure 14

Existing Plus Project Weekday AM Peak-Hour Traffic Volumes

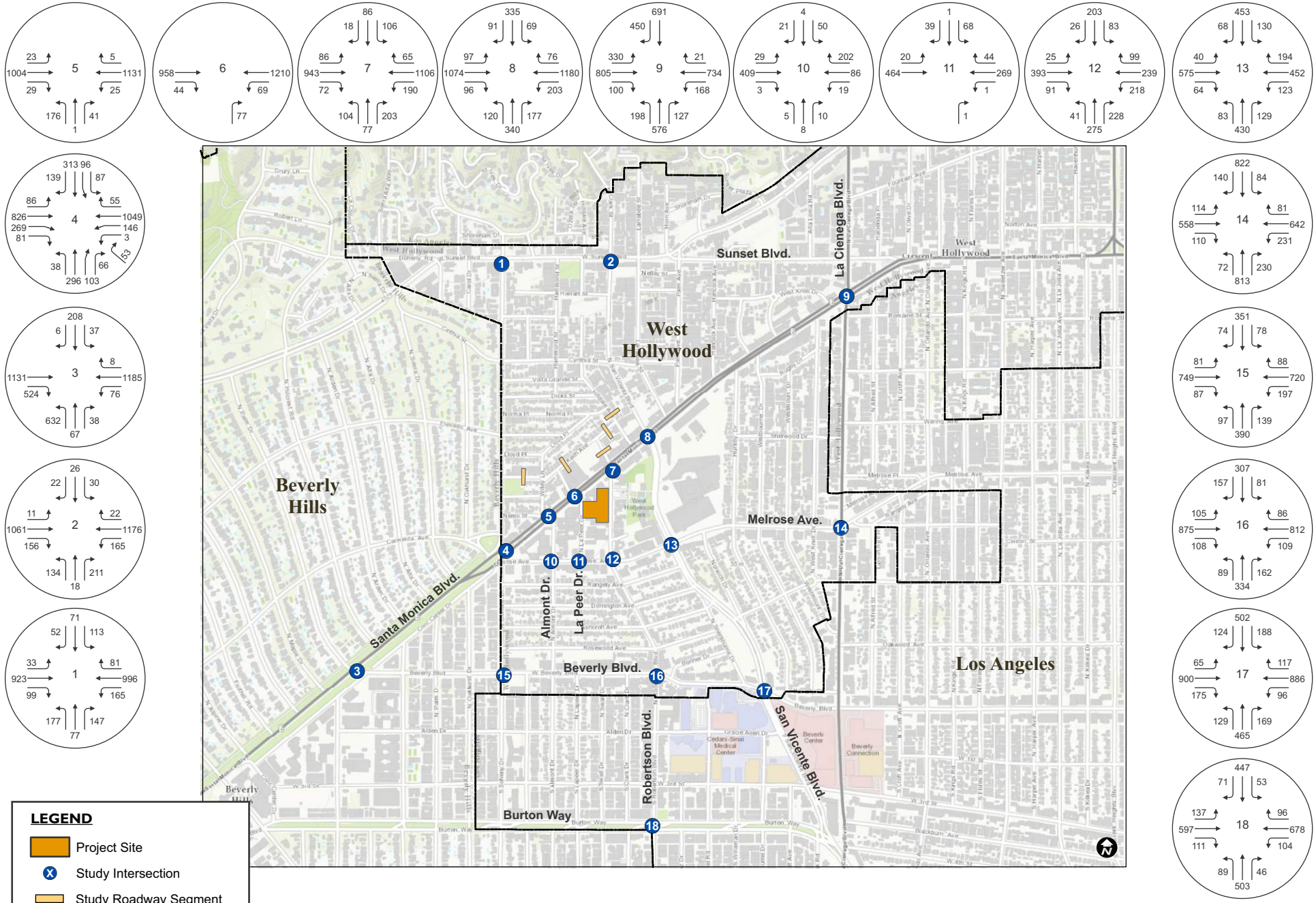

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Figure 15

Existing Plus Project Weekday Midday Peak-Hour Traffic Volumes

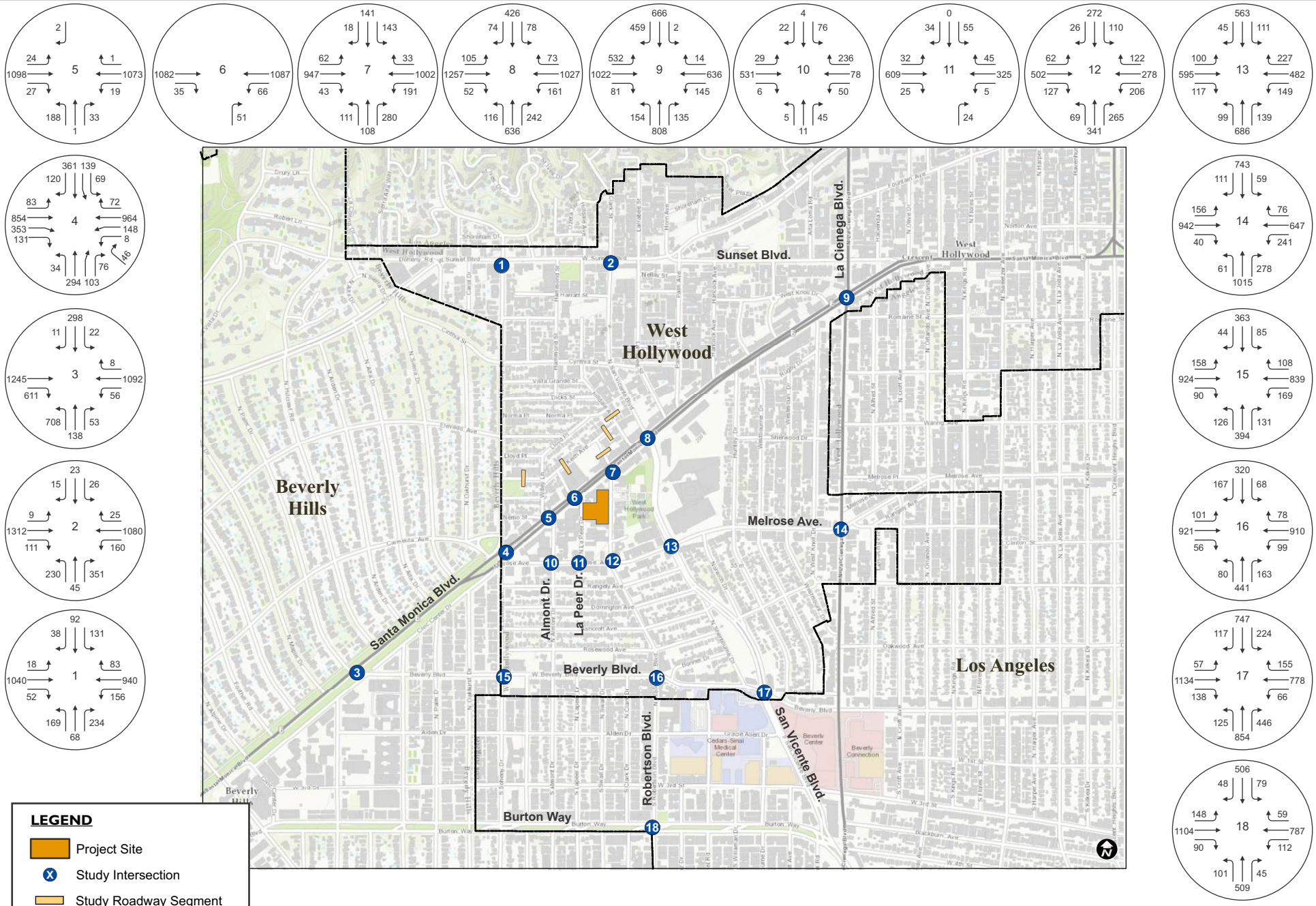

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Figure 16

Existing Plus Project Weekday PM Peak-Hour Traffic Volumes

4.2 Existing Plus Project Street Segment Traffic Volumes

In addition to intersection level of service analysis, the impacts of the project on the surrounding neighborhood streets were analyzed. Project traffic assigned on the surrounding residential street segments were added to existing conditions.

Table 9 summarizes the Existing Plus Project conditions on the five study street segments.

Table 9: Existing Plus Project Daily Traffic Volumes On Study Street Segments

Segment			Existing Daily Traffic Volumes	Project Only	Existing w/ Project Daily Traffic Volumes
1	Hilldale Avenue	Between Norma Place & Keith Avenue	3,239	48	3,287
2	Keith Avenue	Between Doheny Drive & Willey Lane	2,010	48	2,058
3	Keith Avenue	Ramage Street & Robertson Boulevard	3,768	48	3,816
4	Keith Avenue	Robertson Boulevard & Hilldale Avenue	3,860	48	3,908
5	Robertson Boulevard	Keith Avenue & Santa Monica Boulevard	5,058	96	5,154

Figure 17 provides the ADT volumes on the study street segments for this scenario.

Determinations of significant traffic impacts created by the Project are discussed in Chapter 7 of this report.

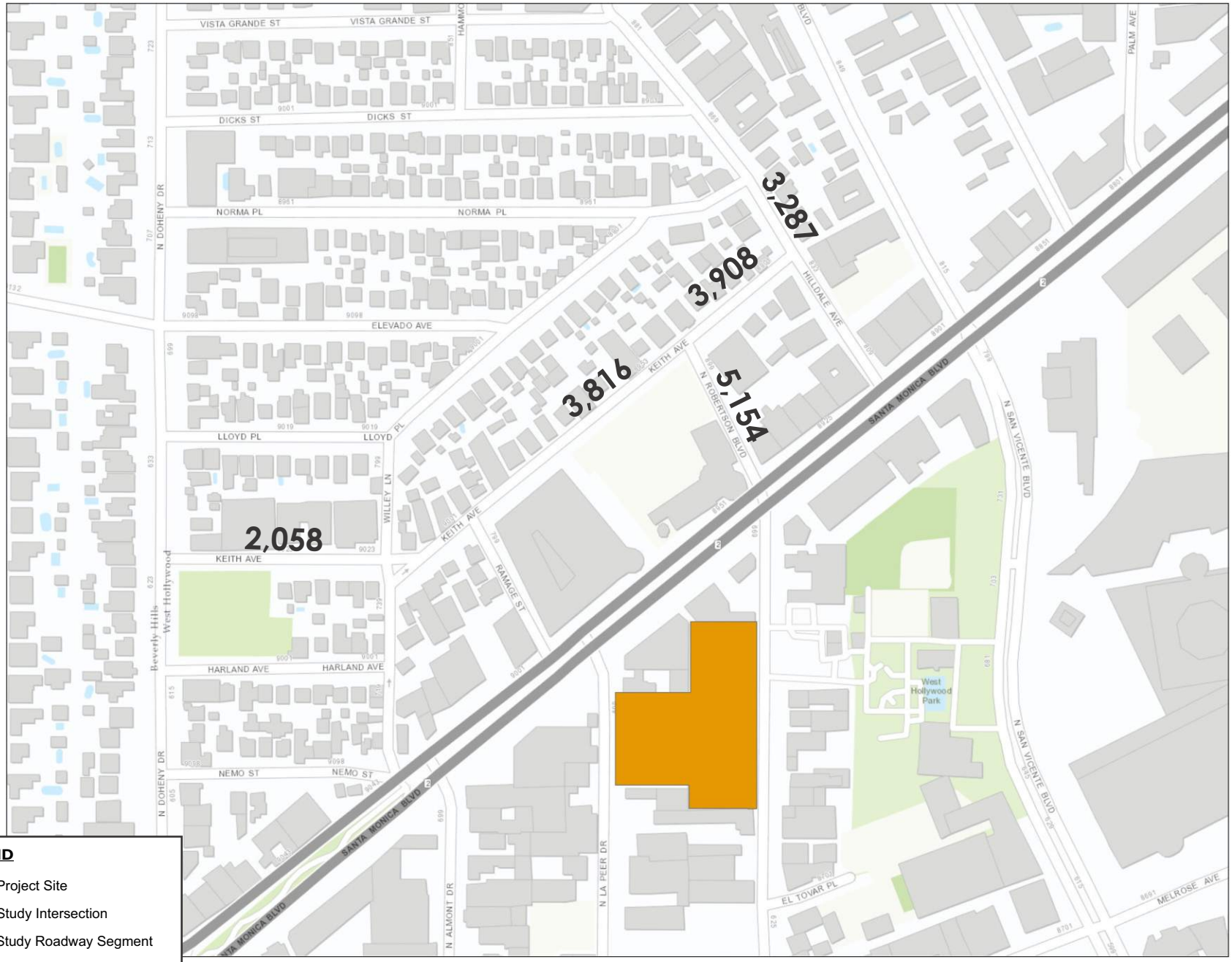

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Figure 17

Existing Plus Project Street Segment Daily Traffic Volumes

5. Future 2019 without-Project Conditions

This section provides an analysis of future traffic conditions in the study area with ambient growth and related area projects added but without the proposed Project. The year 2019 was selected for analysis based on the anticipated completion date of the Project. The without-Project scenario provides the basis upon which Project impacts are measured against.

5.1 Ambient Growth

For the analysis of background traffic during the Project opening year, an annual traffic growth rate of 1% was utilized to account for increase in area-wide traffic. This annual growth rate was confirmed with City of West Hollywood staff.

To apply this ambient growth rate to existing (year 2015) volumes, a growth factor of 1.04 was utilized. This factor provides a compounded 1% annual increase over the four-year period between existing conditions and future (year 2019) conditions.

5.2 Related Projects

Based on data provided by West Hollywood and the surrounding cities, a list of area/related projects was compiled. These projects were considered to potentially contribute measurable traffic volumes to the study area during the future analysis period. The total number of related projects included within this traffic analysis was 55 projects (34 projects – City of West Hollywood, 16 projects – City of Beverly Hills and 5 projects – City of Los Angeles). These projects are all located within an approximate 1.5-mile radius from the Project site.

The related projects trip generation estimates were developed using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition* published in 2012, or provided by the cities.

Figure 18 illustrates the locations of the related projects and Table 10 provides the related project trip generation calculations. Zones were used to conglomerate the projects into trip generation points within the analyzed network.

Figures 19, 20, and 21 illustrate the future 2019 without-Project traffic volumes for each study scenario.

Table 10 - Area/Cumulative Projects Trip Generation

Map ID	Location	Land Use	Intensity	Units	Daily Total	AM Peak Hour			Mid-Day Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out	Total	In	Out
City of West Hollywood														
1	8816 Beverly Boulevard	Mixed-Use	-	-	959	65	47	18	-	-	-	85	31	54
2	612 Croft Avenue	Condominiums	11	d.u.	64	5	1	4	5	1	4	6	4	2
3	920 Fairfax Avenue	Retail/Office	-	-	86	9	1	8	9	1	8	9	2	7
4	937 Fairfax Avenue	Condominiums	17	d.u.	100	7	1	6	7	1	6	9	6	3
5	1216 Flores Street	Condominiums	14	d.u.	81	6	1	5	6	1	5	7	5	2
6	1264 Harper Avenue	Condominiums	16	d.u.	94	7	1	6	7	1	6	8	5	3
7	1345 Havenhurst Drive	Condominiums	16	d.u.	94	7	1	6	7	1	6	8	5	3
8	1211 Horn Avenue	Condominiums	16	d.u.	94	7	1	6	7	1	6	8	5	3
9	1217 Horn Avenue	Condominiums	7	d.u.	41	3	1	2	3	1	2	4	2	2
10	1125 Kings Road	Condominiums	10	d.u.	59	4	1	3	4	1	3	5	3	2
11	1232 Kings Road	Apartments	25	d.u.	168	13	3	10	14	4	10	16	10	6
12	1223 Larrabee Street	Condominiums	8	d.u.	47	4	1	3	4	1	3	4	3	1
13	8451 Melrose Avenue	Retail	3.929	k.s.f.	174	27	13	14	-	-	-	11	5	6
14	8551 Melrose Avenue	Retail	6.500	k.s.f.	288	9	5	4	44	21	23	18	8	10
15	8564 Melrose Avenue	Retail/Commercial	28.474	k.s.f.	765	23	14	9	114	55	59	49	22	27
16	8583 Melrose Avenue	Retail/Commercial	9.545	k.s.f.	561	28	16	12	74	38	36	44	22	22
17	8650 Melrose Avenue	Mixed-Use	-	-	693	23	12	11	104	49	55	43	20	23
18	8711 Melrose Avenue	Commercial	21.565	k.s.f.	567	17	10	7	80	39	41	17	8	9
19	8715 Melrose Avenue	Mixed-Use	-	-	693	23	12	11	104	49	55	43	20	23
20	507 Orlando Avenue	Apartments	9	d.u.	60	5	1	4	5	1	4	6	4	2
21	8120 Santa Monica Boulevard	Mixed-Use	-	-	1,018	15	8	7	48	21	27	118	61	57
22	8350 Santa Monica Boulevard	Mixed-Use	-	-	432	18	7	11	58	26	32	29	15	14
23	8550 Santa Monica Boulevard	Retail/Restaurant	-	-	497	20	8	12	68	30	38	34	18	16
24	8555 Santa Monica Boulevard	Mixed-Use	-	-	2,914	135	56	79	322	153	169	233	131	102
25	9001 Santa Monica Boulevard	Mixed-Use	-	-	829	8	16	-8	58	49	9	47	31	16
26	9040-9098 Santa Monica Boulevard	Mixed-Use	-	-	3,578	260	193	67	431	218	213	303	123	180
27	8240 Sunset Boulevard	Condominiums	27	d.u.	158	12	2	10	12	2	10	14	9	5
28	8305 Sunset Boulevard	Retail/Restaurant	-	-	1,137	0	0	0	70	57	13	95	64	31
29	8418 Sunset Boulevard	Mixed-Use	-	-	2,226	122	67	55	150	82	68	190	114	76
30	8490/8500 Sunset Boulevard	Mixed-Use	-	-	5,496	333	160	173	542	249	293	412	214	198
31	8497 Sunset Boulevard	Mixed-Use	-	-	898	16	8	8	86	50	36	55	39	16
32	8950 Sunset Boulevard	Mixed-Use	-	-	2,218	146	84	62	195	103	92	166	80	86
33	9040 Sunset Boulevard	Hotel	-	-	2,986	126	71	55	112	63	49	234	126	108
34	1253 Sweetzer Avenue	Condominiums	8	d.u.	47	4	1	3	4	1	3	4	3	1
City of West Hollywood Total					30,122	1,507	824	683	2,754	1,370	1,384	2,334	1,218	1,116
City of Beverly Hills														
35	257 N. Canon Drive	Commercial	-	-	1,042	76	62	14	207	113	94	112	35	77
36	246 N. Canon Drive	Restaurant	7.100	k.s.f.	630	36	24	12	64	40	24	63	39	24
37	9262 Burton Way	Condominiums	23	d.u.	134	10	8	2	12	8	4	12	8	4
38	325 N. Maple Drive	Office	50.000	k.s.f.	550	77	68	9	123	62	62	75	13	62
39	450-60 N. Palm Drive	Condominiums	35	d.u.	205	15	3	12	18	12	7	18	12	6
40	154-168 N. LaPeer Drive	Condominiums	16	d.u.	93	7	5	2	8	5	3	8	6	2
41	425 N. Palm Drive	Condominiums	20	d.u.	110	9	2	7	10	7	4	11	7	4
42	432 N. Oakhurst Drive	Condominiums	34	d.u.	205	15	3	12	18	11	6	18	12	6
43	8955 W. Olympic Boulevard	Auto Sales	19.800	k.s.f.	660	44	26	18	55	26	29	54	24	30
44	332 N. Oakhurst Drive	Condominiums	31.000	d.u.	186	14	3	11	16	10	6	15	10	5
45	121 San Vicente Boulevard	Medical Office	35.000	k.s.f.	1,265	88	68	20	149	58	91	130	35	95
46	207 S. Robertson Boulevard	Office	1.700	k.s.f.	19	2	2	0	4	2	2	3	0	3
47	8600 Wilshire Boulevard	Mixed-Use	-	-	960	31	14	17	46	25	21	86	43	43
48	8767 Wilshire Boulevard	Mixed-Use	-	-	2,492	236	151	85	312	141	171	274	113	161
49	9200 Wilshire Boulevard	Mixed-Use	-	-	2,172	63	28	35	119	70	49	192	106	86
50	9230 Wilshire Boulevard	Auto Sales	150.300	k.s.f.	3,000	108	64	44	421	198	223	117	41	76
City of Beverly Hills Total					13,723	831	531	300	1,584	787	796	1,188	504	684
City of Los Angeles														
51	300 S. Wetherly Drive	Condominiums	140	d.u.	270	20	3	17	73	47	26	22	16	6
52	6535 Wilshire Boulevard	Mixed-Use	-	-	786	78	61	17	183	94	89	86	20	66
53	7901 W. Beverly Boulevard	Mixed-Use	-	-	493	36	7	29	103	58	45	46	30	16
54	316 N. La Cienega Boulevard	Mixed-Use	-	-	602	94	41	53	99	54	45	53	31	22
55	8150 W. Sunset Boulevard	Mixed-Use	-		1,077	-82	-92	10	701	380	321	216	158	58
City of Los Angeles Total					3,228	146	20	126	1,159	633	526	423	255	168
Total					**47,073**	**2,484**	**1,375**	**1,109**	**5,496**	**2,790**	**2,706**	**3,945**	**1,977**	**1,968**

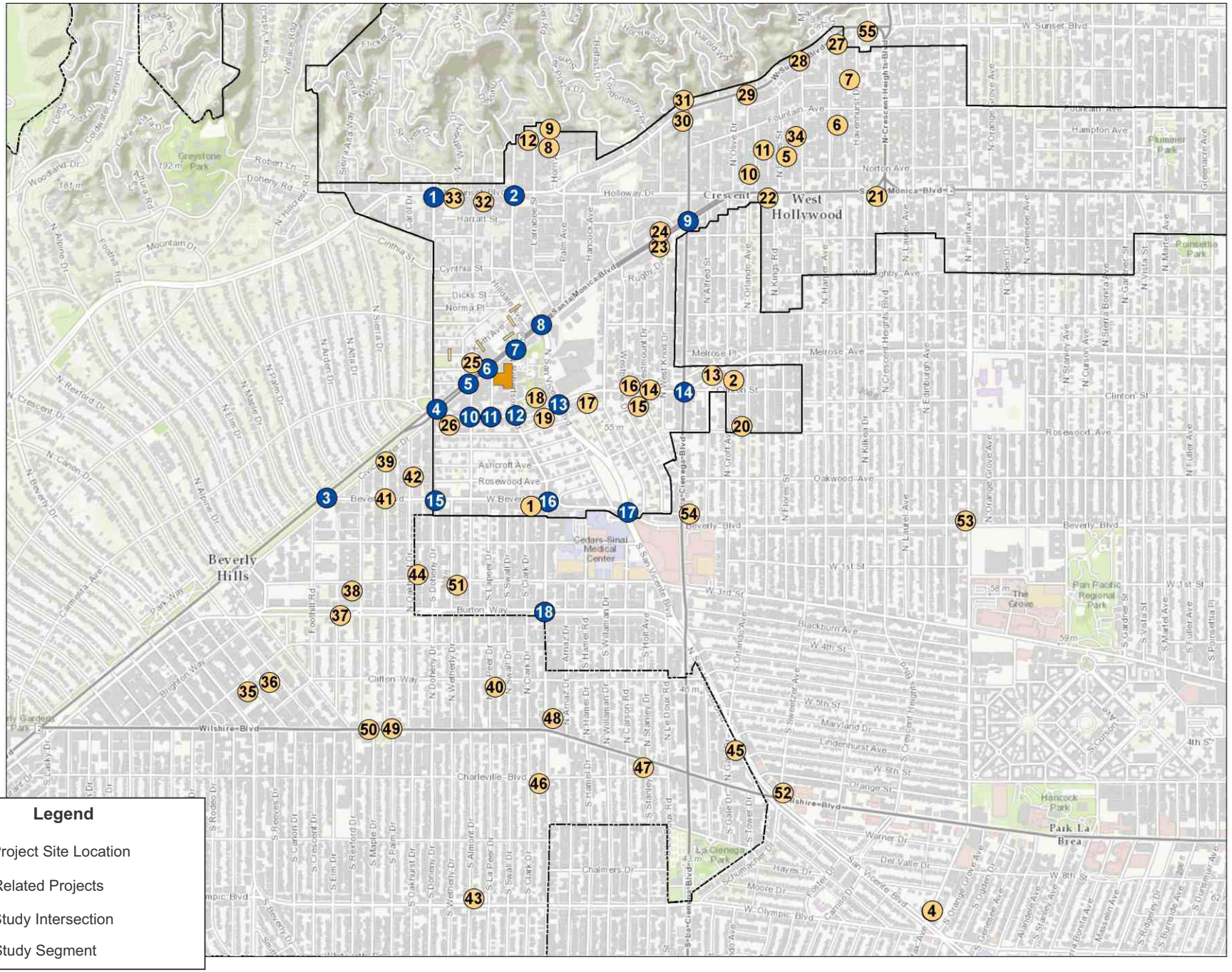

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Figure 18

Location of Related Projects

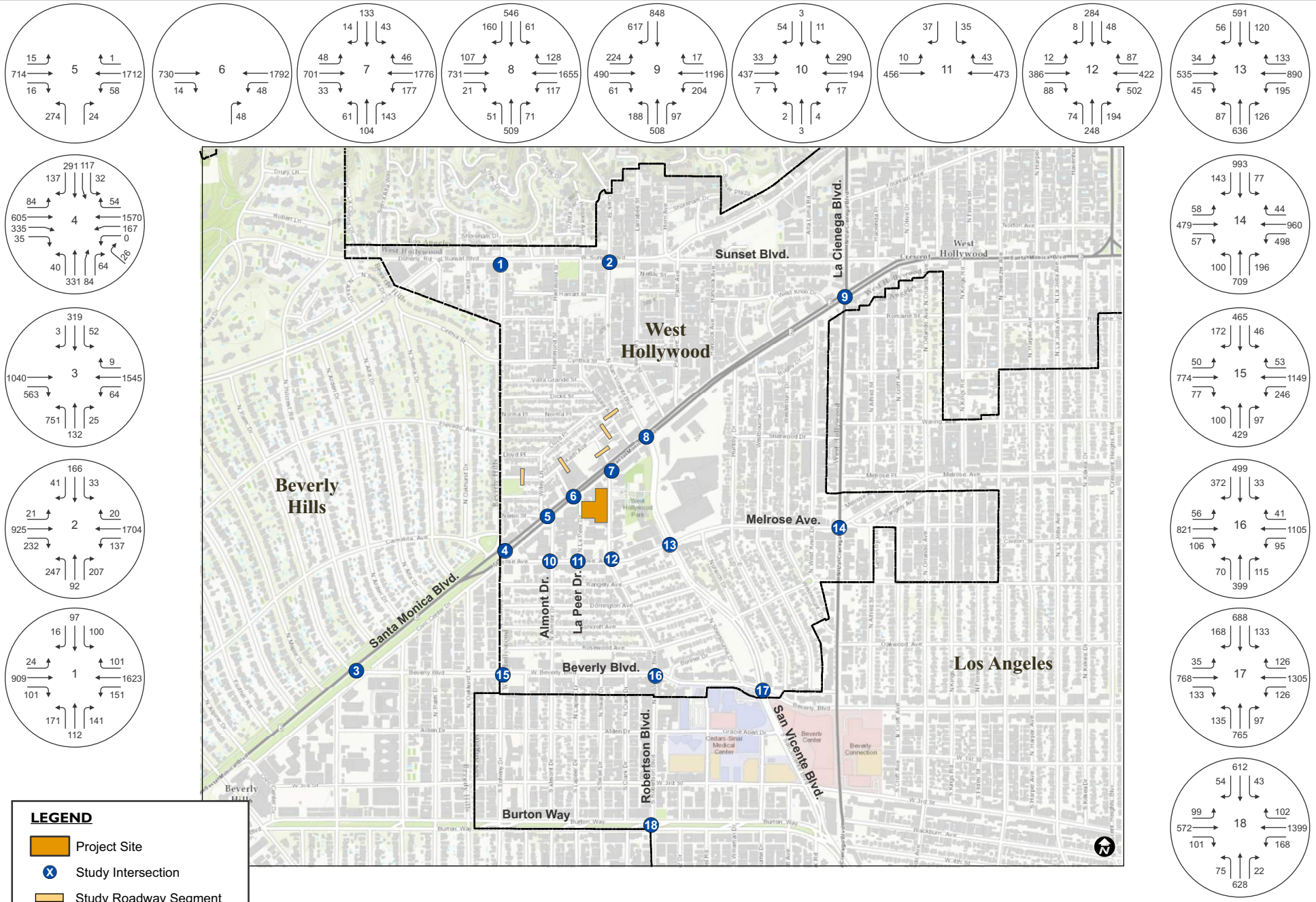

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Figure 19

Future 2019 Without Project Weekday AM Peak-Hour Traffic Volumes

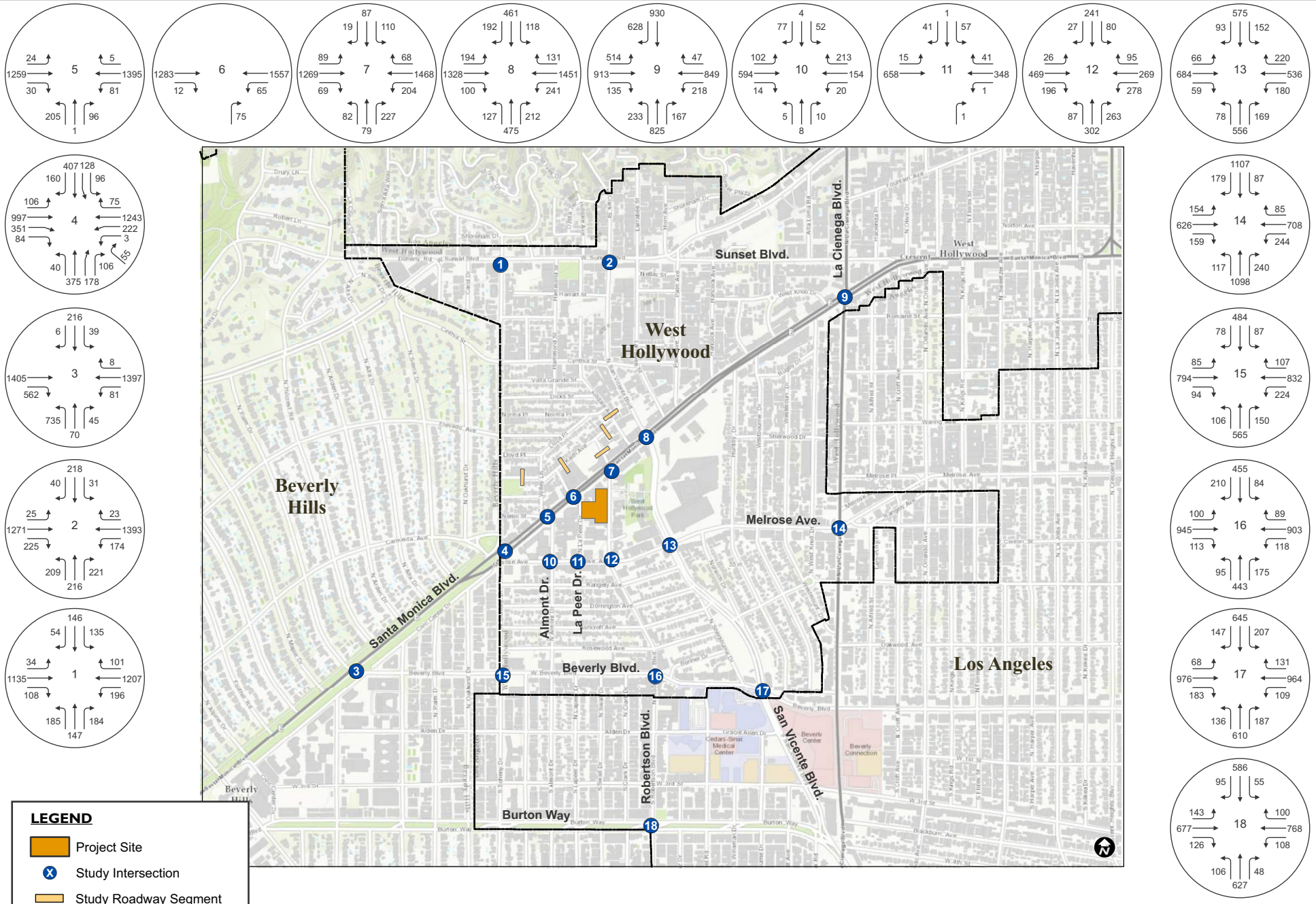

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Figure 20

Future 2019 Without Project Weekday Midday Peak-Hour Traffic Volumes

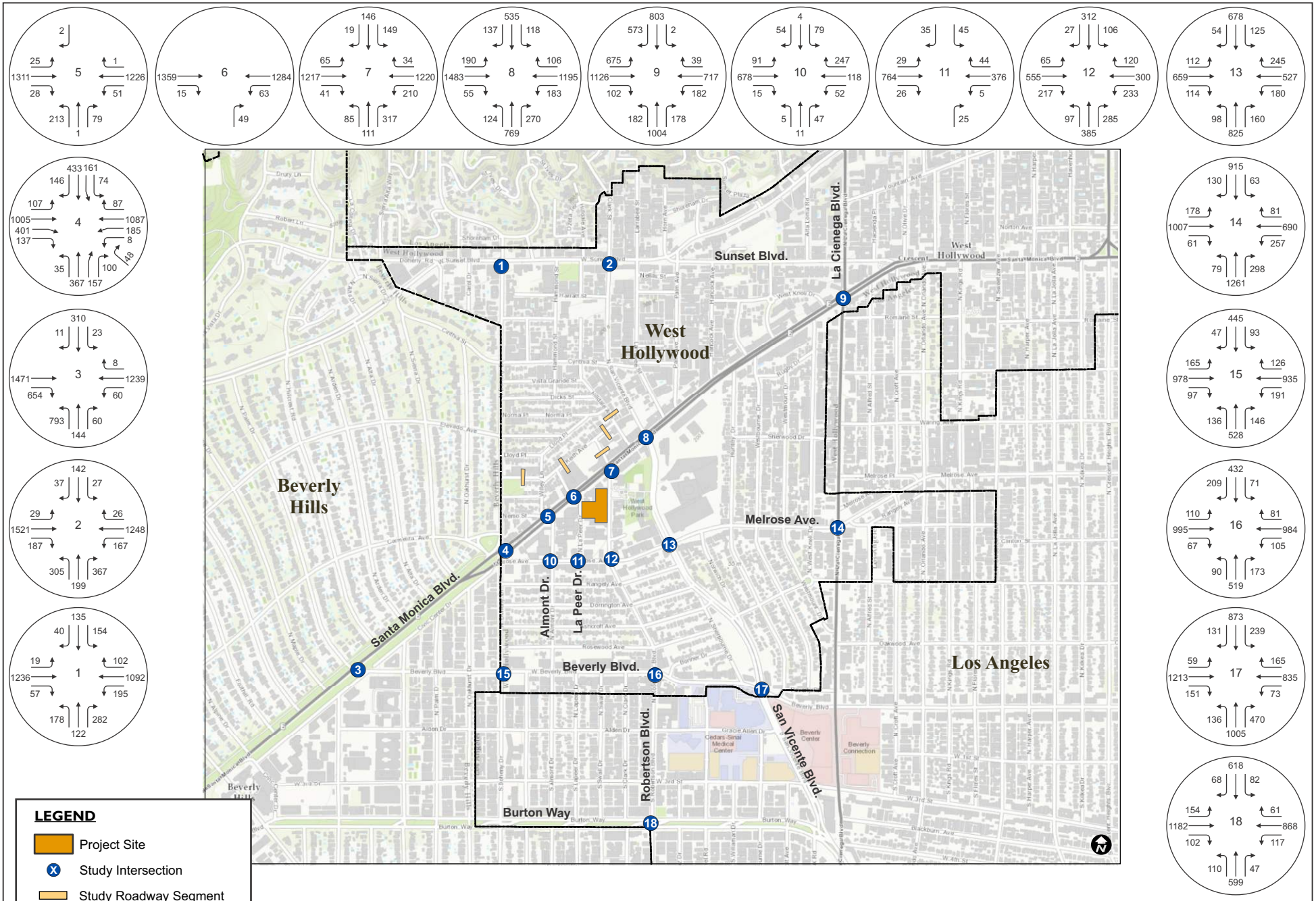

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Figure 21

Future 2019 Without Project Weekday PM Peak-Hour Traffic Volumes

5.3 Peak Hour Intersection Level of Service

To analyze future without-Project conditions, intersection turn volumes with ambient growth and related projects traffic were included.

Table 11 summarizes the level of service of the study area intersections under this scenario.

Table 11: Future 2019 Without Project Level of Service Summary

	Study Intersections	AM Peak		Mid-Day		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Doheny Drive & Sunset Boulevard	37.9	D	62.0	**E**	78.0	**E**
2	San Vicente Boulevard & Sunset Boulevard	65.3	**E**	78.4	**E**	117.6	**F**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	159.9	**F**	146.9	**F**	126.4	**F**
5	Almont Drive & Santa Monica Boulevard	12.5	B	20.1	C	19.2	B
6	La Peer Drive & Santa Monica Boulevard *	0.4	A	0.7	A	0.6	A
7	Robertson Boulevard & Santa Monica Boulevard	48.8	D	44.3	D	73.6	**E**
8	San Vicente Boulevard & Santa Monica Boulevard	56.8	**E**	71.9	**E**	68.9	**E**
9	La Cienega Boulevard & Santa Monica Boulevard	75.9	**E**	79.4	**E**	74.7	**E**
10	Almont Drive & Melrose Avenue *	13.6	B	54.3	**F**	92.0	**F**
11	La Peer Drive & Melrose Avenue *	1.3	A	2.0	A	1.8	A
12	Robertson Boulevard & Melrose Avenue	28.8	C	28.3	C	51.6	D
13	San Vicente Boulevard & Melrose Avenue	40.6	D	21.4	C	37.9	D
14	La Cienega Boulevard & Melrose Avenue	99.7	**F**	69.3	**E**	104.3	**F**
15	Doheny Drive & Beverly Boulevard (A)	78.4	**E**	79.4	**E**	84.5	**F**
16	Robertson Boulevard & Beverly Boulevard	58.1	**E**	34.8	C	31.8	C
17	San Vicente Boulevard & Beverly Boulevard	29.2	C	27.1	C	41.3	D
City of Beverly Hills							
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	0.989	**E**	-	-	1.074	**F**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	1.125	**F**	-	-	1.090	**F**
15	Doheny Drive & Beverly Boulevard (A)	1.105	**F**	-	-	1.160	**F**
18	Robertson Boulevard & Burton Way (A)	1.067	**F**	-	-	1.031	**F**
City of Los Angeles							
18	Robertson Boulevard & Burton Way (A)	0.816	D	-	-	0.817	D

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

** Unsignalized Intersection*

(A) Shared Intersection

Under 2019 without Project conditions, the following intersections are projected to operate at LOS E or worse during one or more peak hour periods:

- Doheny Drive & Sunset Boulevard (Midday and PM peak hours)
- San Vicente Boulevard & Sunset Boulevard (AM, Midday, PM peak hours)

- Doheny Drive & Santa Monica Boulevard/Melrose Boulevard (AM, Midday, PM peak hours)
- Robertson Boulevard & Santa Monica Boulevard (PM peak hour)
- San Vicente Boulevard & Santa Monica Boulevard (AM, Midday, PM peak hours)
- La Cienega Boulevard & Santa Monica Boulevard (AM, Midday, PM peak hours)
- Almont Drive & Melrose Avenue (Midday and PM peak hours)
- La Cienega Boulevard & Melrose Avenue (AM, Midday, and PM peak hours)
- Doheny Drive & Beverly Boulevard (AM, Midday and PM peak hours)
- Palm Drive/Beverly Boulevard & Santa Monica Boulevard (AM and PM peak hours)
- Robertson Boulevard & Burton Way (AM and PM peak hours)

The remaining seven intersections would operate at LOS D or better. The traffic analysis worksheets for this scenario are provided in Appendix D of this report.

5.4 Future Without Project Street Segment Analysis

Future without-Project traffic conditions were estimated based on the existing 24-hour traffic counts conducted on each study street segment, using an ambient growth of 1% per year to account for the increase in area-wide traffic within the four-year period. Related project trip assignments were also included as some related projects are located near the study segments. The ambient growth applied would adequately estimate the future traffic increase along the street segments due to "cut-through" traffic.

Table 12 summarizes the projected future street segment traffic volumes on the five study street segments.

Table 12: Future 2019 Without Project Daily Volumes on Study Street Segments

Segment			Existing Daily Traffic Volumes	Area Projects	Future Pre-Project Daily Traffic Volumes
1	Hilldale Avenue	Between Norma Place & Keith Avenue	3,239	171	3,542
2	Keith Avenue	Between Doheny Drive & Willey Lane	2,010	76	2,168
3	Keith Avenue	Ramage Street & Robertson Boulevard	3,768	76	3,997
4	Keith Avenue	Robertson Boulevard & Hilldale Avenue	3,860	76	4,093
5	Robertson Boulevard	Keith Avenue & Santa Monica Boulevard	5,058	0	5,263

Figure 22 illustrates the daily estimated volumes of the study street segments under future conditions without the proposed project.

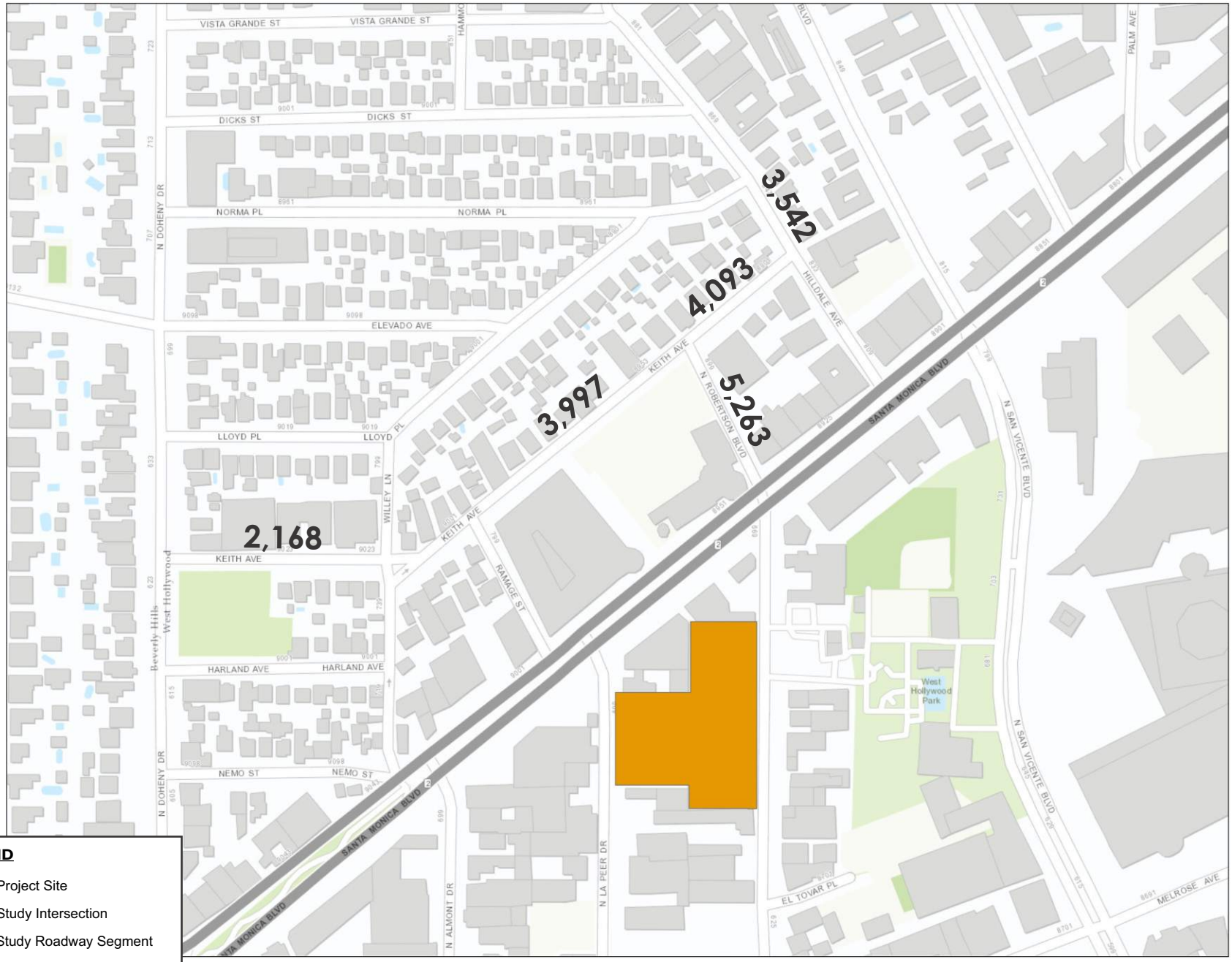

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Figure 22

Future 2019 Without Project Street Segment Daily Traffic Volumes

6. Future 2019 With Project Conditions

This section documents future traffic conditions at the study intersections and street segments with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the future without-Project volumes.

6.1 Peak Hour Intersection Level of Service

Table 13 summarizes the level of service values at the study intersections for this scenario.

Table 13: Future 2019 With Project Level of Service Summary

	Study Intersections	AM Peak		Mid-Day		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Doheny Drive & Sunset Boulevard	38.7	D	64.3	**E**	79.9	**E**
2	San Vicente Boulevard & Sunset Boulevard	66.3	**E**	80.9	**F**	119.9	**F**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	162.4	**F**	154.4	**F**	132.4	**F**
5	Almont Drive & Santa Monica Boulevard	12.8	B	21.2	C	19.2	B
6	La Peer Drive & Santa Monica Boulevard *	0.4	A	0.8	A	0.7	A
7	Robertson Boulevard & Santa Monica Boulevard	53.6	D	55.9	**E**	98.6	**F**
8	San Vicente Boulevard & Santa Monica Boulevard	58.9	**E**	76.8	**E**	69.6	**E**
9	La Cienega Boulevard & Santa Monica Boulevard	76.9	**E**	81.6	**F**	75.6	**E**
10	Almont Drive & Melrose Avenue *	13.7	B	55.7	**F**	93.8	**F**
11	La Peer Drive & Melrose Avenue *	1.6	A	2.6	A	2.3	A
12	Robertson Boulevard & Melrose Avenue	30.2	C	35.7	D	53.5	D
13	San Vicente Boulevard & Melrose Avenue	41.4	D	21.6	C	38.2	D
14	La Cienega Boulevard & Melrose Avenue	100.6	**F**	70.1	**E**	105.4	**F**
15	Doheny Drive & Beverly Boulevard (A)	79.9	**E**	84.1	**F**	87.0	**F**
16	Robertson Boulevard & Beverly Boulevard	58.9	**E**	35.3	D	32.3	C
17	San Vicente Boulevard & Beverly Boulevard	29.3	C	27.2	C	41.9	D
City of Beverly Hills							
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	0.993	**E**	-	-	1.074	**F**
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	1.132	**F**	-	-	1.103	**F**
15	Doheny Drive & Beverly Boulevard (A)	1.110	**F**	-	-	1.168	**F**
18	Robertson Boulevard & Burton Way (A)	1.069	**F**	-	-	1.035	**F**
City of Los Angeles							
18	Robertson Boulevard & Burton Way (A)	0.820	D	-	-	0.822	D

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

** Unsignalized Intersection*

(A) Shared Intersection

Under future conditions with the addition of Project generated traffic, the following intersections are expected to operate at LOS E or F:

- Doheny Drive & Sunset Boulevard (Midday and PM peak hours)
- San Vicente Boulevard & Sunset Boulevard (AM, Midday, PM peak hours)
- Doheny Drive & Santa Monica Boulevard/Melrose Boulevard (AM, Midday, PM peak hours)
- Robertson Boulevard & Santa Monica Boulevard (Midday and PM peak hours)
- San Vicente Boulevard & Santa Monica Boulevard (AM, Midday, PM peak hours)
- La Cienega Boulevard & Santa Monica Boulevard (AM, Midday, PM peak hours)
- Almont Drive & Melrose Avenue (Midday and PM peak hours)
- La Cienega Boulevard & Melrose Avenue (AM, Midday, and PM peak hours)
- Doheny Drive & Beverly Boulevard (AM, Midday and PM peak hours)
- Robertson Boulevard & Beverly Boulevard (AM peak hour)
- Palm Drive/Beverly Boulevard & Santa Monica Boulevard (AM and PM peak hours)
- Robertson Boulevard & Burton Way (AM and PM peak hours)

The remaining six intersections would to continue to operate at LOS D or better. The traffic analysis worksheets for this scenario are included in Appendix E of this report.

Figures 23, 24, and 25 illustrate the 2019 with Project traffic volumes for the weekday AM, weekday midday, and weekday PM peak hour intersection traffic volumes, respectively.

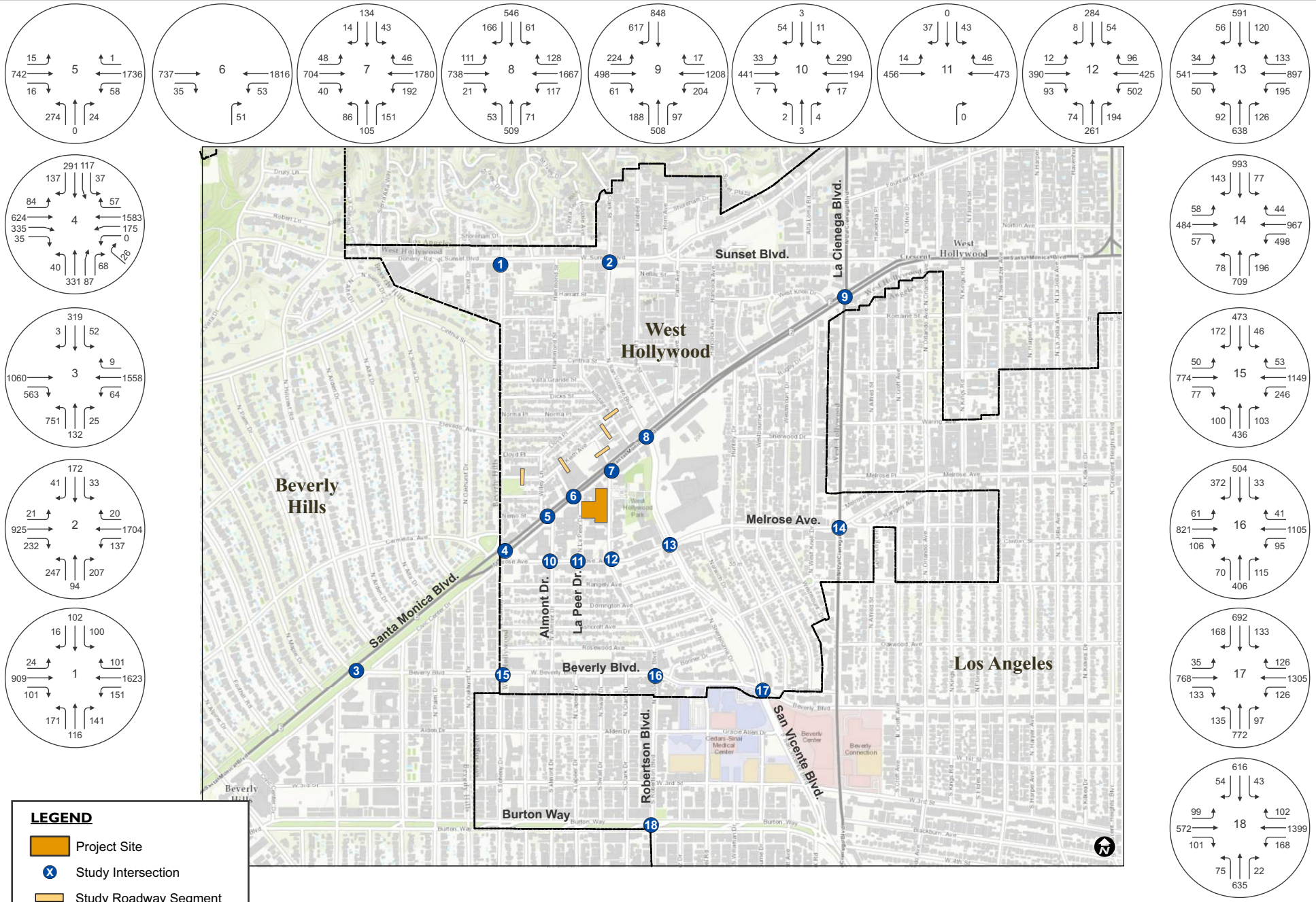

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Figure 23

Future 2019 With Project Weekday AM Peak-Hour Traffic Volumes

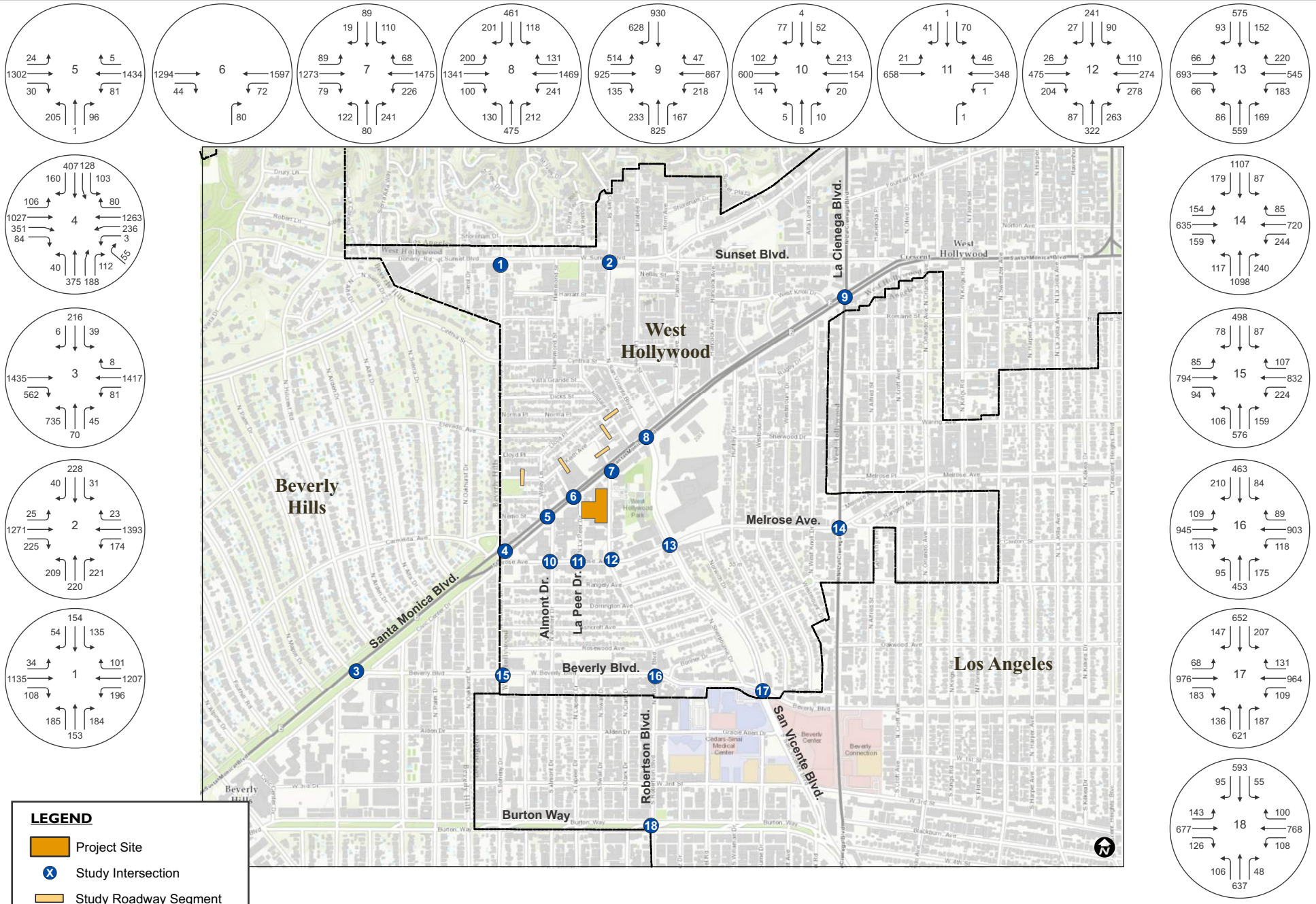

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Figure 24

Future 2019 With Project Weekday Midday Peak-Hour Traffic Volumes

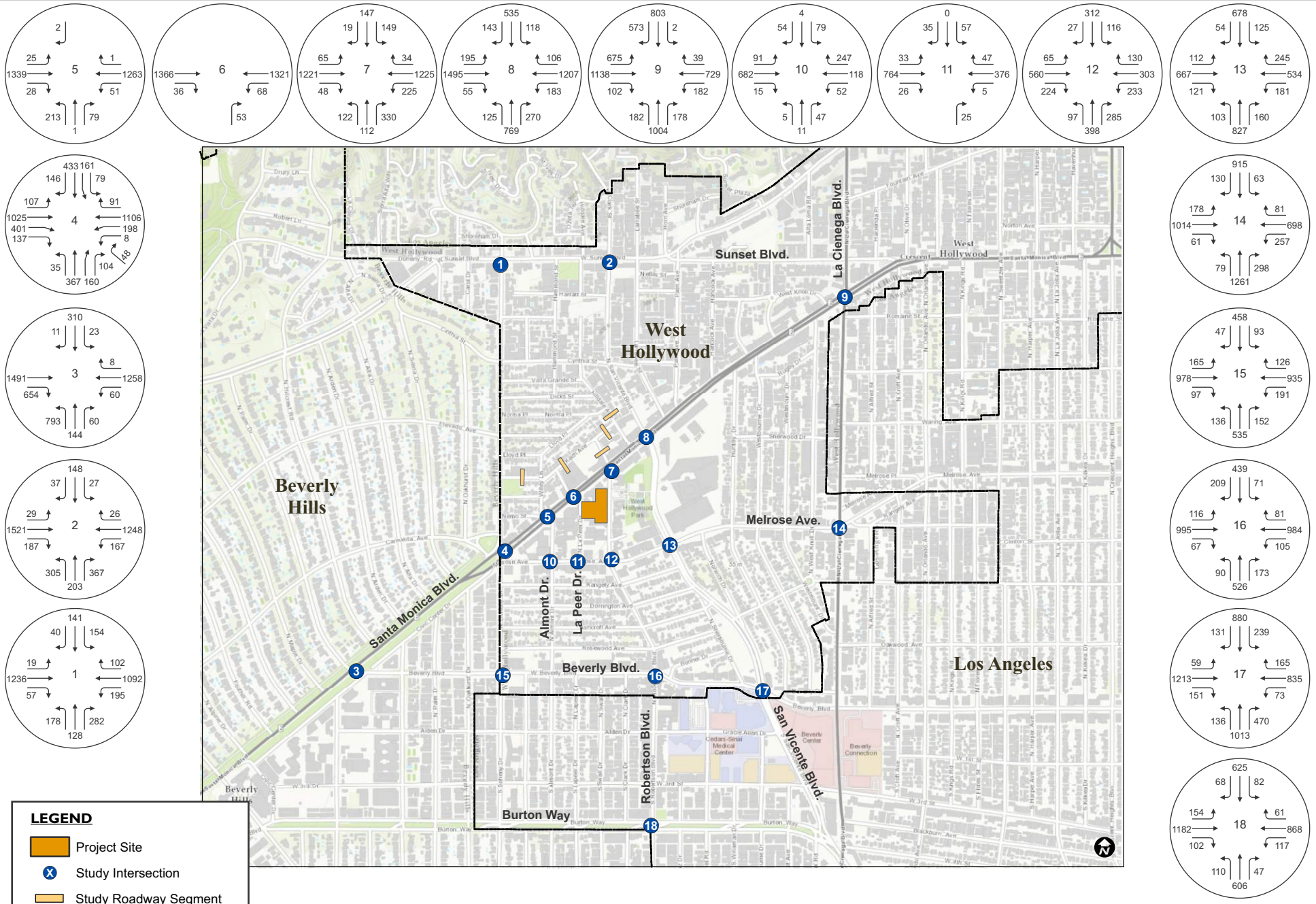

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Figure 25

Future 2019 With Project Weekday PM Peak-Hour Traffic Volumes

6.2 Future With Project Street Segment Traffic Volumes

In addition to intersection level of service analysis, the impacts of the project on the surrounding neighborhood streets were analyzed. Project traffic assigned on the surrounding residential street segments were added to the future base conditions.

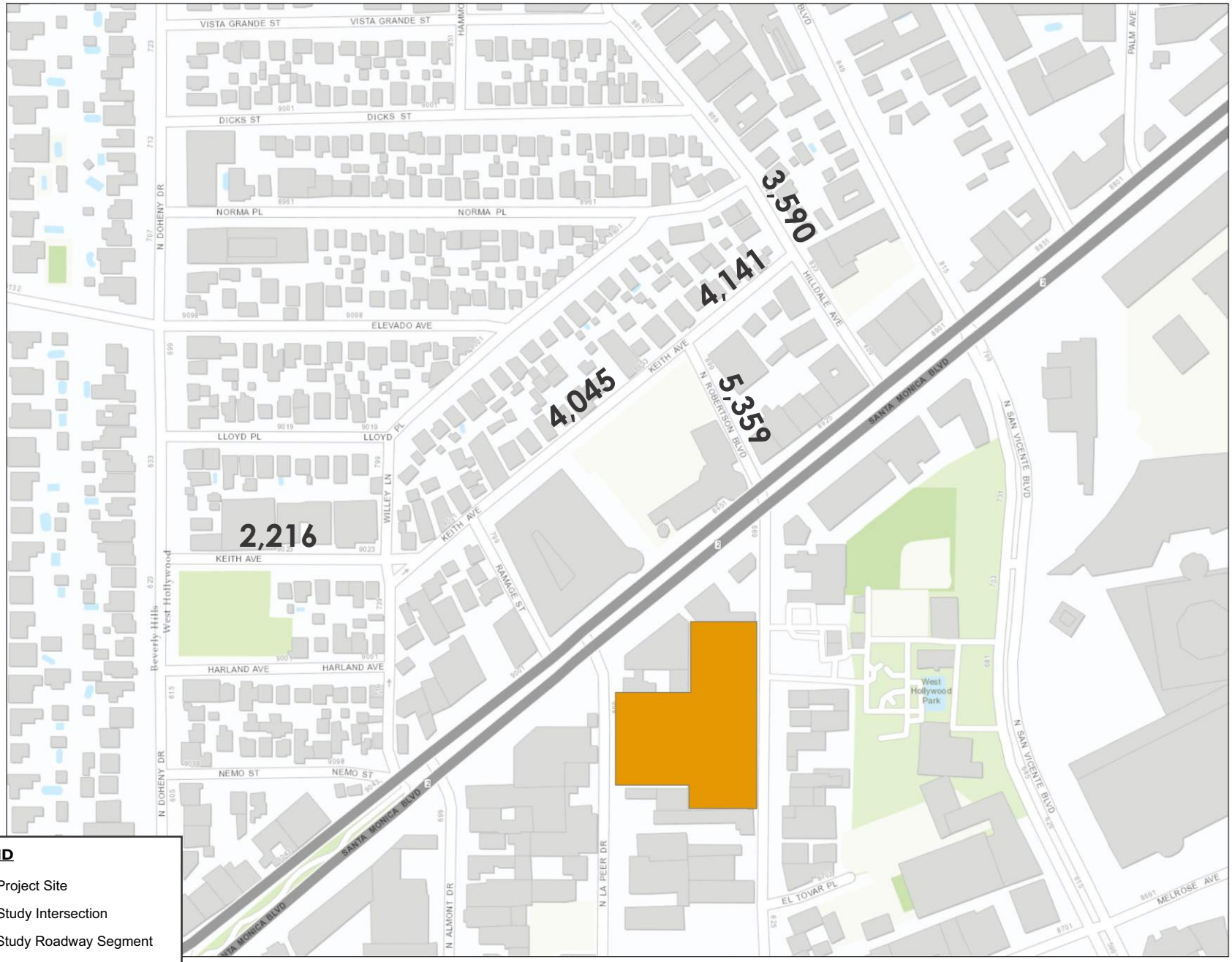
Table 14 summarizes the future with project conditions on the five study street segments.

Table 14: Future 2019 With Project Daily Traffic Volumes On Study Street Segments

Segment			Existing Daily Traffic Volumes	Future w/o Project Daily Traffic Volumes	Project Only	Future w/ Project Daily Traffic Volumes
1	Hilldale Avenue	Between Norma Place & Keith Avenue	3,239	3,542	48	3,590
2	Keith Avenue	Between Doheny Drive & Willey Lane	2,010	2,168	48	2,216
3	Keith Avenue	Ramage Street & Robertson Boulevard	3,768	3,997	48	4,045
4	Keith Avenue	Robertson Boulevard & Hilldale Avenue	3,860	4,093	48	4,141
5	Robertson Boulevard	Keith Avenue & Santa Monica Boulevard	5,058	5,263	96	5,359

Figure 26 illustrates the ADT volumes along the study street segments under future conditions with the addition of the proposed Project.

Determinations of significant traffic impacts created by the Project are discussed in the next report section.



LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment

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Figure 26

Future 2019 With Project Street Segment Daily Traffic Volumes

7. Project Traffic Impacts

7.1 Determination of Traffic Impacts on Intersections

Traffic impacts are identified if the proposed development will result in a significant change in traffic conditions at a study intersection or on a street segment. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below the poorest acceptable level of service and project traffic will cause a further decline below a certain threshold.

City of West Hollywood Significant Impact Criteria

The City of West Hollywood has established specific thresholds for project related increases in the delay of signalized study intersections, made up by two commercial corridors. The following increases in peak hour delay are considered significant impacts:

Level of Service	Final Delay (sec.)	Project Related Delay increase
D	35 – 55 seconds	12 seconds or greater
E and F	55 seconds or more	8 seconds or greater

Note: Final delay is the delay at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.

For all other signalized intersections and four-way stop-controlled intersections within the City of West Hollywood, significant impacts (delay increase) were evaluated as follows:

Level of Service	Final Delay (sec.)	Project Related Delay increase
D	25 – 35 seconds	8 seconds or greater
E and F	35 seconds or more	5 seconds or greater

For unsignalized intersections (one/two-way stops) within the City of West Hollywood, significant impacts (delay increase) were evaluated as follows:

Level of Service	Final Delay (sec.)	Project Related Delay increase
D, E, or F	25 or more	5 seconds or greater

City of Beverly Hills Significant Impact Criteria

The following increases in peak hour V/C ratios at signalized intersections are considered significant impacts based on City of Beverly Hills guidelines:

Level of Service	Final V/C*	Project Related V/C increase
D	0.801 – 0.900	Equal to or greater than 0.030
E or F	Greater than 0.901	Equal to or greater than 0.020

City of Los Angeles Significant Impact Criteria

The following increases in peak hour V/C ratios are considered significant impacts based on City of Los Angeles Department of Transportation guidelines:

Level of Service	Final V/C*	Project Related V/C increase
C	< 0.700 – 0.800	Equal to or greater than 0.040
D	< 0.800– 0.900	Equal to or greater than 0.020
E and F	0.901 or more	Equal to or greater than 0.010

** Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.*

7.2 Determination of Traffic Impacts on Residential Street Segments

The City of West Hollywood has established specific thresholds for determining the significance of traffic impact on neighborhood streets.

The City uses a combination of the Cities of Los Angeles and Beverly Hills standards. The methodology and thresholds are as follows:

- ADT is less than 2,000 and the Project will increase the ADT by 12%
- ADT is 2,001 or greater but less than 3,000 and the Project will increase the ADT by 10%
- ADT is 3,001 or greater but less than 6,749 and the Project will increase the ADT by 8%
- ADT is 6,750 or greater and the Project will increase the ADT by 6.25%

7.3 Project Traffic Impacts – Existing Plus Project Conditions

Table 15 provides a comparison of Existing and Existing Plus Project conditions under the weekday AM, midday, and PM peak hours, respectively. Traffic impacts created by the Project are calculated by comparing Existing conditions to Existing Plus Project conditions. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the two right-most columns of the table.

Table 15: Existing Plus Project Peak Hour Impact Summary

	Study Intersections	Peak Hour	Existing Conditions		Existing with Project		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of West Hollywood								
1	Doheny Drive & Sunset Boulevard	AM	27.6	C	28.4	C	0.8	No
		Noon	29.6	C	30.8	C	1.2	No
		PM	46.2	D	47.7	D	1.5	No
2	San Vicente Boulevard & Sunset Boulevard	AM	33.7	C	34.4	C	0.7	No
		Noon	21.2	C	21.3	C	0.1	No
		PM	69.6	**E**	72.0	**E**	2.4	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	115.9	**F**	118.9	**F**	3.0	No
		Noon	77.1	**E**	80.6	**F**	3.5	No
		PM	78.2	**E**	81.4	**F**	3.2	No
5	Almont Drive & Santa Monica Boulevard	AM	11.1	B	11.1	B	0.0	No
		Noon	13.4	B	13.6	B	0.2	No
		PM	15.5	B	15.5	B	0.0	No
6	La Peer Drive & Santa Monica Boulevard *	AM	0.4	A	0.4	A	0.0	No
		Noon	0.7	A	0.8	A	0.1	No
		PM	0.6	A	0.7	A	0.1	No
7	Robertson Boulevard & Santa Monica Boulevard	AM	25.8	C	30.2	C	4.4	No
		Noon	24.4	C	30.0	C	5.6	No
		PM	53.3	D	76.5	**E**	23.2	**Yes**
8	San Vicente Boulevard & Santa Monica Boulevard	AM	31.5	C	32.2	C	0.7	No
		Noon	22.9	C	23.3	C	0.4	No
		PM	32.0	C	32.1	C	0.1	No
9	La Cienega Boulevard & Santa Monica Boulevard	AM	50.1	D	50.7	D	0.6	No
		Noon	39.1	D	39.6	D	0.5	No
		PM	44.9	D	45.3	D	0.4	No
10	Almont Drive & Melrose Avenue *	AM	10.6	B	10.7	B	0.1	No
		Noon	12.2	B	12.3	B	0.1	No
		PM	21.7	C	22.1	C	0.4	No
11	La Peer Drive & Melrose Avenue *	AM	1.3	A	1.5	A	0.2	No
		Noon	1.8	A	2.2	A	0.4	No
		PM	1.6	A	2.0	A	0.4	No
12	Robertson Boulevard & Melrose Avenue	AM	19.6	B	19.9	B	0.3	No
		Noon	17.2	B	17.3	B	0.1	No
		PM	23.5	C	24.9	C	1.4	No
13	San Vicente Boulevard & Melrose Avenue	AM	30.2	C	30.8	C	0.6	No
		Noon	16.5	B	16.6	B	0.1	No
		PM	21.5	C	21.6	C	0.1	No
14	La Cienega Boulevard & Melrose Avenue	AM	84.5	**F**	85.4	**F**	0.9	No
		Noon	48.9	D	49.6	D	0.7	No
		PM	83.3	**F**	84.6	**F**	1.3	No
15	Doheny Drive & Beverly Boulevard (A)	AM	53.7	D	55.2	**E**	1.5	No
		Noon	36.8	D	39.0	D	2.2	No
		PM	53.1	D	54.0	D	0.9	No
16	Robertson Boulevard & Beverly Boulevard	AM	38.6	D	39.2	D	0.6	No
		Noon	26.7	C	26.8	C	0.1	No
		PM	24.0	C	24.1	C	0.1	No
17	San Vicente Boulevard & Beverly Boulevard	AM	26.3	C	26.4	C	0.1	No
		Noon	24.5	C	24.5	C	0.0	No
		PM	28.2	C	28.5	C	0.3	No

Table 15: Existing Plus Project Peak Hour Impact Summary, cont.

Study Intersections		Peak Hour	Existing Conditions		Existing with Project		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of Beverly Hills								
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	AM	0.919	E	0.923	E	0.004	No
		PM	0.975	E	0.982	E	0.007	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	1.006	F	1.013	F	0.007	No
		PM	0.941	E	0.951	E	0.010	No
15	Doheny Drive & Beverly Boulevard (A)	AM	1.022	F	1.027	F	0.005	No
		PM	1.030	F	1.038	F	0.008	No
18	Robertson Boulevard & Burton Way (A)	AM	0.992	E	0.995	E	0.003	No
		PM	0.926	E	0.930	E	0.004	No
City of Los Angeles								
18	Robertson Boulevard & Burton Way (A)	AM	0.725	C	0.728	C	0.003	No
		PM	0.692	B	0.696	B	0.004	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

** Unsignalized Intersections*

(A) Shared Intersection

As indicated in Table 15, based on the traffic forecasts, the level of service analysis, and significant impact thresholds set forth by the respective cities, the Project will not create a significant traffic impact at any of the study intersections, except at:

- Robertson Boulevard & Santa Monica Boulevard (PM peak hour)

Proposed mitigation measures are discussed in Section 12 of this report.

Project Traffic Impacts – Residential Streets

Table 16 provides a comparison of the Existing and Existing plus Project daily traffic for the study roadway segments. Traffic impacts created by the Project are calculated by comparing the increase in percentage of project traffic against the existing traffic volumes. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the right two columns of the table.

Table 16: Existing Plus Project Roadway Segment Impact Summary

Segment			Existing Daily Traffic Volumes	Project Only	Existing w/ Project Daily Traffic Volumes	Increase (%)	Significant Impact?
1	Hilldale Avenue	Between Norma Place & Keith Avenue	3,239	48	3,287	1.5%	No
2	Keith Avenue	Between Doheny Drive & Willey Lane	2,010	48	2,058	2.4%	No
3	Keith Avenue	Ramage Street & Robertson Boulevard	3,768	48	3,816	1.3%	No
4	Keith Avenue	Robertson Boulevard & Hilldale Avenue	3,860	48	3,908	1.2%	No
5	Robertson Boulevard	Keith Avenue & Santa Monica Boulevard	5,058	96	5,154	1.9%	No

As indicated in Table 16, the Project is not expected to create a significant traffic impact at any of the residential street segments evaluated in this study effort.

7.4 Project Traffic Impacts – Future 2019 With Project Conditions

Table 17 provides a comparison of future without-Project conditions and future with-Project conditions under the weekday AM, midday, and PM peak hours. Traffic impacts created by the Project are calculated by comparing "Future 2019 Without-Project" conditions to "Future 2019 With-Project" conditions. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the two right-most columns of the table.

Table 17: Future 2019 Peak Hour Project Impact Summary

	Study Intersections	Peak Hour	Future (2019) No Project		Future (2019) With Project		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of West Hollywood								
1	Doheny Drive & Sunset Boulevard	AM	37.9	D	38.7	D	0.8	No
		Noon	62.0	**E**	64.3	**E**	2.3	No
		PM	78.0	**E**	79.9	**E**	1.9	No
2	San Vicente Boulevard & Sunset Boulevard	AM	65.3	**E**	66.3	**E**	1.0	No
		Noon	78.4	**E**	80.9	**F**	2.5	No
		PM	117.6	**F**	119.9	**F**	2.3	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	159.9	**F**	162.4	**F**	2.5	No
		Noon	146.9	**F**	154.4	**F**	7.5	No
		PM	126.4	**F**	132.4	**F**	6.0	No
5	Almont Drive & Santa Monica Boulevard	AM	12.5	B	12.8	B	0.3	No
		Noon	20.1	C	21.2	C	1.1	No
		PM	19.2	B	19.2	B	0.0	No
6	La Peer Drive & Santa Monica Boulevard *	AM	0.4	A	0.4	A	0.0	No
		Noon	0.7	A	0.8	A	0.1	No
		PM	0.6	A	0.7	A	0.1	No
7	Robertson Boulevard & Santa Monica Boulevard	AM	48.8	D	53.6	D	4.8	No
		Noon	44.3	D	55.9	**E**	11.6	**Yes**
		PM	73.6	**E**	98.6	**F**	25.0	**Yes**
8	San Vicente Boulevard & Santa Monica Boulevard	AM	56.8	**E**	58.9	**E**	2.1	No
		Noon	71.9	**E**	76.8	**E**	4.9	No
		PM	68.9	**E**	69.6	**E**	0.7	No
9	La Cienega Boulevard & Santa Monica Boulevard	AM	75.9	**E**	76.9	**E**	1.0	No
		Noon	79.4	**E**	81.6	**F**	2.2	No
		PM	74.7	**E**	75.6	**E**	0.9	No
10	Almont Drive & Melrose Avenue *	AM	13.6	B	13.7	B	0.1	No
		Noon	54.3	**F**	55.7	**F**	1.4	No
		PM	92.0	**F**	93.8	**F**	1.8	No
11	La Peer Drive & Melrose Avenue *	AM	1.3	A	1.6	A	0.3	No
		Noon	2.0	A	2.6	A	0.6	No
		PM	1.8	A	2.3	A	0.5	No
12	Robertson Boulevard & Melrose Avenue	AM	28.8	C	30.2	C	1.4	No
		Noon	28.3	C	35.7	D	7.4	No
		PM	51.6	D	53.5	D	1.9	No
13	San Vicente Boulevard & Melrose Avenue	AM	40.6	D	41.4	D	0.8	No
		Noon	21.4	C	21.6	C	0.2	No
		PM	37.9	D	38.2	D	0.3	No
14	La Cienega Boulevard & Melrose Avenue	AM	99.7	**F**	100.6	**F**	0.9	No
		Noon	69.3	**E**	70.1	**E**	0.8	No
		PM	104.3	**F**	105.4	**F**	1.1	No
15	Doheny Drive & Beverly Boulevard (A)	AM	78.4	**E**	79.9	**E**	1.5	No
		Noon	79.4	**E**	84.1	**F**	4.7	No
		PM	84.5	**F**	87.0	**F**	2.5	No
16	Robertson Boulevard & Beverly Boulevard	AM	58.1	**E**	58.9	**E**	0.8	No
		Noon	34.8	C	35.3	D	0.5	No
		PM	31.8	C	32.3	C	0.5	No
17	San Vicente Boulevard & Beverly Boulevard	AM	29.2	C	29.3	C	0.1	No
		Noon	27.1	C	27.2	C	0.1	No
		PM	41.3	D	41.9	D	0.6	No

Table 17: Future 2019 Peak Hour Project Impact Summary, cont.

Study Intersections		Peak Hour	Future (2019) No Project		Future (2019) With Project		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of Beverly Hills								
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	AM	0.989	E	0.993	E	0.004	No
		PM	1.074	F	1.074	F	0.000	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	1.125	F	1.132	F	0.007	No
		PM	1.090	F	1.103	F	0.013	No
15	Doheny Drive & Beverly Boulevard (A)	AM	1.105	F	1.110	F	0.005	No
		PM	1.160	F	1.168	F	0.008	No
18	Robertson Boulevard & Burton Way (A)	AM	1.067	F	1.069	F	0.002	No
		PM	1.031	F	1.035	F	0.004	No
City of Los Angeles								
18	Robertson Boulevard & Burton Way (A)	AM	0.816	D	0.820	D	0.004	No
		PM	0.817	D	0.822	D	0.005	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

** Unsignalized Intersections*

(A) Shared Intersection

As indicated in Table 17, the Project will not create a significant traffic impact at any of the study intersections, except at:

- Robertson Boulevard & Santa Monica Boulevard (Midday and PM peak hour)

Proposed mitigation measures are discussed in Section 12 of this report.

Project Traffic Impacts – Residential Streets

Table 18 provides a comparison of the future without-project and future with-Project daily traffic for the study roadway segments. Traffic impacts created by the Project are calculated by comparing the increase in percentage of project traffic against the future base traffic volumes with the threshold mentioned above. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the right two columns of the table.

Table 18: Future with Project Roadway Segment Impact Summary

Segment			Existing Daily Traffic Volumes	Future w/o Project Daily Traffic Volumes	Project Only	Future w/ Project Daily Traffic Volumes	Increase (%)	Significant Impact?
1	Hilldale Avenue	Between Norma Place & Keith Avenue	3,239	3,542	48	3,590	1.4%	No
2	Keith Avenue	Between Doheny Drive & Willey Lane	2,010	2,168	48	2,216	2.2%	No
3	Keith Avenue	Ramage Street & Robertson Boulevard	3,768	3,997	48	4,045	1.2%	No
4	Keith Avenue	Robertson Boulevard & Hilldale Avenue	3,860	4,093	48	4,141	1.2%	No
5	Robertson Boulevard	Keith Avenue & Santa Monica Boulevard	5,058	5,263	96	5,359	1.8%	No

As indicated in Table 18, the Project is not expected to create a significant traffic impact at any of the residential street segments evaluated in this study effort.

8. Parking Assessment

This section documents the parking impacts associated with the proposed Project. The parking analysis was based on the City of West Hollywood Municipal Code parking standards.

8.1 Parking Code Requirements

Based on the City's Municipal Parking Code parking requirements, the proposed Project would require 999 spaces, as shown in Table 19. The proposed parking supply of 1,151 spaces would result in a supply surplus of 153 spaces.

Table 19: Required Parking and Supply Summary

DESCRIPTION	SIZE	CITY CODE PARKING RATE	Spaces Required	Possible Reduction Factor	Spaces Required w/ Reduction Factor
Parking Per ZCCWH 19.28.040 and Table 3-6					
Public Retail	18,130 SF	3.5 spaces per 1000 SF	64	0%	64
Public Restaurant w/ Outdoor Dining	33,300 SF	9.0 spaces per 1000 SF	300	0%	300
Wholesale Design Showroom	10,325 SF	1.6 spaces per 1000 SF	17	0%	17
Hotel Gym	2,800 SF	10.0 spaces per 1000 SF	28	0%	28
Hotel Spa	1,900 SF	5.0 spaces per 1000 SF	10	0%	10
Total			419	-	419
Parking with 50% Reduction Per ZCCWH 19.28.040 and Table 3-6					
Hotel Rooms	241 rooms	1.0 space per room	241	0%	241
Hotel Event Space	13,220 SF	28.0 spaces per 1000 SF	371	50%	186
Hotel Retail	11,725 SF	3.5 spaces per 1000 SF	42	50%	21
Hotel Restaurant	20,365 SF	9.0 spaces per 1000 SF	184	50%	92
Hotel Club	2,270 SF	15.0 spaces per 1000 SF	35	50%	18
Dance Floor	1,510 SF	28.0 spaces per 1000 SF	43	50%	22
Total			916		580
TOTAL PARKING REQUIREMENT			1,335		999
SUPPLY					1,151
SURPLUS					153

SF = square feet

ZCCWH - Zoning Code of the City of West Hollywood

The proposed Project is also required to provide 62 bicycle parking spaces and a total of four (4) showers for cyclists. The applicant will provide all 62 bicycle parking spaces and four (4) shower facilities.

Furthermore, the Project is required to provide seven (7) loading spaces, which it will provide to satisfy the City's parking code.

8.2 Loss of Existing Public Parking Lot

As illustrated in Figure 2 of this report, the proposed Project will be located between Robertson Boulevard and La Peer Drive, just south of Santa Monica Boulevard. The northern end of the project site along Robertson Boulevard will require the removal of an existing 100+ space public parking lot that is privately owned.

The proposed Project would provide 153 surplus parking spaces, which would cover the loss of the public parking lot.

During Project construction, the 100+ parking space lot will be lost. Due to the Project not being complete, users of that parking will be forced to park elsewhere. Nearby and adjacent public parking lots and on-street parking facilities will be temporarily impacted during construction.

Specific nearby parking lots will be identified in order to address the temporary parking shortage during Project construction.

9. Site Access

This section summarizes the vehicle access, queuing, and pedestrian analysis for the proposed Project. The Project would provide two full-movement driveways, one on La Peer Drive and another on Robertson Boulevard.

9.1 Vehicle Delays and Queuing

The La Peer Drive driveway would be located approximately 40 feet south from the intersection of Santa Monica Boulevard and La Peer Drive. The driveway would be located at the northern end of the Project site and no new striped left-turn pocket is proposed on La Peer Drive for vehicles entering the Project site; the travel lane would remain a shared-left-through lane. The roadway will continue to provide one traffic lane in each direction with on-street parking on both sides.

The Robertson Boulevard driveway would be located approximately 360 feet south from the intersection of Santa Monica Boulevard and Robertson Boulevard. The driveway would be located in the approximate center of the Project site fronting Robertson Boulevard and no new striped left-turn pocket is proposed on Robertson Boulevard for vehicles entering the Project site; the travel lane would remain a shared-left-through lane. The roadway will continue to provide one lane of traffic in each direction with on-street parking on both sides.

Vehicle queuing analysis was conducted to measure both on-site and off-site queuing issues and traffic delays at the driveways. Based on the methodology used in the traffic analysis, vehicle delay and queuing were measured under project conditions at both driveways. Table 20 shows the anticipated vehicle delay and 90th percentile queuing at project driveways for on-street and off-street vehicles during the peak periods.

As Table 20 shows, the expected vehicle delays at the project driveways would be of 1-3 seconds (LOS A) for all the time periods and both scenarios. Thus, the driveways are expected to operate well and with minimal delays.

On-street and driveway vehicle queuing was also analyzed. As Table 20 also shows, the vehicle queues due to project trips at all approaches are expected to be one to two vehicles during the peak hours. The project-related queues are not expected to cause any severe vehicle back-ups on either street or project driveways. As such, no major queuing issues are anticipated due to project traffic.

Appendix F shows the driveway delay and queuing worksheets. Appendix G shows the delivery truck and passenger vehicle turning templates for Project driveways and parking areas.

Table 20: Project-Related Vehicle Delays and Queuing at Driveways

AM Peak Hour				
Driveway	Delay (sec.) / LOS		Queuing (Vehicles)[1]	
	Existing + Project	Future With Project	Existing + Project	Future With Project
La Peer Drive	1.8 / A	1.8 / A	< 1	< 1
Robertson Boulevard	1.1 / A	1.1 / A	< 1	< 1
Midday Peak Hour				
Driveway	Delay (sec.)		Queuing (Vehicles)[1]	
	Existing + Project	Future With Project	Existing + Project	Future With Project
La Peer Drive	2.1 / A	2.1 / A	< 1	< 1
Robertson Boulevard	1.7 / A	1.7 / A	< 1	< 1
PM Peak Hour				
Driveway	Delay (sec.)		Queuing (Vehicles)[1]	
	Existing + Project	Future With Project	Existing + Project	Future With Project
La Peer Drive	1.9 / A	1.8 / A	< 1	< 1
Robertson Boulevard	1.5 / A	1.8 / A	< 1	1.2

1. Vehicle queues reflect those occurring at the street or driveway approach with the longest queue.

9.2 Pedestrian Circulation

The nearby signalized intersections of Santa Monica Boulevard & Robertson Boulevard and Melrose Avenue & Robertson Boulevard have pedestrian phase signals and striped crosswalks that both provide for safe pedestrian movements across the intersection. The unsignalized intersection of Santa Monica Boulevard & La Peer Drive also provides crosswalks that provides for safe pedestrian movements.

Furthermore, the proposed midblock crosswalks on both Robertson Boulevard and La Peer Drive will

also improve pedestrian safety and access.

Overall, the existing sidewalk network, traffic signals at major intersections, and the pedestrian-oriented nature of the project provide a safe local pedestrian travel network.

10. Construction Impact Analysis

This report section analyzes the potential traffic impacts that could be created by Project construction trips – generated by both haul/delivery trucks and construction employee vehicle trips – during the peak period of construction.

Impacts were analyzed using both existing and future baseline conditions. The project applicant has estimated the peak period of construction to be within the 2017-2019 period. The year 2019 was used as the future baseline conditions definition, as the later year would include more background traffic growth and that provides a conservative analysis.

Construction Period Trip Generation Assumptions

The following assumptions were applied to the Project construction-period trip generation analysis. This information was provided by the City and Project applicant:

- Construction workers would total 200 persons
- Passenger vehicles traveling to and from the site on a daily basis would be 200
- 75 trucks per day are anticipated during peak construction

Table 21 provides the trip generation calculations that served as input to the impact analysis within this report section. Truck trips were multiplied by a Passenger Car Equivalent (PCE) factor of 2.5, consistent with truck studies in the region.

Existing baseline traffic volumes were based on the existing conditions analysis in Section 2 of this report, and future baseline traffic volumes were based on the future buildout analysis in Section 6 of this report.

Table 21: Construction Trip Generation Totals

TRIP GENERATION	AVERAGE DAILY TRIPS			AM PEAK HOUR						MIDDAY PEAK HOUR						PM PEAK HOUR					
				Truck Trips*		Employee Trips		Total Trips		Truck Trips*		Employee Trips		Total Trips		Truck Trips*		Employee Trips		Total Trips	
	Trucks*	Employee	Total	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Field Personnel	0	400	400	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	100	0	100
Construction Truck	375	0	375	23	23	0	0	23	23	23	23	0	0	23	23	23	23	0	0	23	23
TOTAL TRIPS	**375**	**400**	**775**	**23**	**23**	**100**	**0**	**123**	**23**	**23**	**23**	**0**	**0**	**23**	**23**	**23**	**23**	**0**	**100**	**23**	**123**

** Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.*

Field Personnel - Assumed 50% of the construction work crew would travel to and from the site during AM and PM peak hours.

Trucks - Approximately 75 daily and nine peak hour construction truck trips in the construction period. Both multiplied by PCE factor. Truck trips were provided by Matt Construction Corporation on July 2015 and are based on the building construction phase, which will be the peak period of construction activity for the entire project.

During the peak of Project construction activities, employee and truck trips would total 775 trips on a daily basis, with 146 of those trips occurring during both the a.m. peak hour and the p.m. peak hour, and 46 occurring during the mid-day peak hour.

Truck trips were all distributed directly to the US-101 freeway at the nearest access points in the Hollywood area. Employee trips were distributed mainly to the north (towards US-101), south, and east.

Significant impacts of the construction period were determined according to the criteria outlined in Section 7.1 of this report. The final significance of determination is provided in the right-most columns of the tables within this report section.

The analysis of construction impacts with existing baseline conditions is provided in Table 22. The analysis of construction impacts with future baseline (year 2019) conditions is provided in Table 23.

The level of service worksheets for the construction period analysis are provided in Appendix H of this report.

Table 22: Construction Impacts
Existing Plus Project

	Study Intersections	Peak Hour	Existing (2015) Conditions		Existing (2015) with Construction		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of West Hollywood								
1	Doheny Drive & Sunset Boulevard	AM	27.6	C	27.6	C	0.0	No
		Noon	29.6	C	29.6	C	0.0	No
		PM	46.2	D	46.2	D	0.0	No
2	San Vicente Boulevard & Sunset Boulevard	AM	33.7	C	33.7	C	0.0	No
		Noon	21.2	C	21.2	C	0.0	No
		PM	69.6	**E**	70.4	**E**	0.8	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	115.9	**F**	115.9	**F**	0.0	No
		Noon	77.1	**E**	77.1	**E**	0.0	No
		PM	78.2	**E**	78.2	**E**	0.0	No
5	Almont Drive & Santa Monica Boulevard	AM	11.1	B	11.1	B	0.0	No
		Noon	13.4	B	13.4	B	0.0	No
		PM	15.5	B	15.5	B	0.0	No
6	La Peer Drive & Santa Monica Boulevard *	AM	0.4	A	0.4	A	0.0	No
		Noon	0.7	A	0.7	A	0.0	No
		PM	0.6	A	0.6	A	0.0	No
7	Robertson Boulevard & Santa Monica Boulevard	AM	25.8	C	27.4	C	1.6	No
		Noon	24.4	C	26.0	C	1.6	No
		PM	53.3	D	59.5	**E**	6.2	No
8	San Vicente Boulevard & Santa Monica Boulevard	AM	31.5	C	32.3	C	0.8	No
		Noon	22.9	C	23.4	C	0.5	No
		PM	32.0	C	33.0	C	1.0	No
9	La Cienega Boulevard & Santa Monica Boulevard	AM	50.1	D	51.8	D	1.7	No
		Noon	39.1	D	39.9	D	0.8	No
		PM	44.9	D	46.2	D	1.3	No
10	Almont Drive & Melrose Avenue *	AM	10.6	B	10.6	B	0.0	No
		Noon	12.2	B	12.2	B	0.0	No
		PM	21.7	C	21.7	C	0.0	No
11	La Peer Drive & Melrose Avenue *	AM	1.3	A	1.3	A	0.0	No
		Noon	1.8	A	1.8	A	0.0	No
		PM	1.6	A	1.6	A	0.0	No
12	Robertson Boulevard & Melrose Avenue	AM	19.6	B	19.6	B	0.0	No
		Noon	17.2	B	17.2	B	0.0	No
		PM	23.5	C	23.5	C	0.0	No
13	San Vicente Boulevard & Melrose Avenue	AM	30.2	C	31.8	C	1.6	No
		Noon	16.5	B	16.5	B	0.0	No
		PM	21.5	C	21.6	C	0.1	No
14	La Cienega Boulevard & Melrose Avenue	AM	84.5	**F**	84.5	**F**	0.0	No
		Noon	48.9	D	48.9	D	0.0	No
		PM	83.3	**F**	83.3	**F**	0.0	No
15	Doheny Drive & Beverly Boulevard (A)	AM	53.7	D	53.9	D	0.2	No
		Noon	36.8	D	36.8	D	0.0	No
		PM	53.1	D	53.1	D	0.0	No
16	Robertson Boulevard & Beverly Boulevard	AM	38.6	D	38.7	D	0.1	No
		Noon	26.7	C	26.7	C	0.0	No
		PM	24.0	C	24.3	C	0.3	No
17	San Vicente Boulevard & Beverly Boulevard	AM	26.3	C	26.5	C	0.2	No
		Noon	24.5	C	24.5	C	0.0	No
		PM	28.2	C	33.9	C	5.7	No

Table 22: Construction Impacts
Existing Plus Project, cont.

Study Intersections		Peak Hour	Existing (2015) Conditions		Existing (2015) with Construction		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of Beverly Hills								
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	AM	0.919	E	0.919	E	0.000	No
		PM	0.975	E	0.975	E	0.000	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	1.006	F	1.006	F	0.000	No
		PM	0.941	E	0.941	E	0.000	No
15	Doheny Drive & Beverly Boulevard (A)	AM	1.022	F	1.022	F	0.000	No
		PM	1.030	F	1.030	F	0.000	No
18	Robertson Boulevard & Burton Way (A)	AM	0.992	E	0.992	E	0.000	No
		PM	0.926	E	0.926	E	0.000	No
City of Los Angeles								
18	Robertson Boulevard & Burton Way (A)	AM	0.725	C	0.725	C	0.000	No
		PM	0.692	B	0.692	B	0.000	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

** Unsignalized Intersections*

(A) Shared Intersection

Table 23: Construction Impacts
Future With Project

	Study Intersections	Peak Hour	Future (2019) No Construction		Future (2019) With Construction		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of West Hollywood								
1	Doheny Drive & Sunset Boulevard	AM	37.9	D	37.9	D	0.0	No
		Noon	62.0	E	62.0	E	0.0	No
		PM	78.0	E	78.0	E	0.0	No
2	San Vicente Boulevard & Sunset Boulevard	AM	65.3	E	65.3	E	0.0	No
		Noon	78.4	E	78.4	E	0.0	No
		PM	117.6	F	117.7	F	0.1	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	159.9	F	159.9	F	0.0	No
		Noon	146.9	F	146.9	F	0.0	No
		PM	126.4	F	126.4	F	0.0	No
5	Almont Drive & Santa Monica Boulevard	AM	12.5	B	12.5	B	0.0	No
		Noon	20.1	C	20.1	C	0.0	No
		PM	19.2	B	19.2	B	0.0	No
6	La Peer Drive & Santa Monica Boulevard *	AM	0.4	A	0.4	A	0.0	No
		Noon	0.7	A	0.7	A	0.0	No
		PM	0.6	A	0.6	A	0.0	No
7	Robertson Boulevard & Santa Monica Boulevard	AM	48.8	D	49.8	D	1.0	No
		Noon	44.3	D	47.2	D	2.9	No
		PM	73.6	E	81.3	F	7.7	No
8	San Vicente Boulevard & Santa Monica Boulevard	AM	56.8	E	58.8	E	2.0	No
		Noon	71.9	E	76.0	E	4.1	No
		PM	68.9	E	74.0	E	5.1	No
9	La Cienega Boulevard & Santa Monica Boulevard	AM	75.9	E	78.5	E	2.6	No
		Noon	79.4	E	82.5	F	3.1	No
		PM	74.7	E	77.4	E	2.7	No
10	Almont Drive & Melrose Avenue *	AM	13.6	B	13.6	B	0.0	No
		Noon	54.3	F	54.3	F	0.0	No
		PM	92.0	F	92.0	F	0.0	No
11	La Peer Drive & Melrose Avenue *	AM	1.3	A	1.3	A	0.0	No
		Noon	2.0	A	2.0	A	0.0	No
		PM	1.8	A	2.3	A	0.5	No
12	Robertson Boulevard & Melrose Avenue	AM	28.8	C	28.8	C	0.0	No
		Noon	28.3	C	28.3	C	0.0	No
		PM	51.6	D	51.6	D	0.0	No
13	San Vicente Boulevard & Melrose Avenue	AM	40.6	D	45.0	D	4.4	No
		Noon	21.4	C	21.4	C	0.0	No
		PM	37.9	D	37.9	D	0.0	No
14	La Cienega Boulevard & Melrose Avenue	AM	99.7	F	99.9	F	0.2	No
		Noon	69.3	E	69.3	E	0.0	No
		PM	104.3	F	104.3	F	0.0	No
15	Doheny Drive & Beverly Boulevard (A)	AM	78.4	E	78.6	E	0.2	No
		Noon	79.4	E	79.4	E	0.0	No
		PM	84.5	F	85.3	F	0.8	No
16	Robertson Boulevard & Beverly Boulevard	AM	58.1	E	58.2	E	0.1	No
		Noon	34.8	C	34.8	C	0.0	No
		PM	31.8	C	32.3	C	0.5	No
17	San Vicente Boulevard & Beverly Boulevard	AM	29.2	C	29.5	C	0.3	No
		Noon	27.1	C	27.1	C	0.0	No
		PM	41.3	D	49.4	D	8.1	No

Table 23: Construction Impacts
Future With Project, cont.

Study Intersections		Peak Hour	Future (2019) No Construction		Future (2019) With Construction		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
City of Beverly Hills								
3	Palm Drive / Beverly Boulevard & Santa Monica Boulevard	AM	0.989	E	0.989	E	0.000	No
		PM	1.074	F	1.077	F	0.003	No
4	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	1.125	F	1.125	F	0.000	No
		PM	1.090	F	1.090	F	0.000	No
15	Doheny Drive & Beverly Boulevard (A)	AM	1.105	F	1.107	F	0.002	No
		PM	1.160	F	1.160	F	0.000	No
18	Robertson Boulevard & Burton Way (A)	AM	1.067	F	1.067	F	0.000	No
		PM	1.031	F	1.031	F	0.000	No
City of Los Angeles								
18	Robertson Boulevard & Burton Way (A)	AM	0.816	D	0.816	D	0.000	No
		PM	0.817	D	0.817	D	0.000	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

** Unsignalized Intersections*

(A) Shared Intersection

As indicated in Tables 22 and 23, based on the traffic forecasts, the level of service analysis, and significant impact thresholds set forth by the respective cities, the Project will not create a significant traffic impact at any of the study intersections.

11. Congestion Management Plan Conformance

This section demonstrates the ways in which this traffic study was prepared to be in conformance with the procedures mandated by the County of Los Angeles Congestion Management Program.

The Congestion Management Program (CMP) was created statewide because of Proposition 111 and was implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways comprises the CMP system. Per CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted where:

- At CMP arterial monitoring intersections, including freeway on-ramps or off-ramps, where the proposed project will add 50 or more vehicle trips during either AM or PM weekday peak hours.

- At CMP mainline freeway-monitoring locations, where the project will add 150 or more trips, in either direction, during the either the AM or PM weekday peak hours.

The nearest CMP arterial monitoring intersections to the project site are:

- CMP ID #160 Santa Monica Boulevard and Doheny Drive
- CMP ID #161 Santa Monica Boulevard and La Cienega Boulevard.

The nearest CMP arterial monitoring intersections are located approximately within one mile from the project site. Based on the project trip generation and the distance of this location from the project site, it is not expected that 50 or more new trips per hour would be added at CMP location #161, therefore no further analysis is needed. More than 50 new trips per hour would be added to CMP location #160, therefore no further analysis of potential CMP impacts is required. See below for analysis.

The nearest CMP mainline freeway-monitoring locations to the project site are:

- CMP ID #1011 I-10, east of Overland Avenue
- CMP ID# 1012 I-10 east of La Brea Avenue

Based on the Project trip distribution and traffic assignment, the proposed Project is expected to add less than 150 new trips per hour to the freeway segments near the Project site. Therefore, no further analysis of CMP freeway monitoring stations is required.

Due to the nature of the proposed Project (i.e.: hotel serving mostly tourists and leisure users), the demand on the transit system is expected to be largely negligible. Furthermore, the analysis did not take any trip credits for transit use, in order to prepare a conservative traffic impact analysis on the nearby intersections and roadways. Given these factors, no CMP transit impact analysis was conducted.

11.1 CMP – Intersection Impact Analysis

The proposed Project is projected to add more than 50 peak hour trips to CMP arterial location #160. Per Los Angeles County's CMP guidelines, further analysis is required.

Intersection impact analysis at this location was conducted using the Intersection Capacity Utilization (ICU) methodology. As specified by the 2010 CMP, significant impact criteria are provided below:

> *For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C ≥ 0.02), causing LOS F (V/C > 1.00); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C ≥ 0.02). The lead agency may apply a more stringent criteria if desired.*
>
> Source: Los Angeles County Metropolitan Transportation Authority (LACMTA) 2010 Congestion Management Program, 2010.

As shown in Table 24 below, under Existing + Project conditions, the intersection's proposed project increase is less than 2%, thus the project does not cause a significant impact per CMP standards at this intersection.

Table 24: Existing Plus Project CMP Impact Summary

Study Intersections		Peak Hour	Existing Conditions		Existing with Project		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
CMP #160	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	1.006	F	1.013	F	0.007	No
		PM	0.941	E	0.951	E	0.010	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

(A) Shared Intersection

As shown in Table 25 below, under Future With Project conditions, the intersection's proposed project increase is less than 2%, thus the project does not cause a significant impact per CMP standards at this intersection.

Table 25: Future With Project CMP Impact Summary

Study Intersections		Peak Hour	Future (2019) No Project		Future (2019) With Project		Change in V/C or Delay	Sig Impact?
			V/C or Delay	LOS	V/C or Delay	LOS		
CMP #160	Doheny Drive & Santa Monica Boulevard/Melrose Avenue (A)	AM	1.125	F	1.132	F	0.007	No
		PM	1.090	F	1.103	F	0.013	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

(A) Shared Intersection

12. Analysis Summary and Project Mitigation

12.1 Summary

The following summarizes the traffic study results and conclusions:

- Based on the scoping document submitted to the City, the Project study area includes 18 study intersections and five roadway segments. Significant traffic impacts of the proposed Project were analyzed within the weekday a.m., midday, and p.m. peak periods for the intersections and on a daily basis for the roadways.

- Under existing conditions, all of the study intersections are currently operating at LOS D or better, except for six intersections, which are operating at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.

- The project would consist of a 241-room hotel that would include hotel restaurants, hotel retail, hotel meeting rooms, etc. The project would also include 8,845 square feet of public restaurant on the first floor and 13,770 square feet of public restaurant on the rooftop level; 18,130 square feet of public retail; 3,780 square feet of nightclub space, and 10,325 square feet of design showroom space. It is anticipated to open in 2019.

- The Project would generate 2,390 daily trips, of which 128 (77 in, 51 out) would occur during the a.m. peak hour, 202 (120 in, 82 out) would occur during the midday peak hour, and 157 (80 in, 77 out) would occur during the p.m. peak hour. These totals include credits for the former use at the site.

- Under the Existing plus-Project traffic analysis, all of the study intersections would continue operating at LOS D or better, except for seven that will operate at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.

- The Future 2019 without Project traffic analysis included ambient growth through 2019 and the addition of traffic from 55 proposed area/cumulative projects within the cities of West Hollywood, Beverly Hills, and Los Angeles.

- Under the Future 2019 without Project conditions, all of the study intersections will continue operating at LOS D or better, except for 11 intersections, which would operate at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.

- Under the Future 2019 With Project conditions, all of the study intersections will continue operating at LOS D or better, except for 12 intersections, which would operate at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.

- The proposed Project will create significant impacts at one study intersection under existing + project conditions and under Future With Project conditions. No roadway segments impacts were triggered by Project traffic. Impact criteria from West Hollywood, Beverly Hills, and Los Angeles, was used to determine impacts at intersections and roadways within those jurisdictions.

- The proposed Project is required to provide 999 parking spaces per City of West Hollywood parking requirements. The Project will provide 1,151 parking spaces, along with seven (7) loading spaces, and 62 bicycle parking spaces. There will be a surplus of 153 vehicle parking spaces.

- The proposed Project will require the removal of the existing 100+ space public parking lot near the southwest corner of Santa Monica Boulevard and Robertson Boulevard. The 153 parking surplus that will be provided by the Project will mitigate the loss of the existing parking lot.

- Project construction would involve 200 daily construction worker employees and 75-trucks per day (9 truck trips per hour) during the peak period of construction.

- Assuming 50% of construction employees would arrive and depart during the a.m. and p.m. peak hours, respectively, and adding a 2.5 passenger car equivalency (PCE) factor to the truck trips, construction trips were analyzed. Under the existing plus construction and future with construction scenarios, Project construction would not create any significant impacts at any of the study intersections or roadway segments.

- No major queuing issues, severe delays, or back-ups were anticipated at Project driveways and City streets. Project pedestrian improvements along with the existing pedestrian infrastructure will continue to provide a safe local pedestrian travel network

12.2 Mitigation Measure Recommendations – Existing + Project Impacts

Robertson Boulevard & Santa Monica Boulevard

After coordination with City staff, the impact this intersection can be mitigated to a level of insignificance by widening the northbound approach to one shared left / thru lane and one exclusive right turn lane. This treatment will require shifting the center line over to the west and the removal of two on street parking spaces on the west side of Robertson Boulevard. See Table 26 for how this measure will affect vehicle delay.

Table 26: Existing Plus Project - Mitigation

Study Intersections		Peak Hour	Existing Conditions		Existing with Project		Change in V/C or Delay	Sig Impact?	Mitigation			
			V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS	Change in V/C or Delay	Sig Impact?
7	Robertson Boulevard & Santa Monica Boulevard	PM	53.3	D	76.5	E	23.2	Yes	40.2	D	-13.1	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

Mitigation level of service worksheets are provided in Appendix I.

12.2 Mitigation Measure Recommendations – Future With Project Impacts

Under Future With Project conditions, the proposed project will trigger significant impacts at the following intersection:

- Robertson Boulevard & Santa Monica Boulevard (Midday and PM peak hour)

Robertson Boulevard & Santa Monica Boulevard

The same mitigation measure as under Existing + Project conditions will apply under this scenario.

The mitigation measures outlined above will fully bring the intersection impacts to a level of insignificance under Future With Project conditions. Table 27 illustrates how the intersection will operate once the mitigation measure is implemented.

Table 27: Future With Project - Mitigation

Study Intersections		Peak Hour	Future (2019) No Project		Future (2019) With Project		Change in V/C or Delay	Sig Impact?	Mitigation			
			V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS	Change in V/C or Delay	Sig Impact?
7	Robertson Boulevard & Santa Monica Boulevard	Noon	44.3	D	55.9	**E**	11.6	**Yes**	44.0	D	-0.3	No
		PM	73.6	**E**	98.6	**F**	25.0	**Yes**	56.9	**E**	-16.7	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

As Table 27 shows, two of the three Project traffic impacts will be eliminated, per West Hollywood, Beverly Hills, and the County's Congestion Management Program impact standards.

Mitigation level of service worksheets are also provided in Appendix I.

Adjacent North Parking Lot

The adjacent parking off-street and on-street parking areas will experience temporary parking impacts during construction due to the loss of the 100+ space parking lot at the north end of the Project site. Nearby parking lots that can be used during construction will be identified.

APPENDIX A
Traffic Counts

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-001 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Doheny Dr			Doheny Dr			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.5	0.5	1	0	1	0	1	2	1	1	2	0					
7:00 AM	18	10	20	6	10	6	8	108	14	49	387	31	667	0	0	0	0
7:15 AM	27	8	22	8	8	5	4	101	12	43	380	20	638	0	0	0	0
7:30 AM	30	17	18	8	6	2	3	119	11	35	395	12	656	0	0	0	1
7:45 AM	39	10	23	21	7	6	10	133	19	18	361	24	671	0	0	0	0
8:00 AM	44	13	28	21	12	0	11	183	23	30	385	19	769	0	0	0	0
8:15 AM	44	15	29	23	9	6	4	214	17	40	367	24	792	0	0	0	0
8:30 AM	34	24	22	26	12	2	2	201	31	24	363	18	759	0	0	0	0
8:45 AM	43	30	29	16	11	7	6	222	24	32	372	26	818	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	279	127	191	129	75	34	48	1281	151	271	3010	174	5770	0	0	0	1
APPROACH %'s :	46.73%	21.27%	31.99%	54.20%	31.51%	14.29%	3.24%	86.55%	10.20%	7.84%	87.12%	5.04%					

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	165	82	108	86	44	15	23	820	95	126	1487	87	3138
PEAK HR FACTOR :		0.870			0.906			0.931			0.979		0.959

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-001 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Doheny Dr			Doheny Dr			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.5	0.5	1	0	1	0	1	2	1	1	2	0					
4:00 PM	47	12	52	31	24	9	6	255	15	37	249	16	753	0	0	1	0
4:15 PM	42	21	51	36	22	8	3	288	10	38	247	24	790	0	0	0	0
4:30 PM	40	15	71	41	21	8	3	252	20	35	232	21	759	0	0	0	0
4:45 PM	40	15	60	23	19	13	6	245	7	46	212	22	708	0	0	0	0
5:00 PM	42	16	58	29	27	3	2	251	11	37	236	17	729	0	0	0	0
5:15 PM	44	14	60	22	17	7	4	255	14	43	276	21	777	0	0	0	0
5:30 PM	49	14	51	34	24	7	2	240	17	37	218	21	714	0	0	0	0
5:45 PM	37	16	60	23	19	5	1	279	19	39	273	16	787	0	0	0	0
6:00 PM	49	15	52	20	24	3	1	203	10	43	244	21	685	0	0	0	0
6:15 PM	34	20	48	23	17	7	2	214	8	48	306	21	748	0	0	0	0
6:30 PM	23	26	56	12	18	10	2	148	17	44	261	13	630	0	0	0	0
6:45 PM	28	13	57	18	9	3	1	270	18	31	263	14	725	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	475	197	676	312	241	83	33	2900	166	478	3017	227	8805	0	0	1	0
APPROACH %'s :	35.24%	14.61%	50.15%	49.06%	37.89%	13.05%	1.06%	93.58%	5.36%	12.84%	81.06%	6.10%					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	169	63	234	131	86	38	18	1040	52	156	940	83	3010				
PEAK HR FACTOR :		0.925			0.911			0.922			0.954		0.953				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-001 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Doheny Dr			Doheny Dr			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1.5	NT 0.5	NR 1	SL 0	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	44	15	36	20	15	13	4	202	21	39	283	21	713	0	0	1	0
11:15 AM	36	15	31	34	18	7	7	215	14	35	253	21	686	0	0	1	0
11:30 AM	43	13	33	24	19	12	11	215	27	40	265	21	723	0	0	0	0
11:45 AM	43	13	36	32	17	18	7	237	25	40	235	24	727	0	0	0	0
12:00 PM	42	20	36	19	15	14	10	233	18	45	234	21	707	0	0	0	1
12:15 PM	49	25	42	38	12	8	5	238	29	40	262	15	763	0	0	0	0
12:30 PM	44	20	39	20	24	11	5	231	20	44	238	12	708	0	0	0	0
12:45 PM	46	15	35	23	20	11	16	235	22	37	237	17	714	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	347	136	288	210	140	94	65	1806	176	320	2007	152	5741	0	0	2	1
APPROACH %'s :	45.01%	17.64%	37.35%	47.30%	31.53%	21.17%	3.18%	88.23%	8.60%	12.91%	80.96%	6.13%					
PEAK HR START TIME :	1130 AM												TOTAL				
PEAK HR VOL :	177	71	147	113	63	52	33	923	99	165	996	81	2920				
PEAK HR FACTOR :		0.851			0.851			0.970			0.952		0.957				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

Doheny Dr and Sunset Blvd , West Hollywood

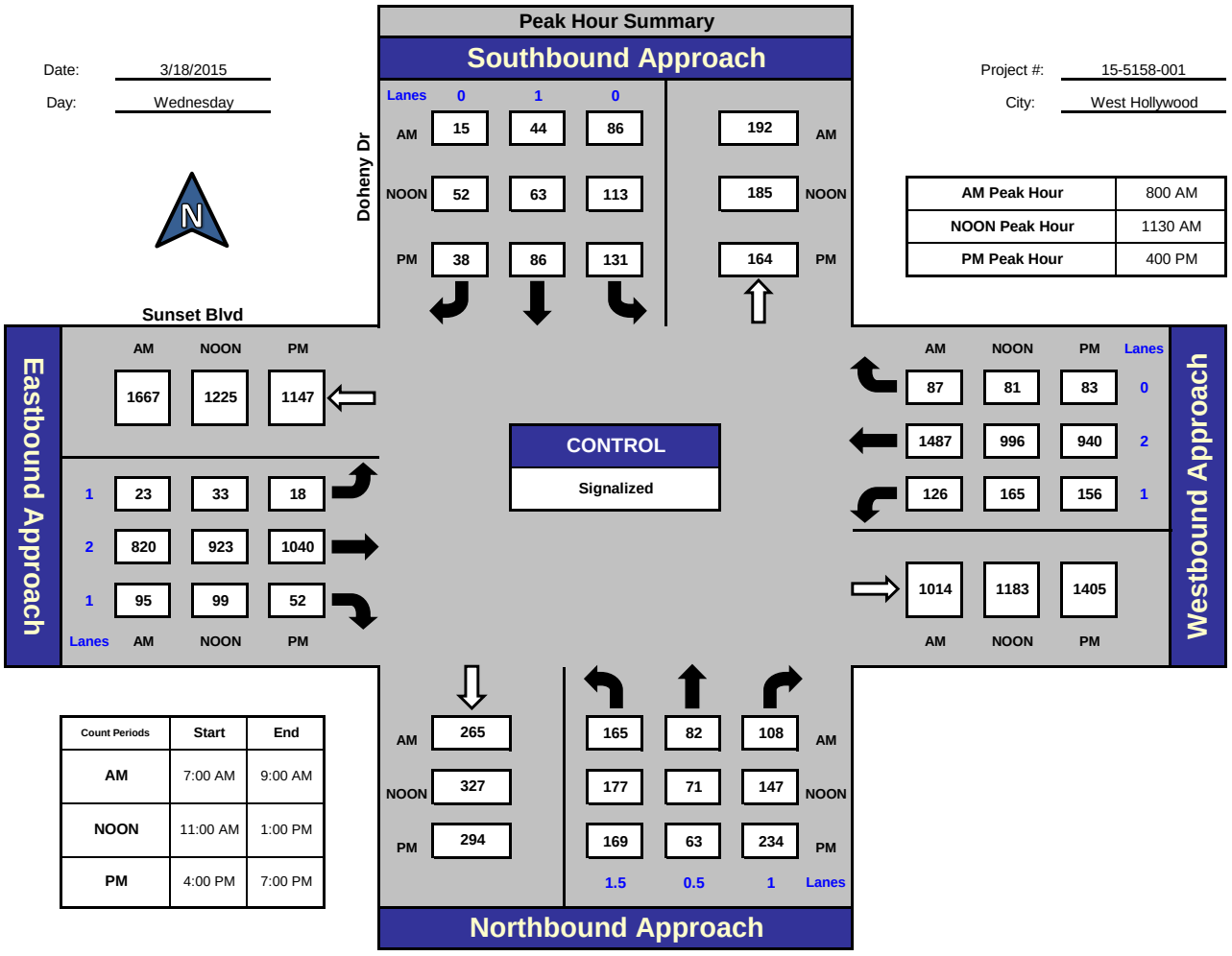
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-001

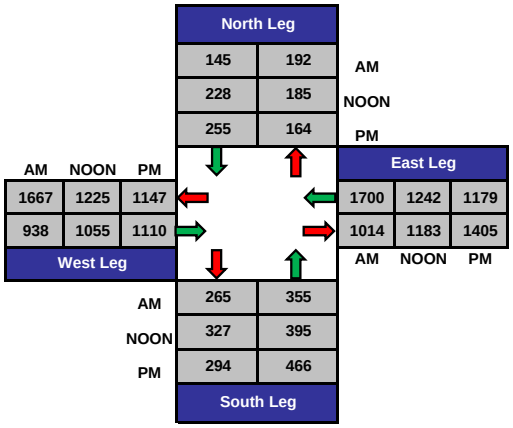
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1130 AM
PM Peak Hour	400 PM

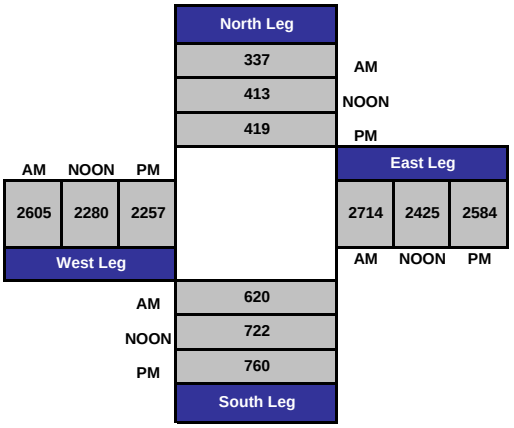


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-002 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1.3	NT 0.3	NR 1.3	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	40	0	27	4	2	2	2	97	28	21	418	2	643	0	0	0	0
7:15 AM	41	0	26	5	4	1	3	115	21	24	434	4	678	0	0	0	0
7:30 AM	43	2	23	0	5	1	1	115	17	21	411	2	641	0	0	0	0
7:45 AM	51	0	36	7	8	5	2	152	19	36	370	3	689	0	0	0	0
8:00 AM	31	4	50	8	4	9	1	196	50	47	418	4	822	0	0	0	0
8:15 AM	67	5	46	9	12	5	3	216	40	22	347	8	780	0	0	0	0
8:30 AM	41	2	38	10	6	4	2	217	44	26	391	3	784	0	0	0	0
8:45 AM	50	2	64	5	12	6	3	207	51	35	397	4	836	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	364	15	310	48	53	33	17	1315	270	232	3186	30	5873	0	0	0	0
APPROACH %'s :	52.83%	2.18%	44.99%	35.82%	39.55%	24.63%	1.06%	82.08%	16.85%	6.73%	92.40%	0.87%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	189	13	198	32	34	24	9	836	185	130	1553	19	3222				
PEAK HR FACTOR :		0.847			0.865			0.979			0.907		0.964				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-002 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.3	0.3	1.3	1	1	0	1	2	1	1	2	0					
4:00 PM	42	6	73	10	4	3	2	334	22	45	275	6	822	0	0	0	0
4:15 PM	45	2	66	9	5	4	2	355	34	36	274	9	841	0	0	0	0
4:30 PM	61	10	88	7	10	2	1	329	35	34	235	3	815	0	0	0	0
4:45 PM	53	5	65	9	3	5	4	315	27	44	239	9	778	0	0	0	0
5:00 PM	57	6	79	5	6	6	3	321	34	44	259	11	831	1	0	0	0
5:15 PM	60	13	92	4	3	2	0	346	31	51	268	5	875	0	0	0	0
5:30 PM	51	7	87	4	5	3	3	321	31	38	245	7	802	0	0	1	0
5:45 PM	51	11	80	7	1	5	3	344	27	27	302	5	863	0	0	0	0
6:00 PM	68	10	92	11	8	5	3	301	22	44	265	8	837	2	0	0	0
6:15 PM	66	9	73	7	5	3	4	247	21	36	295	8	774	0	0	0	0
6:30 PM	46	8	92	9	7	3	3	224	25	52	286	8	763	0	0	0	0
6:45 PM	50	11	77	5	6	1	6	331	22	31	248	13	801	1	0	1	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	650	98	964	87	63	42	34	3768	331	482	3191	92	9802	4	0	2	0
APPROACH %'s :	37.97%	5.72%	56.31%	45.31%	32.81%	21.88%	0.82%	91.17%	8.01%	12.80%	84.75%	2.44%					
PEAK HR START TIME :	515 PM												TOTAL				
PEAK HR VOL :	230	41	351	26	17	15	9	1312	111	160	1080	25	3377				
PEAK HR FACTOR :		0.915			0.604			0.950			0.947		0.965				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-002 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1.3	NT 0.3	NR 1.3	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	36	7	36	8	11	4	3	237	28	32	325	8	735	0	0	0	0
11:15 AM	35	10	49	5	6	4	3	232	41	44	307	6	742	0	0	0	0
11:30 AM	31	8	41	10	6	3	3	246	40	31	313	3	735	0	0	1	0
11:45 AM	33	3	58	5	4	2	3	260	38	45	290	7	748	0	0	0	0
12:00 PM	33	1	57	5	8	12	5	244	42	43	291	6	747	1	0	1	0
12:15 PM	33	4	55	9	1	4	1	273	37	39	318	4	778	0	0	0	0
12:30 PM	35	6	41	11	3	4	2	284	39	38	277	5	745	0	0	0	0
12:45 PM	49	3	70	4	6	3	4	259	23	40	275	3	739	1	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	285	42	407	57	45	36	24	2035	288	312	2396	42	5969	2	0	2	0
APPROACH %'s :	38.83%	5.72%	55.45%	41.30%	32.61%	26.09%	1.02%	86.71%	12.27%	11.35%	87.13%	1.53%					
PEAK HR START TIME :	1145 AM												TOTAL				
PEAK HR VOL :	134	14	211	30	16	22	11	1061	156	165	1176	22	3018				
PEAK HR FACTOR :		0.955			0.680			0.945			0.944		0.970				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

San Vicente Blvd and Sunset Blvd , West Hollywood

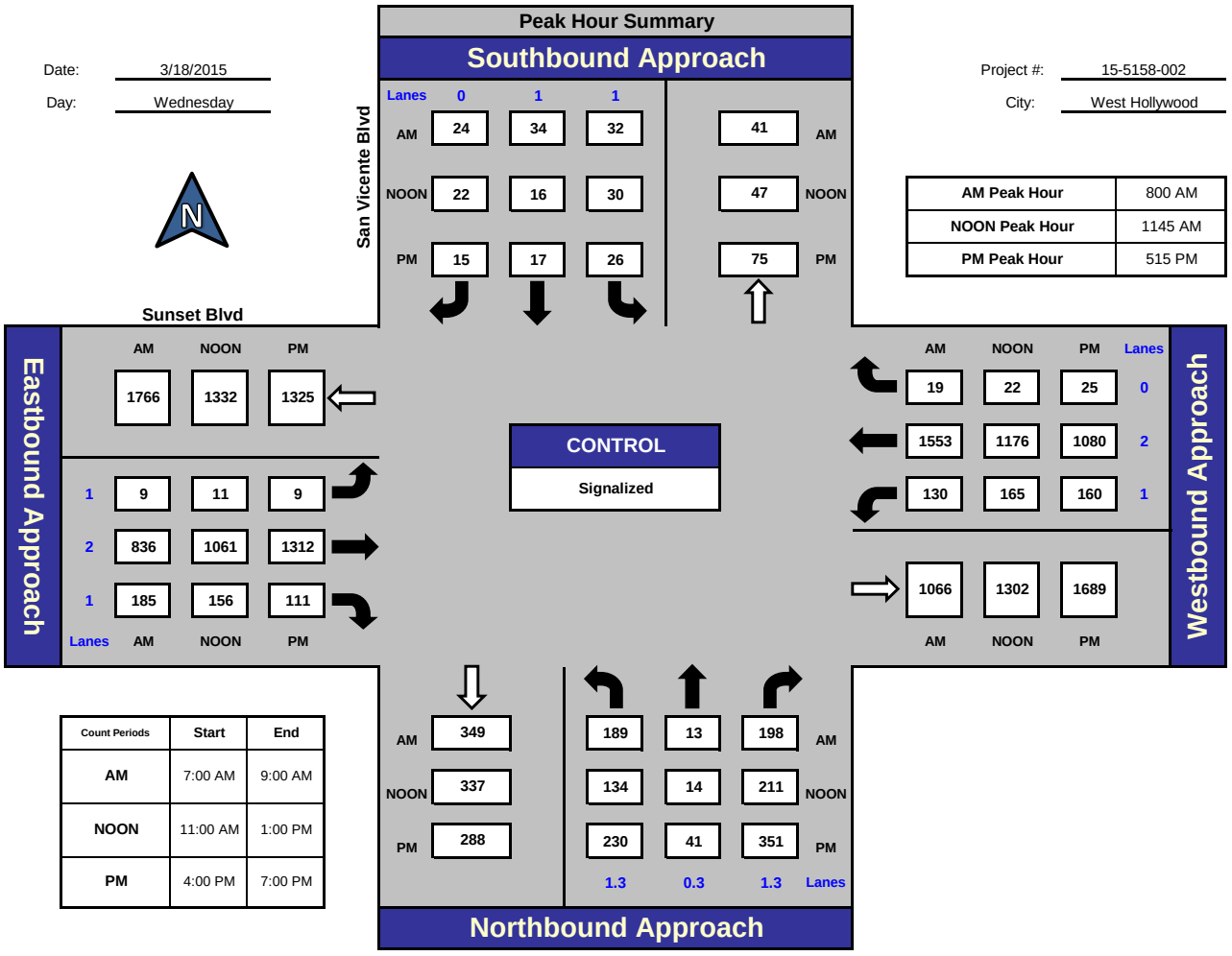
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-002

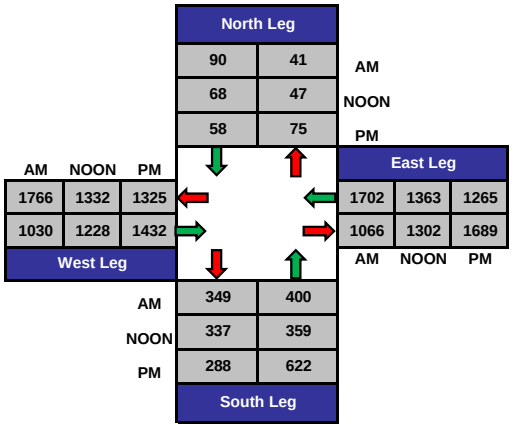
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	515 PM

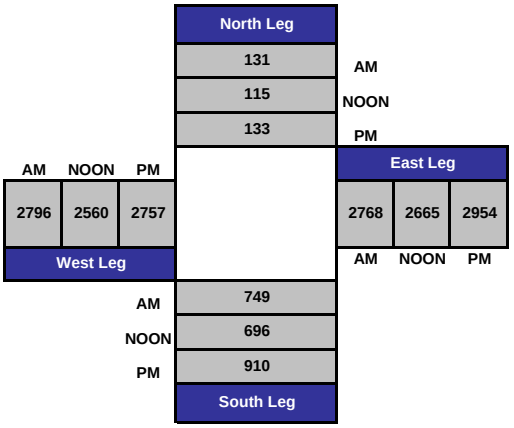


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-003 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Palm Dr/Beverly Blvd			Palm Dr/Beverly Blvd			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 1	NR 1	SL 0.5	ST 1	SR 0.5	EL 0	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	97	15	6	0	27	0	0	119	78	9	377	0	728
7:15 AM	184	22	3	3	34	1	0	130	90	8	393	1	869
7:30 AM	178	17	3	5	54	0	0	158	99	13	368	0	895
7:45 AM	183	37	5	11	65	2	0	165	126	15	330	1	940
8:00 AM	159	31	6	14	65	0	0	205	122	16	353	1	972
8:15 AM	176	29	5	17	79	1	0	238	118	14	334	4	1015
8:30 AM	177	22	3	10	81	1	0	228	149	7	377	2	1057
8:45 AM	176	45	9	9	82	1	0	237	137	22	343	2	1063
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1330	218	40	69	487	6	0	1480	919	104	2875	11	7539
APPROACH %'s :	83.75%	13.73%	2.52%	12.28%	86.65%	1.07%	0.00%	61.69%	38.31%	3.48%	96.15%	0.37%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	688	127	23	50	307	3	0	908	526	59	1407	9	4107
PEAK HR FACTOR :		0.911			0.928			0.951			0.955		0.966

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-003 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Palm Dr/Beverly Blvd			Palm Dr/Beverly Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	1	1	0.5	1	0.5	0	2	1	1	2	0					
4:00 PM	165	26	9	19	74	2	0	355	108	16	294	0	1068				
4:15 PM	189	32	10	16	65	1	0	313	126	12	248	1	1013				
4:30 PM	175	23	5	4	77	3	0	338	144	7	249	2	1027				
4:45 PM	168	43	10	9	86	1	0	322	139	15	267	2	1062				
5:00 PM	181	30	14	5	74	5	0	293	158	9	257	3	1029				
5:15 PM	174	34	11	4	65	3	0	306	150	14	275	1	1037				
5:30 PM	185	31	18	4	73	2	0	304	164	18	274	2	1075				
5:45 PM	157	27	14	12	65	0	0	284	168	10	266	3	1006				
6:00 PM	192	29	11	7	48	5	0	290	156	15	261	2	1016				
6:15 PM	174	24	13	1	60	3	0	296	151	11	258	2	993				
6:30 PM	165	32	13	7	58	2	0	303	155	19	279	6	1039				
6:45 PM	154	19	10	1	53	0	0	280	203	9	268	1	998				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	2079	350	138	89	798	27	0	3684	1822	155	3196	25	12363	0	0	0	0
APPROACH %'s :	80.99%	13.63%	5.38%	9.74%	87.31%	2.95%	0.00%	66.91%	33.09%	4.59%	94.67%	0.74%					
PEAK HR START TIME :	445 PM												TOTAL				
PEAK HR VOL :	708	138	53	22	298	11	0	1225	611	56	1073	8	4203				
PEAK HR FACTOR :		0.960			0.862			0.981			0.967		0.977				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-003 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Palm Dr/Beverly Blvd			Palm Dr/Beverly Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 2	NT 1	NR 1	SL 0.5	ST 1	SR 0.5	EL 0	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	163	21	8	2	58	0	0	276	129	19	289	3	968				
11:15 AM	155	14	6	5	51	1	0	263	112	19	322	0	948				
11:30 AM	156	15	14	20	53	1	0	267	129	14	275	4	948				
11:45 AM	158	17	10	10	46	4	0	295	154	24	278	1	997				
12:00 PM	131	19	8	4	40	3	0	251	131	16	271	5	879				
12:15 PM	149	13	14	7	46	1	0	289	134	11	285	3	952				
12:30 PM	158	13	10	4	51	2	0	257	134	16	270	2	917				
12:45 PM	123	27	18	6	42	1	0	294	135	15	247	2	910				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	1193	139	88	58	387	13	0	2192	1058	134	2237	20	7519	0	0	0	0
APPROACH %'s :	84.01%	9.79%	6.20%	12.66%	84.50%	2.84%	0.00%	67.45%	32.55%	5.60%	93.56%	0.84%					
PEAK HR START TIME :	1100 AM												TOTAL				
PEAK HR VOL :	632	67	38	37	208	6	0	1101	524	76	1164	8	3861				
PEAK HR FACTOR :		0.960			0.848			0.905			0.915		0.968				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

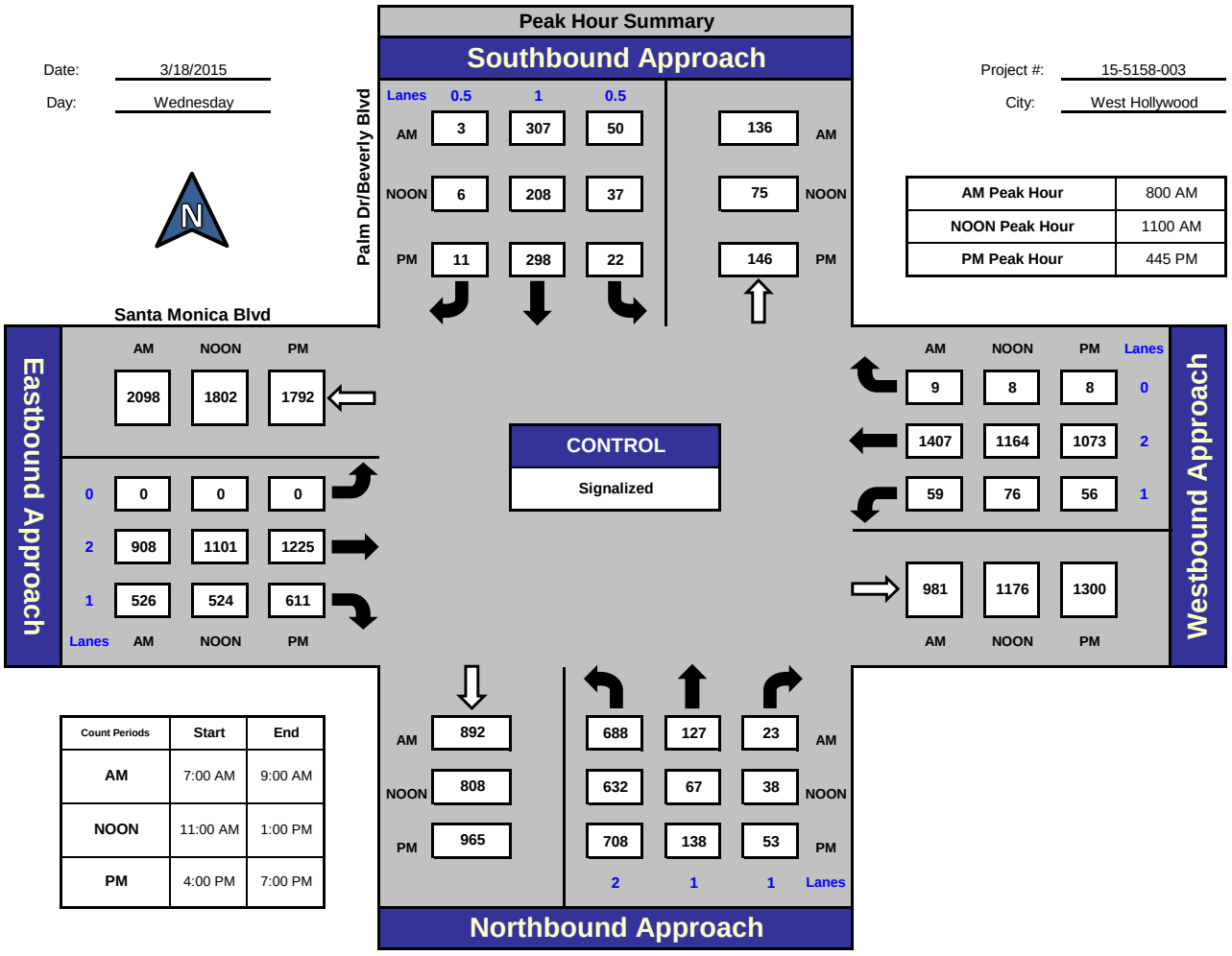
NDS

Palm Dr/Beverly Blvd and Santa Monica Blvd , West Hollywood

Date: 3/18/2015
Day: Wednesday

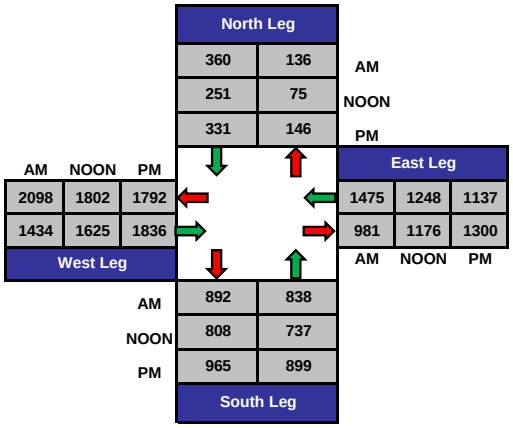
Project #: 15-5158-003
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1100 AM
PM Peak Hour	445 PM

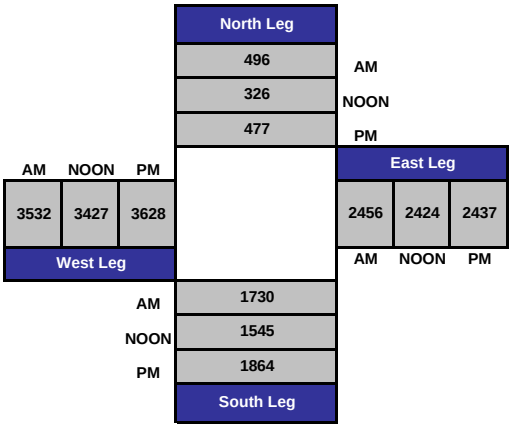


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-004 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Doheny Dr			Doheny Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 0.5	NT 1	NR 0.5	SL 0.5	ST 1.5	SR 1	EL 1	ET 3	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	6	33	7	3	28	37	11	87	6	31	361	0	610	0	0	0	1
7:15 AM	6	47	12	6	39	40	17	74	7	37	381	1	667	0	0	0	1
7:30 AM	6	57	9	5	40	19	7	94	7	33	403	5	685	0	0	0	0
7:45 AM	5	66	12	3	57	14	19	117	8	25	345	6	677	0	0	0	0
8:00 AM	6	70	12	9	59	21	12	105	8	37	357	9	705	0	0	0	0
8:15 AM	8	78	19	3	54	31	15	159	5	36	403	13	824	0	0	0	0
8:30 AM	13	69	9	8	53	30	19	150	11	23	334	12	731	0	0	0	0
8:45 AM	11	66	19	7	58	38	18	127	8	25	351	14	742	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	61	486	99	44	388	230	118	913	60	247	2935	60	5641	0	0	0	2
APPROACH %'s :	9.44%	75.23%	15.33%	6.65%	58.61%	34.74%	10.82%	83.68%	5.50%	7.62%	90.53%	1.85%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	38	283	59	27	224	120	64	541	32	121	1445	48	3002				
PEAK HR FACTOR :		0.905			0.900			0.885			0.893		0.911				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-004 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Doheny Dr			Doheny Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0.5	1	0.5	0.5	1.5	1	1	3	1	1	2	0					
4:00 PM	10	71	35	19	84	17	9	256	11	33	261	14	820	0	0	0	6
4:15 PM	9	66	25	26	80	24	18	222	19	46	223	7	765	0	0	0	3
4:30 PM	8	62	21	11	82	22	19	238	25	29	197	24	738	0	0	0	3
4:45 PM	8	69	29	28	82	37	15	184	24	36	223	9	744	0	0	0	3
5:00 PM	10	76	29	23	88	28	20	225	17	39	246	6	807	0	0	0	1
5:15 PM	5	68	27	22	89	27	17	172	26	31	226	11	721	0	0	0	2
5:30 PM	12	67	20	22	75	22	18	219	27	46	262	13	803	0	0	0	1
5:45 PM	4	87	26	21	104	38	23	213	37	26	214	14	807	0	0	0	2
6:00 PM	11	58	23	9	97	25	26	222	39	35	245	20	810	0	0	0	0
6:15 PM	7	82	31	12	85	35	16	180	28	28	224	20	748	0	0	0	0
6:30 PM	10	61	22	31	87	36	10	162	34	32	239	11	735	0	0	0	1
6:45 PM	10	78	26	24	72	30	22	221	25	22	209	24	763	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	104	845	314	248	1025	341	213	2514	312	403	2769	173	9261	0	0	0	25
APPROACH %'s :	8.23%	66.90%	24.86%	15.37%	63.51%	21.13%	7.01%	82.72%	10.27%	12.05%	82.78%	5.17%					
PEAK HR START TIME :	530 PM												TOTAL				
PEAK HR VOL :	34	294	100	64	361	120	83	834	131	135	945	67	3168				
PEAK HR FACTOR :		0.892			0.836			0.913			0.893		0.978				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-004 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Doheny Dr			Doheny Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 0.5	NT 1	NR 0.5	SL 0.5	ST 1.5	SR 1	EL 1	ET 3	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	9	61	28	11	87	49	23	166	10	38	267	13	762	0	0	0	2
11:15 AM	13	64	34	12	68	35	23	190	20	32	290	8	789	0	0	0	2
11:30 AM	8	70	23	22	73	24	20	190	12	21	231	15	709	0	0	0	0
11:45 AM	12	71	14	16	75	33	30	226	24	37	283	9	830	0	0	0	4
12:00 PM	7	70	30	18	73	37	24	181	20	30	231	19	740	0	0	1	1
12:15 PM	12	84	31	18	81	38	22	191	20	31	248	12	788	0	0	1	0
12:30 PM	7	71	23	27	84	31	10	198	17	34	266	10	778	0	0	1	1
12:45 PM	5	86	29	14	73	36	30	210	16	34	208	13	754	0	0	0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	73	577	212	138	614	283	182	1552	139	257	2024	99	6150	0	0	3	11
APPROACH %'s :	8.47%	66.94%	24.59%	13.33%	59.32%	27.34%	9.72%	82.86%	7.42%	10.80%	85.04%	4.16%					
PEAK HR START TIME :	1145 AM												TOTAL				
PEAK HR VOL :	38	296	98	79	313	139	86	796	81	132	1028	50	3136				
PEAK HR FACTOR :		0.850			0.935			0.860			0.919		0.945				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

Doheny Dr and Santa Monica Blvd , West Hollywood

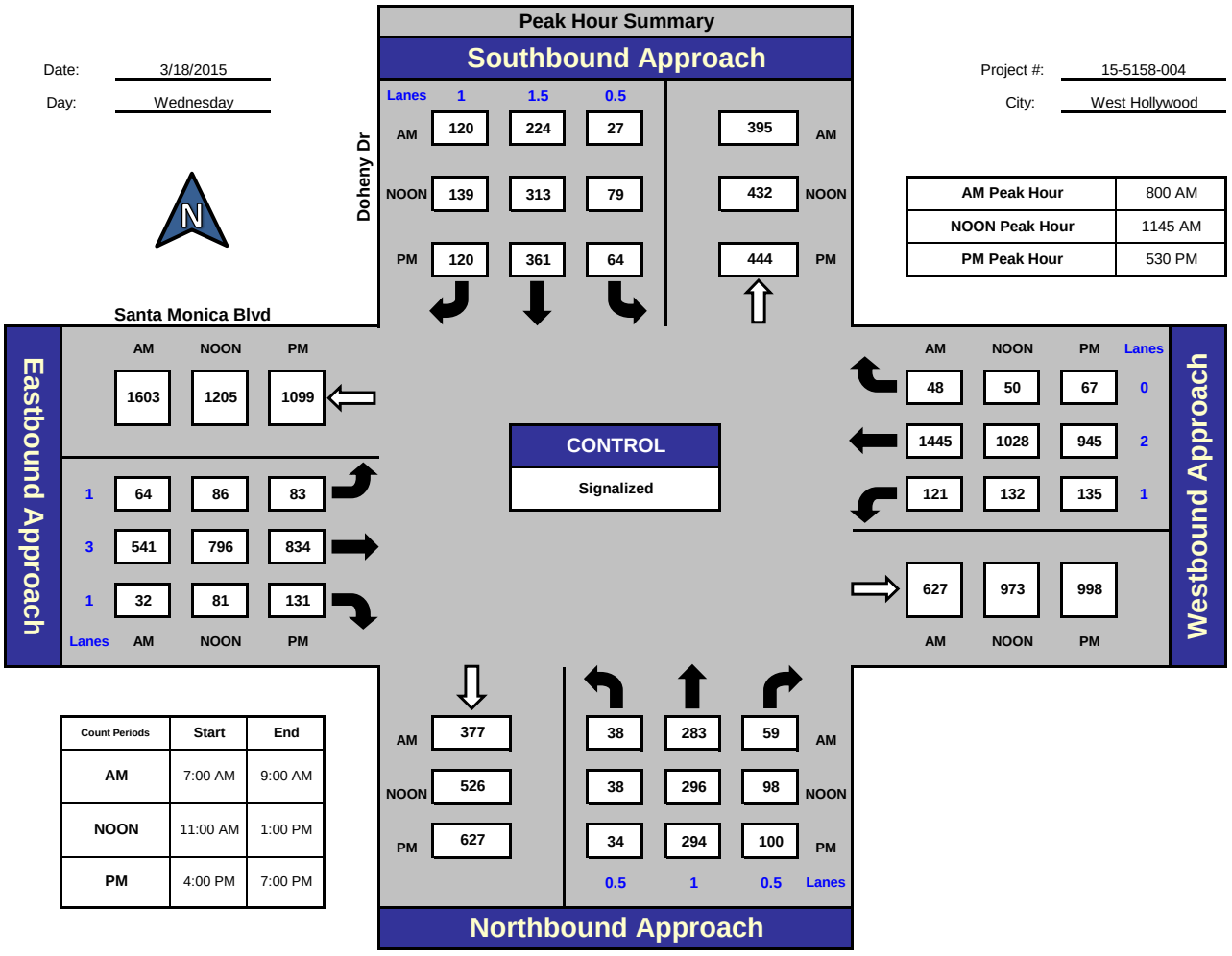
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-004

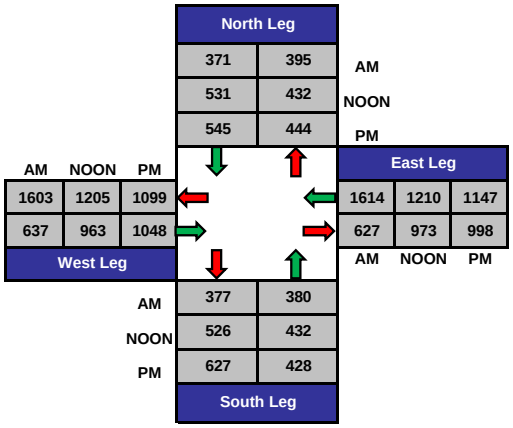
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	530 PM

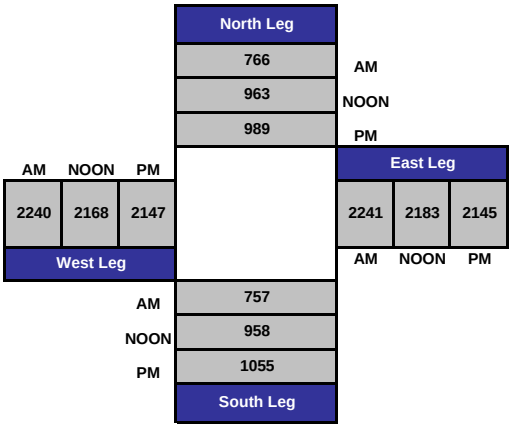


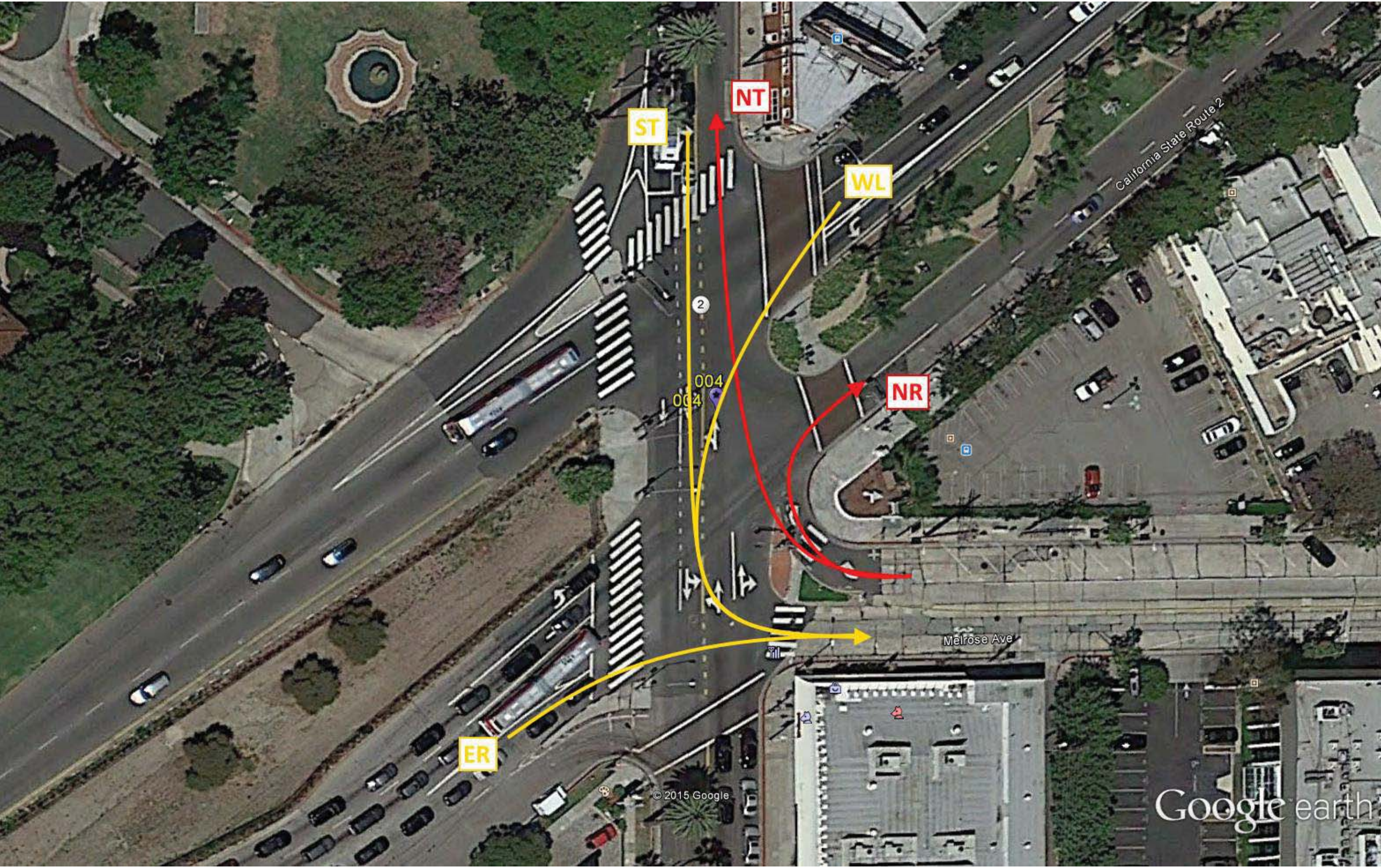
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg




NT
ST
WL
NR
ER
2
004
004
California State Route 2
Melrose Ave
© 2015 Google
Google earth

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-104 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Doheny Dr			Doheny Dr			Santa Monica Blvd/Melrose Blvd			Santa Monica Blvd/Melrose Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0.5	NT 1	NR 0.5	SL 0.5	ST 1.5	SR 1	EL 1	ET 3	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	0	1	4	0	9	0	0	0	19	0	0	0	33
7:15 AM	0	0	5	0	9	0	0	0	30	0	0	0	44
7:30 AM	0	1	4	0	9	0	0	0	43	0	0	0	57
7:45 AM	0	0	3	0	15	0	0	0	48	0	0	0	66
8:00 AM	0	0	8	0	18	0	0	0	53	0	0	0	79
8:15 AM	0	0	5	0	27	0	0	0	74	0	0	0	106
8:30 AM	0	0	8	0	24	0	0	0	81	0	0	0	113
8:45 AM	0	0	4	0	21	0	0	0	75	0	0	0	100
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	41	0	132	0	0	0	423	0	0	0	598
APPROACH %'s :	0.00%	4.65%	95.35%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	25	0	90	0	0	0	283	0	0	0	398
PEAK HR FACTOR :		0.781			0.833			0.873			0.000		0.881

UTURNS	NB	SB	EB	WB
TOTAL	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-104 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Doheny Dr			Doheny Dr			Santa Monica Blvd/Melrose Blvd			Santa Monica Blvd/Melrose Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0.5	1	0.5	0.5	1.5	1	1	3	1	1	2	0					
4:00 PM	0	1	12	0	25	0	0	0	85	2	0	0	125				
4:15 PM	0	1	10	0	30	0	0	0	97	2	0	0	140				
4:30 PM	0	0	11	0	42	0	0	0	99	0	0	0	152				
4:45 PM	0	1	10	0	42	0	0	0	72	4	0	0	129				
5:00 PM	0	1	7	0	12	0	0	0	85	1	0	0	106				
5:15 PM	0	1	10	0	34	0	0	0	78	2	0	0	125				
5:30 PM	0	0	12	0	27	0	0	0	90	1	0	0	130				
5:45 PM	0	1	7	0	31	0	0	0	68	2	0	0	109				
6:00 PM	0	0	4	0	26	0	0	0	100	1	0	0	131				
6:15 PM	0	0	10	0	36	0	0	0	76	2	0	0	124				
6:30 PM	0	0	12	0	28	0	0	0	83	3	0	0	126				
6:45 PM	0	0	13	0	25	0	0	0	87	0	0	0	125				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	6	118	0	358	0	0	0	1020	20	0	0	1522	0	0	0	0
APPROACH %'s :	0.00%	4.84%	95.16%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	0	3	43	0	139	0	0	0	353	8	0	0	546				
PEAK HR FACTOR :		0.885			0.827			0.891			0.500		0.898				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-104 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Doheny Dr			Doheny Dr			Santa Monica Blvd/Melrose Blvd			Santa Monica Blvd/Melrose Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0.5	1	0.5	0.5	1.5	1	1	3	1	1	2	0					
11:00 AM	0	0	12	0	29	0	0	0	64	0	0	0	105				
11:15 AM	0	0	7	0	14	0	0	0	64	1	0	0	86				
11:30 AM	0	0	16	0	28	0	0	0	63	1	0	0	108				
11:45 AM	0	0	14	0	29	0	0	0	71	0	0	0	114				
12:00 PM	0	0	7	0	15	0	0	0	60	1	0	0	83				
12:15 PM	0	4	12	0	24	0	0	0	75	1	0	0	116				
12:30 PM	0	0	11	0	17	0	0	0	66	0	0	0	94				
12:45 PM	0	1	8	0	22	0	0	0	81	1	0	0	113				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	5	87	0	178	0	0	0	544	5	0	0	819	0	0	0	0
APPROACH %'s :	0.00%	5.43%	94.57%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%					
PEAK HR START TIME :	1130 AM												TOTAL				
PEAK HR VOL :	0	4	49	0	96	0	0	0	269	3	0	0	421				
PEAK HR FACTOR :		0.828			0.828			0.897			0.750		0.907				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

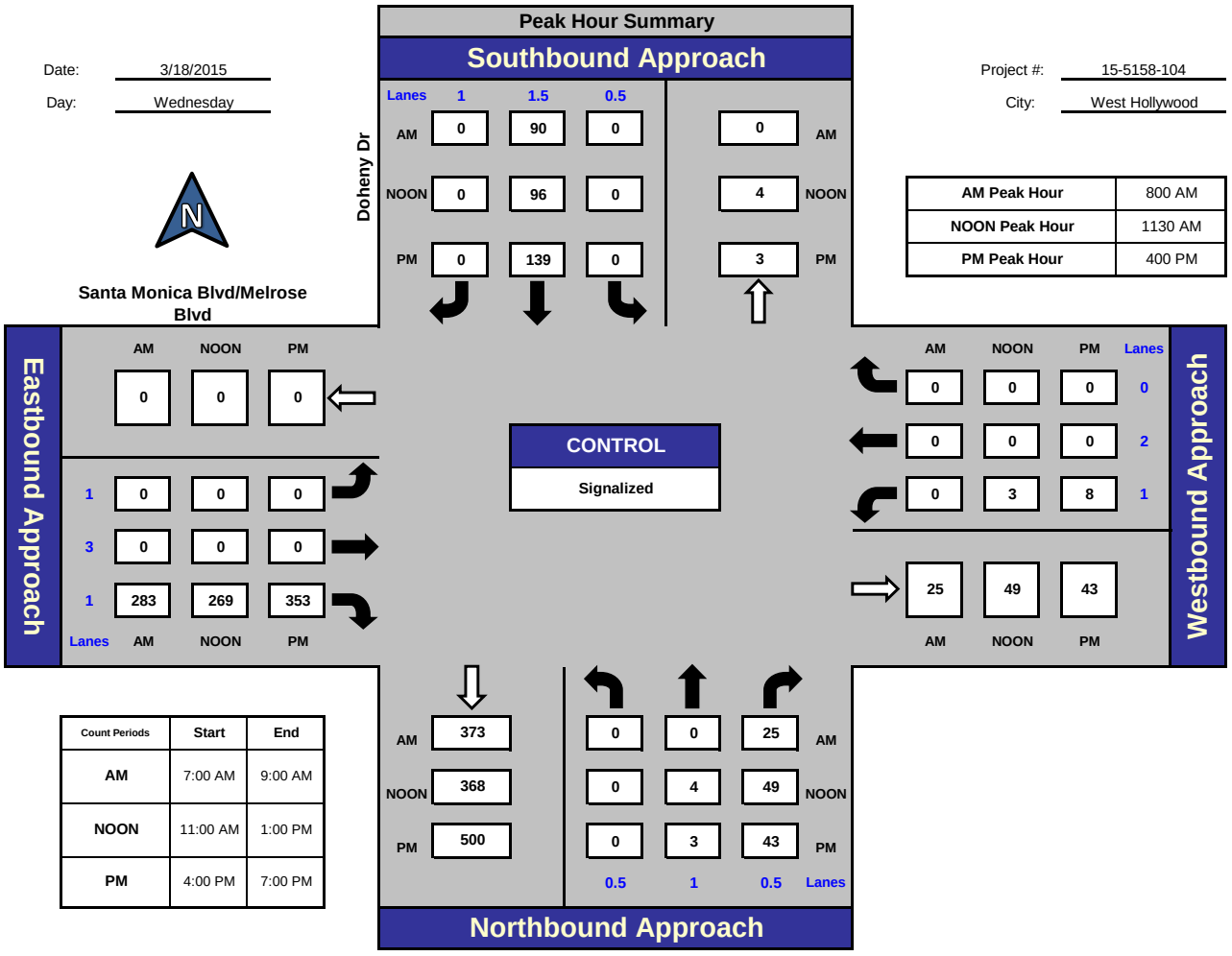
Doheny Dr and Santa Monica Blvd/Melrose Blvd , West Hollywood

Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-104

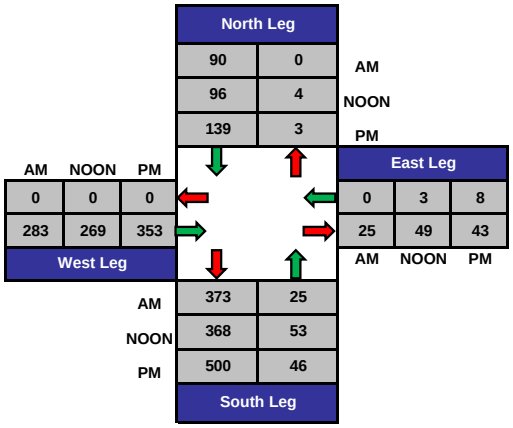
City: West Hollywood



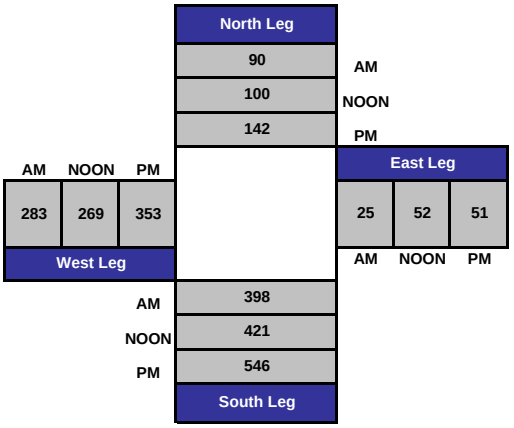
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

AM Peak Hour	800 AM
NOON Peak Hour	1130 AM
PM Peak Hour	400 PM

Total Ins & Outs



Total Volume Per Leg




California State Route 2
Melrose Ave
2
004
004
NR
© 2015 Goo
Google earth

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-204 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Doheny Dr			Doheny Dr			Melrose Blvd			Melrose Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 1	SL 0	ST 0	SR 0	EL 0	ET 0	ER 0	WL 0	WT 0	WR 0	TOTAL
7:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	4
7:30 AM	0	0	7	0	0	0	0	0	0	0	0	0	7
7:45 AM	0	0	10	0	0	0	0	0	0	0	0	0	10
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	5	0	0	0	0	0	0	0	0	0	5
8:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	37	0	0	0	0	0	0	0	0	0	37
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	24	0	0	0	0	0	0	0	0	0	24
PEAK HR FACTOR :	0.600			0.000			0.000			0.000			0.600

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

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-204 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Doheny Dr			Doheny Dr			Melrose Blvd			Melrose Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	1	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	8	0	0	0	0	0	0	0	0	0	8
4:15 PM	0	0	6	0	0	0	0	0	0	0	0	0	6
4:30 PM	0	0	9	0	0	0	0	0	0	0	0	0	9
4:45 PM	0	0	16	0	0	0	0	0	0	0	0	0	16
5:00 PM	0	0	7	0	0	0	0	0	0	0	0	0	7
5:15 PM	0	0	14	0	0	0	0	0	0	0	0	0	14
5:30 PM	0	0	17	0	0	0	0	0	0	0	0	0	17
5:45 PM	0	0	13	0	0	0	0	0	0	0	0	0	13
6:00 PM	0	0	15	0	0	0	0	0	0	0	0	0	15
6:15 PM	0	0	27	0	0	0	0	0	0	0	0	0	27
6:30 PM	0	0	15	0	0	0	0	0	0	0	0	0	15
6:45 PM	0	0	14	0	0	0	0	0	0	0	0	0	14
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	161	0	0	0	0	0	0	0	0	0	161
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	72	0	0	0	0	0	0	0	0	0	72
PEAK HR FACTOR :	0.667			0.000			0.000			0.000			0.667

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-204 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Doheny Dr			Doheny Dr			Melrose Blvd			Melrose Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	0	1	0	0	0	0	0	0	0	0	0					
11:00 AM	0	0	11	0	0	0	0	0	0	0	0	0	11				
11:15 AM	0	0	7	0	0	0	0	0	0	0	0	0	7				
11:30 AM	0	0	17	0	0	0	0	0	0	0	0	0	17				
11:45 AM	0	0	17	0	0	0	0	0	0	0	0	0	17				
12:00 PM	0	0	15	0	0	0	0	0	0	0	0	0	15				
12:15 PM	0	0	11	0	0	0	0	0	0	0	0	0	11				
12:30 PM	0	0	12	0	0	0	0	0	0	0	0	0	12				
12:45 PM	0	0	15	0	0	0	0	0	0	0	0	0	15				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	105	0	0	0	0	0	0	0	0	0	105	0	0	0	0
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	1130 AM												TOTAL				
PEAK HR VOL :	0	0	60	0	0	0	0	0	0	0	0	0	60				
PEAK HR FACTOR :		0.882			0.000			0.000			0.000		0.882				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

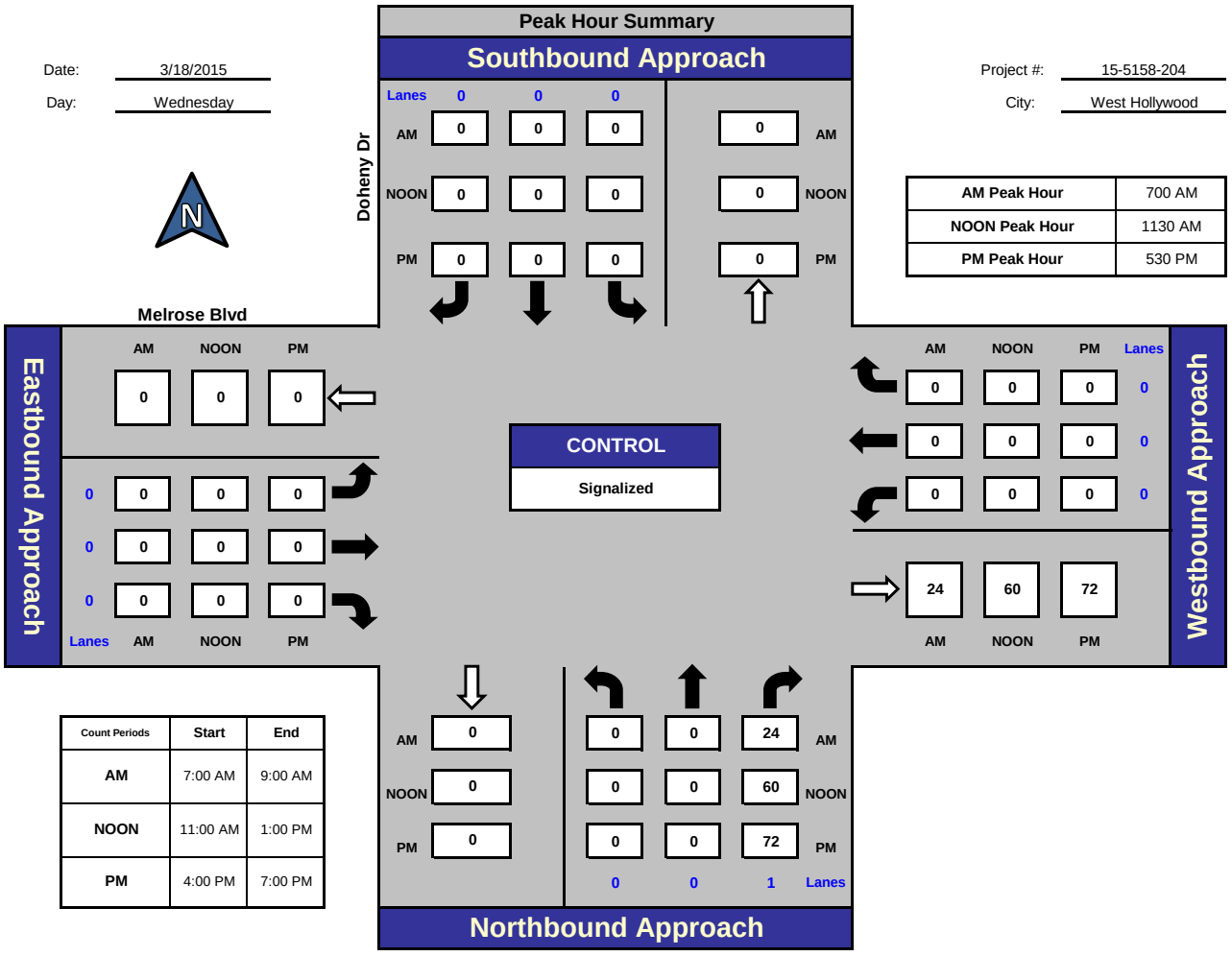
Doheny Dr and Melrose Blvd , West Hollywood

Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-204

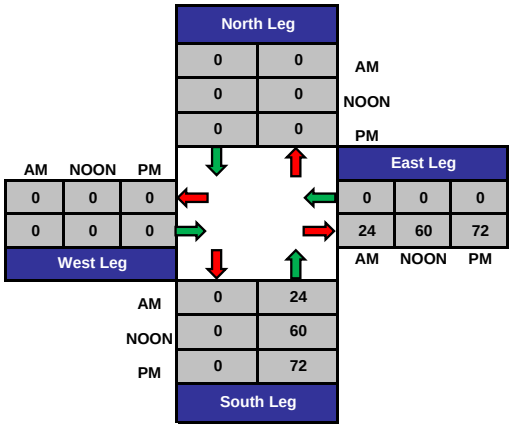
City: West Hollywood



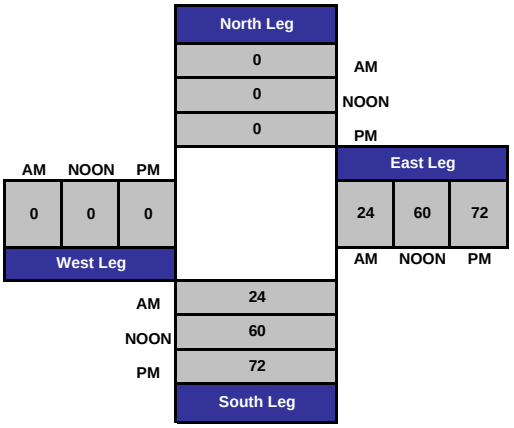
AM Peak Hour	700 AM
NOON Peak Hour	1130 AM
PM Peak Hour	530 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-004
N/S Street: Doheny Dr
E/W Street: Santa Monica Blvd
DATE: 3/18/2015
CITY: West Hollywood

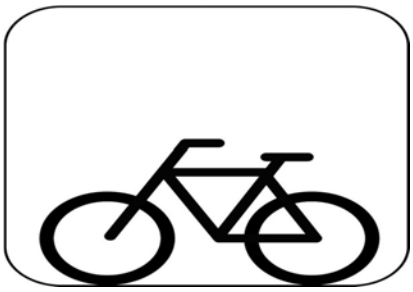
DAY: Wednesday

AM	0	0	0
NOON	0	0	2
PM	1	2	3

NORTH LEG

AM	NOON	PM
0	0	0
2	4	8
0	0	0

WEST LEG



EAST LEG

AM	NOON	PM
0	2	0
19	5	5
0	0	0

SOUTH LEG

AM	0	0	3
NOON	0	0	4
PM	1	0	1

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-004
N/S Street: Doheny Dr
E/W Street: Santa Monica Blvd
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	1	0	0	0	0	0	0	3	0
7:15 AM	0	0	0	0	0	0	1	0	0	0	3	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	6	0
7:45 AM	0	0	1	0	0	0	0	1	0	1	2	0
8:00 AM	0	0	1	0	0	0	0	0	0	0	3	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	7	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	5	0
8:45 AM	0	0	1	0	0	0	0	1	0	0	4	0
TOTALS	**0**	**0**	**4**	**1**	**0**	**0**	**1**	**3**	**0**	**1**	**33**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	3	1	0	0	0	0	0	0	0	2
11:15 AM	0	0	1	1	0	0	0	1	0	0	2	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	2	0	0	3	0
12:00 PM	0	0	0	0	0	0	0	3	0	0	2	0
12:15 PM	0	0	0	0	0	0	0	2	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0
12:45 PM	0	0	0	0	0	0	1	1	0	0	0	0
TOTALS	**0**	**0**	**4**	**2**	**0**	**0**	**1**	**10**	**0**	**0**	**8**	**2**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	4	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	1	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	1	0	1	1	0	0	1	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0
5:15 PM	1	1	0	2	0	0	0	1	0	1	1	0
5:30 PM	0	0	1	0	0	1	0	0	0	1	0	1
5:45 PM	1	0	0	1	0	0	0	2	0	0	2	0
6:00 PM	0	0	0	1	1	0	0	0	0	0	1	0
6:15 PM	0	0	1	0	0	1	0	2	0	0	2	0
6:30 PM	0	0	0	1	1	0	0	4	0	0	0	0
6:45 PM	0	1	0	1	0	0	0	1	0	0	0	0
TOTALS	**2**	**4**	**2**	**7**	**4**	**2**	**0**	**16**	**0**	**2**	**11**	**1**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-104
N/S Street: Doheny Dr
E/W Street: Santa Monica Blvd
DATE: 3/18/2015
CITY: West Hollywood

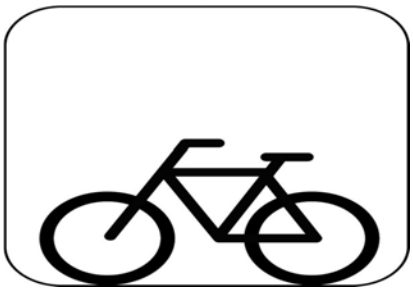
DAY: Wednesday

AM	0	1	0
NOON	0	1	0
PM	0	0	0

NORTH LEG

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

WEST LEG



EAST LEG

AM	NOON	PM
0	0	0
0	0	0
2	1	0

SOUTH LEG

AM	1	1	2
NOON	0	2	1
PM	0	0	1

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-104
N/S Street: Doheny Dr
E/W Street: Santa Monica Blvd
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	1	1	1	0	0	0	0	0	0	1	0	0
8:00 AM	0	0	1	0	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**1**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	0
11:15 AM	0	0	0	0	1	0	0	0	0	0	0	0
11:30 AM	0	2	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	1	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	1	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-204
N/S Street: Doheny Dr
E/W Street: Santa Monica Blvd
DATE: 3/18/2015
CITY: West Hollywood

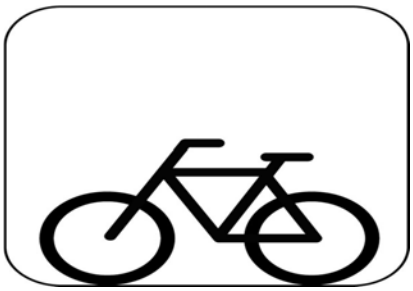
DAY: Wednesday

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

NORTH LEG

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

WEST LEG



EAST LEG

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

SOUTH LEG

AM	0	0	0
NOON	0	0	0
PM	0	0	1

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-204
N/S Street: Doheny Dr
E/W Street: Santa Monica Blvd
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	1	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-005 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Almont Dr			Almont Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.5	0	0.5	0	1	0	1	3	0	1	3	0					
7:00 AM	59	0	2	0	0	0	0	96	2	2	358	0	519	0	0	0	0
7:15 AM	51	0	1	0	0	0	0	90	2	0	406	1	551	0	0	0	0
7:30 AM	44	0	0	0	0	0	1	103	1	3	399	0	551	0	0	1	0
7:45 AM	53	0	1	0	0	0	2	138	1	3	390	0	588	0	0	2	0
8:00 AM	45	0	2	0	0	0	8	134	2	0	402	0	593	0	0	8	0
8:15 AM	62	0	1	0	0	0	2	178	5	3	385	0	636	0	0	2	0
8:30 AM	70	0	3	0	0	0	3	161	2	2	362	1	604	0	0	3	2
8:45 AM	81	0	1	0	0	0	1	147	6	5	396	0	637	0	0	1	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	465	0	11	0	0	0	17	1047	21	18	3098	2	4679	0	0	17	2
APPROACH %'s :	97.69%	0.00%	2.31%	#DIV/0!	#DIV/0!	#DIV/0!	1.57%	96.50%	1.94%	0.58%	99.36%	0.06%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	258	0	7	0	0	0	14	620	15	10	1545	1	2470				
PEAK HR FACTOR :	0.808			0.000			0.877			0.968			0.969				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-005 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Almont Dr			Almont Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.5	0	0.5	0	1	0	1	3	0	1	3	0					
4:00 PM	42	0	6	0	0	0	9	294	6	5	287	0	649	0	0	9	2
4:15 PM	51	1	9	0	0	1	6	292	6	7	252	1	626	0	0	6	0
4:30 PM	40	0	8	0	0	0	4	224	7	4	235	0	522	0	0	4	0
4:45 PM	55	0	10	0	0	1	5	260	8	3	262	0	604	0	0	5	0
5:00 PM	63	0	9	0	0	1	3	250	7	6	251	0	590	0	0	3	0
5:15 PM	63	0	10	0	0	0	5	231	4	7	250	1	571	0	0	5	0
5:30 PM	64	0	11	0	0	0	4	244	7	4	265	0	599	0	0	4	1
5:45 PM	63	0	9	0	0	0	3	266	3	2	248	0	594	0	0	3	0
6:00 PM	61	0	11	0	0	0	3	221	9	6	241	0	552	0	0	3	0
6:15 PM	64	0	11	0	0	0	3	220	3	11	230	0	542	0	0	3	1
6:30 PM	51	0	8	0	0	0	2	221	7	4	249	0	542	0	0	2	1
6:45 PM	52	0	8	0	0	0	12	241	11	6	220	0	550	0	0	12	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	669	1	110	0	0	3	59	2964	78	65	2990	2	6941	0	0	59	6
APPROACH %'s :	85.77%	0.13%	14.10%	0.00%	0.00%	100.00%	1.90%	95.58%	2.52%	2.13%	97.81%	0.07%					

PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	188	1	33	0	0	2	24	1070	27	19	1036	1	2401
PEAK HR FACTOR :	0.854			0.500			0.907			0.904			0.925

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-005 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Almont Dr			Almont Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.5	0	0.5	0	1	0	1	3	0	1	3	0					
11:00 AM	31	0	10	0	0	1	8	222	5	5	293	1	576	0	0	7	0
11:15 AM	39	0	5	0	0	0	6	235	2	2	312	0	601	0	0	6	0
11:30 AM	26	0	8	0	0	0	4	230	11	5	251	0	535	0	0	4	2
11:45 AM	49	0	10	0	0	0	3	248	8	7	277	3	605	0	0	3	1
12:00 PM	39	0	20	0	0	0	5	229	6	6	272	2	579	0	0	5	0
12:15 PM	44	1	2	0	0	0	8	246	5	2	266	0	574	0	0	8	0
12:30 PM	44	0	9	0	0	0	7	238	10	10	276	0	594	0	0	7	0
12:45 PM	34	0	11	0	0	0	3	251	6	9	279	0	593	0	0	3	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	306	1	75	0	0	1	44	1899	53	46	2226	6	4657	0	0	43	4
APPROACH %'s :	80.10%	0.26%	19.63%	0.00%	0.00%	100.00%	2.20%	95.14%	2.66%	2.02%	97.72%	0.26%					
PEAK HR START TIME :	1145 AM												TOTAL				
PEAK HR VOL :	176	1	41	0	0	0	23	961	29	25	1091	5	2352				
PEAK HR FACTOR :		0.924			0.000			0.978			0.976		0.972				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

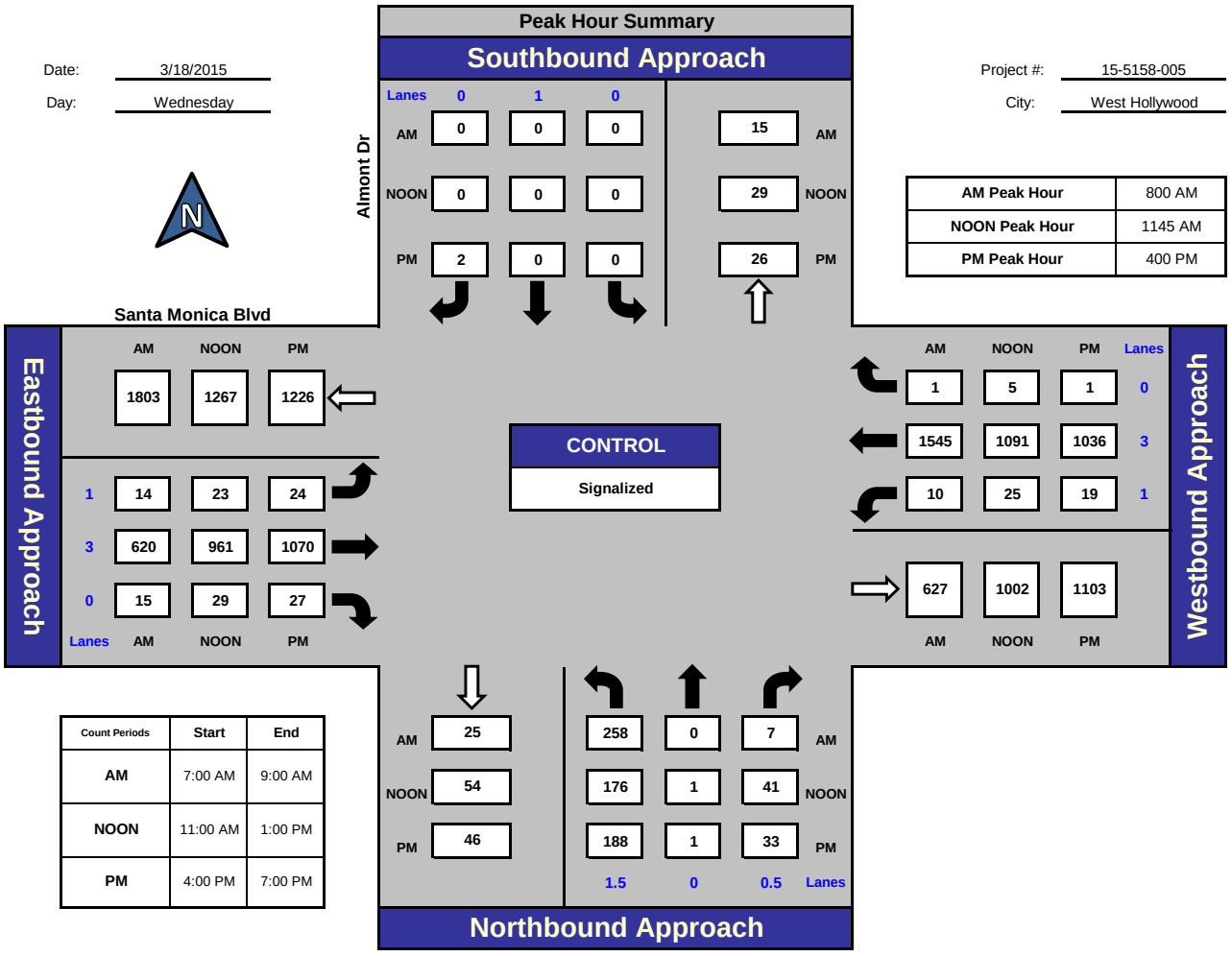
NDS

Almont Dr and Santa Monica Blvd , West Hollywood

Date: 3/18/2015
Day: Wednesday

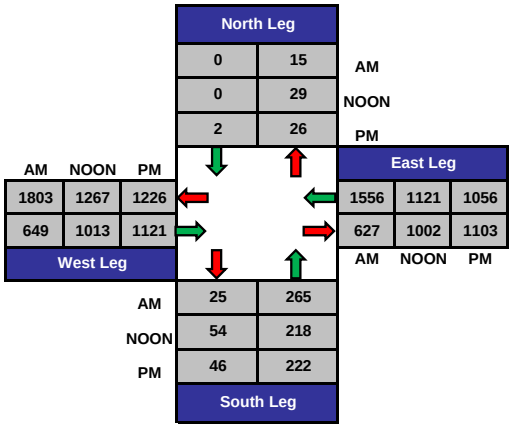
Project #: 15-5158-005
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	400 PM

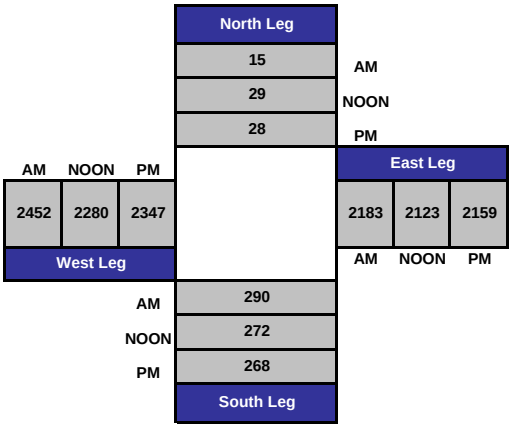


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-006 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	La Peer Dr			La Peer Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	0	0	6	0	0	0	0	95	2	4	365	0	472	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	89	1	4	411	0	506	0	0	0	1
7:30 AM	0	0	9	0	0	0	0	102	2	6	409	0	528	0	0	0	0
7:45 AM	0	0	7	0	0	0	0	127	0	13	389	0	536	0	0	0	2
8:00 AM	0	0	15	0	0	0	0	143	1	11	404	0	574	0	0	0	1
8:15 AM	0	0	5	0	0	0	0	180	3	12	401	0	601	0	0	0	1
8:30 AM	0	0	11	0	0	0	0	164	4	8	355	0	542	0	0	0	2
8:45 AM	0	0	15	0	0	0	0	142	5	15	404	0	581	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	69	0	0	0	0	1042	18	73	3138	0	4340	0	0	0	10
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.30%	1.70%	2.27%	97.73%	0.00%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	46	0	0	0	0	629	13	46	1564	0	2298				
PEAK HR FACTOR :		0.767			0.000			0.877			0.961		0.956				

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-006 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	La Peer Dr			La Peer Dr			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	0	0	0	3	0	1	3	0					
4:00 PM	0	0	7	0	0	0	0	292	3	10	296	0	608	0	0	0	1
4:15 PM	0	0	19	0	0	0	0	286	4	19	251	0	579	0	0	0	3
4:30 PM	0	0	11	0	0	0	0	249	3	18	246	0	527	0	0	0	2
4:45 PM	0	0	10	0	0	0	0	248	4	14	257	0	533	0	0	0	0
5:00 PM	0	0	10	0	0	0	0	261	7	10	255	0	543	0	0	0	1
5:15 PM	0	0	10	0	0	0	0	233	6	9	251	0	509	0	0	0	1
5:30 PM	0	0	11	0	0	0	0	258	2	15	276	0	562	0	0	0	3
5:45 PM	0	0	13	0	0	0	0	268	3	11	246	0	541	0	0	0	1
6:00 PM	0	0	16	0	0	0	0	247	3	12	238	0	516	0	0	0	4
6:15 PM	0	0	16	0	0	0	0	205	8	10	243	0	482	0	0	0	1
6:30 PM	0	0	8	0	0	0	0	228	3	7	247	0	493	0	0	0	1
6:45 PM	0	0	6	0	0	0	0	252	3	11	221	0	493	0	0	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	137	0	0	0	0	3027	49	146	3027	0	6386	0	0	0	21
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.41%	1.59%	4.60%	95.40%	0.00%					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	0	0	47	0	0	0	0	1075	14	61	1050	0	2247				
PEAK HR FACTOR :		0.618			0.000			0.923			0.908		0.924				

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-006 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	La Peer Dr			La Peer Dr			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
11:00 AM	0	0	18	0	0	0	0	228	5	15	300	0	566
11:15 AM	0	0	15	0	0	0	0	233	2	17	308	0	575
11:30 AM	0	0	19	0	0	0	0	241	3	19	272	0	554
11:45 AM	0	0	20	0	0	0	0	245	2	11	290	0	568
12:00 PM	0	0	24	0	0	0	0	247	4	12	272	0	559
12:15 PM	0	0	25	0	0	0	0	240	3	13	259	0	540
12:30 PM	0	0	15	0	0	0	0	251	2	11	299	0	578
12:45 PM	0	0	20	0	0	0	0	251	1	10	283	0	565
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	156	0	0	0	0	1936	22	108	2283	0	4505
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.88%	1.12%	4.52%	95.48%	0.00%	
PEAK HR START TIME :	1100 AM												TOTAL
PEAK HR VOL :	0	0	72	0	0	0	0	947	12	62	1170	0	2263
PEAK HR FACTOR :		0.900			0.000			0.971			0.948		0.984

UTURNS	NB	SB	EB	WB
	0	0	0	3
	0	0	0	5
	0	0	0	3
	0	0	0	5
	0	0	0	1
	0	0	0	5
	0	0	0	2
	0	0	0	4
	NB	SB	EB	WB
	0	0	0	28

CONTROL : 1-Way Stop (NB)

ITM Peak Hour Summary

Prepared by:

NDS

La Peer Dr and Santa Monica Blvd , West Hollywood

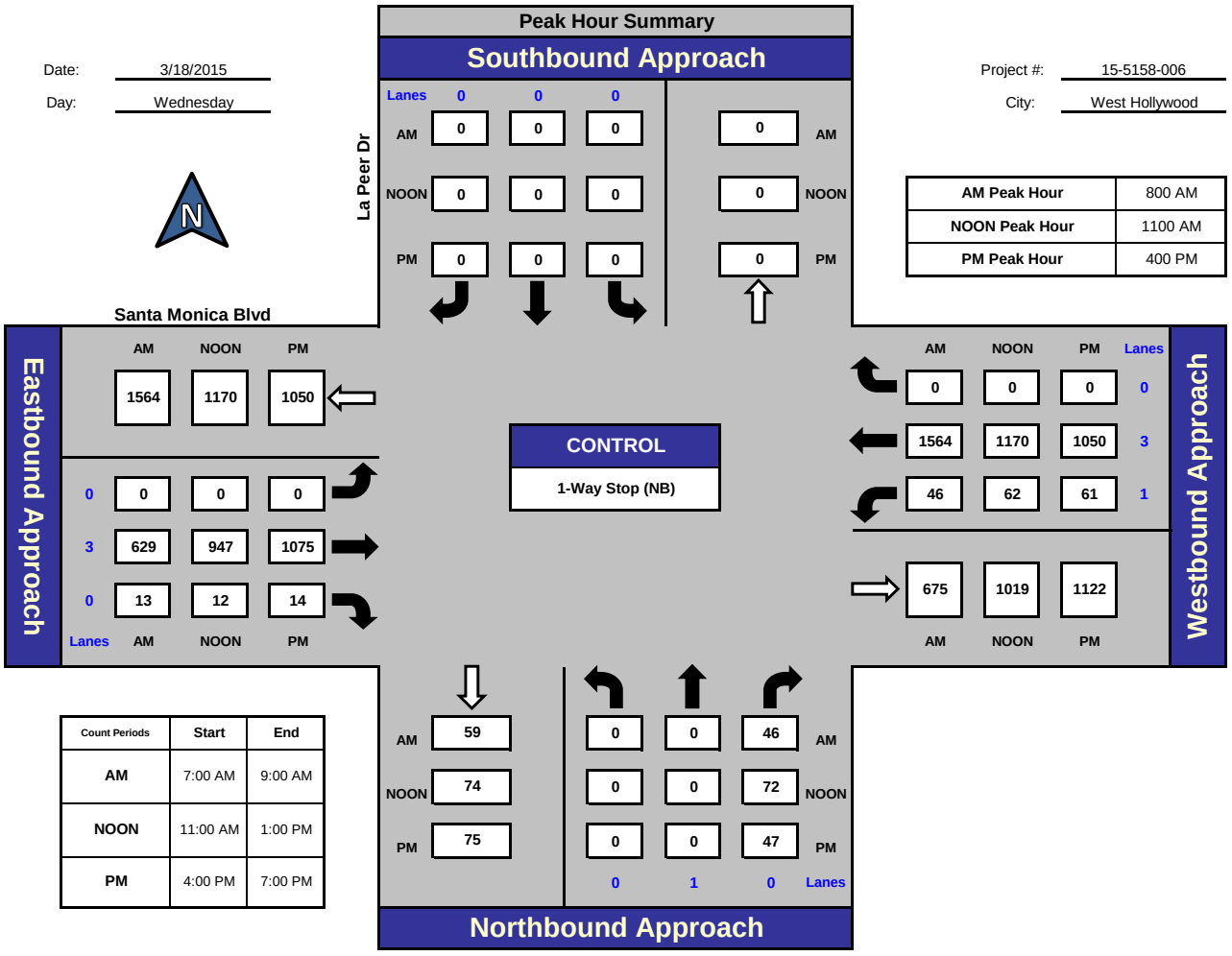
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-006

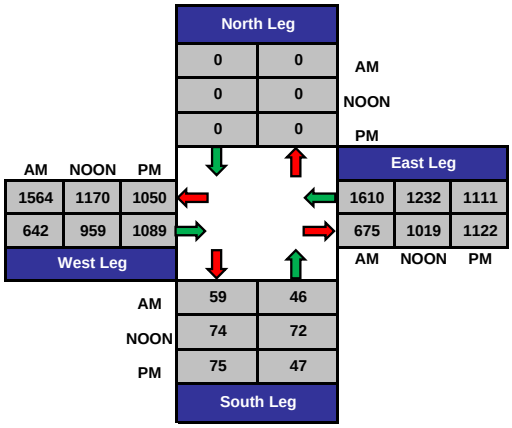
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1100 AM
PM Peak Hour	400 PM

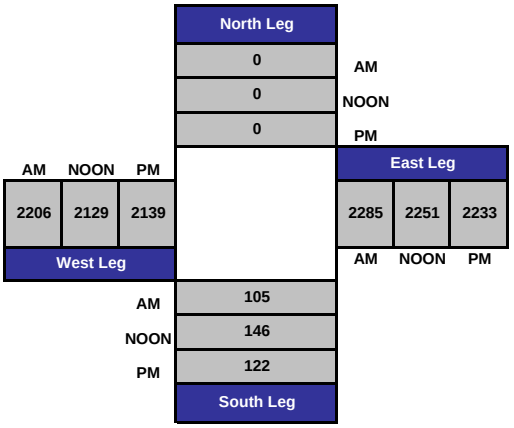


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-007 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	3	13	16	2	11	1	10	85	6	32	370	4	553
7:15 AM	10	12	13	12	16	4	6	71	4	30	415	12	605
7:30 AM	7	16	20	8	20	3	11	108	2	33	416	15	659
7:45 AM	12	23	24	9	12	2	5	120	3	41	395	16	662
8:00 AM	11	26	21	11	25	3	16	141	10	33	408	8	713
8:15 AM	16	22	33	10	34	5	8	166	8	34	408	9	753
8:30 AM	13	25	30	10	31	2	12	150	8	30	366	12	689
8:45 AM	15	27	36	10	38	3	10	145	6	41	370	15	716
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	87	164	193	72	187	23	78	986	47	274	3148	91	5350
APPROACH %'s :	19.59%	36.94%	43.47%	25.53%	66.31%	8.16%	7.02%	88.75%	4.23%	7.80%	89.61%	2.59%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	55	100	120	41	128	13	46	602	32	138	1552	44	2871
PEAK HR FACTOR :		0.881			0.892			0.934			0.961		0.953

UTURNS	NB	SB	EB	WB
	0	0	3	0
	0	0	2	0
	0	0	2	0
	0	0	0	0
	0	0	3	0
	0	0	1	0
	0	0	0	0
	0	0	2	0
	NB	SB	EB	WB
	0	0	13	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-007 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	1	0.5	0.5	1	3	0	1	2	0					
4:00 PM	20	18	63	41	31	6	18	257	13	36	268	16	787	0	0	6	0
4:15 PM	15	16	54	23	21	5	26	272	8	38	252	10	740	0	0	5	0
4:30 PM	26	20	60	33	48	4	13	244	14	33	236	21	752	0	0	4	0
4:45 PM	16	21	61	26	28	0	17	237	7	22	264	6	705	0	0	3	1
5:00 PM	26	25	58	36	31	4	14	223	12	34	244	19	726	0	0	2	0
5:15 PM	19	23	60	29	32	3	11	225	12	31	251	15	711	0	0	2	0
5:30 PM	19	30	71	32	31	8	19	231	11	34	276	4	766	0	0	2	0
5:45 PM	21	27	63	28	29	2	16	262	11	40	246	13	758	0	0	2	0
6:00 PM	18	27	60	41	38	3	13	251	9	45	224	12	741	0	0	2	0
6:15 PM	16	23	73	42	42	5	14	199	5	57	251	4	731	0	0	4	1
6:30 PM	15	31	65	38	29	6	21	223	5	42	237	10	722	0	0	12	0
6:45 PM	16	20	59	40	29	2	11	222	13	39	230	12	693	0	0	3	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	227	281	747	409	389	48	193	2846	120	451	2979	142	8832	0	0	47	2
APPROACH %'s :	18.09%	22.39%	59.52%	48.35%	45.98%	5.67%	6.11%	90.09%	3.80%	12.63%	83.40%	3.98%					
PEAK HR START TIME :	530 PM												TOTAL				
PEAK HR VOL :	74	107	267	143	140	18	62	943	36	176	997	33	2996				
PEAK HR FACTOR :		0.933			0.846			0.901			0.960		0.978				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-007 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 0	WL 1	WT 2	WR 0	TOTAL
11:00 AM	10	17	29	24	23	6	26	199	11	32	300	14	691
11:15 AM	18	13	47	17	17	5	22	231	13	40	287	7	717
11:30 AM	20	14	48	21	24	5	20	230	14	37	278	13	724
11:45 AM	13	22	48	18	25	6	7	237	15	53	287	14	745
12:00 PM	19	21	52	23	14	3	18	236	22	39	257	17	721
12:15 PM	14	16	41	35	23	3	29	240	9	45	263	19	737
12:30 PM	13	17	50	20	25	4	16	223	16	51	301	8	744
12:45 PM	18	22	46	28	22	8	23	239	14	33	278	21	752
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	125	142	361	186	173	40	161	1835	114	330	2251	113	5831
APPROACH %'s :	19.90%	22.61%	57.48%	46.62%	43.36%	10.03%	7.63%	86.97%	5.40%	12.25%	83.56%	4.19%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	64	76	189	106	84	18	86	938	61	168	1099	65	2954
PEAK HR FACTOR :		0.894			0.852			0.976			0.925		0.982

UTURNS	NB	SB	EB	WB
	0	0	6	1
	0	0	3	1
	0	0	3	1
	0	0	2	1
	0	0	2	0
	0	0	6	0
	0	0	4	3
	0	0	6	0
	NB	SB	EB	WB
	0	0	32	7

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

Robertson Blvd and Santa Monica Blvd , West Hollywood

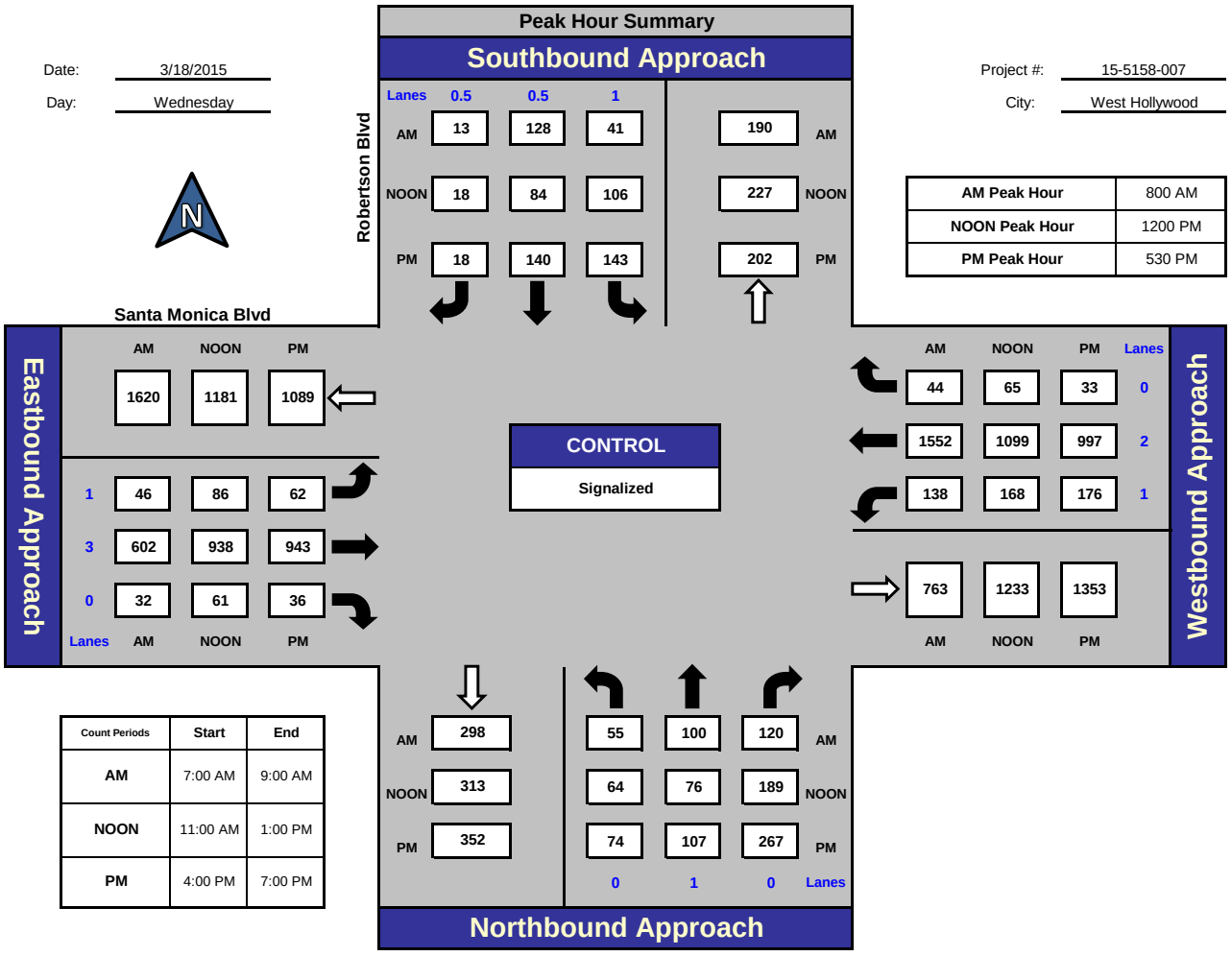
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-007

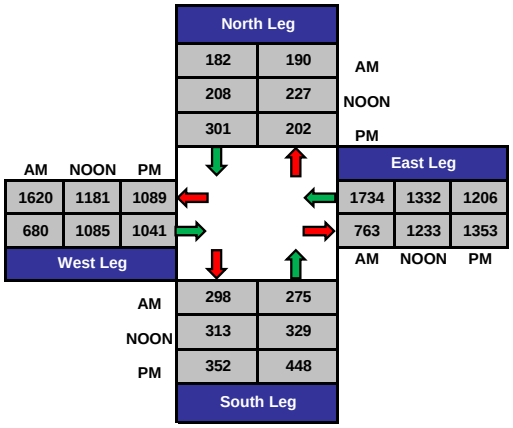
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1200 PM
PM Peak Hour	530 PM

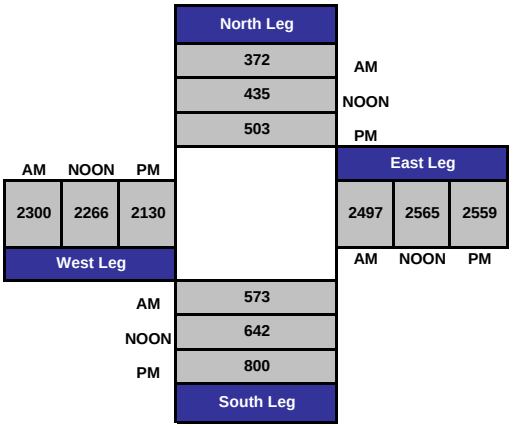


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-008 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	11	67	15	10	47	9	14	88	2	38	395	6	702	0	0	1	2
7:15 AM	16	77	22	6	58	19	11	83	4	42	417	12	767	0	0	0	2
7:30 AM	15	67	24	8	54	15	14	115	7	30	430	23	802	0	0	0	0
7:45 AM	13	87	24	7	55	21	27	122	7	23	398	32	816	0	0	2	2
8:00 AM	7	112	16	9	123	13	17	143	9	33	405	41	928	0	0	0	2
8:15 AM	12	109	16	12	115	23	19	169	5	24	382	21	907	0	0	1	0
8:30 AM	11	104	15	11	109	22	17	164	4	23	344	20	844	0	0	0	0
8:45 AM	16	98	14	11	104	21	15	172	2	22	351	19	845	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	101	721	146	74	665	143	134	1056	40	235	3122	174	6611	0	0	4	8
APPROACH %'s :	10.43%	74.48%	15.08%	8.39%	75.40%	16.21%	10.89%	85.85%	3.25%	6.66%	88.42%	4.93%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	46	423	61	43	451	79	68	648	20	102	1482	101	3524				
PEAK HR FACTOR :		0.967			0.955			0.953			0.879		0.949				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-008 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
4:00 PM	23	109	63	13	101	24	39	323	17	50	283	17	1062	0	0	1	6
4:15 PM	32	110	56	26	84	15	24	289	16	55	243	22	972	0	0	1	3
4:30 PM	25	112	56	12	108	14	23	296	14	38	249	21	968	0	0	1	1
4:45 PM	27	130	76	19	108	22	20	286	19	48	250	14	1019	0	0	1	4
5:00 PM	28	151	62	19	120	19	32	277	12	42	258	14	1034	0	0	2	3
5:15 PM	24	139	64	21	122	18	25	282	12	49	237	17	1010	0	0	0	2
5:30 PM	26	151	57	17	129	19	27	317	8	35	271	18	1075	0	0	2	5
5:45 PM	32	157	57	18	106	14	20	314	15	40	243	12	1028	0	0	0	2
6:00 PM	28	161	58	22	99	12	30	321	14	40	227	30	1042	0	0	4	6
6:15 PM	28	167	70	21	92	23	22	293	15	46	274	13	1064	0	0	2	6
6:30 PM	34	139	45	32	93	14	20	278	18	56	232	17	978	0	0	1	6
6:45 PM	27	127	44	20	84	9	16	300	10	60	241	16	954	0	0	2	12
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	334	1653	708	240	1246	203	298	3576	170	559	3008	211	12206	0	0	17	56
APPROACH %'s :	12.39%	61.34%	26.27%	14.21%	73.77%	12.02%	7.37%	88.43%	4.20%	14.80%	79.62%	5.58%					
PEAK HR START TIME :	530 PM												TOTAL				
PEAK HR VOL :	114	636	242	78	426	68	99	1245	52	161	1015	73	4209				
PEAK HR FACTOR :		0.936			0.867			0.956			0.938		0.979				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-008 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	25	69	29	9	72	16	18	215	15	42	312	16	838	0	0	0	5
11:15 AM	27	75	45	16	79	21	30	253	11	40	289	18	904	0	0	2	5
11:30 AM	27	87	39	25	78	23	26	245	22	55	293	13	933	0	0	3	7
11:45 AM	40	80	42	12	87	36	30	252	16	36	279	16	926	0	0	0	6
12:00 PM	24	80	49	18	81	22	26	267	29	50	283	17	946	0	0	3	6
12:15 PM	32	87	40	23	85	17	20	282	20	51	277	18	952	0	0	1	9
12:30 PM	33	87	50	12	93	23	23	247	22	54	310	18	972	0	0	1	6
12:45 PM	28	86	38	16	76	20	22	266	25	48	292	23	940	0	0	5	6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	236	651	332	131	651	178	195	2027	160	376	2335	139	7411	0	0	15	50
APPROACH %'s :	19.36%	53.40%	27.24%	13.65%	67.81%	18.54%	8.19%	85.10%	6.72%	13.19%	81.93%	4.88%					
PEAK HR START TIME :	1200 PM												TOTAL				
PEAK HR VOL :	117	340	177	69	335	82	91	1062	96	203	1162	76	3810				
PEAK HR FACTOR :		0.932			0.949			0.970			0.943		0.980				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

San Vicente Blvd and Santa Monica Blvd , West Hollywood

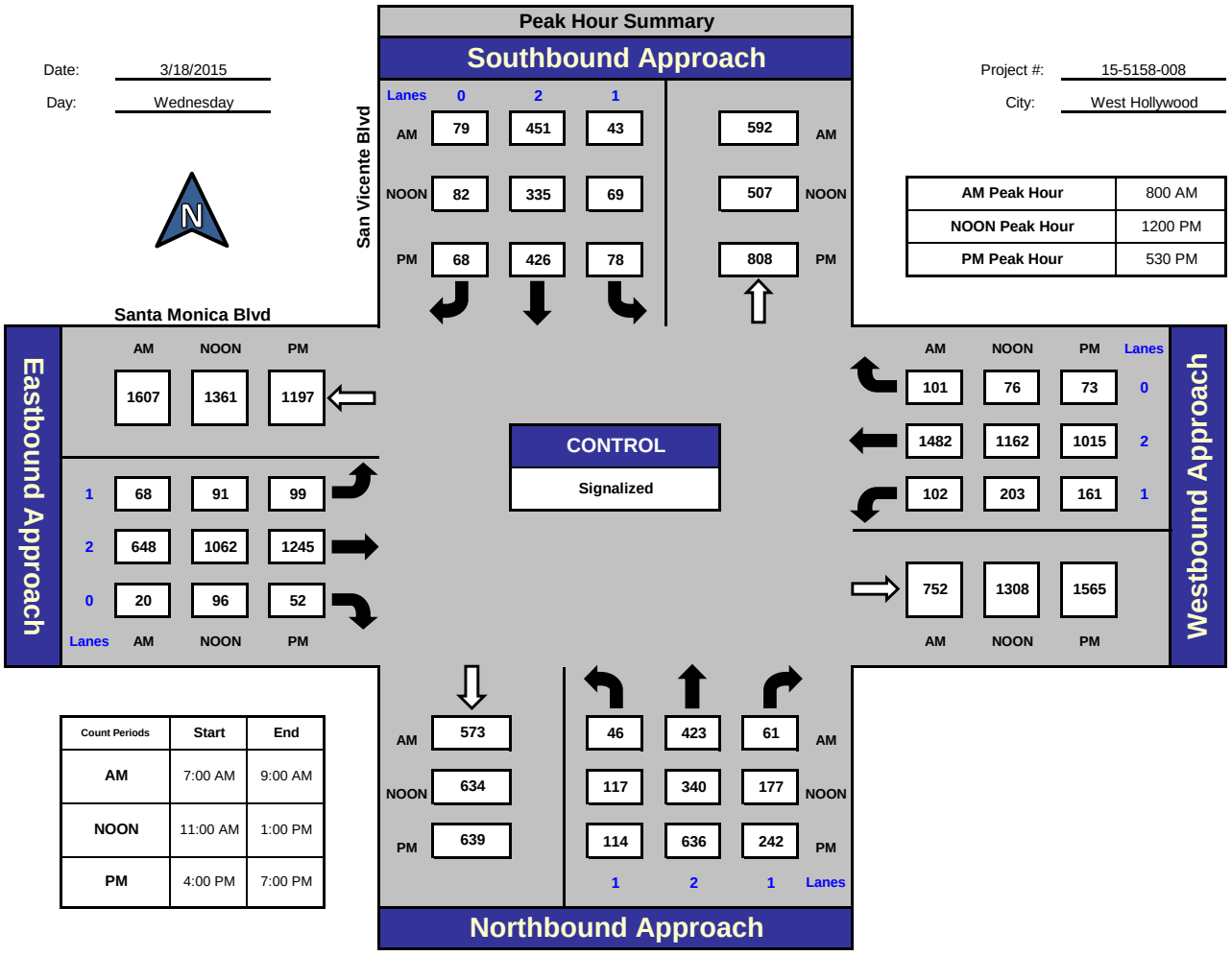
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-008

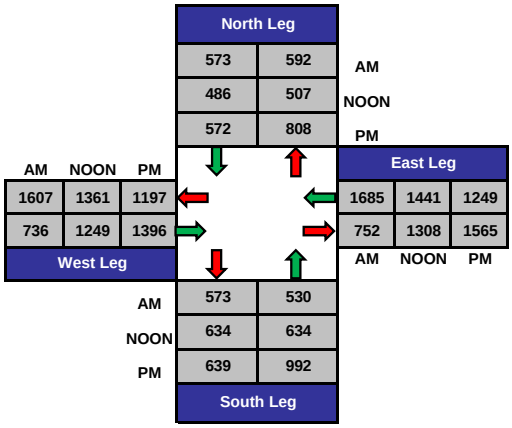
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1200 PM
PM Peak Hour	530 PM

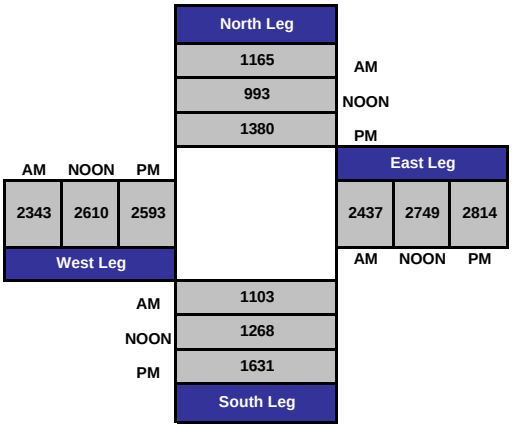


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-008
N/S Street: San Vicente Blvd
E/W Street: Santa Monica Blvd
DATE: 3/18/2015
CITY: West Hollywood

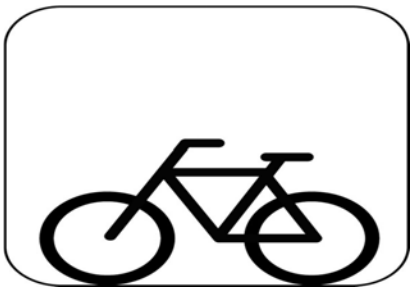
DAY: Wednesday

AM	0	2	0
NOON	1	1	0
PM	1	1	0

NORTH LEG

AM	**NOON**	**PM**
0	0	0
6	5	36
0	0	1

WEST LEG



EAST LEG

AM	**NOON**	**PM**
0	1	1
20	9	7
0	3	3

SOUTH LEG

AM	1	0	0
NOON	1	0	0
PM	1	1	2

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-008
N/S Street: San Vicente Blvd
E/W Street: Santa Monica Blvd
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	6	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	4	0
7:30 AM	1	0	0	0	1	0	0	0	0	0	4	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	4	0
8:00 AM	0	0	0	0	0	0	0	4	0	0	6	0
8:15 AM	0	0	0	0	1	0	0	1	0	0	6	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**7**	**0**	**0**	**30**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	2	0	2	3	0
11:15 AM	0	0	0	0	0	0	0	2	0	1	2	0
11:30 AM	1	0	0	0	0	0	0	2	0	0	3	0
11:45 AM	0	0	0	0	0	0	0	0	0	1	2	0
12:00 PM	0	0	0	0	0	0	0	3	0	0	4	0
12:15 PM	1	0	0	0	0	0	0	0	0	2	2	0
12:30 PM	0	0	0	0	1	0	0	0	0	1	1	0
12:45 PM	0	0	0	0	0	1	0	2	0	0	2	1
TOTALS	**2**	**0**	**0**	**0**	**1**	**1**	**0**	**11**	**0**	**7**	**19**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	1	0	2	0	0	0	0	2	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	7	0	0	2	0
4:30 PM	1	0	0	0	0	0	0	6	1	0	3	0
4:45 PM	0	0	2	0	0	0	0	6	0	1	1	0
5:00 PM	0	0	1	0	0	0	0	5	0	2	4	0
5:15 PM	0	0	1	0	0	0	0	8	0	0	2	0
5:30 PM	0	0	0	0	1	0	0	12	0	0	4	1
5:45 PM	0	0	0	0	0	1	0	8	0	0	2	0
6:00 PM	0	0	0	0	0	0	0	7	0	1	1	0
6:15 PM	1	0	1	0	1	0	0	9	0	1	3	0
6:30 PM	0	0	1	0	0	1	0	9	0	0	2	1
6:45 PM	0	1	0	0	0	0	0	11	1	1	1	0
TOTALS	**3**	**1**	**8**	**0**	**2**	**2**	**0**	**90**	**2**	**6**	**26**	**2**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-009 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	La Cienega Blvd			La Cienega Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 2	NT 1.5	NR 0.5	SL 0	ST 2	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	19	52	9	0	171	135	26	75	14	51	292	0	844	0	0	2	2
7:15 AM	16	60	12	0	120	99	21	87	10	39	320	0	784	0	0	0	0
7:30 AM	34	99	20	0	199	138	32	81	6	47	289	0	945	0	0	2	0
7:45 AM	35	90	18	0	204	131	49	120	10	33	264	1	955	0	0	0	0
8:00 AM	45	121	19	0	173	142	44	90	16	49	264	1	964	0	0	2	2
8:15 AM	57	124	24	0	157	126	51	149	13	44	277	0	1022	0	0	0	0
8:30 AM	55	101	18	0	150	111	50	137	14	26	233	3	898	0	0	1	0
8:45 AM	52	115	9	0	152	87	60	117	15	23	230	1	861	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	313	762	129	0	1326	969	333	856	98	312	2169	6	7273	0	0	7	4
APPROACH %'s :	26.00%	63.29%	10.71%	0.00%	57.78%	42.22%	25.87%	66.51%	7.61%	12.55%	87.21%	0.24%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	171	434	81	0	733	537	176	440	45	173	1094	2	3886				
PEAK HR FACTOR :		0.837			0.942			0.776			0.944		0.951				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-009 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	La Cienega Blvd			La Cienega Blvd			Santa Monica Blvd			Santa Monica Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 2	NT 1.5	NR 0.5	SL 0	ST 2	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL	NB	SB	EB	WB
4:00 PM	46	202	29	0	161	98	111	215	26	36	174	4	1102	1	0	7	0
4:15 PM	36	182	23	0	137	104	100	230	22	31	165	2	1032	0	0	7	1
4:30 PM	35	181	44	0	168	103	107	219	17	44	164	11	1093	0	0	4	0
4:45 PM	41	192	37	0	157	97	105	242	22	35	145	8	1081	0	0	8	4
5:00 PM	53	213	33	0	159	115	126	235	18	39	148	4	1143	0	0	3	5
5:15 PM	37	211	34	0	155	115	138	264	16	31	157	4	1162	0	0	5	2
5:30 PM	26	195	31	0	156	117	137	250	27	35	159	2	1135	0	0	5	1
5:45 PM	38	189	37	2	196	112	131	261	20	40	160	4	1190	0	0	6	3
6:00 PM	43	156	28	0	134	98	129	227	20	43	142	3	1023	0	0	4	4
6:15 PM	49	167	21	0	177	104	107	256	21	31	157	3	1093	0	0	3	0
6:30 PM	43	175	18	6	177	92	117	260	24	37	125	5	1079	0	0	6	0
6:45 PM	40	186	28	0	154	94	127	241	20	46	159	4	1099	0	0	5	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	487	2249	363	8	1931	1249	1435	2900	253	448	1855	54	13232	1	0	63	22
APPROACH %'s :	15.71%	72.57%	11.71%	0.25%	60.57%	39.18%	31.28%	63.21%	5.51%	19.01%	78.70%	2.29%					
PEAK HR START TIME :	500 PM												TOTAL				
PEAK HR VOL :	154	808	135	2	666	459	532	1010	81	145	624	14	4630				
PEAK HR FACTOR :		0.917			0.909			0.971			0.960		0.973				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-009 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	La Cienega Blvd			La Cienega Blvd			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 1.5	NR 0.5	SL 0	ST 2	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL
11:00 AM	35	121	30	0	164	113	71	178	31	46	171	3	963
11:15 AM	52	136	33	0	145	103	62	162	27	42	197	14	973
11:30 AM	37	133	39	1	178	142	75	193	28	45	179	1	1051
11:45 AM	38	161	38	0	163	96	84	184	27	50	190	1	1032
12:00 PM	51	149	30	0	179	111	80	188	18	44	178	3	1031
12:15 PM	40	124	25	0	174	108	81	209	28	50	185	8	1032
12:30 PM	49	148	44	0	171	128	81	209	26	34	175	4	1069
12:45 PM	58	155	28	0	167	103	88	187	28	40	178	6	1038
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	360	1127	267	1	1341	904	622	1510	213	351	1453	40	8189
APPROACH %'s :	20.52%	64.25%	15.22%	0.04%	59.71%	40.25%	26.52%	64.39%	9.08%	19.03%	78.80%	2.17%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	198	576	127	0	691	450	330	793	100	168	716	21	4170
PEAK HR FACTOR :		0.935			0.954			0.961			0.931		0.975

UTURNS				
NB	SB	EB	WB	
0	0	2	2	
0	0	3	1	
0	0	4	1	
0	0	5	2	
0	0	9	2	
0	0	4	3	
0	0	12	2	
0	0	7	3	
NB	SB	EB	WB	
0	0	46	16	

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

La Cienega Blvd and Santa Monica Blvd , West Hollywood

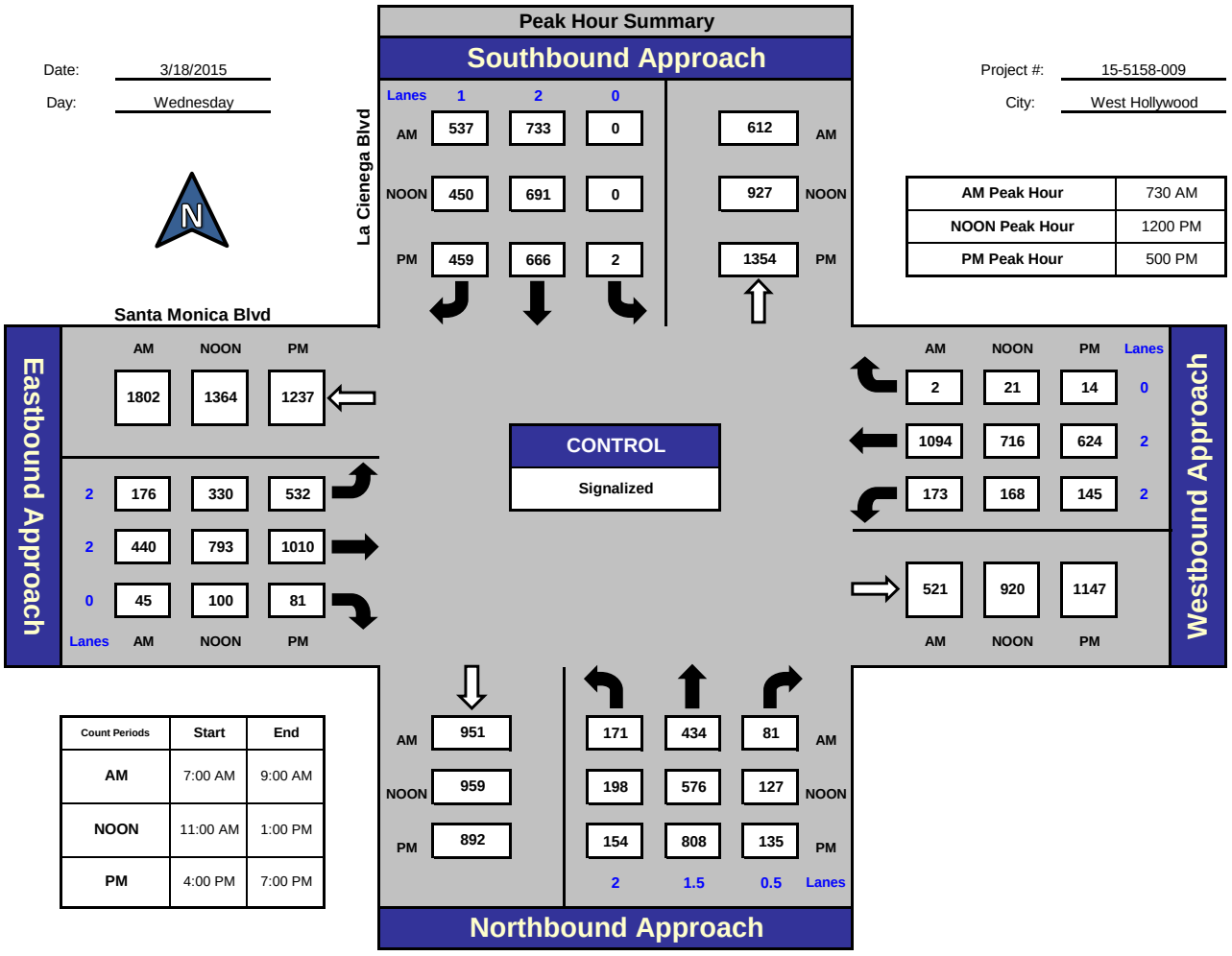
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-009

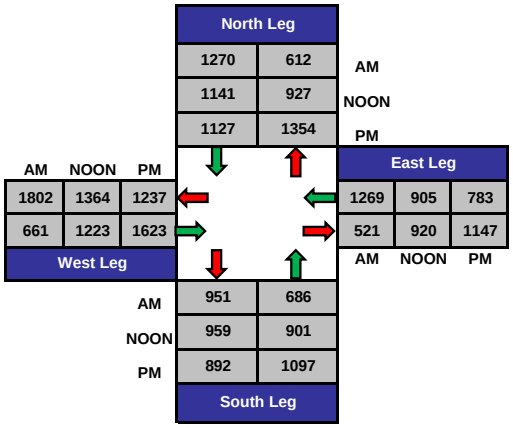
City: West Hollywood

AM Peak Hour	730 AM
NOON Peak Hour	1200 PM
PM Peak Hour	500 PM

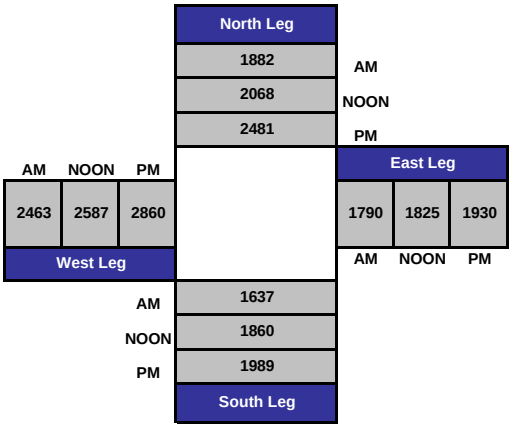


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-010 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Almont Dr			Almont Dr			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0.5	WR 0.5	TOTAL
7:00 AM	0	0	0	3	0	1	1	29	0	2	10	63	109
7:15 AM	0	0	0	2	0	0	2	40	0	3	15	49	111
7:30 AM	0	0	0	1	0	3	0	59	1	2	24	56	146
7:45 AM	0	0	0	3	1	2	0	70	0	1	23	50	150
8:00 AM	0	1	3	1	1	0	1	64	1	7	31	55	165
8:15 AM	1	0	0	4	1	3	1	108	0	5	29	81	233
8:30 AM	0	1	0	2	1	0	3	97	0	0	36	58	198
8:45 AM	1	1	1	4	0	3	5	97	3	4	35	84	238
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	3	4	20	4	12	13	564	5	24	203	496	1350
APPROACH %'s :	22.22%	33.33%	44.44%	55.56%	11.11%	33.33%	2.23%	96.91%	0.86%	3.32%	28.08%	68.60%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	2	3	4	11	3	6	10	366	4	16	131	278	834
PEAK HR FACTOR :	0.563			0.625			0.872			0.864			0.876

UTURNS	NB	SB	EB	WB
	0	0	0	1
	0	0	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	4
	0	0	0	0
	0	0	0	0
	0	0	0	0
	NB	SB	EB	WB
	0	0	0	6

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-010 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Almont Dr			Almont Dr			Melrose Ave			Melrose Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	1	0.5	0.5					
4:00 PM	1	2	2	7	0	4	10	102	2	9	27	40	206	0	0	0	3
4:15 PM	4	4	4	14	2	1	3	128	4	6	12	45	227	0	0	0	0
4:30 PM	0	0	3	12	1	2	11	134	1	6	18	37	225	0	0	0	0
4:45 PM	1	1	2	11	1	2	5	136	1	4	18	68	250	0	0	0	0
5:00 PM	1	7	7	15	2	4	9	109	2	5	27	52	240	0	0	0	0
5:15 PM	0	3	5	14	1	1	9	115	2	6	19	69	244	0	0	0	1
5:30 PM	2	3	3	19	0	2	7	137	2	5	28	63	271	0	0	0	1
5:45 PM	1	1	9	10	1	3	7	110	3	10	23	60	238	0	0	0	0
6:00 PM	2	6	9	21	1	5	10	133	0	7	15	60	269	0	0	0	0
6:15 PM	2	2	9	18	0	2	5	138	2	15	16	72	281	0	0	0	1
6:30 PM	1	2	16	15	2	7	7	130	2	17	24	58	281	0	0	0	3
6:45 PM	0	1	11	22	1	8	7	126	2	11	23	46	258	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	15	32	80	178	12	41	90	1498	23	101	250	670	2990	0	0	0	9
APPROACH %'s :	11.81%	25.20%	62.99%	77.06%	5.19%	17.75%	5.59%	92.99%	1.43%	9.89%	24.49%	65.62%					

PEAK HR START TIME :	600 PM												TOTAL
PEAK HR VOL :	5	11	45	76	4	22	29	527	6	50	78	236	1089
PEAK HR FACTOR :		0.803			0.823			0.969			0.883		0.969

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-010 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Almont Dr			Almont Dr			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	1	0.5	0.5	
11:00 AM	0	0	2	7	1	3	5	99	2	4	26	39	188
11:15 AM	0	0	1	3	0	2	2	86	0	5	30	41	170
11:30 AM	0	0	4	12	0	5	7	96	4	4	15	37	184
11:45 AM	2	2	4	19	0	3	6	114	3	5	23	57	238
12:00 PM	1	2	0	8	2	6	10	83	0	4	16	54	186
12:15 PM	2	2	3	11	1	5	6	113	0	6	27	48	224
12:30 PM	0	2	3	12	1	7	7	93	0	4	20	43	192
12:45 PM	1	2	2	16	0	2	5	110	1	6	25	49	219
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	6	10	19	88	5	33	48	794	10	38	182	368	1601
APPROACH %'s :	17.14%	28.57%	54.29%	69.84%	3.97%	26.19%	5.63%	93.19%	1.17%	6.46%	30.95%	62.59%	
PEAK HR START TIME :	1145 AM												TOTAL
PEAK HR VOL :	5	8	10	50	4	21	29	403	3	19	86	202	840
PEAK HR FACTOR :		0.719			0.852			0.884			0.903		0.882

UTURNS				
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	1
0	0	0	2
0	0	0	1
0	0	1	2
NB	SB	EB	WB
0	0	1	7

CONTROL : 4-Way Stop

ITM Peak Hour Summary

Prepared by:

NDS

Almont Dr and Melrose Ave , West Hollywood

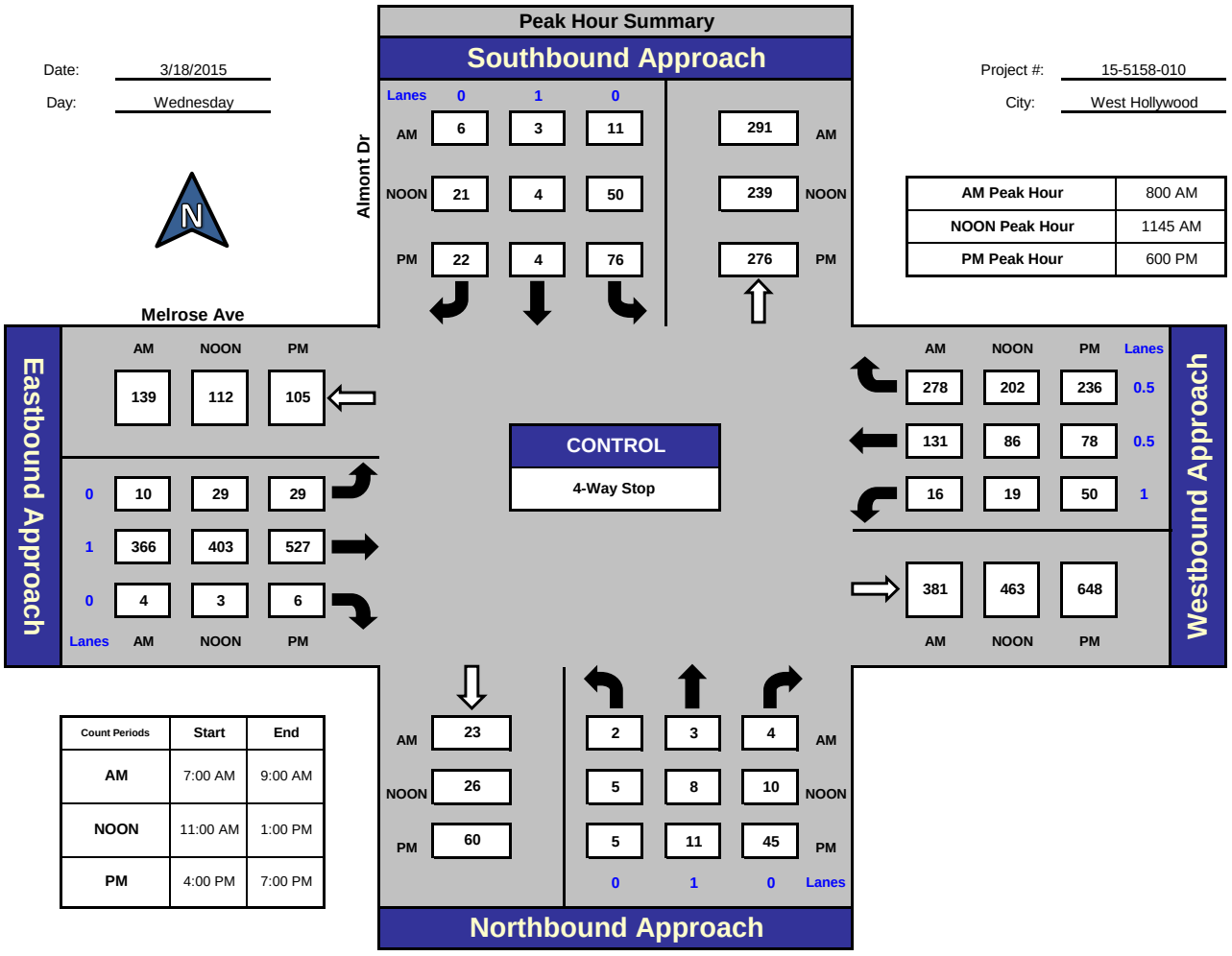
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-010

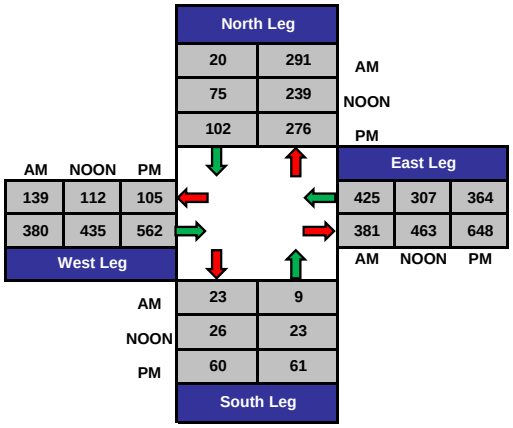
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	600 PM

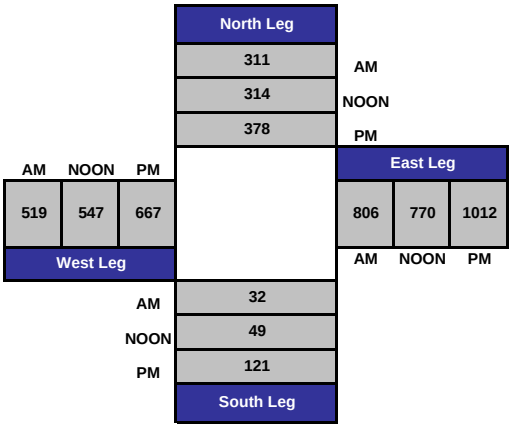


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-010
N/S Street: Almont Dr
E/W Street: Melrose Ave
DATE: 3/18/2015
CITY: West Hollywood

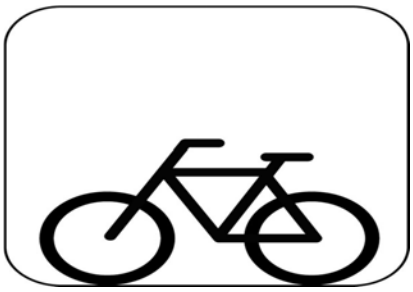
DAY: Wednesday

AM	0	0	1
NOON	0	0	0
PM	1	0	0

NORTH LEG

AM	**NOON**	**PM**
0	0	0
1	1	0
0	0	2

WEST LEG



EAST LEG

AM	**NOON**	**PM**
1	2	1
0	2	0
2	1	0

SOUTH LEG

AM	0	0	0
NOON	0	1	1
PM	0	1	1

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-010
N/S Street: Almont Dr
E/W Street: Melrose Ave
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	1	1	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	1
8:30 AM	0	0	0	1	0	0	0	0	0	1	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	1	0	0	0
11:30 AM	0	0	1	0	0	0	0	1	0	1	2	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	1	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	**2**	**2**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	1	0	0	1	0	0	2	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	1	0	0	0	0	0	0	0
6:15 PM	0	0	1	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	1	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
TOTALS	**0**	**1**	**2**	**0**	**2**	**1**	**0**	**1**	**2**	**0**	**0**	**3**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-011 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	La Peer Dr			La Peer Dr			Melrose Ave			Melrose Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	0	0	0	1	0	0	1	0	0	1	0					
7:00 AM	0	0	0	2	0	6	0	33	0	1	67	5	114	0	0	0	1
7:15 AM	0	0	0	5	0	3	0	39	0	0	65	3	115	0	0	0	0
7:30 AM	0	0	0	6	0	7	2	58	0	0	78	7	158	0	0	0	0
7:45 AM	0	0	0	5	0	6	4	67	0	0	74	17	173	0	0	0	0
8:00 AM	0	0	0	9	0	8	4	70	0	0	89	13	193	0	0	1	0
8:15 AM	0	0	0	11	0	13	1	115	0	0	106	12	258	0	0	0	0
8:30 AM	0	0	0	5	0	6	3	94	0	0	88	6	202	0	0	0	0
8:45 AM	0	0	0	9	0	9	2	105	0	0	115	10	250	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	52	0	58	16	581	0	1	682	73	1463	0	0	1	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	47.27%	0.00%	52.73%	2.68%	97.32%	0.00%	0.13%	90.21%	9.66%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	0	34	0	36	10	384	0	0	398	41	903				
PEAK HR FACTOR :	0.000			0.729			0.849			0.878			0.875				

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-011 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	La Peer Dr			La Peer Dr			Melrose Ave			Melrose Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	0	0	0	1	0	0	1	0	0	1	0					
4:00 PM	0	0	2	14	0	3	3	113	1	0	72	10	218	0	0	0	0
4:15 PM	0	0	1	19	0	6	4	145	0	0	59	11	245	0	0	0	0
4:30 PM	0	0	1	11	0	5	2	150	0	1	61	13	244	0	0	0	1
4:45 PM	0	0	0	15	0	4	4	142	0	1	84	15	265	0	0	1	1
5:00 PM	0	0	0	14	1	6	6	129	0	0	79	6	241	0	0	0	0
5:15 PM	0	0	2	12	0	8	3	132	1	1	91	11	261	0	0	0	0
5:30 PM	0	0	3	7	0	7	4	149	2	1	91	8	272	0	0	1	0
5:45 PM	0	0	3	14	0	5	7	124	2	2	85	11	253	0	0	0	0
6:00 PM	0	0	6	15	0	6	6	151	7	2	76	13	282	0	0	1	0
6:15 PM	0	0	5	11	0	8	8	161	3	2	90	12	300	0	0	3	0
6:30 PM	0	0	4	9	0	11	5	150	5	1	88	10	283	0	0	0	1
6:45 PM	0	0	9	8	0	9	9	147	10	0	71	7	270	0	0	2	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	36	149	1	78	61	1693	31	11	947	127	3134	0	0	8	3
APPROACH %'s :	0.00%	0.00%	100.00%	65.35%	0.44%	34.21%	3.42%	94.85%	1.74%	1.01%	87.28%	11.71%					
PEAK HR START TIME :	600 PM												TOTAL				
PEAK HR VOL :	0	0	24	43	0	34	28	609	25	5	325	42	1135				
PEAK HR FACTOR :	0.667			0.917			0.962			0.894			0.946				

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-011 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	La Peer Dr			La Peer Dr			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
11:00 AM	0	0	0	10	0	10	8	100	0	3	60	14	205
11:15 AM	0	0	0	15	0	7	2	94	0	0	69	18	205
11:30 AM	0	0	1	23	0	3	2	110	0	1	60	10	210
11:45 AM	0	0	0	8	0	10	4	135	0	0	77	11	245
12:00 PM	0	0	0	15	0	15	2	92	0	0	58	11	193
12:15 PM	0	0	0	9	1	11	6	127	0	0	74	7	235
12:30 PM	0	0	0	10	0	7	5	108	0	0	58	6	194
12:45 PM	0	0	0	14	0	14	6	124	0	0	70	14	242
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	104	1	77	35	890	0	4	526	91	1729
APPROACH %'s :	0.00%	0.00%	100.00%	57.14%	0.55%	42.31%	3.78%	96.22%	0.00%	0.64%	84.70%	14.65%	
PEAK HR START TIME :	1130 AM												TOTAL
PEAK HR VOL :	0	0	1	55	1	39	14	464	0	1	269	39	883
PEAK HR FACTOR :		0.250			0.792			0.860			0.878		0.901

UTURNS	NB	SB	EB	WB
	0	0	1	0
	0	0	0	0
	0	0	0	0
	0	0	1	0
	0	0	0	0
	0	0	1	0
	0	0	0	0
	0	0	0	0
	NB	SB	EB	WB
	0	0	3	0

CONTROL : 1-Way Stop (SB)

ITM Peak Hour Summary

Prepared by:

NDS

La Peer Dr and Melrose Ave , West Hollywood

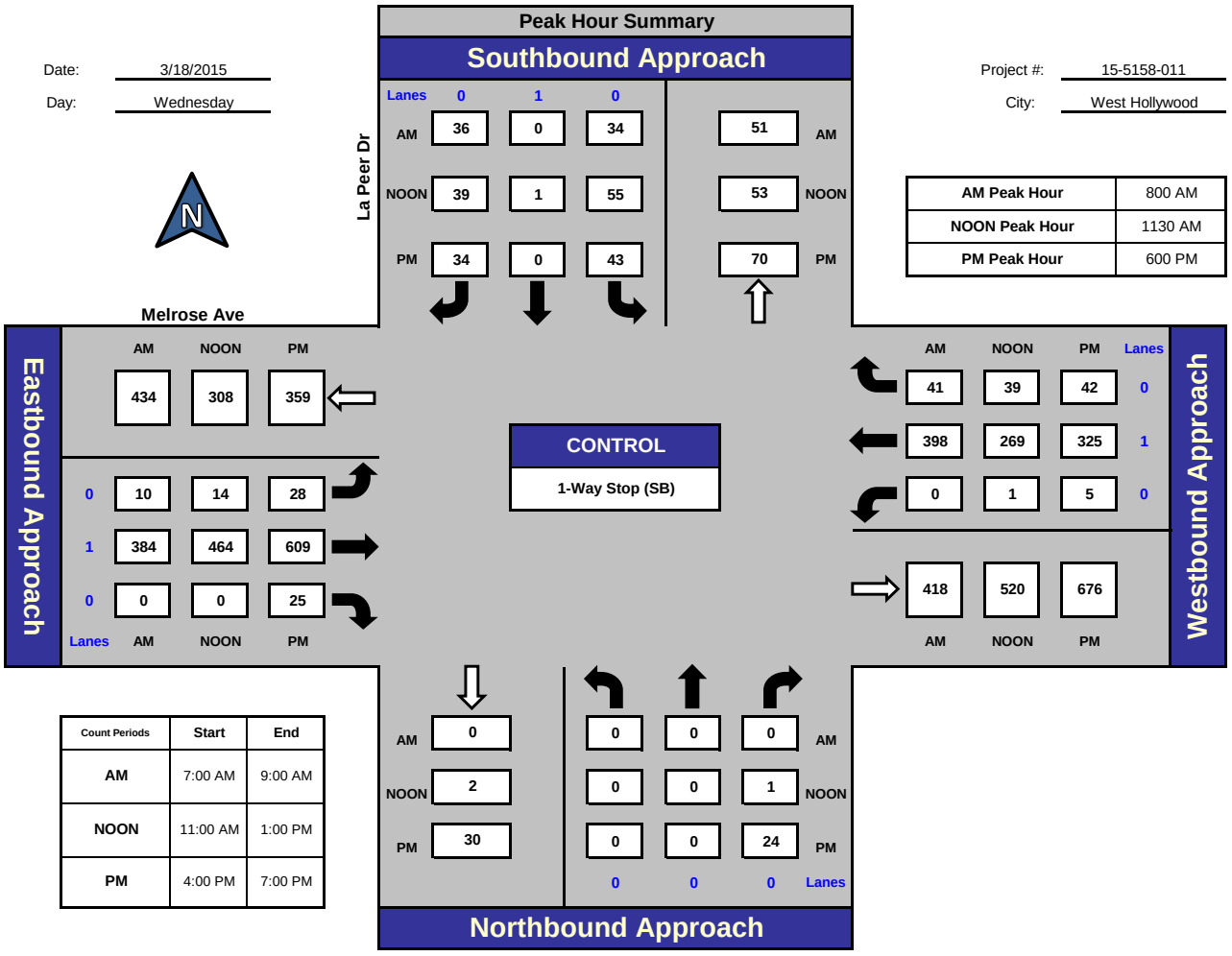
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-011

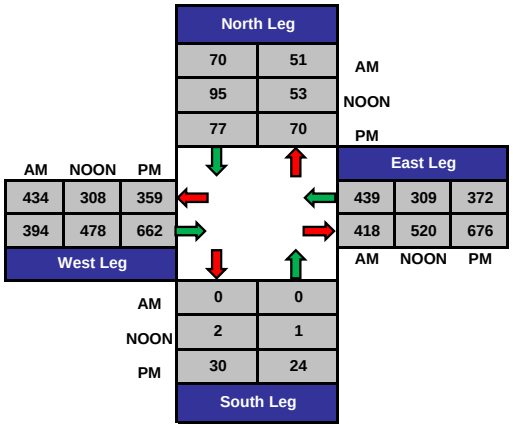
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1130 AM
PM Peak Hour	600 PM

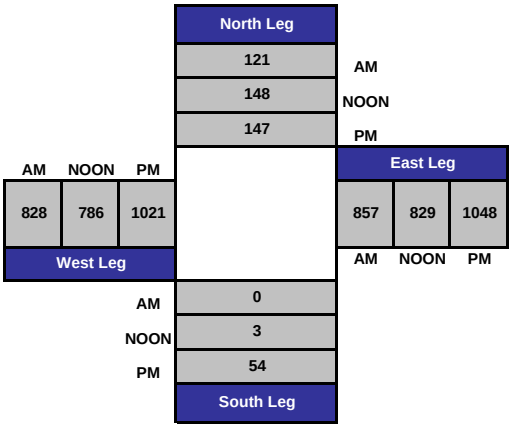


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-012 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 0	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
7:00 AM	3	30	13	4	33	0	2	25	9	68	68	13	268
7:15 AM	5	37	27	5	35	3	1	31	10	119	64	18	355
7:30 AM	7	35	31	8	43	1	0	54	9	122	81	15	406
7:45 AM	11	51	35	5	45	0	0	61	9	122	83	14	436
8:00 AM	7	44	36	12	61	2	4	61	10	129	88	23	477
8:15 AM	5	59	35	9	52	2	2	111	13	123	107	18	536
8:30 AM	11	55	51	17	70	1	3	83	11	114	80	25	521
8:45 AM	11	61	58	7	59	3	3	95	18	107	111	16	549
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	60	372	286	67	398	12	15	521	89	904	682	142	3548
APPROACH %'s :	8.36%	51.81%	39.83%	14.05%	83.44%	2.52%	2.40%	83.36%	14.24%	52.31%	39.47%	8.22%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	34	219	180	45	242	8	12	350	52	473	386	82	2083
PEAK HR FACTOR :		0.833			0.838			0.821			0.949		0.949

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-012 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 0	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
4:00 PM	4	78	61	16	65	7	5	100	26	69	70	23	524
4:15 PM	20	74	61	14	52	5	6	135	20	42	48	12	489
4:30 PM	17	73	72	25	58	8	4	140	23	58	56	20	554
4:45 PM	25	85	61	15	45	7	14	130	17	52	68	18	537
5:00 PM	13	82	60	14	52	4	11	97	33	55	66	26	513
5:15 PM	19	84	57	24	57	4	8	111	30	53	74	21	542
5:30 PM	18	81	84	12	53	8	14	106	37	40	71	27	551
5:45 PM	16	89	45	18	55	11	8	109	23	68	73	24	539
6:00 PM	12	93	63	26	66	7	10	130	33	39	75	19	573
6:15 PM	24	92	67	26	79	6	16	129	33	57	75	29	633
6:30 PM	17	74	65	22	57	5	14	117	22	70	70	29	562
6:45 PM	16	69	70	27	70	8	22	121	32	40	55	35	565
TOTAL VOLUMES :	NL 201	NT 974	NR 766	SL 239	ST 709	SR 80	EL 132	ET 1425	ER 329	WL 643	WT 801	WR 283	TOTAL 6582
APPROACH %'s :	10.36%	50.18%	39.46%	23.25%	68.97%	7.78%	7.00%	75.56%	17.44%	37.23%	46.38%	16.39%	
PEAK HR START TIME :	600 PM												TOTAL
PEAK HR VOL :	69	328	265	101	272	26	62	497	120	206	275	112	2333
PEAK HR FACTOR :		0.904			0.899			0.954			0.877		0.921

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-012 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 0	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
11:00 AM	15	50	50	12	47	2	9	85	16	64	63	14	427
11:15 AM	14	60	54	13	44	7	13	79	26	67	70	25	472
11:30 AM	12	60	38	13	47	4	6	106	17	67	56	23	449
11:45 AM	11	62	50	12	47	10	6	111	19	62	63	27	480
12:00 PM	9	77	48	21	57	8	9	80	19	58	48	17	451
12:15 PM	11	54	52	12	43	7	6	102	26	51	67	19	450
12:30 PM	11	59	72	21	58	6	6	99	12	55	46	25	470
12:45 PM	10	65	56	19	45	5	4	106	27	54	73	23	487
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	93	487	420	123	388	49	59	768	162	478	486	173	3686
APPROACH %'s :	9.30%	48.70%	42.00%	21.96%	69.29%	8.75%	5.97%	77.65%	16.38%	42.04%	42.74%	15.22%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	41	255	228	73	203	26	25	387	84	218	234	84	1858
PEAK HR FACTOR :		0.923			0.878			0.905			0.893		0.954

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

Robertson Blvd and Melrose Ave , West Hollywood

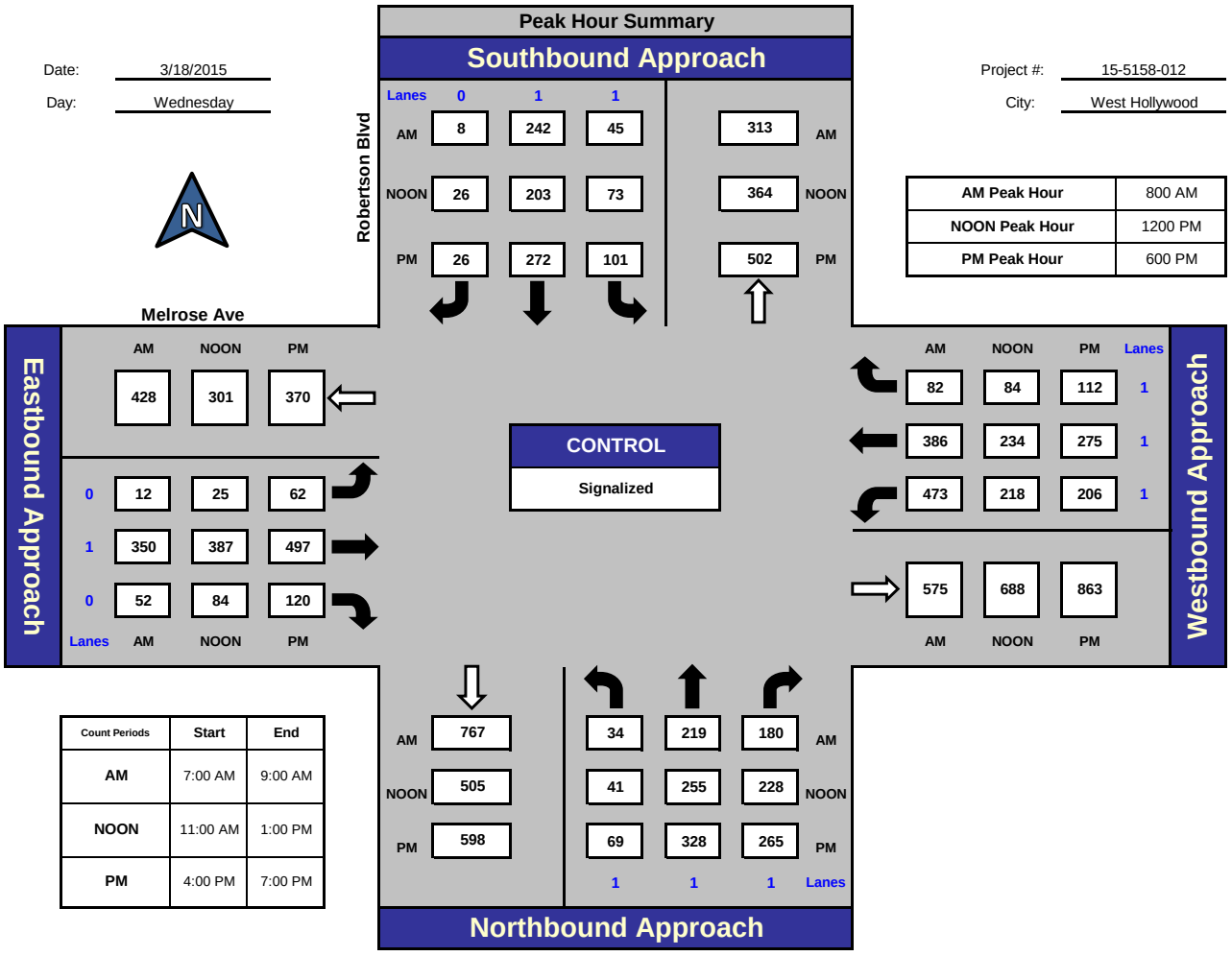
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-012

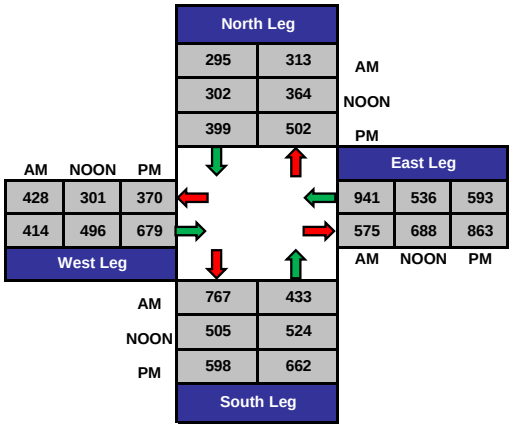
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1200 PM
PM Peak Hour	600 PM

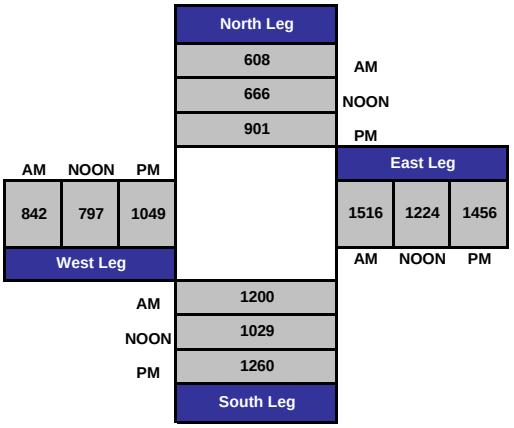


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-013 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Melrose Ave			Melrose Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB
7:00 AM	3	68	10	11	78	2	4	43	2	31	144	20	416	0	0	0	0
7:15 AM	14	104	9	15	76	12	6	49	5	31	182	15	518	0	0	0	0
7:30 AM	16	86	12	15	75	5	4	84	2	61	195	32	587	0	0	0	0
7:45 AM	18	135	13	15	69	10	4	86	11	45	195	30	631	0	0	0	0
8:00 AM	24	150	26	27	128	11	7	89	8	54	211	41	776	0	0	0	0
8:15 AM	16	125	26	30	113	10	2	139	12	36	216	26	751	0	0	0	0
8:30 AM	17	119	20	24	112	12	9	123	11	52	205	21	725	0	0	0	0
8:45 AM	27	150	39	29	141	15	10	137	12	34	193	34	821	1	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	135	937	155	166	792	77	46	750	63	344	1541	219	5225	1	0	0	0
APPROACH %'s :	11.00%	76.37%	12.63%	16.04%	76.52%	7.44%	5.36%	87.31%	7.33%	16.35%	73.24%	10.41%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	84	544	111	110	494	48	28	488	43	176	825	122	3073				
PEAK HR FACTOR :		0.855			0.881			0.879			0.917		0.936				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-013 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Melrose Ave			Melrose Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB
4:00 PM	21	141	37	36	139	16	10	144	27	26	124	36	757	0	0	0	0
4:15 PM	17	144	19	34	110	10	19	160	32	38	93	43	719	0	0	0	0
4:30 PM	14	150	41	29	149	18	23	174	32	33	88	45	796	0	0	0	0
4:45 PM	18	158	36	26	131	12	9	154	28	31	119	49	771	0	1	0	0
5:00 PM	17	168	29	31	168	8	15	141	21	36	114	64	812	0	0	0	0
5:15 PM	25	160	35	29	155	11	18	138	27	38	115	50	801	0	0	0	0
5:30 PM	24	183	33	26	161	15	36	147	24	25	97	53	824	0	0	0	0
5:45 PM	16	181	41	25	129	12	17	130	31	38	136	62	818	0	0	0	0
6:00 PM	24	167	40	28	152	8	22	157	31	45	112	46	832	0	0	0	0
6:15 PM	30	153	25	32	121	10	25	153	24	41	129	66	809	1	0	0	0
6:30 PM	18	158	32	35	135	14	25	136	25	42	132	53	805	0	0	0	0
6:45 PM	20	167	30	30	116	12	26	162	24	40	113	49	789	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	244	1930	398	361	1666	146	245	1796	326	433	1372	616	9533	1	1	0	0
APPROACH %'s :	9.49%	75.04%	15.47%	16.61%	76.67%	6.72%	10.35%	75.88%	13.77%	17.89%	56.67%	25.44%					
PEAK HR START TIME :	530 PM												TOTAL				
PEAK HR VOL :	94	684	139	111	563	45	100	587	110	149	474	227	3283				
PEAK HR FACTOR :		0.955			0.890			0.949			0.900		0.986				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-013 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL
11:00 AM	16	86	32	23	95	19	6	119	13	33	119	46	607
11:15 AM	26	107	25	20	93	18	7	128	13	41	114	43	635
11:30 AM	14	120	31	27	104	19	7	127	16	32	112	35	644
11:45 AM	17	109	32	30	108	14	13	137	25	33	123	59	700
12:00 PM	9	101	34	33	105	18	13	127	11	24	103	46	624
12:15 PM	24	112	22	30	115	19	8	131	19	25	107	44	656
12:30 PM	11	112	38	33	117	13	13	154	14	35	118	55	713
12:45 PM	31	102	35	34	116	18	6	155	13	39	112	49	710
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	148	849	249	230	853	138	73	1078	124	262	908	377	5289
APPROACH %'s :	11.88%	68.14%	19.98%	18.84%	69.86%	11.30%	5.73%	84.55%	9.73%	16.94%	58.69%	24.37%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	75	427	129	130	453	68	40	567	57	123	440	194	2703
PEAK HR FACTOR :		0.939			0.969			0.917			0.910		0.948

UTURNS	NB	SB	EB	WB
	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	0	0
	0	1	0	0
	0	0	0	0
	0	0	0	1
	1	0	0	1
	NB	SB	EB	WB
TOTAL VOLUMES :	2	1	0	2

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

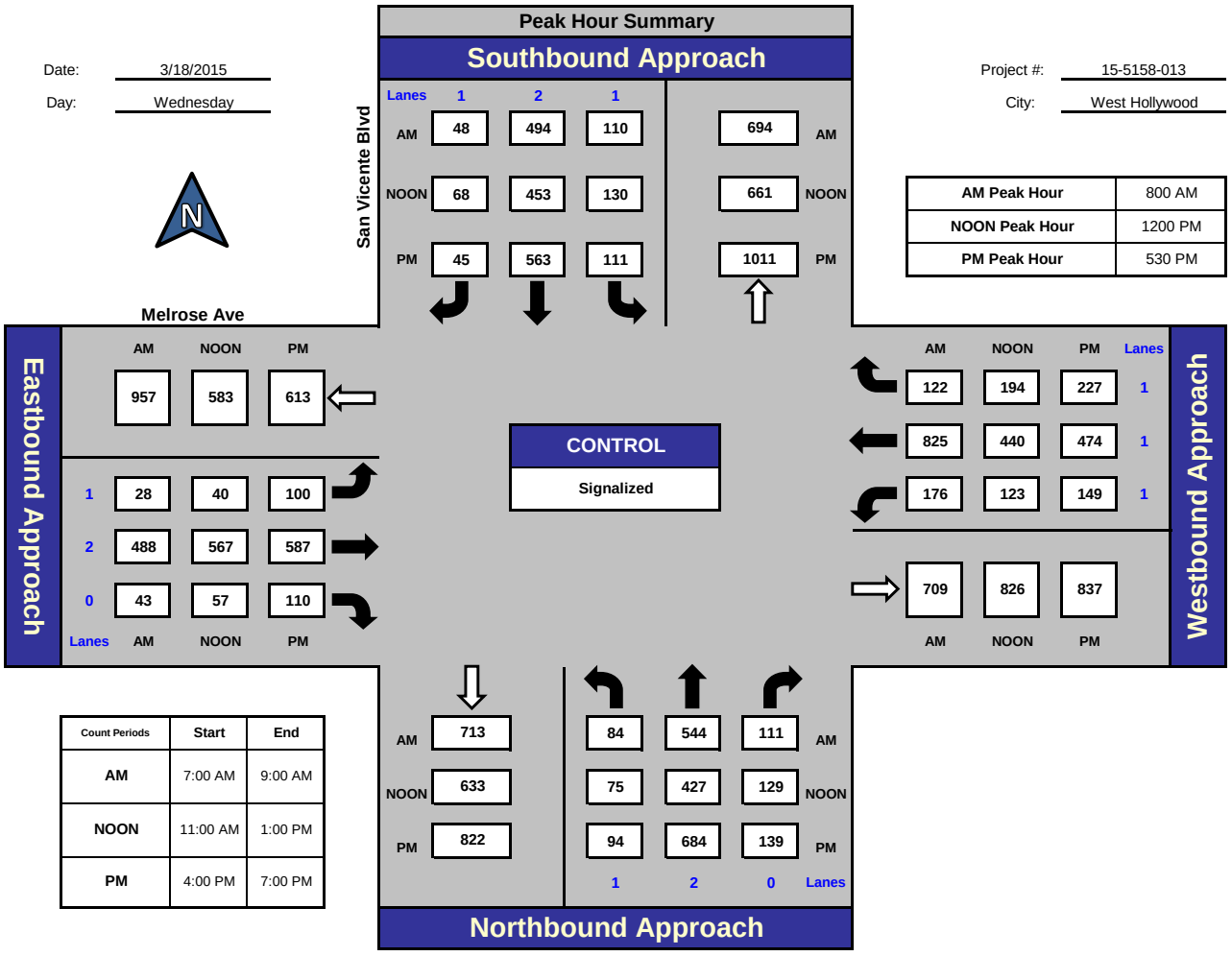
San Vicente Blvd and Melrose Ave , West Hollywood

Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-013

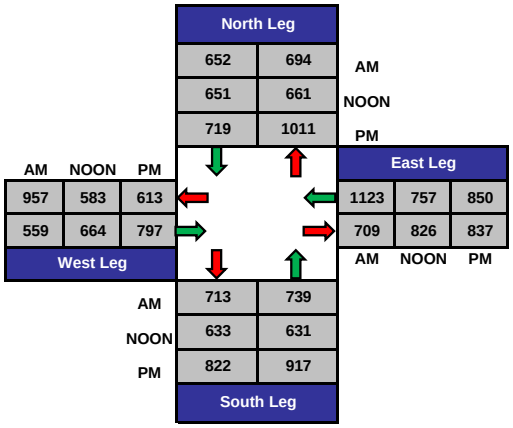
City: West Hollywood



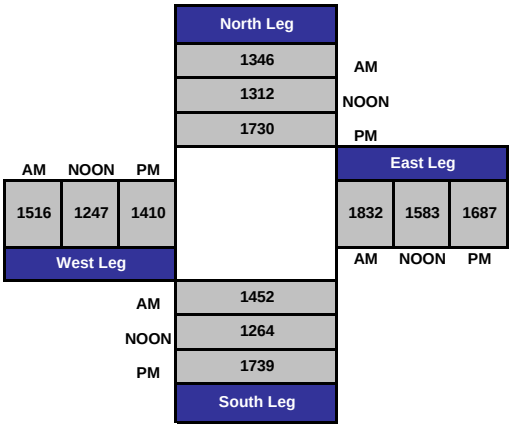
AM Peak Hour	800 AM
NOON Peak Hour	1200 PM
PM Peak Hour	530 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-014 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	La Cienega Blvd			La Cienega Blvd			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	13	77	19	13	244	24	4	45	6	62	164	6	677
7:15 AM	9	86	27	10	183	43	6	52	8	102	214	6	746
7:30 AM	8	142	35	5	228	39	7	67	5	110	254	12	912
7:45 AM	15	125	44	9	196	27	11	97	11	117	269	8	929
8:00 AM	16	154	43	24	214	28	10	87	11	130	247	8	972
8:15 AM	15	176	46	21	210	27	10	154	12	110	227	14	1022
8:30 AM	18	160	48	18	228	47	18	105	12	110	151	9	924
8:45 AM	18	173	40	11	219	33	14	109	21	103	146	15	902
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	112	1093	302	111	1722	268	80	716	86	844	1672	78	7084
APPROACH %'s :	7.43%	72.53%	20.04%	5.28%	81.96%	12.76%	9.07%	81.18%	9.75%	32.54%	64.46%	3.01%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	64	615	181	72	848	129	49	443	46	467	894	39	3847
PEAK HR FACTOR :		0.907			0.895			0.764			0.888		0.941

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-014 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	La Cienega Blvd			La Cienega Blvd			Melrose Ave			Melrose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
4:00 PM	14	271	78	18	209	45	30	181	19	53	124	11	1053
4:15 PM	18	218	71	15	161	21	33	211	21	54	149	9	981
4:30 PM	13	250	64	18	185	22	26	229	7	52	112	11	989
4:45 PM	19	232	64	15	177	26	41	239	16	45	140	15	1029
5:00 PM	21	246	89	21	170	25	34	203	14	65	138	25	1051
5:15 PM	15	241	79	18	164	28	34	247	23	54	136	20	1059
5:30 PM	17	271	56	11	204	19	30	245	9	51	127	8	1048
5:45 PM	15	214	67	14	171	28	39	252	14	45	167	13	1039
6:00 PM	24	263	56	14	181	29	50	208	13	52	130	22	1042
6:15 PM	12	253	70	17	195	31	39	238	9	69	187	19	1139
6:30 PM	13	270	82	18	203	27	31	221	10	57	167	15	1114
6:45 PM	12	229	70	10	164	24	36	267	8	63	155	20	1058
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	193	2958	846	189	2184	325	423	2741	163	660	1732	188	12602
APPROACH %'s :	4.83%	74.01%	21.17%	7.01%	80.95%	12.05%	12.71%	82.39%	4.90%	25.58%	67.13%	7.29%	
PEAK HR START TIME :	600 PM												TOTAL
PEAK HR VOL :	61	1015	278	59	743	111	156	934	40	241	639	76	4353
PEAK HR FACTOR :		0.927			0.920			0.908			0.869		0.955

UTURNS	NB	SB	EB	WB
TOTAL	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-014 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	La Cienega Blvd			La Cienega Blvd			Melrose Ave			Melrose Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB
11:00 AM	23	180	52	10	211	31	25	124	19	64	163	17	919				
11:15 AM	18	174	55	19	177	28	19	138	23	60	177	22	910				
11:30 AM	17	185	57	24	218	41	18	114	18	50	124	11	877				
11:45 AM	19	198	63	17	201	37	31	142	21	51	167	17	964				
12:00 PM	26	210	55	20	222	32	22	126	26	57	144	24	964				
12:15 PM	18	181	61	22	191	30	37	129	23	57	162	16	927				
12:30 PM	10	222	62	15	221	44	23	140	31	58	150	18	994				
12:45 PM	18	200	52	27	188	34	32	155	30	59	174	23	992				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	149	1550	457	154	1629	277	207	1068	191	456	1261	148	7547	0	0	0	0
APPROACH %'s :	6.91%	71.89%	21.20%	7.48%	79.08%	13.45%	14.12%	72.85%	13.03%	24.45%	67.61%	7.94%					
PEAK HR START TIME :	1200 PM												TOTAL				
PEAK HR VOL :	72	813	230	84	822	140	114	550	110	231	630	81	3877				
PEAK HR FACTOR :		0.948			0.934			0.892			0.920		0.975				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

La Cienega Blvd and Melrose Ave , West Hollywood

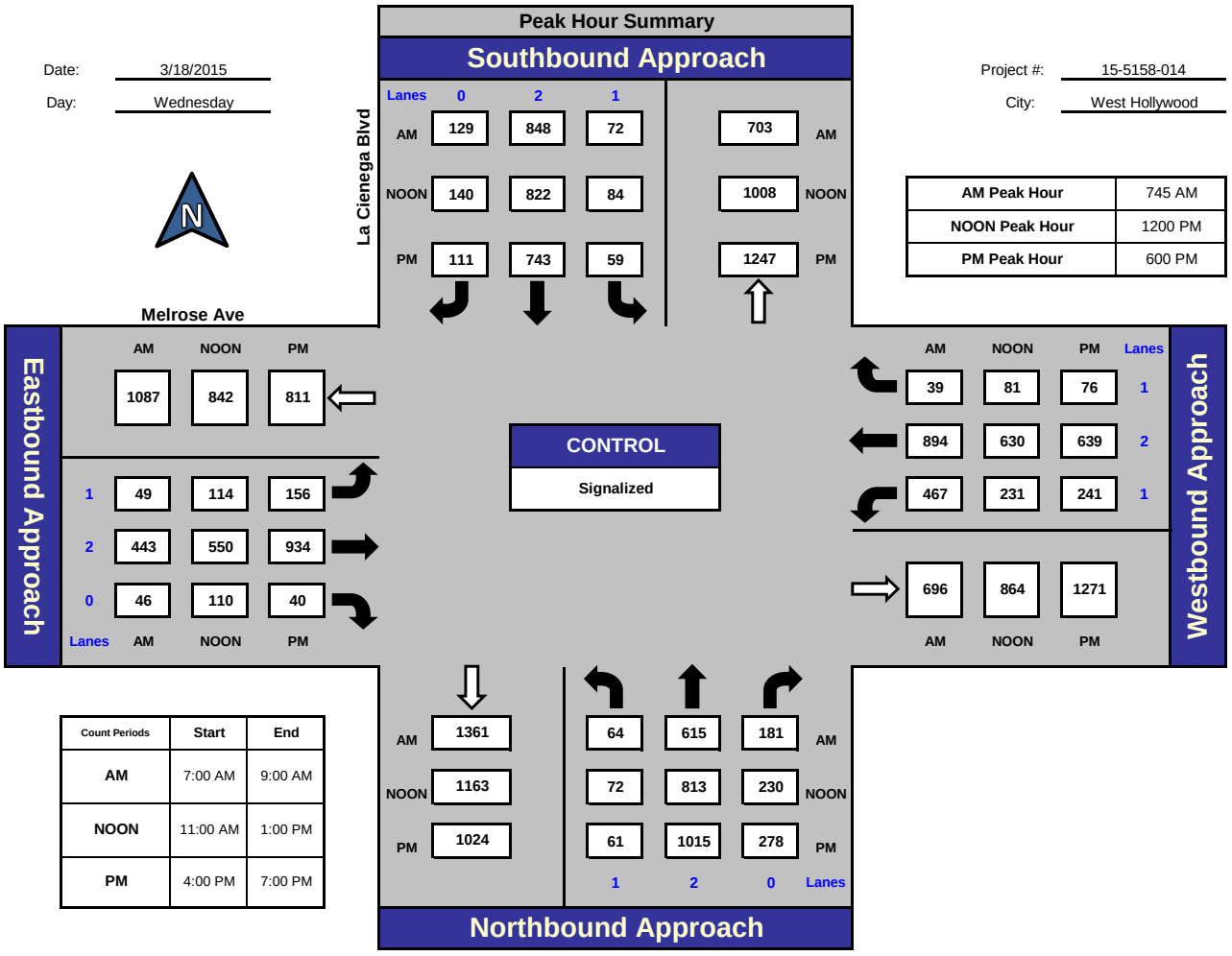
Date: 3/18/2015

Day: Wednesday

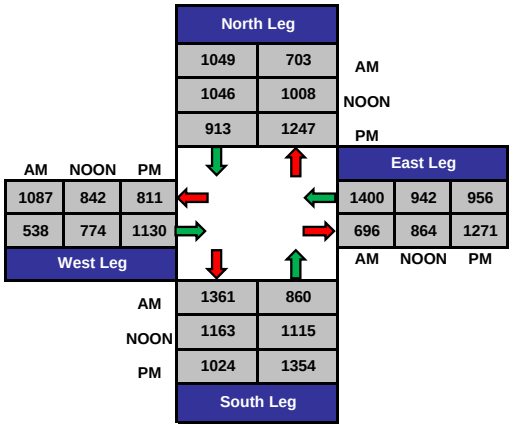
Project #: 15-5158-014

City: West Hollywood

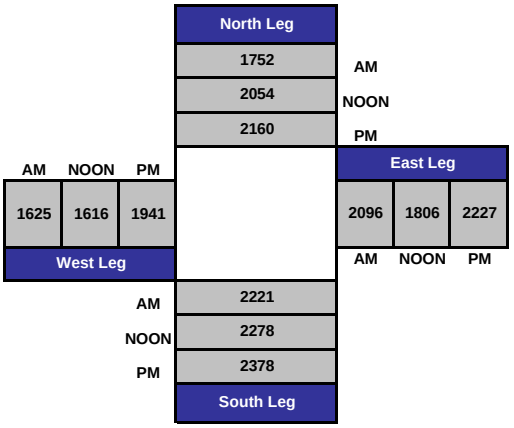
AM Peak Hour	745 AM
NOON Peak Hour	1200 PM
PM Peak Hour	600 PM



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-015 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Doheny Dr			Doheny Dr			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	1	0	1	1	0	1	2	0	1	2	0					
7:00 AM	19	45	5	8	44	8	10	99	8	25	145	4	420				
7:15 AM	20	68	9	9	84	19	4	115	13	47	219	13	620				
7:30 AM	19	53	19	7	95	20	10	117	19	57	223	13	652				
7:45 AM	29	67	16	15	91	27	14	189	22	47	252	15	784				
8:00 AM	25	67	18	9	88	37	12	172	13	61	227	10	739				
8:15 AM	18	93	19	12	99	29	12	180	13	54	272	8	809				
8:30 AM	22	84	23	8	94	52	10	200	23	46	297	9	868				
8:45 AM	30	83	21	10	96	47	13	171	20	61	277	16	845				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	182	560	130	78	691	239	85	1243	131	398	1912	88	5737	0	0	0	0
APPROACH %'s :	20.87%	64.22%	14.91%	7.74%	68.55%	23.71%	5.83%	85.20%	8.98%	16.60%	79.73%	3.67%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	95	327	81	39	377	165	47	723	69	222	1073	43	3261				
PEAK HR FACTOR :		0.938			0.943			0.900			0.945		0.939				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-015 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Doheny Dr			Doheny Dr			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	1	0	1	1	0	1	2	0	1	2	0					
4:00 PM	26	84	50	21	101	15	30	206	34	42	186	29	824				
4:15 PM	25	91	33	15	92	11	28	206	22	55	217	25	820				
4:30 PM	31	84	19	18	90	12	46	205	33	49	189	22	798				
4:45 PM	38	91	27	26	83	12	32	228	35	46	209	30	857				
5:00 PM	29	98	44	16	89	6	30	242	15	41	218	26	854				
5:15 PM	31	98	30	22	96	14	42	220	21	40	201	28	843				
5:30 PM	28	100	24	21	82	12	54	234	19	42	211	24	851				
5:45 PM	27	104	43	18	113	15	45	227	19	40	176	20	847				
6:00 PM	26	83	41	18	109	10	46	219	24	41	207	13	837				
6:15 PM	33	98	28	22	90	8	47	230	21	41	201	15	834				
6:30 PM	23	99	35	23	86	16	44	241	24	57	153	18	819				
6:45 PM	26	102	47	19	70	11	48	261	24	45	160	20	833				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	343	1132	421	239	1101	142	492	2719	291	539	2328	270	10017	0	0	0	0
APPROACH %'s :	18.09%	59.70%	22.20%	16.13%	74.29%	9.58%	14.05%	77.64%	8.31%	17.18%	74.21%	8.61%					
PEAK HR START TIME :	445 PM												TOTAL				
PEAK HR VOL :	126	387	125	85	350	44	158	924	90	169	839	108	3405				
PEAK HR FACTOR :		0.933			0.907			0.954			0.979		0.993				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-015 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Doheny Dr			Doheny Dr			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	17	99	26	13	88	9	14	161	21	46	195	22	711				
11:15 AM	26	83	31	22	86	18	11	165	21	33	164	20	680				
11:30 AM	21	77	31	14	75	12	18	203	18	45	191	15	720				
11:45 AM	31	71	26	18	90	8	20	201	19	57	201	27	769				
12:00 PM	22	111	34	16	87	25	16	175	22	47	168	13	736				
12:15 PM	22	100	41	21	87	18	24	177	25	53	166	25	759				
12:30 PM	22	97	29	23	73	23	21	196	21	40	185	23	753				
12:45 PM	27	95	42	16	82	17	23	192	21	47	166	25	753				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	188	733	260	143	668	130	147	1470	168	368	1436	170	5881	0	0	0	0
APPROACH %'s :	15.92%	62.07%	22.02%	15.20%	70.99%	13.82%	8.24%	82.35%	9.41%	18.64%	72.75%	8.61%					
PEAK HR START TIME :	1145 AM												TOTAL				
PEAK HR VOL :	97	379	130	78	337	74	81	749	87	197	720	88	3017				
PEAK HR FACTOR :		0.907			0.955			0.955			0.882		0.981				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

Doheny Dr and Beverly Blvd , West Hollywood

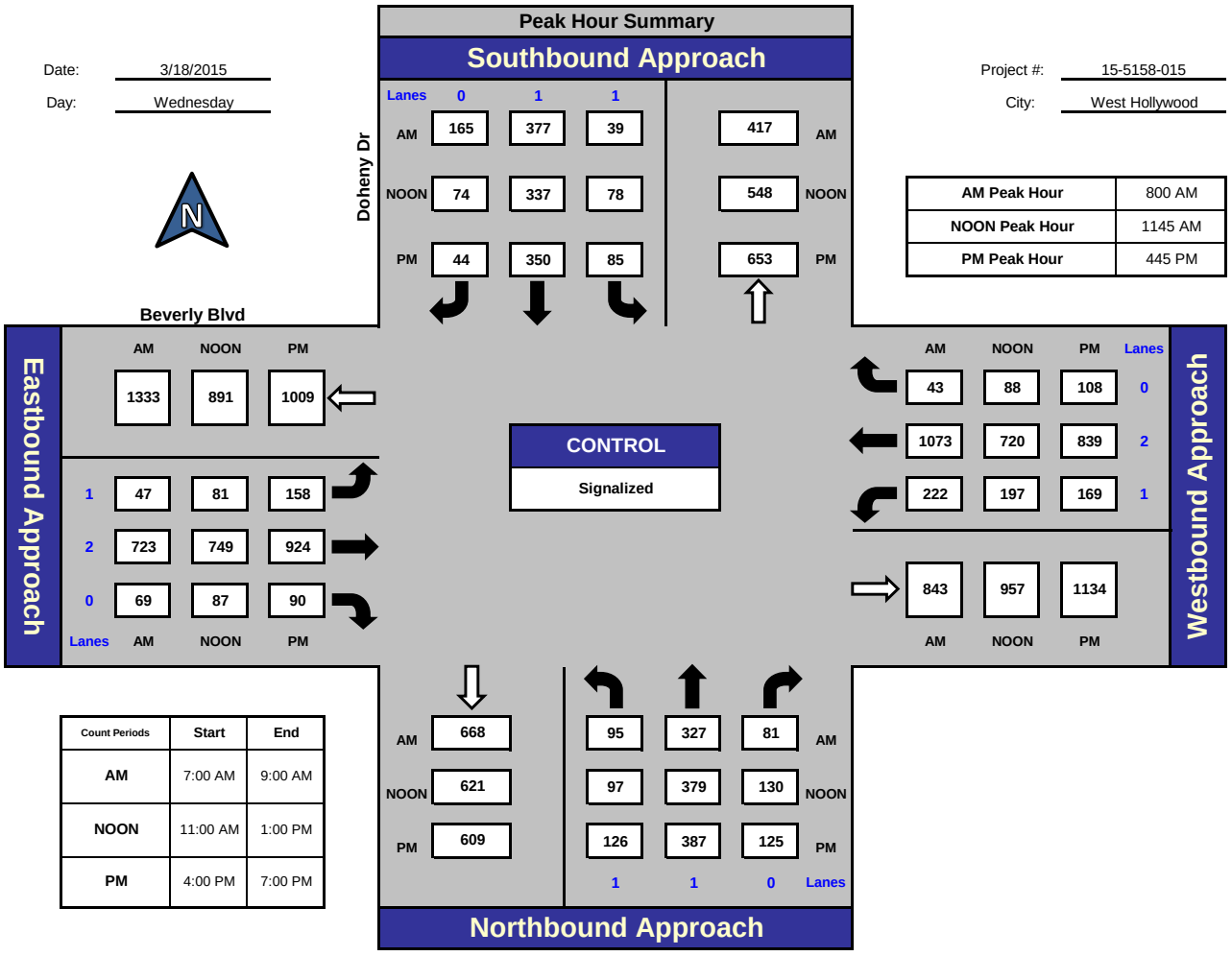
Date: 3/18/2015

Day: Wednesday

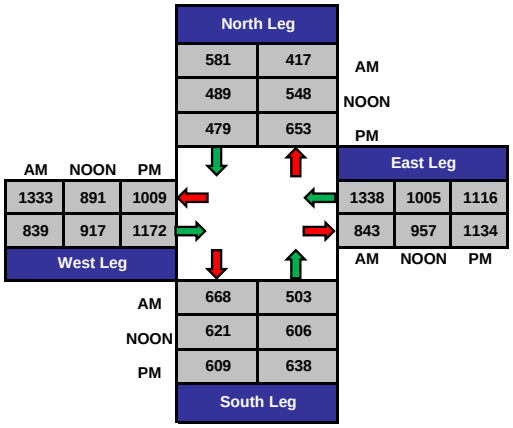
Project #: 15-5158-015

City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	445 PM



Total Ins & Outs



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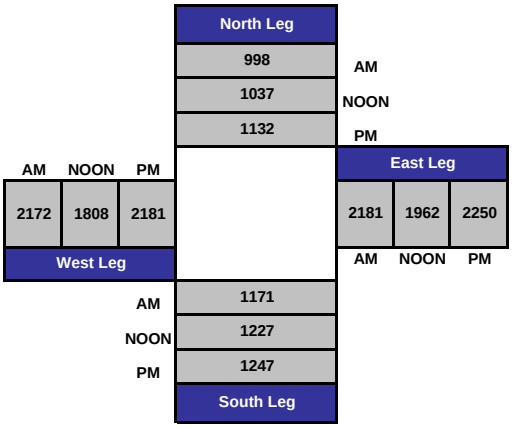


PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-015
N/S Street: Doheny Dr
E/W Street: Beverly Blvd
DATE: 3/18/2015
CITY: West Hollywood

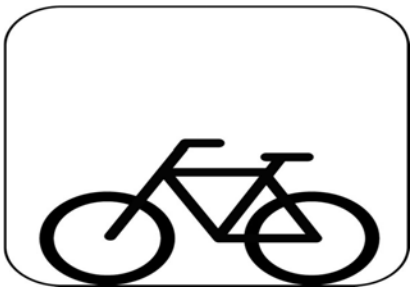
DAY: Wednesday

AM	0	1	0
NOON	0	0	0
PM	1	2	0

NORTH LEG

AM	NOON	PM
0	0	0
3	2	3
0	0	0

WEST LEG



EAST LEG

AM	NOON	PM
0	1	0
0	2	1
0	0	0

SOUTH LEG

AM	0	3	0
NOON	0	2	1
PM	0	5	3

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-015
N/S Street: Doheny Dr
E/W Street: Beverly Blvd
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	2	0	0	0	0	0	1	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0
TOTALS	**0**	**3**	**0**	**0**	**2**	**0**	**0**	**4**	**0**	**0**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	1	1	0	0	0	0	1	0	0	1	0
11:15 AM	0	1	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	0
12:00 PM	0	0	0	0	0	1	0	0	0	0	0	0
12:15 PM	1	1	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	1	0	0	0	1	0	0
TOTALS	**1**	**3**	**1**	**0**	**0**	**2**	**0**	**2**	**0**	**1**	**2**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	1	0	0	0	0	0	0	0
4:45 PM	0	1	1	0	1	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0
5:15 PM	0	3	2	0	0	0	0	0	0	0	1	0
5:30 PM	0	1	0	0	1	0	0	2	0	0	0	0
5:45 PM	0	1	1	0	0	1	0	0	0	0	0	0
6:00 PM	0	0	0	0	1	0	0	1	0	0	0	0
6:15 PM	0	1	0	0	0	0	0	1	0	0	1	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	1
6:45 PM	0	2	0	0	0	0	0	1	0	0	0	0
TOTALS	**0**	**13**	**4**	**0**	**4**	**1**	**0**	**6**	**0**	**0**	**3**	**1**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-016 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	1	1	1	1	0	1	2	0	1	2	0					
7:00 AM	12	37	16	4	66	32	6	79	23	16	167	6	464	0	0	0	0
7:15 AM	11	61	18	6	79	60	5	98	39	14	192	7	590	0	0	0	1
7:30 AM	9	63	22	6	97	68	7	134	27	23	272	2	730	0	0	0	0
7:45 AM	15	64	31	5	95	72	13	202	24	24	250	12	807	0	0	0	0
8:00 AM	12	73	29	5	112	86	9	203	17	20	268	6	840	0	0	0	0
8:15 AM	17	81	30	9	116	86	10	180	22	30	249	8	838	0	0	0	1
8:30 AM	15	84	27	8	106	93	17	203	26	14	250	12	855	0	1	0	0
8:45 AM	16	86	23	10	93	72	14	181	32	23	253	13	816	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	107	549	196	53	764	569	81	1280	210	164	1901	66	5940	0	1	0	2
APPROACH %'s :	12.56%	64.44%	23.00%	3.82%	55.12%	41.05%	5.16%	81.48%	13.37%	7.70%	89.21%	3.10%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	60	324	109	32	427	337	50	767	97	87	1020	39	3349				
PEAK HR FACTOR :		0.963			0.943			0.929			0.974		0.979				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-016 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	1	1	1	1	0	1	2	0	1	2	0					
4:00 PM	14	94	38	27	80	42	27	209	22	24	228	15	820	0	0	0	0
4:15 PM	15	102	34	14	70	38	22	248	18	25	224	17	827	0	0	0	0
4:30 PM	19	98	48	24	76	56	24	213	18	29	221	23	849	0	0	0	0
4:45 PM	24	122	42	14	60	41	24	223	12	19	249	20	850	0	0	0	0
5:00 PM	22	112	39	16	107	32	25	237	8	26	216	18	858	0	0	0	0
5:15 PM	19	120	41	27	81	34	27	210	13	24	207	16	819	0	0	0	0
5:30 PM	16	115	42	17	72	21	17	212	13	21	221	14	781	0	0	0	0
5:45 PM	11	121	42	9	92	24	26	249	25	25	180	13	817	0	0	0	1
6:00 PM	13	120	29	19	69	31	28	241	19	16	238	9	832	0	0	1	0
6:15 PM	17	115	32	21	106	41	33	235	25	18	220	16	879	0	0	0	0
6:30 PM	20	116	41	24	79	43	24	241	11	26	183	8	816	0	0	0	0
6:45 PM	19	110	30	19	78	39	35	255	19	15	181	17	817	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	209	1345	458	231	970	442	312	2773	203	268	2568	186	9965	0	0	1	1
APPROACH %'s :	10.39%	66.85%	22.76%	14.06%	59.04%	26.90%	9.49%	84.34%	6.17%	8.87%	84.98%	6.15%					
PEAK HR START TIME :	415 PM												TOTAL				
PEAK HR VOL :	80	434	163	68	313	167	95	921	56	99	910	78	3384				
PEAK HR FACTOR :		0.900			0.878			0.931			0.944		0.986				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-016 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	16	90	32	7	82	39	18	180	22	24	199	13	722	0	0	0	0
11:15 AM	15	86	38	12	82	44	21	180	27	33	165	18	721	0	0	0	0
11:30 AM	19	87	38	12	77	39	21	230	23	24	209	19	798	0	0	0	0
11:45 AM	20	81	39	20	78	51	18	214	29	25	202	16	793	0	0	1	0
12:00 PM	14	84	48	16	91	29	22	200	31	30	203	20	788	0	0	0	0
12:15 PM	19	83	38	20	71	40	25	226	24	28	198	22	794	0	0	0	0
12:30 PM	36	87	37	23	71	45	26	217	27	22	206	16	813	0	0	1	0
12:45 PM	20	69	39	22	67	43	23	232	26	29	205	28	803	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	159	667	309	132	619	330	174	1679	209	215	1587	152	6232	0	0	2	0
APPROACH %'s :	14.01%	58.77%	27.22%	12.21%	57.26%	30.53%	8.44%	81.43%	10.14%	11.00%	81.22%	7.78%					
PEAK HR START TIME :	1200 PM												TOTAL				
PEAK HR VOL :	89	323	162	81	300	157	96	875	108	109	812	86	3198				
PEAK HR FACTOR :		0.897			0.968			0.960			0.961		0.983				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

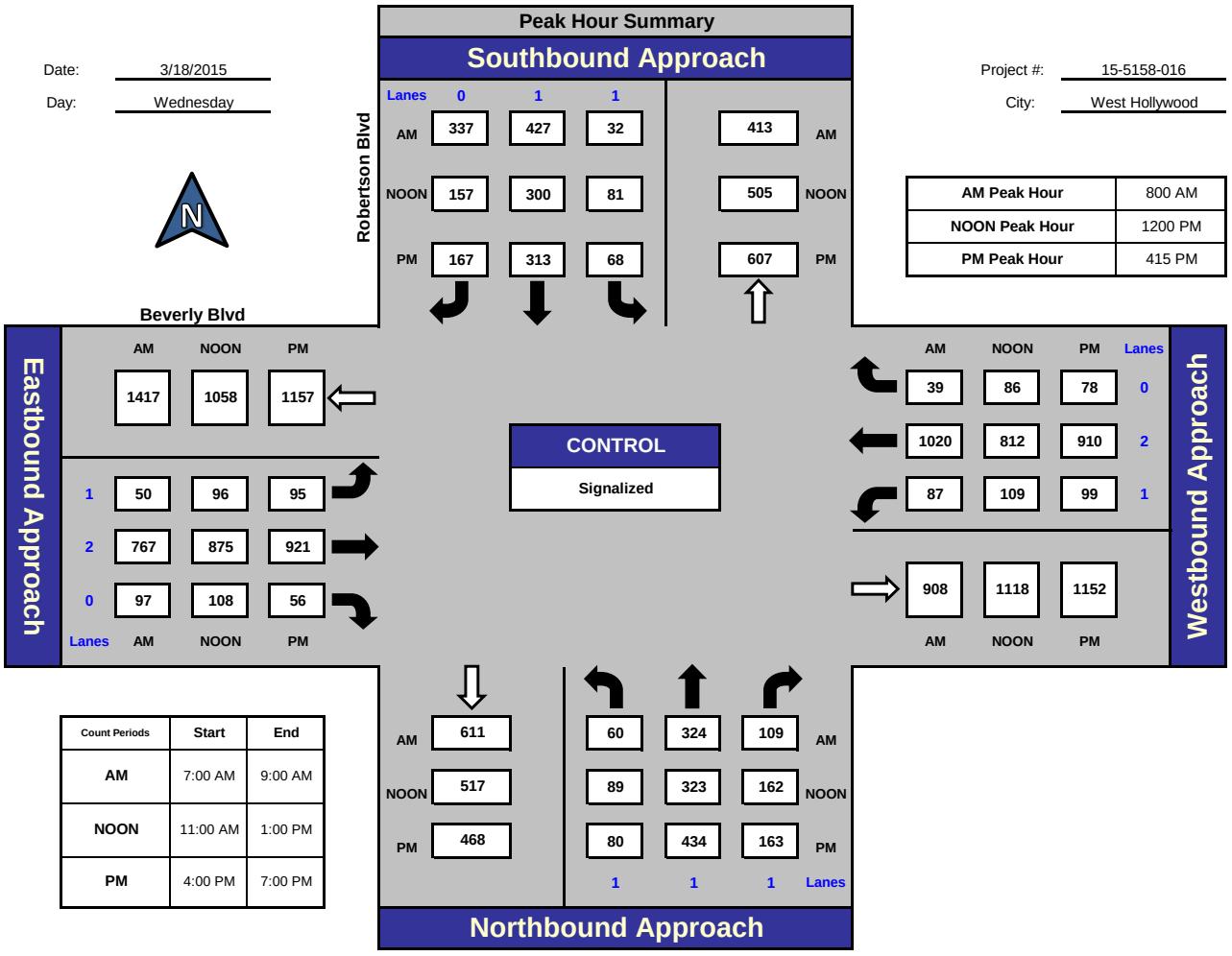
Robertson Blvd and Beverly Blvd , West Hollywood

Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-016

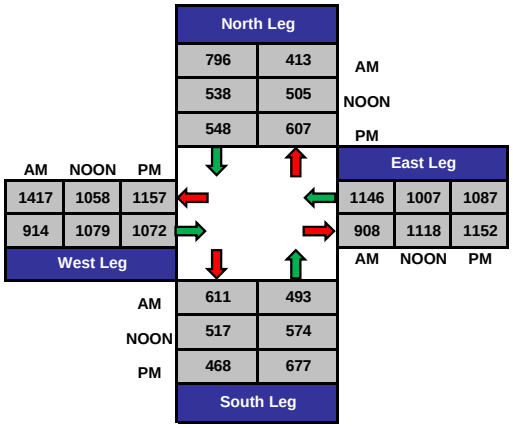
City: West Hollywood



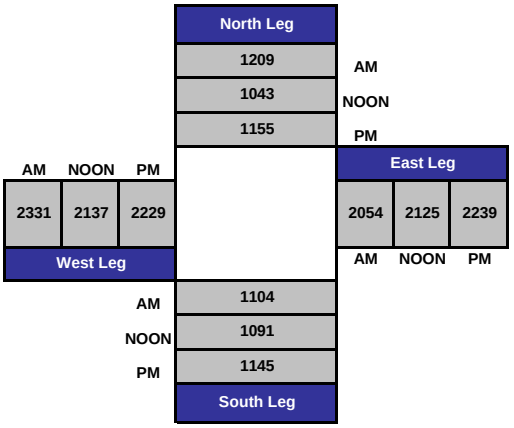
AM Peak Hour	800 AM
NOON Peak Hour	1200 PM
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-017 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 0	WT 3	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	14	86	11	18	89	30	10	65	15	30	225	16	609	0	0	0	0
7:15 AM	26	105	9	18	86	22	7	75	24	31	201	22	626	0	1	0	0
7:30 AM	26	103	15	14	102	41	6	136	23	21	297	19	803	1	0	0	0
7:45 AM	27	161	15	18	114	45	13	188	31	25	284	28	949	1	0	0	0
8:00 AM	30	172	21	29	156	35	13	215	19	23	323	34	1070	0	0	0	0
8:15 AM	25	137	26	27	138	38	3	157	36	31	293	26	937	0	0	0	0
8:30 AM	32	178	21	32	143	40	9	181	37	23	283	19	998	0	2	0	0
8:45 AM	38	179	20	35	147	45	9	165	32	36	318	34	1058	0	2	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	218	1121	138	191	975	296	70	1182	217	220	2224	198	7050	2	5	0	0
APPROACH %'s :	14.76%	75.90%	9.34%	13.06%	66.69%	20.25%	4.77%	80.46%	14.77%	8.33%	84.18%	7.49%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	125	666	88	123	584	158	34	718	124	113	1217	113	4063				
PEAK HR FACTOR :		0.927			0.953			0.887			0.930		0.949				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-017 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 0	WT 3	WR 0	TOTAL	NB	SB	EB	WB
4:00 PM	29	180	99	44	184	25	18	279	31	18	200	35	1142	0	3	0	0
4:15 PM	30	142	87	45	134	36	12	284	36	21	231	35	1093	0	2	0	0
4:30 PM	38	190	97	44	174	46	24	258	29	18	187	45	1150	0	3	1	0
4:45 PM	28	198	93	53	160	40	18	300	40	16	222	40	1208	1	1	0	0
5:00 PM	32	209	128	55	201	31	12	273	45	19	173	34	1212	0	4	0	2
5:15 PM	31	201	120	62	176	32	14	272	30	14	204	43	1199	0	1	0	0
5:30 PM	27	215	114	59	196	33	13	270	39	17	189	36	1208	0	6	0	0
5:45 PM	35	222	84	48	167	21	18	319	24	16	212	42	1208	0	2	0	0
6:00 PM	28	199	95	58	179	24	20	247	36	17	233	37	1173	1	1	0	0
6:15 PM	25	194	91	47	141	19	11	284	30	13	256	43	1154	0	1	0	0
6:30 PM	26	216	88	35	153	20	17	283	21	18	234	40	1151	0	1	0	0
6:45 PM	30	171	72	45	135	22	7	291	26	14	212	42	1067	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	359	2337	1168	595	2000	349	184	3360	387	201	2553	472	13965	2	25	1	2
APPROACH %'s :	9.29%	60.48%	30.23%	20.21%	67.93%	11.85%	4.68%	85.47%	9.84%	6.23%	79.14%	14.63%					
PEAK HR START TIME :	500 PM												TOTAL				
PEAK HR VOL :	125	847	446	224	740	117	57	1134	138	66	778	155	4827				
PEAK HR FACTOR :		0.961			0.938			0.920			0.925		0.996				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-017 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	San Vicente Blvd			San Vicente Blvd			Beverly Blvd			Beverly Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 0	WT 3	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	24	118	26	34	109	31	6	186	38	26	245	29	872	0	3	0	1
11:15 AM	44	114	25	32	105	33	10	180	48	27	192	32	842	0	1	0	0
11:30 AM	33	111	35	34	128	31	8	219	48	24	211	33	915	0	4	0	0
11:45 AM	36	120	35	40	138	20	9	219	54	18	222	30	941	0	1	0	1
12:00 PM	35	105	44	36	115	28	14	218	46	26	241	20	928	0	2	0	1
12:15 PM	34	115	40	49	132	31	9	218	35	21	208	27	919	0	3	0	1
12:30 PM	27	126	43	51	127	28	21	229	49	27	232	36	996	0	2	0	0
12:45 PM	33	108	42	52	121	37	21	235	45	22	205	34	955	0	4	1	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	266	917	290	328	975	239	98	1704	363	191	1756	241	7368	0	20	1	4
APPROACH %'s :	18.06%	62.25%	19.69%	21.27%	63.23%	15.50%	4.53%	78.71%	16.77%	8.73%	80.26%	11.01%					
PEAK HR START TIME :	1200 PM												TOTAL				
PEAK HR VOL :	129	454	169	188	495	124	65	900	175	96	886	117	3798				
PEAK HR FACTOR :		0.959			0.952			0.947			0.931		0.953				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

San Vicente Blvd and Beverly Blvd , West Hollywood

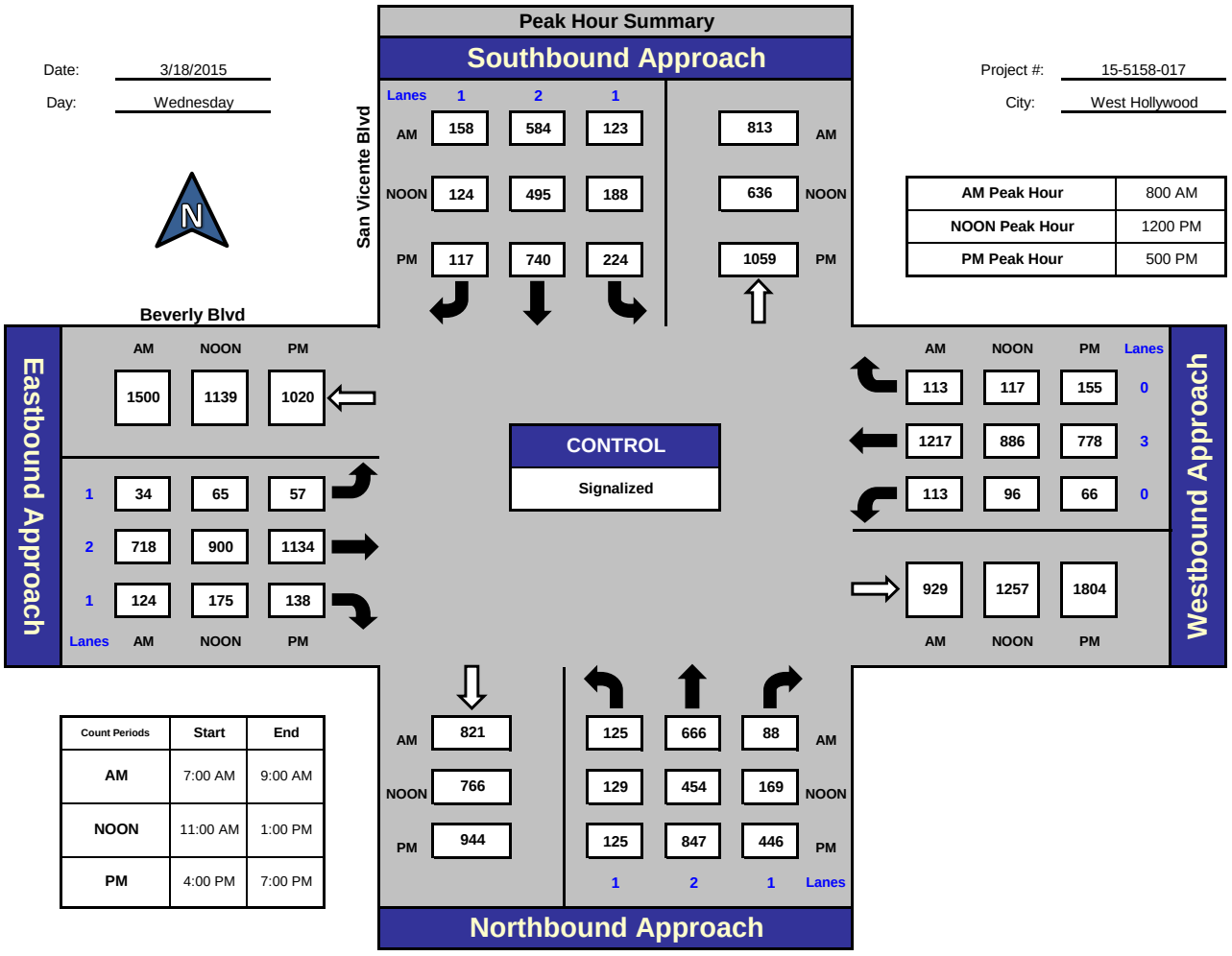
Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-017

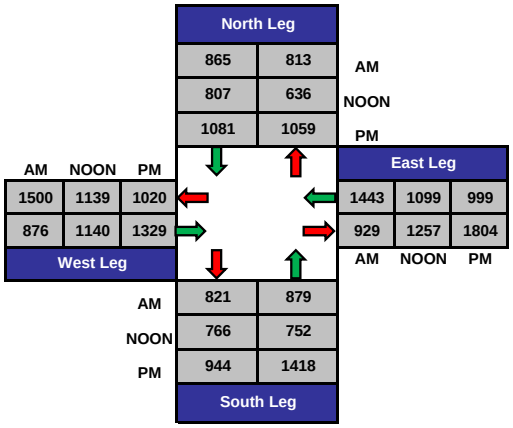
City: West Hollywood

AM Peak Hour	800 AM
NOON Peak Hour	1200 PM
PM Peak Hour	500 PM

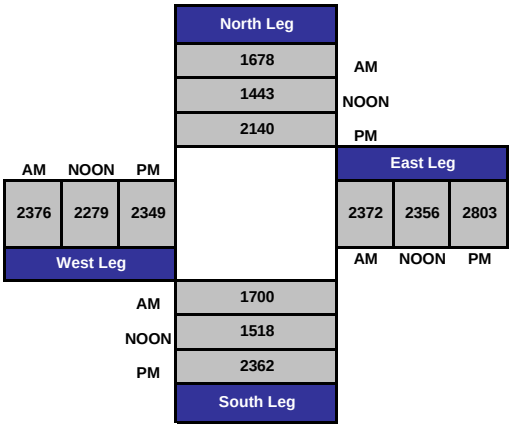


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-018 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

AM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Burton Wy			Burton Wy				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	1	1	1	1	0	1	4	0	1	4	0					
7:00 AM	20	71	2	6	87	14	12	56	14	13	179	7	481	0	0	0	1
7:15 AM	12	109	9	9	108	18	14	61	13	12	220	10	595	0	0	1	0
7:30 AM	16	127	7	11	132	12	20	75	14	28	319	16	777	0	0	1	1
7:45 AM	14	129	7	7	132	15	23	103	22	27	269	20	768	0	0	2	1
8:00 AM	10	140	6	9	125	9	26	106	28	32	303	21	815	0	0	2	0
8:15 AM	28	130	5	12	145	13	31	116	18	42	315	23	878	0	0	1	0
8:30 AM	12	127	6	9	134	10	18	146	21	39	349	22	893	0	0	1	1
8:45 AM	14	137	4	11	128	13	20	146	26	48	351	32	930	0	0	3	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	126	970	46	74	991	104	164	809	156	241	2305	151	6137	0	0	11	6
APPROACH %'s :	11.03%	84.94%	4.03%	6.33%	84.77%	8.90%	14.53%	71.66%	13.82%	8.94%	85.47%	5.60%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	64	534	21	41	532	45	95	514	93	161	1318	98	3516				
PEAK HR FACTOR :		0.949			0.909			0.914			0.915		0.945				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-018 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

PM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Burton Wy			Burton Wy				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	1	1	1	1	0	1	4	0	1	4	0					
4:00 PM	23	106	14	13	119	15	41	298	25	22	207	27	910	0	0	4	2
4:15 PM	20	118	13	9	125	9	38	274	21	26	189	13	855	0	0	2	3
4:30 PM	32	118	8	17	128	12	41	287	26	32	182	19	902	0	0	5	3
4:45 PM	28	134	16	13	129	10	35	262	32	33	190	16	898	0	0	2	4
5:00 PM	20	119	10	19	125	12	36	282	15	26	199	17	880	0	0	2	5
5:15 PM	30	114	6	27	132	5	45	276	22	30	184	14	885	0	0	5	6
5:30 PM	23	135	13	20	113	21	32	284	21	23	214	12	911	0	0	3	2
5:45 PM	27	118	8	17	111	8	41	286	16	26	200	23	881	0	0	2	4
6:00 PM	13	106	6	20	124	16	46	293	15	24	207	17	887	0	0	1	2
6:15 PM	18	103	17	22	128	11	45	293	18	23	183	25	886	0	0	2	1
6:30 PM	19	130	11	16	132	10	42	280	21	27	159	14	861	0	0	4	2
6:45 PM	15	114	14	22	114	13	40	293	26	24	162	14	851	0	0	5	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	268	1415	136	215	1480	142	482	3408	258	316	2276	211	10607	0	0	37	39
APPROACH %'s :	14.73%	77.79%	7.48%	11.70%	80.57%	7.73%	11.62%	82.16%	6.22%	11.27%	81.20%	7.53%					
PEAK HR START TIME :	445 PM												TOTAL				
PEAK HR VOL :	101	502	45	79	499	48	148	1104	90	112	787	59	3574				
PEAK HR FACTOR :		0.910			0.954			0.978			0.962		0.981				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5158-018 **Day:** Wednesday

City: West Hollywood **Date:** 3/18/2015

NOON

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Burton Wy			Burton Wy				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL	NB	SB	EB	WB
11:00 AM	23	109	11	10	123	14	37	158	20	20	160	22	707	0	0	4	3
11:15 AM	19	121	10	5	121	14	30	147	39	23	161	12	702	0	0	4	1
11:30 AM	24	129	6	8	103	13	30	127	32	26	162	21	681	0	0	2	2
11:45 AM	23	125	12	11	104	26	33	143	34	27	193	25	756	0	0	3	3
12:00 PM	16	128	15	13	113	18	40	160	33	25	148	22	731	0	0	6	4
12:15 PM	25	121	12	16	113	13	33	147	15	32	152	25	704	0	0	4	8
12:30 PM	25	118	7	13	110	14	31	147	29	20	185	24	723	0	0	1	1
12:45 PM	20	114	15	8	108	13	34	150	27	26	151	31	697	0	0	5	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	175	965	88	84	895	125	268	1179	229	199	1312	182	5701	0	0	29	25
APPROACH %'s :	14.25%	78.58%	7.17%	7.61%	81.07%	11.32%	15.99%	70.35%	13.66%	11.75%	77.50%	10.75%					
PEAK HR START TIME :	1145 AM												TOTAL				
PEAK HR VOL :	89	492	46	53	440	71	137	597	111	104	678	96	2914				
PEAK HR FACTOR :		0.980			0.979			0.907			0.896		0.964				

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

NDS

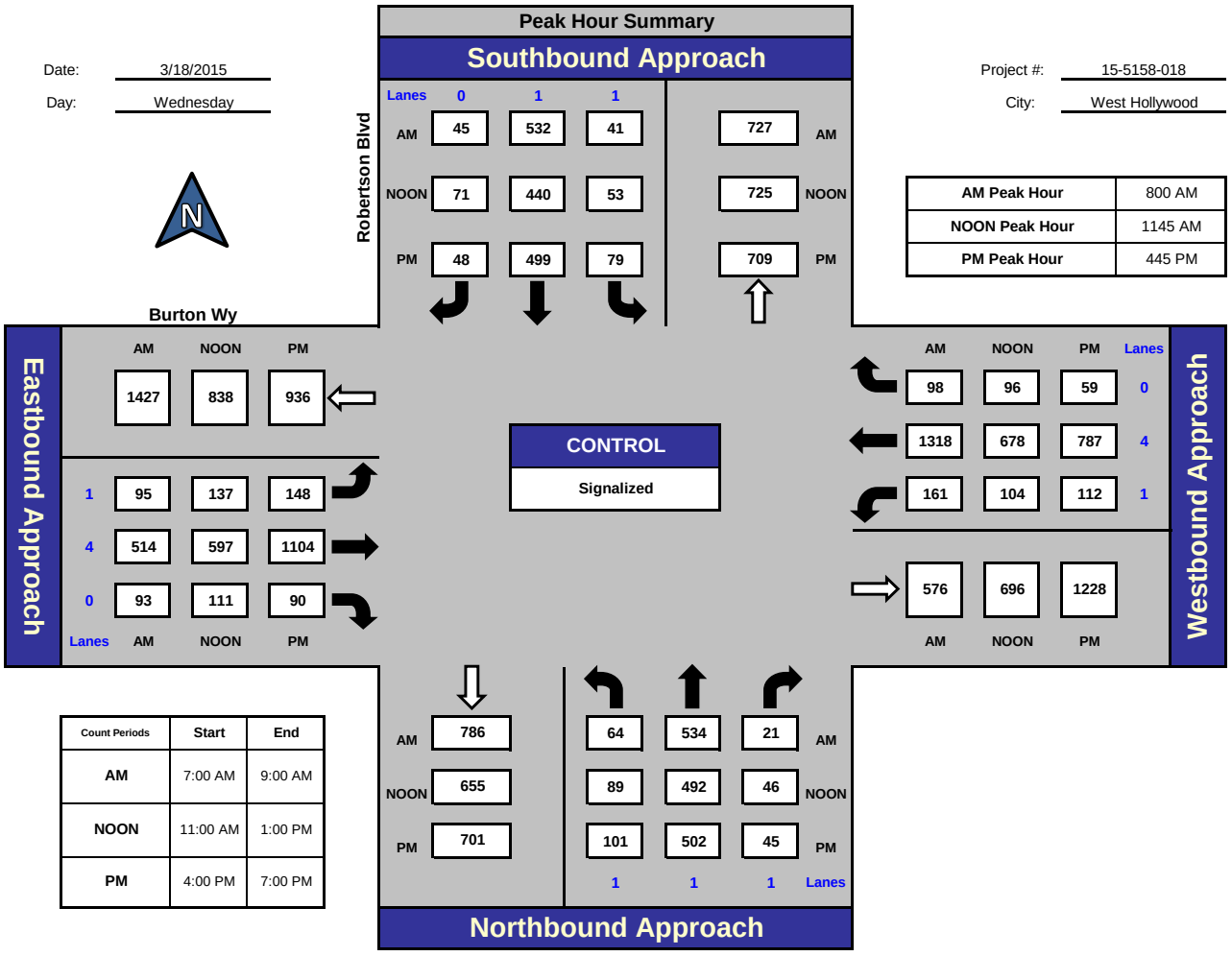
Robertson Blvd and Burton Wy , West Hollywood

Date: 3/18/2015

Day: Wednesday

Project #: 15-5158-018

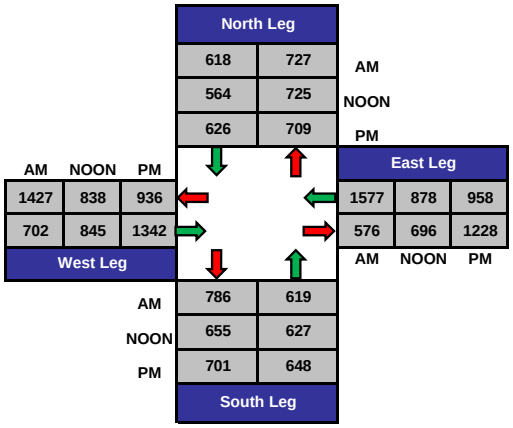
City: West Hollywood



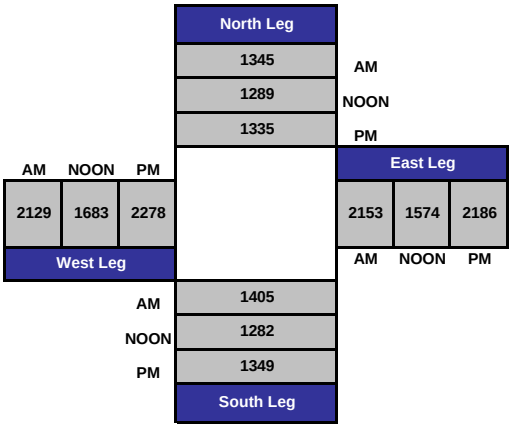
AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

	Start:	End:
AM	7:00	9:00
NOON	11:00	13:00
PM	16:00	19:00

PROJECT#: 15-5158-018
N/S Street: Robertson Blvd
E/W Street: Burton Wy
DATE: 3/18/2015
CITY: West Hollywood

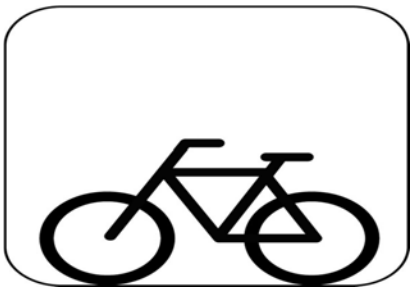
DAY: Wednesday

AM	1	1	1
NOON	0	2	0
PM	1	4	0

NORTH LEG

AM	NOON	PM
0	0	2
1	5	8
0	0	2

WEST LEG



EAST LEG

AM	NOON	PM
0	0	0
8	1	4
0	1	1

SOUTH LEG

AM	1	2	0
NOON	0	3	0
PM	0	10	0

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 15-5158-018
N/S Street: Robertson Blvd
E/W Street: Burton Wy
DATE: 3/18/2015 DAY: Wednesday
CITY: West Hollywood

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	1	1	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0
7:45 AM	0	0	0	0	1	1	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0
8:30 AM	1	0	0	1	0	0	0	1	0	0	1	0
8:45 AM	0	2	0	0	1	1	0	0	0	0	5	0
TOTALS	**1**	**2**	**0**	**1**	**2**	**2**	**1**	**4**	**0**	**0**	**11**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	2	0	0	0	0	0	0	0	1	1	0
11:15 AM	0	0	0	0	1	0	0	3	0	0	0	0
11:30 AM	0	1	0	0	1	0	0	1	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	1	0	0	1	0
12:30 PM	0	0	0	0	0	1	0	1	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	0	0	0	1	1
TOTALS	**0**	**5**	**0**	**0**	**3**	**1**	**0**	**7**	**0**	**1**	**3**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	2	0	0	1	2	1	0	0	0	1	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	3	1
4:30 PM	0	0	0	0	1	0	0	0	0	0	1	0
4:45 PM	0	2	0	0	1	0	0	3	0	0	0	0
5:00 PM	0	2	0	0	2	1	0	2	1	1	1	0
5:15 PM	0	3	0	0	1	0	0	2	1	0	1	0
5:30 PM	0	3	0	0	0	0	2	1	0	0	2	0
5:45 PM	0	1	0	0	0	0	0	2	0	0	0	0
6:00 PM	0	1	0	0	0	0	0	2	0	0	0	0
6:15 PM	0	0	0	1	1	0	0	1	0	0	1	0
6:30 PM	0	0	0	0	0	0	1	0	0	0	1	0
6:45 PM	0	1	0	0	3	0	0	0	0	0	0	0
TOTALS	**0**	**15**	**0**	**1**	**11**	**3**	**4**	**13**	**2**	**1**	**11**	**1**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5160-001 **Day:** Wednesday

City: Los Angeles **Date:** 3/18/2015

AM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Parking Lot Dwy			Parking Lot Dwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 0	WR 0	TOTAL
7:00 AM	1	29	0	0	55	2	0	0	0	0	0	0	87
7:15 AM	1	37	0	0	50	0	0	0	0	0	0	0	88
7:30 AM	0	42	0	0	56	1	0	0	0	0	0	0	99
7:45 AM	0	61	0	0	52	2	1	0	0	0	0	0	116
8:00 AM	4	62	0	0	68	1	0	0	0	0	0	0	135
8:15 AM	3	67	0	1	71	1	0	0	0	0	0	0	143
8:30 AM	3	77	0	0	71	1	0	0	0	0	0	0	152
8:45 AM	7	67	0	1	79	2	1	0	0	0	0	0	157
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	19	442	0	2	502	10	2	0	0	0	0	0	977
APPROACH %'s :	4.12%	95.88%	0.00%	0.39%	97.67%	1.95%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	17	273	0	2	289	5	1	0	0	0	0	0	587
PEAK HR FACTOR :		0.906			0.902			0.250			0.000		0.935

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

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5160-001 **Day:** Wednesday

City: Los Angeles **Date:** 3/18/2015

PM

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Parking Lot Dwy			Parking Lot Dwy				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
4:00 PM	3	98	0	0	85	0	2	0	2	0	0	0	190	2	0		
4:15 PM	2	87	0	2	57	3	1	0	3	0	0	0	155	0	2		
4:30 PM	3	99	0	2	96	0	0	0	6	0	0	0	206	2	2		
4:45 PM	1	101	0	0	50	0	0	0	1	0	0	0	153	1	0		
5:00 PM	2	107	0	0	77	1	1	0	3	0	0	0	191	0	0		
5:15 PM	1	98	0	1	71	3	1	0	5	0	0	0	180	0	1		
5:30 PM	2	116	0	1	73	1	3	0	5	0	0	0	201	0	1		
5:45 PM	5	110	0	0	81	1	3	0	3	0	0	0	203	4	0		
6:00 PM	4	101	0	0	93	2	2	0	11	0	0	0	213	1	0		
6:15 PM	6	115	0	0	99	1	3	0	9	0	0	0	233	1	0		
6:30 PM	4	101	0	0	79	0	4	0	9	0	0	0	197	2	0		
6:45 PM	5	98	0	2	69	0	1	0	6	0	0	0	181	2	2		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	38	1231	0	8	930	12	21	0	63	0	0	0	2303	15	8	0	0
APPROACH %'s :	2.99%	97.01%	0.00%	0.84%	97.89%	1.26%	25.00%	0.00%	75.00%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	530 PM												TOTAL				
PEAK HR VOL :	17	442	0	1	346	5	11	0	28	0	0	0	850				
PEAK HR FACTOR :		0.948			0.880			0.750			0.000		0.912				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5160-001 **Day:** Wednesday

City: Los Angeles **Date:** 3/18/2015

NOON

NS/EW Streets:	Robertson Blvd			Robertson Blvd			Parking Lot Dwy			Parking Lot Dwy				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
11:00 AM	4	54	0	0	65	1	0	0	1	0	0	0	125	2	0		
11:15 AM	5	78	0	1	59	5	1	0	0	0	0	0	149	2	1		
11:30 AM	4	75	0	0	65	3	1	0	0	0	0	0	148	1	0		
11:45 AM	3	85	0	0	88	2	0	0	1	0	0	0	179	3	0		
12:00 PM	2	92	0	0	78	0	1	0	0	0	0	0	173	1	0		
12:15 PM	2	71	0	0	83	0	0	0	1	0	0	0	157	0	0		
12:30 PM	6	75	0	0	86	1	0	0	4	0	0	0	172	0	0		
12:45 PM	6	86	0	0	63	3	2	0	1	0	0	0	161	4	0		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	32	616	0	1	587	15	5	0	8	0	0	0	1264	13	1	0	0
APPROACH %'s :	4.94%	95.06%	0.00%	0.17%	97.35%	2.49%	38.46%	0.00%	61.54%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	1145 AM												TOTAL				
PEAK HR VOL :	13	323	0	0	335	3	1	0	6	0	0	0	681				
PEAK HR FACTOR :		0.894			0.939			0.438			0.000		0.951				

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

NDS

Robertson Blvd and Parking Lot Dwy , Los Angeles

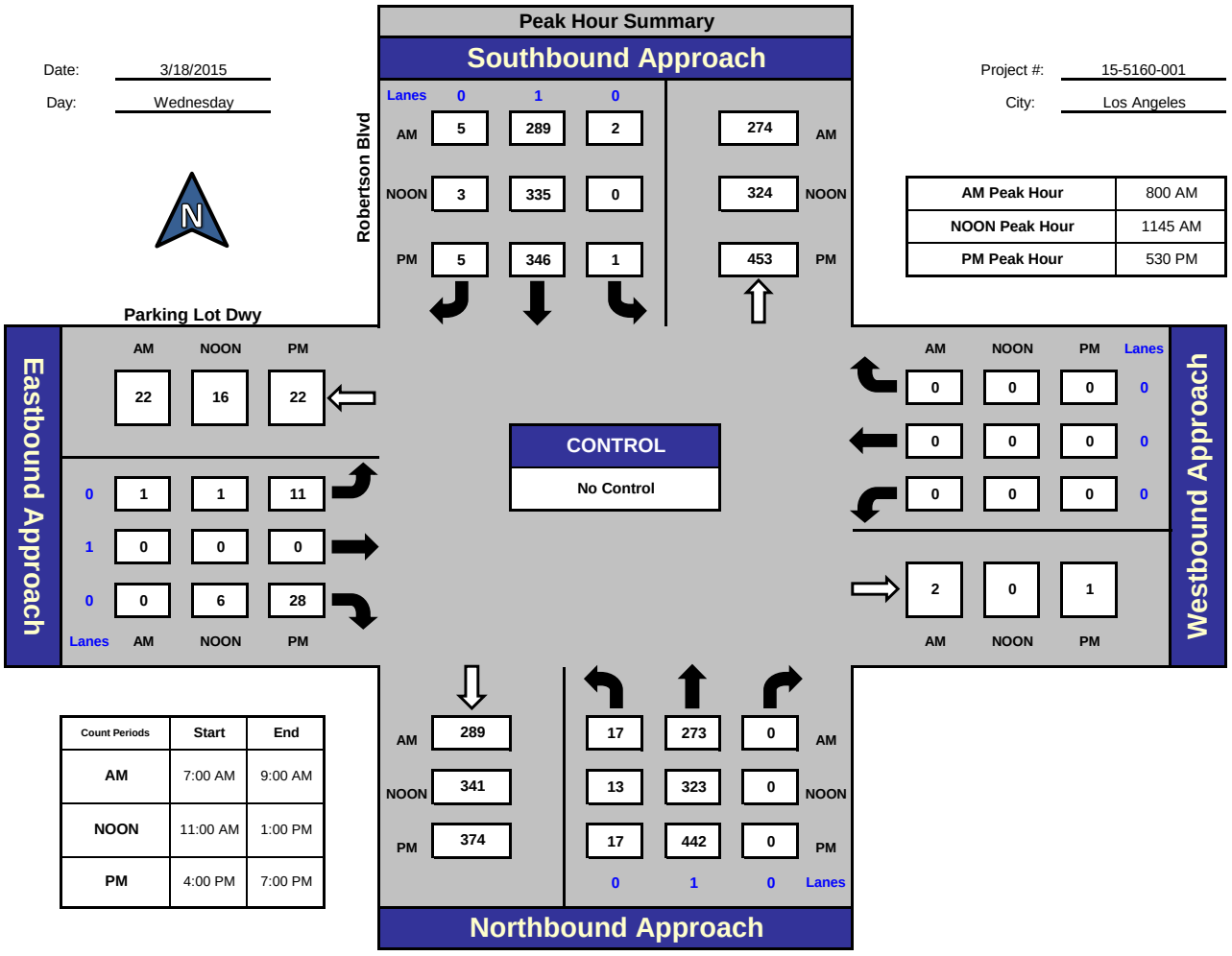
Date: 3/18/2015

Day: Wednesday

Project #: 15-5160-001

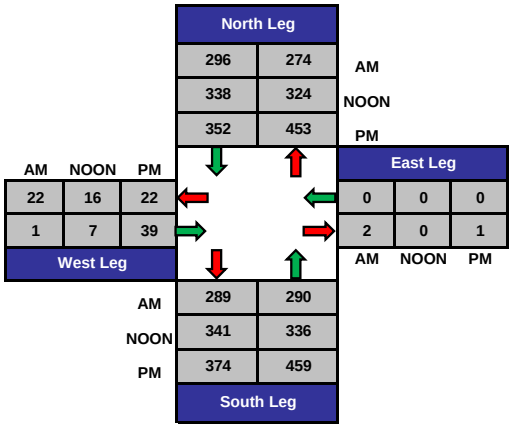
City: Los Angeles

AM Peak Hour	800 AM
NOON Peak Hour	1145 AM
PM Peak Hour	530 PM

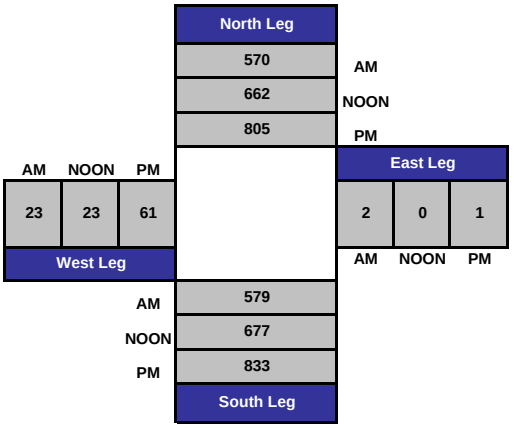


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	11:00 AM	1:00 PM
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



Prepared by NDS/ATD

VOLUME

Hilldale Ave Bet. Norma Pl & Keith Ave

Day: Wednesday
Date: 3/18/2015

City: West Hollywood
Project #: CA15_5159_001

DAILY TOTALS	NB	SB	EB	WB	Total
	2,042	1,197	0	0	3,239

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	6		1						7		12:00	27		22						49	
00:15	8		1						9		12:15	31		17						48	
00:30	8		6						14		12:30	26		25						51	
00:45	8	30	4	12					12	42	12:45	34	118	17	81					51	199
01:00	14		0						14		13:00	29		20						49	
01:15	5		7						12		13:15	23		15						38	
01:30	3		0						3		13:30	30		24						54	
01:45	1	23	1	8					2	31	13:45	23	105	14	73					37	178
02:00	12		2						14		14:00	40		7						47	
02:15	8		3						11		14:15	34		16						50	
02:30	7		1						8		14:30	30		10						40	
02:45	2	29	1	7					3	36	14:45	36	140	18	51					54	191
03:00	2		1						3		15:00	38		19						57	
03:15	1		0						1		15:15	30		20						50	
03:30	2		1						3		15:30	35		18						53	
03:45	1	6	0	2					1	8	15:45	36	139	21	78					57	217
04:00	0		1						1		16:00	34		19						53	
04:15	0		0						0		16:15	42		24						66	
04:30	1		1						2		16:30	42		32						74	
04:45	1	2	0	2					1	4	16:45	37	155	23	98					60	253
05:00	0		1						1		17:00	38		21						59	
05:15	3		3						6		17:15	45		23						68	
05:30	2		3						5		17:30	38		27						65	
05:45	5	10	1	8					6	18	17:45	41	162	25	96					66	258
06:00	4		1						5		18:00	35		23						58	
06:15	3		4						7		18:15	45		24						69	
06:30	4		3						7		18:30	40		13						53	
06:45	6	17	11	19					17	36	18:45	51	171	26	86					77	257
07:00	11		12						23		19:00	40		21						61	
07:15	9		15						24		19:15	43		18						61	
07:30	8		7						15		19:30	41		15						56	
07:45	25	53	17	51					42	104	19:45	28	152	16	70					44	222
08:00	34		16						50		20:00	35		7						42	
08:15	24		27						51		20:15	26		11						37	
08:30	21		27						48		20:30	26		17						43	
08:45	25	104	18	88					43	192	20:45	27	114	7	42					34	156
09:00	25		24						49		21:00	21		6						27	
09:15	48		21						69		21:15	19		7						26	
09:30	26		18						44		21:30	18		10						28	
09:45	30	129	19	82					49	211	21:45	15	73	6	29					21	102
10:00	25		19						44		22:00	12		9						21	
10:15	23		30						53		22:15	13		10						23	
10:30	21		26						47		22:30	20		8						28	
10:45	21	90	23	98					44	188	22:45	19	64	14	41					33	105
11:00	18		10						28		23:00	21		9						30	
11:15	32		14						46		23:15	14		5						19	
11:30	26		12						38		23:30	11		7						18	
11:45	26	102	15	51					41	153	23:45	8	54	3	24					11	78
TOTALS		595		428						1023	TOTALS		1447		769						2216
SPLIT %		58.2%		41.8%						31.6%	SPLIT %		65.3%		34.7%						68.4%

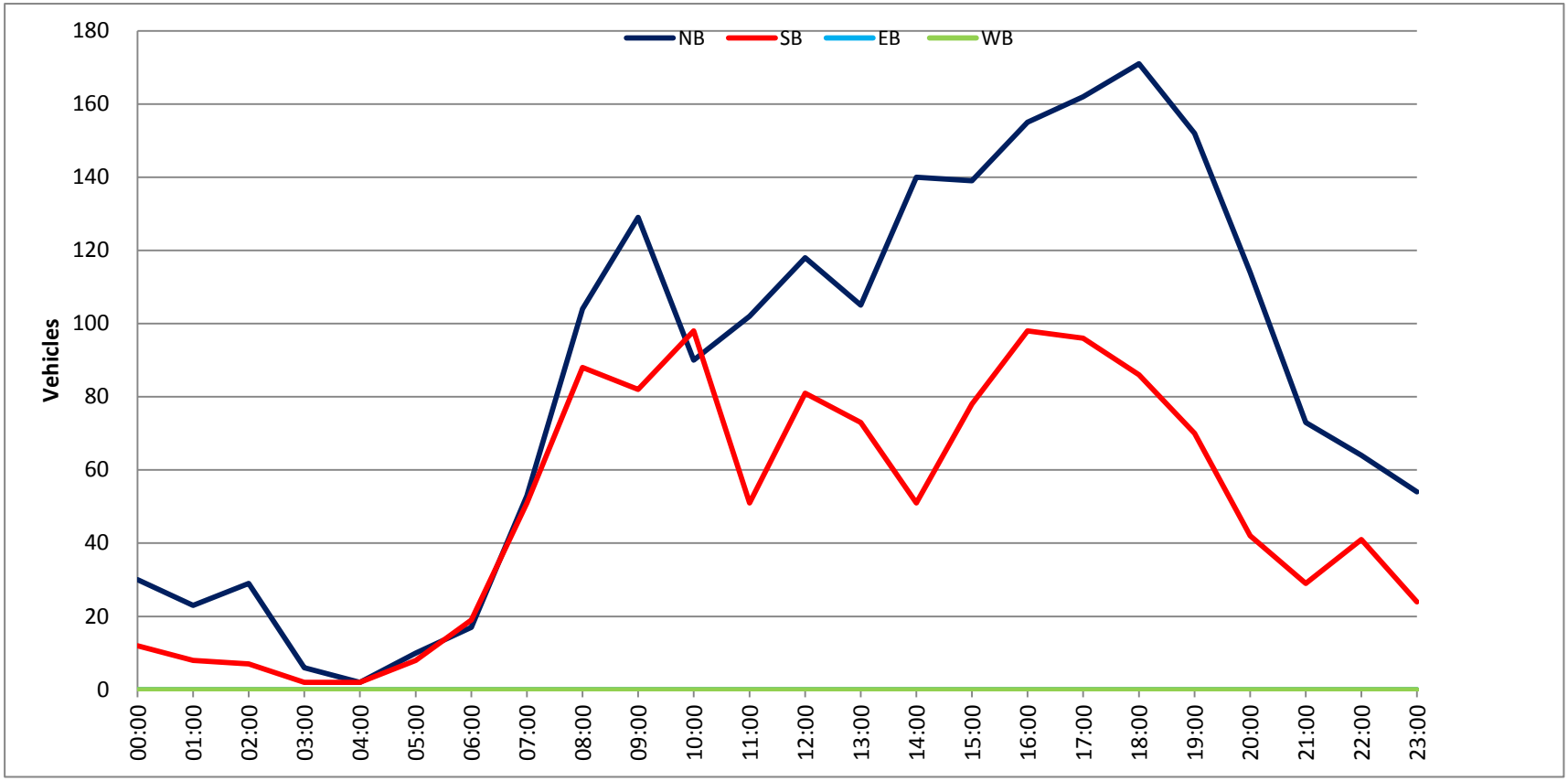
DAILY TOTALS	NB	SB	EB	WB	Total
	2,042	1,197	0	0	3,239

AM Peak Hour	09:00	10:00			09:00	PM Peak Hour	18:15	16:15			16:30
AM Pk Volume	129	98			211	PM Pk Volume	176	100			261
Pk Hr Factor	0.672	0.817			0.764	Pk Hr Factor	0.863	0.781			0.882
7 - 9 Volume	157	139	0	0	296	4 - 6 Volume	317	194	0	0	511
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	16:30	16:15			16:30
7 - 9 Pk Volume	104	88	0	0	192	4 - 6 Pk Volume	162	100	0	0	261
Pk Hr Factor	0.765	0.815	0.000	0.000	0.941	Pk Hr Factor	0.900	0.781	0.000	0.000	0.882

Prepared by NDS/ATD

Project #: CA15_5159_001 **City:** West Hollywood

Location: Hilldale Ave Bet. Norma Pl & Keith Ave **Date:** 3/18/2015



Prepared by NDS/ATD

VOLUME

Keith Ave Bet. Doheny Dr & Willey Ln

Day: Wednesday
Date: 3/18/2015

City: West Hollywood
Project #: CA15_5159_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	997	1,013	2,010

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			3		2		5		12:00			7		25		32	
00:15			0		5		5		12:15			15		13		28	
00:30			2		1		3		12:30			14		15		29	
00:45			1	6	2	10	3	16	12:45			10	46	12	65	22	111
01:00			1		2		3		13:00			16		17		33	
01:15			1		3		4		13:15			10		14		24	
01:30			1		1		2		13:30			16		19		35	
01:45			1	4	2	8	3	12	13:45			15	57	21	71	36	128
02:00			0		3		3		14:00			17		19		36	
02:15			0		0		0		14:15			16		19		35	
02:30			0		0		0		14:30			12		22		34	
02:45			0		1	4	1	4	14:45			17	62	14	74	31	136
03:00			1		1		2		15:00			28		16		44	
03:15			0		1		1		15:15			10		22		32	
03:30			0		0		0		15:30			15		16		31	
03:45			1	2	0	2	1	4	15:45			24	77	13	67	37	144
04:00			1		2		3		16:00			17		16		33	
04:15			0		1		1		16:15			21		11		32	
04:30			0		0		0		16:30			32		10		42	
04:45			0	1	0	3	0	4	16:45			17	87	9	46	26	133
05:00			1		0		1		17:00			45		9		54	
05:15			0		1		1		17:15			36		14		50	
05:30			2		1		3		17:30			26		19		45	
05:45			1	4	1	3	2	7	17:45			45	152	12	54	57	206
06:00			2		4		6		18:00			41		13		54	
06:15			4		2		6		18:15			43		12		55	
06:30			1		1		2		18:30			30		15		45	
06:45			4	11	8	15	12	26	18:45			42	156	9	49	51	205
07:00			5		7		12		19:00			16		7		23	
07:15			5		17		22		19:15			20		14		34	
07:30			3		31		34		19:30			12		12		24	
07:45			6	19	28	83	34	102	19:45			16	64	8	41	24	105
08:00			6		26		32		20:00			9		5		14	
08:15			9		22		31		20:15			6		7		13	
08:30			4		29		33		20:30			8		6		14	
08:45			12	31	34	111	46	142	20:45			3	26	6	24	9	50
09:00			10		29		39		21:00			4		5		9	
09:15			10		23		33		21:15			2		8		10	
09:30			5		28		33		21:30			2		8		10	
09:45			10	35	12	92	22	127	21:45			5	13	7	28	12	41
10:00			13		10		23		22:00			2		4		6	
10:15			16		16		32		22:15			6		9		15	
10:30			10		26		36		22:30			3		6		9	
10:45			19	58	15	67	34	125	22:45			1	12	3	22	4	34
11:00			12		28		40		23:00			4		5		9	
11:15			17		15		32		23:15			1		1		2	
11:30			16		12		28		23:30			3		3		6	
11:45			18	63	7	62	25	125	23:45			3	11	3	12	6	23
TOTALS				234		460		**694**	**TOTALS**				763		553		**1316**
SPLIT %				33.7%		66.3%		**34.5%**	**SPLIT %**				58.0%		42.0%		**65.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	997	1,013	2,010

AM Peak Hour			10:45	08:30	**08:30**	**PM Peak Hour**			17:45	13:45	**17:30**
AM Pk Volume			64	115	**151**	**PM Pk Volume**			159	81	**211**
Pk Hr Factor			0.842	0.846	**0.821**	**Pk Hr Factor**			0.883	0.920	**0.925**
7 - 9 Volume	0	0	50	194	**244**	**4 - 6 Volume**	0	0	239	100	**339**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	31	111	**142**	**4 - 6 Pk Volume**	0	0	152	54	**206**
Pk Hr Factor	0.000	0.000	0.646	0.816	**0.772**	**Pk Hr Factor**	0.000	0.000	0.844	0.711	**0.904**

Prepared by NDS/ATD

Project #: CA15_5159_002 **City:** West Hollywood

Location: Keith Ave Bet. Doheny Dr & Willey Ln **Date:** 3/18/2015

Prepared by NDS/ATD

VOLUME

Keith Ave Bet. Ramage St & Robertson Blvd

Day: Wednesday
Date: 3/18/2015

City: West Hollywood
Project #: CA15_5159_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,102	1,666	3,768

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			5	3	8	12:00			27	24	51
00:15			1	3	4	12:15			21	22	43
00:30			1	3	4	12:30			18	26	44
00:45			0 7	1 10	1 17	12:45			32 98	30 102	62 200
01:00			1	4	5	13:00			49	29	78
01:15			2	1	3	13:15			32	22	54
01:30			1	2	3	13:30			41	31	72
01:45			2 6	1 8	3 14	13:45			33 155	23 105	56 260
02:00			1	0	1	14:00			26	19	45
02:15			0	0	0	14:15			23	26	49
02:30			1	0	1	14:30			29	28	57
02:45			3 5	0	3 5	14:45			33 111	38 111	71 222
03:00			3	1	4	15:00			36	33	69
03:15			5	3	8	15:15			36	38	74
03:30			0	0	0	15:30			19	34	53
03:45			1 9	2 6	3 15	15:45			28 119	29 134	57 253
04:00			3	1	4	16:00			36	37	73
04:15			3	1	4	16:15			44	25	69
04:30			8	4	12	16:30			33	32	65
04:45			11 25	1 7	12 32	16:45			44 157	31 125	75 282
05:00			7	2	9	17:00			36	45	81
05:15			9	7	16	17:15			54	36	90
05:30			12	2	14	17:30			37	47	84
05:45			18 46	6 17	24 63	17:45			39 166	39 167	78 333
06:00			15	6	21	18:00			34	41	75
06:15			22	8	30	18:15			55	35	90
06:30			28	14	42	18:30			44	44	88
06:45			23 88	22 50	45 138	18:45			39 172	46 166	85 338
07:00			33	41	74	19:00			40	49	89
07:15			43	60	103	19:15			31	29	60
07:30			50	19	69	19:30			33	19	52
07:45			54 180	23 143	77 323	19:45			32 136	16 113	48 249
08:00			34	13	47	20:00			34	18	52
08:15			17	8	25	20:15			25	17	42
08:30			27	15	42	20:30			15	27	42
08:45			20 98	5 41	25 139	20:45			35 109	25 87	60 196
09:00			13	19	32	21:00			40	7	47
09:15			15	11	26	21:15			33	12	45
09:30			18	9	27	21:30			18	9	27
09:45			22 68	14 53	36 121	21:45			11 102	6 34	17 136
10:00			19	16	35	22:00			13	7	20
10:15			19	13	32	22:15			8	8	16
10:30			29	22	51	22:30			5	5	10
10:45			24 91	12 63	36 154	22:45			4 30	3 23	7 53
11:00			21	18	39	23:00			7	7	14
11:15			24	17	41	23:15			12	4	16
11:30			28	31	59	23:30			5	4	9
11:45			22 95	15 81	37 176	23:45			5 29	5 20	10 49
TOTALS			718	479	1197	TOTALS			1384	1187	2571
SPLIT %			60.0%	40.0%	31.8%	SPLIT %			53.8%	46.2%	68.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,102	1,666	3,768

AM Peak Hour			07:15	07:00	07:00	PM Peak Hour			18:15	18:15	18:15
AM Pk Volume			181	143	323	PM Pk Volume			178	174	352
Pk Hr Factor			0.838	0.596	0.784	Pk Hr Factor			0.809	0.888	0.978
7 - 9 Volume	0	0	278	184	462	4 - 6 Volume	0	0	323	292	615
7 - 9 Peak Hour			07:15	07:00	07:00	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	181	143	323	4 - 6 Pk Volume	0	0	171	167	333
Pk Hr Factor	0.000	0.000	0.838	0.596	0.784	Pk Hr Factor	0.000	0.000	0.792	0.888	0.925

Prepared by NDS/ATD

Project #: CA15_5159_003 **City:** West Hollywood

Location: Keith Ave Bet. Ramage St & Robertson Blvd **Date:** 3/18/2015

Prepared by NDS/ATD

VOLUME

Keith Ave Bet. Robertson Blvd & Hilldale Ave

Day: Wednesday
Date: 3/18/2015

City: West Hollywood
Project #: CA15_5159_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,104	1,756	3,860

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			5		3		8		12:00			27		21		48	
00:15			1		3		4		12:15			23		23		46	
00:30			1		3		4		12:30			16		26		42	
00:45			1	8	1	10	2	18	12:45			27	93	32	102	59	195
01:00			0		3		3		13:00			39		24		63	
01:15			3		1		4		13:15			38		26		64	
01:30			2		1		3		13:30			43		34		77	
01:45			2	7	1	6	3	13	13:45			40	160	22	106	62	266
02:00			1		0		1		14:00			30		15		45	
02:15			0		0		0		14:15			26		25		51	
02:30			1		0		1		14:30			30		25		55	
02:45			3	5	0		3	5	14:45			31	117	33	98	64	215
03:00			3		1		4		15:00			30		29		59	
03:15			5		3		8		15:15			29		31		60	
03:30			0		0		0		15:30			24		33		57	
03:45			1	9	2	6	3	15	15:45			36	119	30	123	66	242
04:00			2		1		3		16:00			33		46		79	
04:15			3		1		4		16:15			32		38		70	
04:30			8		4		12		16:30			27		41		68	
04:45			11	24	1	7	12	31	16:45			27	119	37	162	64	281
05:00			7		2		9		17:00			22		65		87	
05:15			11		9		20		17:15			37		51		88	
05:30			12		3		15		17:30			36		62		98	
05:45			19	49	6	20	25	69	17:45			31	126	45	223	76	349
06:00			15		5		20		18:00			33		49		82	
06:15			24		6		30		18:15			30		42		72	
06:30			29		12		41		18:30			35		57		92	
06:45			29	97	24	47	53	144	18:45			34	132	58	206	92	338
07:00			46		39		85		19:00			33		44		77	
07:15			44		56		100		19:15			29		27		56	
07:30			56		20		76		19:30			30		16		46	
07:45			55	201	18	133	73	334	19:45			37	129	15	102	52	231
08:00			42		12		54		20:00			32		17		49	
08:15			20		10		30		20:15			29		18		47	
08:30			34		14		48		20:30			20		25		45	
08:45			28	124	10	46	38	170	20:45			31	112	27	87	58	199
09:00			20		17		37		21:00			33		15		48	
09:15			18		10		28		21:15			35		13		48	
09:30			23		14		37		21:30			25		8		33	
09:45			24	85	13	54	37	139	21:45			17	110	8	44	25	154
10:00			24		15		39		22:00			15		6		21	
10:15			27		16		43		22:15			10		7		17	
10:30			32		17		49		22:30			8		4		12	
10:45			25	108	11	59	36	167	22:45			10	43	4	21	14	64
11:00			20		16		36		23:00			7		5		12	
11:15			25		14		39		23:15			12		4		16	
11:30			27		30		57		23:30			5		4		9	
11:45			23	95	17	77	40	172	23:45			8	32	4	17	12	49
TOTALS				812		465		**1277**	**TOTALS**				1292		1291		**2583**
SPLIT %				63.6%		36.4%		**33.1%**	**SPLIT %**				50.0%		50.0%		**66.9%**

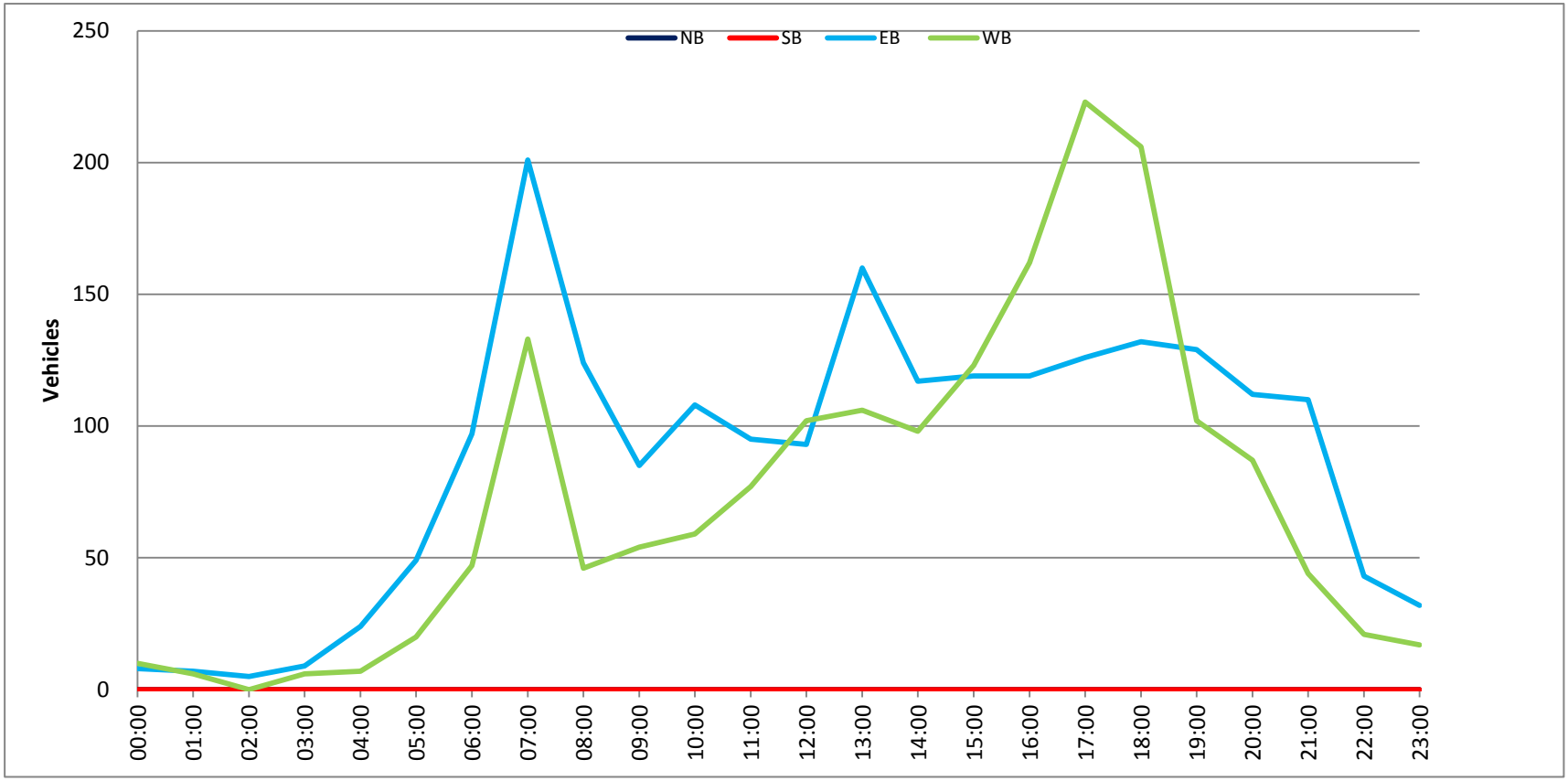
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,104	1,756	3,860

AM Peak Hour			07:00	06:45	**07:00**	**PM Peak Hour**			13:00	17:00	**17:00**
AM Pk Volume			201	139	**334**	**PM Pk Volume**			160	223	**349**
Pk Hr Factor			0.897	0.621	**0.835**	**Pk Hr Factor**			0.930	0.858	**0.890**
7 - 9 Volume	0	0	325	179	**504**	**4 - 6 Volume**	0	0	245	385	**630**
7 - 9 Peak Hour			07:00	07:00	**07:00**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	201	133	**334**	**4 - 6 Pk Volume**	0	0	126	223	**349**
Pk Hr Factor	0.000	0.000	0.897	0.594	**0.835**	**Pk Hr Factor**	0.000	0.000	0.851	0.858	**0.890**

Prepared by NDS/ATD

Project #: CA15_5159_004 **City:** West Hollywood

Location: Keith Ave Bet. Robertson Blvd & Hilldale Ave **Date:** 3/18/2015



Prepared by NDS/ATD

VOLUME

Robertson Blvd Bet. Keith Ave & Santa Monica Blvd

Day: Wednesday
Date: 3/18/2015

City: West Hollywood
Project #: CA15_5159_005

DAILY TOTALS	NB	SB	EB	WB	Total
	2,488	2,570	0	0	5,058

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	8		4						12		12:00	52		38						90	
00:15	11		14						25		12:15	62		65						127	
00:30	9		6						15		12:30	31		46						77	
00:45	9	37	6	30					15	67	12:45	64	209	62	211					126	420
01:00	7		3						10		13:00	38		25						63	
01:15	6		6						12		13:15	32		27						59	
01:30	3		2						5		13:30	46		39						85	
01:45	4	20	5	16					9	36	13:45	24	140	33	124					57	264
02:00	8		0						8		14:00	38		29						67	
02:15	6		2						8		14:15	42		40						82	
02:30	3		0						3		14:30	23		20						43	
02:45	4	21	4	6					8	27	14:45	36	139	31	120					67	259
03:00	0		1						1		15:00	43		47						90	
03:15	3		0						3		15:15	42		29						71	
03:30	0		0						0		15:30	42		39						81	
03:45	1	4	2	3					3	7	15:45	35	162	42	157					77	319
04:00	2		1						3		16:00	49		75						124	
04:15	0		1						1		16:15	44		53						97	
04:30	1		0						1		16:30	51		78						129	
04:45	0	3	1	3					1	6	16:45	36	180	57	263					93	443
05:00	1		3						4		17:00	61		67						128	
05:15	2		2						4		17:15	46		67						113	
05:30	2		4						6		17:30	55		67						122	
05:45	8	13	2	11					10	24	17:45	53	215	64	265					117	480
06:00	4		4						8		18:00	53		79						132	
06:15	9		3						12		18:15	37		92						129	
06:30	9		7						16		18:30	45		70						115	
06:45	14	36	11	25					25	61	18:45	48	183	74	315					122	498
07:00	30		13						43		19:00	42		40						82	
07:15	25		30						55		19:15	42		30						72	
07:30	37		36						73		19:30	36		29						65	
07:45	50	142	17	96					67	238	19:45	31	151	30	129					61	280
08:00	39		45						84		20:00	24		21						45	
08:15	44		46						90		20:15	25		10						35	
08:30	48		47						95		20:30	21		22						43	
08:45	52	183	46	184					98	367	20:45	25	95	12	65					37	160
09:00	28		36						64		21:00	20		12						32	
09:15	35		23						58		21:15	15		5						20	
09:30	24		36						60		21:30	16		7						23	
09:45	17	104	35	130					52	234	21:45	22	73	6	30					28	103
10:00	27		27						54		22:00	11		8						19	
10:15	40		32						72		22:15	9		12						21	
10:30	25		30						55		22:30	13		7						20	
10:45	24	116	45	134					69	250	22:45	11	44	9	36					20	80
11:00	49		48						97		23:00	16		11						27	
11:15	43		41						84		23:15	9		6						15	
11:30	40		46						86		23:30	9		6						15	
11:45	45	177	51	186					96	363	23:45	7	41	8	31					15	72
TOTALS		856		824						1680	TOTALS		1632		1746						3378
SPLIT %		51.0%		49.0%						33.2%	SPLIT %		48.3%		51.7%						66.8%

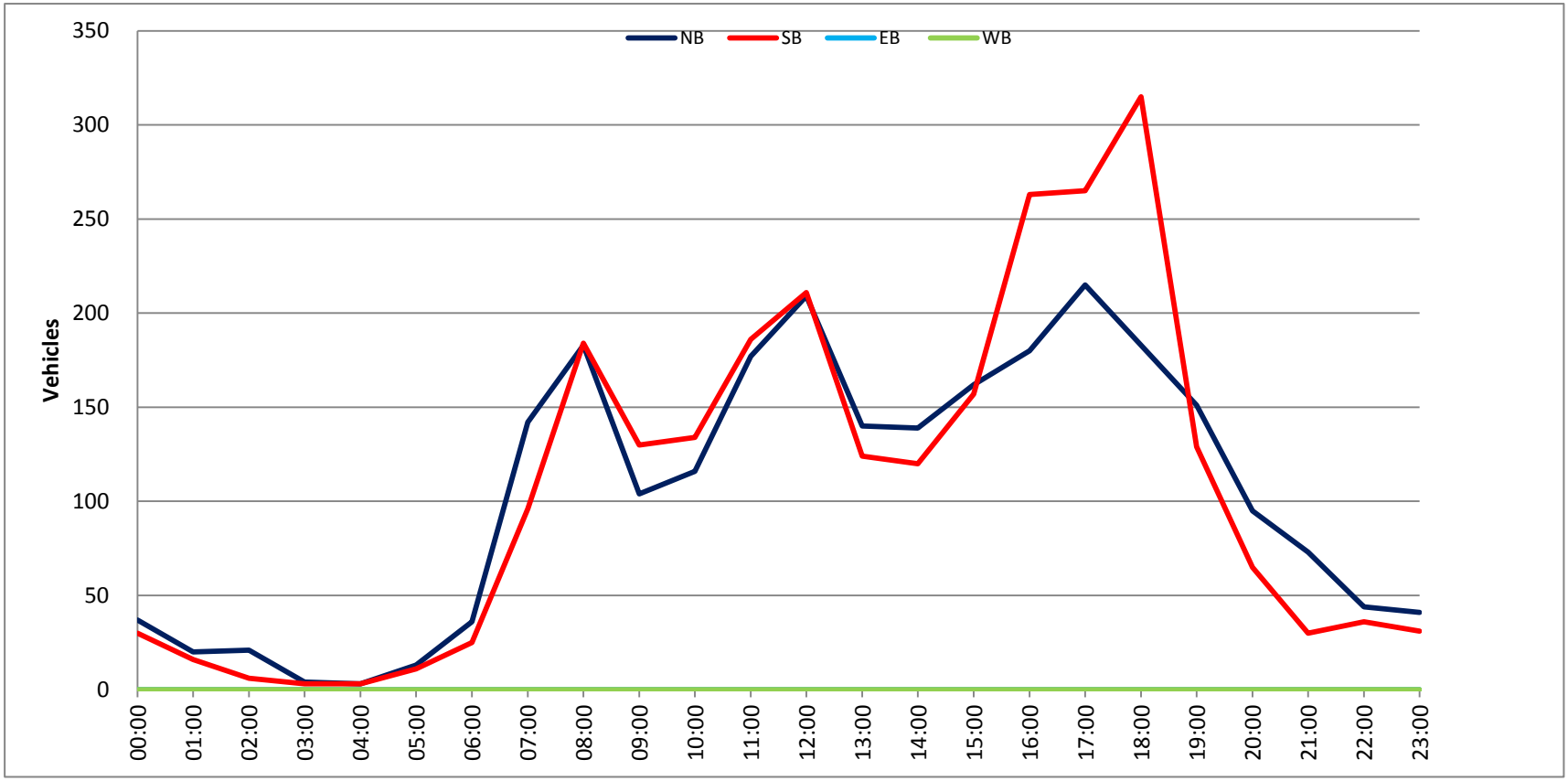
DAILY TOTALS	NB	SB	EB	WB	Total
	2,488	2,570	0	0	5,058

AM Peak Hour	11:30	11:30			11:30	PM Peak Hour	17:00	18:00			17:30
AM Pk Volume	199	200			399	PM Pk Volume	215	315			500
Pk Hr Factor	0.802	0.769			0.785	Pk Hr Factor	0.881	0.856			0.947
7 - 9 Volume	325	280	0	0	605	4 - 6 Volume	395	528	0	0	923
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	183	184	0	0	367	4 - 6 Pk Volume	215	269	0	0	480
Pk Hr Factor	0.880	0.979	0.000	0.000	0.936	Pk Hr Factor	0.881	0.862	0.000	0.000	0.938

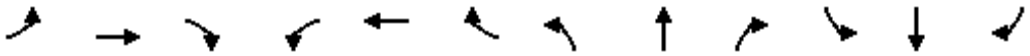
Prepared by NDS/ATD

Project #: CA15_5159_005 **City:** West Hollywood

Location: Robertson Blvd Bet. Keith Ave & Santa **Date:** 3/18/2015

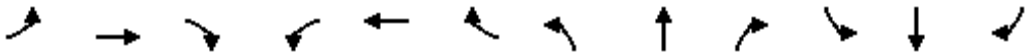


APPENDIX B
Intersection Level of Service Worksheets
Existing Conditions (Year 2015)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	820	95	126	1487	87	165	82	108	86	44	15
Future Volume (vph)	23	820	95	126	1487	87	165	82	108	86	44	15
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (prot)	1509	3018	1350	1509	2993		1433	1483	1350		1723	
Flt Permitted	0.09	1.00	1.00	0.24	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (perm)	148	3018	1350	386	2993		1433	1483	1350		1723	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	863	100	133	1565	92	174	86	114	91	46	16
RTOR Reduction (vph)	0	0	41	0	3	0	0	0	95	0	4	0
Lane Group Flow (vph)	24	863	59	133	1654	0	129	131	19	0	149	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	66.1	66.1	66.1	77.1	77.1		15.3	15.3	22.3		13.6	
Effective Green, g (s)	66.1	66.1	66.1	76.1	77.1		14.8	14.8	20.3		13.1	
Actuated g/C Ratio	0.55	0.55	0.55	0.63	0.64		0.12	0.12	0.17		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	81	1662	743	300	1923		176	182	228		188	
v/s Ratio Prot		0.29		0.02	c0.55		c0.09	0.09	0.00		c0.09	
v/s Ratio Perm	0.16		0.04	0.26					0.01			
v/c Ratio	0.30	0.52	0.08	0.44	0.86		0.73	0.72	0.08		0.79	
Uniform Delay, d1	14.5	17.0	12.7	10.7	17.1		50.7	50.6	42.0		52.1	
Progression Factor	1.00	1.00	1.00	1.18	1.22		1.00	1.00	1.00		1.00	
Incremental Delay, d2	9.1	1.2	0.2	0.5	2.7		14.6	12.8	0.2		22.3	
Delay (s)	23.6	18.1	12.9	13.1	23.5		65.3	63.4	42.2		74.4	
Level of Service	C	B	B	B	C		E	E	D		E	
Approach Delay (s)		17.7			22.7			57.6			74.4	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	836	185	130	1553	19	189	13	198	32	34	24
Future Volume (vph)	9	836	185	130	1553	19	189	13	198	32	34	24
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1307	1282	1509	1491	
Flt Permitted	0.13	1.00	1.00	0.26	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	202	3018	1350	409	3018	1350	1433	1307	1282	1509	1491	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	880	195	137	1635	20	199	14	208	34	36	25
RTOR Reduction (vph)	0	0	74	0	0	5	0	33	115	0	23	0
Lane Group Flow (vph)	9	880	121	137	1635	15	145	110	18	34	38	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	74.4	74.4	74.4	87.4	87.4	87.4	9.0	9.0	18.0	9.6	9.6	
Effective Green, g (s)	74.4	74.4	74.4	86.4	87.4	87.4	9.0	9.0	16.0	8.6	8.6	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.73	0.73	0.08	0.08	0.13	0.07	0.07	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	125	1871	837	367	2198	983	107	98	170	108	106	
v/s Ratio Prot		0.29		0.02	c0.54		c0.10	0.08	0.01	0.02	c0.03	
v/s Ratio Perm	0.04		0.09	0.24		0.01			0.01			
v/c Ratio	0.07	0.47	0.14	0.37	0.74	0.01	1.36	1.12	0.10	0.31	0.36	
Uniform Delay, d1	9.1	12.2	9.5	6.6	9.7	4.5	55.5	55.5	45.7	52.9	53.1	
Progression Factor	0.69	1.15	2.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.7	0.3	0.2	2.3	0.0	208.9	126.7	0.1	1.7	2.1	
Delay (s)	7.3	14.8	25.3	6.8	12.0	4.5	264.4	182.2	45.8	54.6	55.1	
Level of Service	A	B	C	A	B	A	F	F	D	D	E	
Approach Delay (s)		16.6			11.5			167.4			54.9	
Approach LOS		B			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	688	127	23	50	307	3	0	908	526	59	1407	9
Future Volume (vph)	688	127	23	50	307	3	0	908	526	59	1407	9
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2932			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.18	1.00	
Satd. Flow (perm)	2927	1350	1350		2932			3018	1350	289	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	724	134	24	53	323	3	0	956	554	62	1481	9
RTOR Reduction (vph)	0	0	18	0	56	0	0	0	0	0	1	0
Lane Group Flow (vph)	724	134	6	0	323	0	0	956	554	62	1489	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.4	25.4	25.4		15.2			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.4	25.4	25.4		15.2			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	782	360	360		469			1315	588	125	1313	
v/s Ratio Prot	c0.25	0.10	0.00		c0.11			0.32			c0.49	
v/s Ratio Perm									0.41	0.21		
v/c Ratio	0.93	0.37	0.02		0.69			0.73	0.94	0.50	1.13	
Uniform Delay, d1	33.9	28.3	25.6		37.7			22.1	25.7	19.3	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.5	0.2	0.0		4.2			3.5	25.3	13.4	70.4	
Delay (s)	50.4	28.6	25.6		41.8			25.7	50.9	32.7	97.2	
Level of Service	D	C	C		D			C	D	C	F	
Approach Delay (s)	46.4				41.8			34.9			94.6	
Approach LOS	D				D			C			F	

Intersection Summary			
HCM 2000 Control Delay	59.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

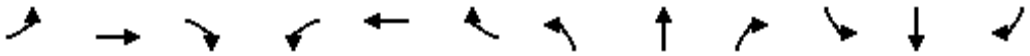
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	64	541	283	32	121	1445	48	38	283	59	24	27
Future Volume (vph)	64	541	283	32	121	1445	48	38	283	59	24	27
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0	4.0	5.3			5.3	5.3		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.95			1.00	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00			1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt	1.00	1.00	0.85	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (prot)	1509	3018	1350	1333	1509	2999			1579	1350		
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (perm)	1509	3018	1350	1333	1509	2999			1579	1350		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	569	298	34	127	1521	51	40	298	62	25	28
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	69	0	0
Lane Group Flow (vph)	67	569	298	34	127	1571	0	0	338	18	0	0
Confl. Bikes (#/hr)				2			19			3		
Turn Type	Prot	NA	Perm	Free	Prot	NA		Split	NA	custom		Split
Protected Phases	5	2			1	6		4	4	4		3
Permitted Phases			2	Free						4		
Actuated Green, G (s)	9.2	40.7	40.7	148.5	28.9	60.4			30.1	30.1		
Effective Green, g (s)	9.2	40.7	40.7	148.5	28.9	60.4			30.1	30.1		
Actuated g/C Ratio	0.06	0.27	0.27	1.00	0.19	0.41			0.20	0.20		
Clearance Time (s)	4.0	5.3	5.3		4.0	5.3			5.3	5.3		
Vehicle Extension (s)	2.0	3.5	3.5		2.0	3.5			2.0	2.0		
Lane Grp Cap (vph)	93	827	370	1333	293	1219			320	273		
v/s Ratio Prot	0.04	0.19			0.08	c0.52			c0.21	0.01		
v/s Ratio Perm			c0.22	0.03								
v/c Ratio	0.72	0.69	0.81	0.03	0.43	1.29			1.06	0.06		
Uniform Delay, d1	68.4	48.2	50.2	0.0	52.6	44.0			59.2	47.8		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	20.6	2.5	12.4	0.0	0.4	136.2			65.9	0.0		
Delay (s)	89.0	50.7	62.6	0.0	53.0	180.2			125.1	47.9		
Level of Service	F	D	E	A	D	F			F	D		
Approach Delay (s)		55.2				170.7			109.3			
Approach LOS		E				F			F			

Intersection Summary			
HCM 2000 Control Delay	115.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	148.5	Sum of lost time (s)	23.9
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWR2
Lane Configurations				
Traffic Volume (vph)	90	224	120	25
Future Volume (vph)	90	224	120	25
Ideal Flow (vphpl)	1620	1620	1620	1620
Total Lost time (s)		5.3	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	0.85	0.86
Flt Protected		0.98	1.00	1.00
Satd. Flow (prot)		2967	1350	1374
Flt Permitted		0.98	1.00	1.00
Satd. Flow (perm)		2967	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	236	126	26
RTOR Reduction (vph)	0	0	0	26
Lane Group Flow (vph)	0	359	126	0
Confl. Bikes (#/hr)				
Turn Type	Split	NA	Free	Prot
Protected Phases	3	3		7
Permitted Phases			Free	
Actuated Green, G (s)		22.1	148.5	2.8
Effective Green, g (s)		22.1	148.5	2.8
Actuated g/C Ratio		0.15	1.00	0.02
Clearance Time (s)		5.3		4.0
Vehicle Extension (s)		2.0		2.0
Lane Grp Cap (vph)		441	1350	25
v/s Ratio Prot		c0.12		0.00
v/s Ratio Perm			c0.09	
v/c Ratio		0.81	0.09	0.02
Uniform Delay, d1		61.2	0.0	71.5
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		10.5	0.1	0.1
Delay (s)		71.7	0.1	71.6
Level of Service		E	A	E
Approach Delay (s)		53.1		
Approach LOS		D		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	620	15	10	1545	1	258	0	7	0	0	0
Future Volume (vph)	14	620	15	10	1545	1	258	0	7	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.99				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95				
Satd. Flow (prot)	1509	3007		1509	3017		1433	1429				
Flt Permitted	0.09	1.00		0.37	1.00		0.95	0.95				
Satd. Flow (perm)	139	3007		587	3017		1433	1429				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	15	674	16	11	1679	1	280	0	8	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	15	689	0	11	1680	0	146	83	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	74.3	74.3		74.3	74.3		15.4	15.4				
Effective Green, g (s)	74.3	74.3		74.3	74.3		15.4	15.4				
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.14	0.14				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	93	2031		396	2037		200	200				
v/s Ratio Prot		0.23			c0.56							
v/s Ratio Perm	0.11			0.02			c0.10	0.06				
v/c Ratio	0.16	0.34		0.03	0.82		0.73	0.41				
Uniform Delay, d1	6.5	7.5		5.9	13.1		45.3	43.2				
Progression Factor	1.00	1.00		0.27	0.25		1.00	1.00				
Incremental Delay, d2	3.7	0.5		0.1	2.3		12.5	1.4				
Delay (s)	10.2	8.0		1.6	5.5		57.8	44.6				
Level of Service	B	A		A	A		E	D				
Approach Delay (s)		8.0			5.5			51.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	629	13	46	1564	0	46
Future Vol, veh/h	629	13	46	1564	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	662	14	48	1646	0	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	676	0	1589	338
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	920	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	911	-	98	658
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	349	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	911	-	93	658
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	331	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	658	-	-	911	-
HCM Lane V/C Ratio	0.074	-	-	0.053	-
HCM Control Delay (s)	10.9	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	602	32	138	1552	44	55	100	120	41	128	13
Future Volume (veh/h)	46	602	32	138	1552	44	55	100	120	41	128	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	48	634	34	145	1634	46	58	105	126	43	135	14
Adj No. of Lanes	1	2	0	1	2	0	0	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	138	1650	88	485	1769	50	88	132	140	189	356	37
Arrive On Green	0.03	0.57	0.57	0.05	0.59	0.59	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1513	2913	156	1513	2998	84	193	527	556	1145	1416	147
Grp Volume(v), veh/h	48	328	340	145	820	860	289	0	0	43	0	149
Grp Sat Flow(s),veh/h/ln	1513	1509	1561	1513	1509	1573	1275	0	0	1145	0	1562
Q Serve(g_s), s	1.5	13.2	13.3	4.5	53.7	54.3	15.8	0.0	0.0	0.0	0.0	8.7
Cycle Q Clear(g_c), s	1.5	13.2	13.3	4.5	53.7	54.3	24.5	0.0	0.0	9.7	0.0	8.7
Prop In Lane	1.00		0.10	1.00		0.05	0.20		0.44	1.00		0.09
Lane Grp Cap(c), veh/h	138	855	884	485	891	929	360	0	0	189	0	392
V/C Ratio(X)	0.35	0.38	0.38	0.30	0.92	0.93	0.80	0.00	0.00	0.23	0.00	0.38
Avail Cap(c_a), veh/h	264	855	884	575	891	929	386	0	0	210	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)	1.00	1.00	1.00	0.30	0.30	0.30	0.86	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	13.2	13.2	9.9	20.2	20.4	40.5	0.0	0.0	34.5	0.0	34.1
Incr Delay (d2), s/veh	0.6	1.3	1.3	0.0	6.1	6.2	9.6	0.0	0.0	0.6	0.0	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	5.8	6.0	1.8	23.6	25.0	9.5	0.0	0.0	1.1	0.0	3.8
LnGrp Delay(d),s/veh	24.5	14.5	14.5	10.0	26.4	26.6	50.1	0.0	0.0	35.1	0.0	34.7
LnGrp LOS	C	B	B	A	C	C	D			D		C
Approach Vol, veh/h		716			1825			289			192	
Approach Delay, s/veh		15.2			25.1			50.1			34.8	
Approach LOS		B			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	10.5	67.6		31.9	7.8	70.2		31.9
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	6.5	15.3		11.7	3.5	56.3		26.5
Green Ext Time (p_c), s	0.1	32.1		1.9	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

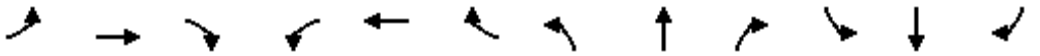
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	648	20	102	1482	101	46	423	61	43	451	79
Future Volume (veh/h)	68	648	20	102	1482	101	46	423	61	43	451	79
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	72	682	21	107	1560	106	48	445	64	45	475	83
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	1757	54	560	1700	115	115	705	315	155	599	104
Arrive On Green	0.08	1.00	1.00	0.04	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2987	92	1513	2865	193	848	3018	1350	887	2565	446
Grp Volume(v), veh/h	72	344	359	107	817	849	48	445	64	45	278	280
Grp Sat Flow(s),veh/h/ln	1513	1509	1570	1513	1509	1550	848	1509	1350	887	1509	1502
Q Serve(g_s), s	2.1	0.0	0.0	3.1	52.8	54.3	6.2	14.6	4.2	5.3	19.1	19.3
Cycle Q Clear(g_c), s	2.1	0.0	0.0	3.1	52.8	54.3	25.5	14.6	4.2	19.9	19.1	19.3
Prop In Lane	1.00		0.06	1.00		0.12	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	156	887	924	560	895	919	115	705	315	155	353	351
V/C Ratio(X)	0.46	0.39	0.39	0.19	0.91	0.92	0.42	0.63	0.20	0.29	0.79	0.80
Avail Cap(c_a), veh/h	288	887	924	684	895	919	115	705	315	155	353	351
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	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	0.0	8.3	19.8	20.1	51.7	37.9	33.9	46.8	39.6	39.7
Incr Delay (d2), s/veh	0.7	1.2	1.2	0.1	15.1	16.2	3.4	2.1	0.4	1.5	12.0	12.7
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	0.3	0.3	1.3	25.5	27.0	1.6	6.3	1.6	1.4	9.1	9.2
LnGrp Delay(d),s/veh	24.3	1.2	1.2	8.4	35.0	36.3	55.1	40.0	34.3	48.3	51.6	52.4
LnGrp LOS	C	A	A	A	C	D	E	D	C	D	D	D
Approach Vol, veh/h		775			1773			557			603	
Approach Delay, s/veh		3.3			34.0			40.6			51.7	
Approach LOS		A			C			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	9.0	70.0		31.0	8.4	70.6		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 14	* 56		* 26	* 14	* 56		* 26
Max Q Clear Time (g_c+I1), s	5.1	2.0		21.9	4.1	56.3		27.5
Green Ext Time (p_c), s	0.1	42.4		2.5	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	440	45	173	1094	2	171	434	81	0	733	537
Future Volume (vph)	176	440	45	173	1094	2	171	434	81	0	733	537
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3017		2927	2947			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3017		2927	2947			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	463	47	182	1152	2	180	457	85	0	772	565
RTOR Reduction (vph)	0	0	30	0	0	0	0	14	0	0	0	139
Lane Group Flow (vph)	185	463	17	182	1154	0	180	528	0	0	772	426
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	9.2	40.9	40.9	10.3	43.0		7.0	43.8			32.8	32.8
Effective Green, g (s)	9.2	41.4	40.9	10.3	43.5		8.0	44.8			33.8	33.8
Actuated g/C Ratio	0.08	0.38	0.37	0.09	0.40		0.07	0.41			0.31	0.31
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	244	1135	501	274	1193		212	1200			927	414
v/s Ratio Prot	c0.06	0.15		0.06	c0.38		c0.06	0.18			0.26	
v/s Ratio Perm			0.01									c0.32
v/c Ratio	0.76	0.41	0.03	0.66	0.97		0.85	0.44			0.83	1.03
Uniform Delay, d1	49.3	25.3	22.0	48.2	32.6		50.4	23.5			35.5	38.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	11.3	0.5	0.1	4.6	18.8		24.9	1.2			8.7	51.7
Delay (s)	60.6	25.8	22.0	52.8	51.4		75.3	24.7			44.1	89.8
Level of Service	E	C	C	D	D		E	C			D	F
Approach Delay (s)		34.8			51.6			37.3			63.4	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	10	366	4	0	16	131	278	0	2	3	4
Future Vol, veh/h	0	10	366	4	0	16	131	278	0	2	3	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	398	4	0	17	142	302	0	2	3	4
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	12.4	9.2	8.6
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	3%	11%	0%	55%
Vol Thru, %	33%	96%	89%	0%	15%
Vol Right, %	44%	1%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	380	147	278	20
LT Vol	2	10	16	0	11
Through Vol	3	366	131	0	3
RT Vol	4	4	0	278	6
Lane Flow Rate	10	413	160	302	22
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.015	0.52	0.22	0.353	0.034
Departure Headway (Hd)	5.514	4.531	4.968	4.21	5.642
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	797	725	855	633
Service Time	3.56	2.547	2.684	1.925	3.686
HCM Lane V/C Ratio	0.015	0.518	0.221	0.353	0.035
HCM Control Delay	8.6	12.4	9.1	9.2	8.9
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0	3.1	0.8	1.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	11	3	6
Future Vol, veh/h	0	11	3	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	3	7
Number of Lanes	0	0	1	0

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

Lane

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	10	384	398	41	34	36
Future Vol, veh/h	10	384	398	41	34	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	404	419	43	36	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	462	0	-	0	866	441
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	425	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1099	-	-	-	324	616
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	320	616
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1099	-	-	-	425
HCM Lane V/C Ratio	0.01	-	-	-	0.173
HCM Control Delay (s)	8.3	0	-	-	15.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	350	52	473	386	82	34	219	180	45	242	8
Future Volume (veh/h)	12	350	52	473	386	82	34	219	180	45	242	8
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	13	368	55	498	406	86	36	231	189	47	255	8
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	865	127	641	1034	879	174	376	320	183	363	11
Arrive On Green	0.66	0.65	0.65	0.65	0.65	0.65	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	17	1329	194	960	1588	1350	1112	1588	1350	963	1532	48
Grp Volume(v), veh/h	436	0	0	498	406	86	36	231	189	47	0	263
Grp Sat Flow(s),veh/h/ln	1541	0	0	960	1588	1350	1112	1588	1350	963	0	1580
Q Serve(g_s), s	0.0	0.0	0.0	34.2	10.8	2.1	2.8	11.7	11.2	4.1	0.0	13.7
Cycle Q Clear(g_c), s	12.2	0.0	0.0	46.4	10.8	2.1	16.5	11.7	11.2	15.8	0.0	13.7
Prop In Lane	0.03		0.13	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	1053	0	0	641	1034	879	174	376	320	183	0	374
V/C Ratio(X)	0.41	0.00	0.00	0.78	0.39	0.10	0.21	0.61	0.59	0.26	0.00	0.70
Avail Cap(c_a), veh/h	1053	0	0	641	1034	879	296	551	468	289	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.39	0.39	0.39	1.00	1.00	1.00	0.92	0.00	0.92
Uniform Delay (d), s/veh	7.6	0.0	0.0	15.8	7.4	5.9	39.0	30.7	30.5	37.7	0.0	31.4
Incr Delay (d2), s/veh	1.2	0.0	0.0	3.7	0.4	0.1	0.6	1.6	1.7	0.7	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	5.4	0.0	0.0	11.2	4.8	0.8	0.9	5.3	4.3	1.1	0.0	6.2
LnGrp Delay(d),s/veh	8.8	0.0	0.0	19.5	7.8	5.9	39.6	32.3	32.2	38.4	0.0	33.7
LnGrp LOS	A			B	A	A	D	C	C	D		C
Approach Vol, veh/h		436			990			456			310	
Approach Delay, s/veh		8.8			13.5			32.8			34.4	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.9		26.1		63.9		26.1
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		48.4		18.5		14.2		17.8
Green Ext Time (p_c), s		0.3		2.8		14.5		2.9

Intersection Summary		
HCM 2010 Ctrl Delay		19.6
HCM 2010 LOS		B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	488	43	176	825	122	84	544	111	110	494	48
Future Volume (veh/h)	28	488	43	176	825	122	84	544	111	110	494	48
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	29	514	45	185	868	128	88	573	117	116	520	51
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	110	1621	141	480	916	779	218	792	161	157	957	428
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	563	2809	245	847	1588	1350	838	2499	509	750	3018	1350
Grp Volume(v), veh/h	29	276	283	185	868	128	88	345	345	116	520	51
Grp Sat Flow(s),veh/h/ln	563	1509	1545	847	1588	1350	838	1509	1498	750	1509	1350
Q Serve(g_s), s	5.1	9.4	9.5	14.5	51.0	4.4	9.7	20.3	20.4	11.3	14.2	2.7
Cycle Q Clear(g_c), s	56.0	9.4	9.5	24.0	51.0	4.4	23.9	20.3	20.4	31.7	14.2	2.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	110	871	891	480	916	779	218	478	475	157	957	428
V/C Ratio(X)	0.26	0.32	0.32	0.39	0.95	0.16	0.40	0.72	0.73	0.74	0.54	0.12
Avail Cap(c_a), veh/h	110	871	891	480	916	779	218	478	475	157	957	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	45.9	10.9	11.0	17.2	19.7	9.9	38.0	30.2	30.3	45.9	28.2	24.2
Incr Delay (d2), s/veh	5.3	0.9	0.9	2.3	19.4	0.5	0.4	4.6	4.8	14.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.1	4.2	3.7	27.1	1.7	2.3	9.1	9.1	3.8	6.0	1.0
LnGrp Delay(d),s/veh	51.1	11.8	11.8	19.5	39.1	10.3	38.5	34.9	35.1	60.8	28.5	24.3
LnGrp LOS	D	B	B	B	D	B	D	C	D	E	C	C
Approach Vol, veh/h		588			1181			778			687	
Approach Delay, s/veh		13.8			32.9			35.4			33.7	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 58		* 32		* 58		* 32
Max Q Clear Time (g_c+I1), s		58.0		33.7		53.0		25.9
Green Ext Time (p_c), s		0.0		0.0		3.4		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	443	46	467	894	39	64	615	181	72	848	129
Future Volume (veh/h)	49	443	46	467	894	39	64	615	181	72	848	129
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	52	466	48	492	941	0	67	647	191	76	893	136
Adj No. of Lanes	1	2	0	1	2	1	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	126	705	72	267	1172	524	224	1240	366	245	1416	216
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	593	2763	284	1513	3018	1350	546	2299	678	653	2627	400
Grp Volume(v), veh/h	52	254	260	492	941	0	67	424	414	76	513	516
Grp Sat Flow(s),veh/h/ln	593	1509	1538	1513	1509	1350	546	1509	1469	653	1509	1518
Q Serve(g_s), s	10.3	18.1	18.2	10.4	33.3	0.0	13.8	30.6	30.6	11.3	28.5	28.6
Cycle Q Clear(g_c), s	27.5	18.1	18.2	10.4	33.3	0.0	42.4	30.6	30.6	41.9	28.5	28.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.46	1.00		0.26
Lane Grp Cap(c), veh/h	126	385	392	267	1172	524	224	814	792	245	814	818
V/C Ratio(X)	0.41	0.66	0.66	1.84	0.80	0.00	0.30	0.52	0.52	0.31	0.63	0.63
Avail Cap(c_a), veh/h	126	385	392	267	1172	524	224	814	792	245	814	818
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	40.0	40.2	41.0	32.6	0.0	53.6	35.3	35.3	34.8	19.3	19.4
Incr Delay (d2), s/veh	8.1	7.2	7.2	392.3	5.9	0.0	3.4	2.4	2.5	3.3	3.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	8.3	8.5	35.7	14.8	0.0	2.3	13.3	13.0	2.3	12.7	12.8
LnGrp Delay(d),s/veh	60.1	47.3	47.4	433.2	38.5	0.0	56.9	37.7	37.8	38.1	23.0	23.1
LnGrp LOS	E	D	D	F	D		E	D	D	D	C	C
Approach Vol, veh/h		566			1433			905			1105	
Approach Delay, s/veh		48.5			174.0			39.2			24.1	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		43.9		35.3		44.4	12.4	29.5
Green Ext Time (p_c), s		10.6		5.4		10.4	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	84.5
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

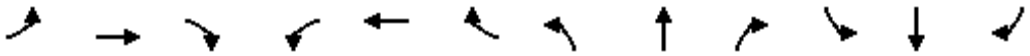
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	723	69	222	1073	43	95	327	81	39	377	165
Future Volume (veh/h)	47	723	69	222	1073	43	95	327	81	39	377	165
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	49	761	73	234	1129	45	100	344	85	41	397	174
Adj No. of Lanes	1	2	0	1	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	256	994	95	336	1059	42	96	482	119	227	410	180
Arrive On Green	0.11	0.34	0.34	0.23	0.68	0.68	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2913	279	1587	3104	124	879	1287	318	1002	1095	480
Grp Volume(v), veh/h	49	413	421	234	576	598	100	0	429	41	0	571
Grp Sat Flow(s),veh/h/ln	1587	1583	1610	1587	1583	1645	879	0	1605	1002	0	1575
Q Serve(g_s), s	1.6	21.0	21.0	8.9	30.7	30.7	1.7	0.0	20.5	3.3	0.0	32.0
Cycle Q Clear(g_c), s	1.6	21.0	21.0	8.9	30.7	30.7	33.7	0.0	20.5	23.8	0.0	32.0
Prop In Lane	1.00		0.17	1.00		0.08	1.00		0.20	1.00		0.30
Lane Grp Cap(c), veh/h	256	540	549	336	540	561	96	0	601	227	0	590
V/C Ratio(X)	0.19	0.77	0.77	0.70	1.07	1.07	1.04	0.00	0.71	0.18	0.00	0.97
Avail Cap(c_a), veh/h	256	540	549	336	540	561	96	0	601	227	0	590
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	26.4	26.4	16.9	14.3	14.3	44.9	0.0	24.0	34.2	0.0	27.6
Incr Delay (d2), s/veh	1.7	9.9	9.8	11.4	57.5	56.9	102.3	0.0	7.1	1.7	0.0	30.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	10.6	10.7	4.8	21.2	22.0	5.1	0.0	10.2	1.0	0.0	18.7
LnGrp Delay(d),s/veh	21.1	36.4	36.3	28.2	71.8	71.2	147.9	0.0	31.1	35.9	0.0	57.7
LnGrp LOS	C	D	D	C	F	F	F		C	D		E
Approach Vol, veh/h		883			1408			529			612	
Approach Delay, s/veh		35.5			64.3			53.2			56.2	
Approach LOS		D			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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	3.6	32.7		34.0	10.9	23.0		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	723	69	222	1073	43	95	327	81	39	377	165
Future Volume (vph)	47	723	69	222	1073	43	95	327	81	39	377	165
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3119		1583	3148		1583	1613		1583	1584	
Flt Permitted	0.13	1.00		0.17	1.00		0.17	1.00		0.33	1.00	
Satd. Flow (perm)	219	3119		275	3148		286	1613		542	1584	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	49	761	73	234	1129	45	100	344	85	41	397	174
RTOR Reduction (vph)	0	8	0	0	3	0	0	10	0	0	18	0
Lane Group Flow (vph)	49	826	0	234	1171	0	100	419	0	41	553	0
Confl. Bikes (#/hr)			3						3			1
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.8	31.4		45.7	38.3		33.7	33.7		33.7	33.7	
Effective Green, g (s)	32.8	31.4		45.2	38.3		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.36	0.35		0.50	0.43		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Vehicle Extension (s)	1.0	5.0		1.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	1088		280	1339		107	603		202	593	
v/s Ratio Prot	0.01	0.26		c0.09	c0.37			0.26			0.35	
v/s Ratio Perm	0.14			0.33			c0.35			0.08		
v/c Ratio	0.42	0.76		0.84	0.87		0.93	0.69		0.20	0.93	
Uniform Delay, d1	20.1	26.0		16.2	23.7		27.1	23.8		19.1	27.1	
Progression Factor	1.00	1.00		2.10	0.37		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	5.0		4.8	2.0		70.7	6.5		2.3	23.7	
Delay (s)	21.0	30.9		38.8	10.9		97.8	30.3		21.3	50.8	
Level of Service	C	C		D	B		F	C		C	D	
Approach Delay (s)		30.4			15.5			43.0			48.8	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	767	97	87	1020	39	60	324	109	32	427	337
Future Volume (veh/h)	50	767	97	87	1020	39	60	324	109	32	427	337
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	53	807	102	92	1074	41	63	341	115	34	449	355
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	1061	134	200	1166	45	120	1160	671	573	409	323
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	528	2829	358	641	3110	119	708	2451	1417	977	863	683
Grp Volume(v), veh/h	53	452	457	92	547	568	63	341	115	34	0	804
Grp Sat Flow(s),veh/h/ln	528	1583	1604	641	1583	1646	708	2451	1417	977	0	1546
Q Serve(g_s), s	2.3	15.0	15.0	7.5	20.2	20.2	0.0	0.6	0.3	1.2	0.0	28.4
Cycle Q Clear(g_c), s	22.5	15.0	15.0	22.5	20.2	20.2	28.4	0.6	0.3	1.8	0.0	28.4
Prop In Lane	1.00		0.22	1.00		0.07	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	140	594	601	200	594	617	120	1160	671	573	0	732
V/C Ratio(X)	0.38	0.76	0.76	0.46	0.92	0.92	0.52	0.29	0.17	0.06	0.00	1.10
Avail Cap(c_a), veh/h	140	594	601	200	594	617	120	1160	671	573	0	732
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.58	0.58	0.58	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	16.4	16.4	30.4	21.6	21.6	15.8	0.9	0.9	9.0	0.0	15.9
Incr Delay (d2), s/veh	7.6	8.9	8.8	4.9	15.9	15.4	9.3	0.4	0.3	0.2	0.0	63.5
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	8.0	8.1	1.8	11.4	11.8	1.3	0.5	0.2	0.3	0.0	24.9
LnGrp Delay(d),s/veh	37.1	25.3	25.2	35.3	37.5	37.1	25.1	1.2	1.2	9.2	0.0	79.4
LnGrp LOS	D	C	C	D	D	D	C	A	A	A		F
Approach Vol, veh/h		962			1207			519			838	
Approach Delay, s/veh		25.9			37.1			4.1			76.6	
Approach LOS		C			D			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		30.4		24.5		30.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

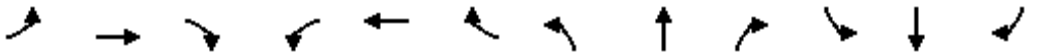
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	718	124	113	1217	113	125	666	88	123	584	158
Future Volume (veh/h)	34	718	124	113	1217	113	125	666	88	123	584	158
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	36	756	131	119	1281	119	132	701	93	129	615	166
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	107	1649	738	401	1526	141	250	1285	575	229	1285	575
Arrive On Green	1.00	1.00	1.00	0.35	0.35	0.35	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	403	3167	1417	655	2931	271	723	3167	1417	714	3167	1417
Grp Volume(v), veh/h	36	756	131	119	690	710	132	701	93	129	615	166
Grp Sat Flow(s),veh/h/ln	403	1583	1417	655	1583	1619	723	1583	1417	714	1583	1417
Q Serve(g_s), s	10.1	0.0	0.0	16.2	48.1	48.5	19.8	20.3	5.0	20.2	17.2	9.5
Cycle Q Clear(g_c), s	58.5	0.0	0.0	16.2	48.1	48.5	36.9	20.3	5.0	40.5	17.2	9.5
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	1649	738	401	825	843	250	1285	575	229	1285	575
V/C Ratio(X)	0.34	0.46	0.18	0.30	0.84	0.84	0.53	0.55	0.16	0.56	0.48	0.29
Avail Cap(c_a), veh/h	107	1649	738	401	825	843	250	1285	575	229	1285	575
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	0.0	0.0	24.0	34.4	34.5	39.9	27.2	22.7	42.6	26.3	24.0
Incr Delay (d2), s/veh	7.3	0.8	0.5	0.4	2.2	2.2	7.8	1.7	0.6	9.6	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	1.3	0.2	0.1	3.0	21.6	22.2	4.5	9.2	2.1	4.6	7.7	3.9
LnGrp Delay(d),s/veh	30.0	0.8	0.5	24.4	36.5	36.7	47.7	28.9	23.3	52.3	27.6	25.3
LnGrp LOS	C	A	A	C	D	D	D	C	C	D	C	C
Approach Vol, veh/h		923			1519			926			910	
Approach Delay, s/veh		1.9			35.6			31.0			30.6	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 61		* 47		* 61		* 47
Max Q Clear Time (g_c+I1), s		50.5		42.5		60.5		38.9
Green Ext Time (p_c), s		7.9		3.6		0.0		5.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	514	93	161	1318	98	64	534	21	41	532	45
Future Volume (vph)	95	514	93	161	1318	98	64	534	21	41	532	45
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1322	1509	4336	1313	1509	1588	1332	1509	1568	
Flt Permitted	0.17	1.00	1.00	0.44	1.00	1.00	0.23	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	266	4336	1322	699	4336	1313	367	1588	1332	433	1568	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	541	98	169	1387	103	67	562	22	43	560	47
RTOR Reduction (vph)	0	0	59	0	0	62	0	0	12	0	3	0
Lane Group Flow (vph)	100	541	39	169	1387	41	67	562	10	43	604	0
Confl. Bikes (#/hr)			1			8			2			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	23.9	23.9	23.9	23.9	23.9	23.9	26.1	26.1	26.1	26.1	26.1	
Effective Green, g (s)	23.9	23.9	23.9	23.9	23.9	23.9	26.1	26.1	26.1	26.1	26.1	
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	105	1727	526	278	1727	523	159	690	579	188	682	
v/s Ratio Prot		0.12			0.32			0.35			c0.38	
v/s Ratio Perm	c0.38		0.03	0.24		0.03	0.18		0.01	0.10		
v/c Ratio	0.95	0.31	0.07	0.61	0.80	0.08	0.42	0.81	0.02	0.23	0.89	
Uniform Delay, d1	17.5	12.4	11.2	14.3	16.0	11.2	11.7	14.8	9.6	10.6	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.30	1.29	
Incremental Delay, d2	75.7	0.5	0.3	9.5	4.1	0.3	1.8	7.3	0.0	0.2	4.2	
Delay (s)	93.2	12.9	11.5	23.9	20.0	11.5	13.5	22.2	9.7	14.0	24.3	
Level of Service	F	B	B	C	C	B	B	C	A	B	C	
Approach Delay (s)		23.6			19.9			20.8			23.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	12/7/2015
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	AM	Reviewed by:		Project:	Robertson Lane Hotel Project

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			3			3			3				3				3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	64	1	**64**	0	64	**64**	8	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	534	1	534	8	542	542	72	628	1	628	8	636	1	636	0	636	1	636
	Through-Right		0							0				0				0	
	Right	21	1	0	0	21	0	0	22	1	0	0	22	1	0	0	22	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	41	1	41	0	41	41	0	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	532	0	**577**	5	537	**582**	51	605	0	**652**	5	610	0	**657**	0	610	0	**657**
	Through-Right		1							1				1				1	
	Right	45	0	0	0	45	0	0	47	0	0	0	47	0	0	0	47	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	95	1	**95**	0	95	**95**	0	99	1	**99**	0	99	1	**99**	0	99	1	**99**
	Left-Through		0							0				0				0	
	Through	514	3	171	0	514	171	37	572	3	191	0	572	3	191	0	572	3	191
	Through-Right		0							0				0				0	
	Right	93	1	61	0	93	61	4	101	1	64	0	101	1	64	0	101	1	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	161	1	161	0	161	161	0	168	1	168	0	168	1	168	0	168	1	168
	Left-Through		0							0				0				0	
	Through	1318	3	**439**	0	1318	**439**	27	1399	3	**466**	0	1399	3	**466**	0	1399	3	**466**
	Through-Right		0							0				0				0	
	Right	98	1	78	0	98	78	0	102	1	81	0	102	1	81	0	102	1	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		641	*North-South:*		646	*North-South:*			727	*North-South:*			732	*North-South:*			732
		East-West:		534	*East-West:*		534	*East-West:*			565	*East-West:*			565	*East-West:*			565
		SUM:		1175	*SUM:*		1180	*SUM:*			1292	*SUM:*			1297	*SUM:*			1297
VOLUME/CAPACITY *(V/C)* RATIO:				0.825			0.828				0.907				0.910				0.910
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.725			0.728				0.807				0.810				0.810
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.003

Significant impacted? NO

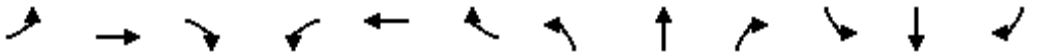
PROPOSED PROJECT IMPACT

Change in *v/c* due to project: 0.003

Significant impacted? NO

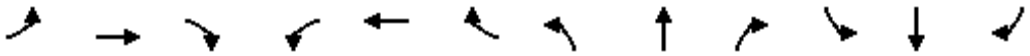
$\Delta v/c$ after mitigation: 0.003

Fully mitigated? N/A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	923	99	165	996	81	177	71	147	113	63	52
Future Volume (vph)	33	923	99	165	996	81	177	71	147	113	63	52
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2984		1433	1477	1350		1702	
Flt Permitted	0.23	1.00	1.00	0.17	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	358	3018	1350	275	2984		1433	1477	1350		1702	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	972	104	174	1048	85	186	75	155	119	66	55
RTOR Reduction (vph)	0	0	55	0	5	0	0	0	100	0	10	0
Lane Group Flow (vph)	35	972	49	174	1128	0	128	133	55	0	230	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	47.0	47.0	47.0	58.0	58.0		14.0	14.0	21.0		14.0	
Effective Green, g (s)	47.0	47.0	47.0	57.0	58.0		13.5	13.5	19.0		13.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.57	0.58		0.14	0.14	0.19		0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	168	1418	634	230	1730		193	199	256		229	
v/s Ratio Prot		0.32		0.05	c0.38		0.09	c0.09	0.01		c0.13	
v/s Ratio Perm	0.10		0.04	c0.38					0.03			
v/c Ratio	0.21	0.69	0.08	0.76	0.65		0.66	0.67	0.22		1.00	
Uniform Delay, d1	15.6	20.7	14.6	14.0	14.2		41.1	41.1	34.2		43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.8	2.7	0.2	13.2	1.9		8.3	8.2	0.4		60.2	
Delay (s)	18.4	23.4	14.8	27.2	16.1		49.4	49.3	34.6		103.4	
Level of Service	B	C	B	C	B		D	D	C		F	
Approach Delay (s)		22.5			17.6			43.9			103.4	
Approach LOS		C			B			D			F	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1061	156	165	1176	22	134	14	211	30	16	22
Future Volume (vph)	11	1061	156	165	1176	22	134	14	211	30	16	22
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88	0.85	1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1271	1282	1509	1451	
Flt Permitted	0.23	1.00	1.00	0.16	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	359	3018	1350	250	3018	1350	1433	1271	1282	1509	1451	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	1117	164	174	1238	23	141	15	222	32	17	23
RTOR Reduction (vph)	0	0	75	0	0	7	0	89	104	0	21	0
Lane Group Flow (vph)	12	1117	89	174	1238	16	127	38	20	32	19	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	54.1	54.1	54.1	67.6	67.6	67.6	9.0	9.0	18.5	9.4	9.4	
Effective Green, g (s)	54.1	54.1	54.1	66.6	67.6	67.6	9.0	9.0	16.5	8.4	8.4	
Actuated g/C Ratio	0.54	0.54	0.54	0.67	0.68	0.68	0.09	0.09	0.16	0.08	0.08	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	194	1632	730	273	2040	912	128	114	211	126	121	
v/s Ratio Prot		c0.37		0.05	c0.41		c0.09	0.03	0.01	c0.02	0.01	
v/s Ratio Perm	0.03		0.07	0.37		0.01			0.01			
v/c Ratio	0.06	0.68	0.12	0.64	0.61	0.02	0.99	0.33	0.10	0.25	0.16	
Uniform Delay, d1	10.9	16.7	11.3	10.6	8.9	5.3	45.5	42.7	35.4	42.9	42.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	2.4	0.3	3.6	1.4	0.0	76.9	1.7	0.1	1.1	0.6	
Delay (s)	11.5	19.1	11.6	14.2	10.3	5.3	122.3	44.4	35.5	43.9	43.1	
Level of Service	B	B	B	B	B	A	F	D	D	D	D	
Approach Delay (s)		18.1			10.7			67.7			43.5	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

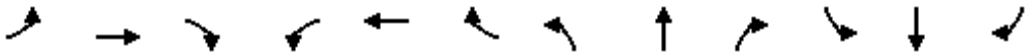
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	86	796	269	81	3	132	1028	50	38	296	98	60
Future Volume (vph)	86	796	269	81	3	132	1028	50	38	296	98	60
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (prot)	1509	3018	1350	1333		1509	2993			1579	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (perm)	1509	3018	1350	1333		1509	2993			1579	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	838	283	85	3	139	1082	53	40	312	103	63
RTOR Reduction (vph)	0	0	0	0	0	0	2	0	0	0	112	0
Lane Group Flow (vph)	91	838	283	85	0	142	1133	0	0	352	54	0
Confl. Bikes (#/hr)				4				7			4	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	12.8	52.4	52.4	159.2		20.2	59.8			29.8	29.8	
Effective Green, g (s)	12.8	52.4	52.4	159.2		20.2	59.8			29.8	29.8	
Actuated g/C Ratio	0.08	0.33	0.33	1.00		0.13	0.38			0.19	0.19	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	121	993	444	1333		191	1124			295	252	
v/s Ratio Prot	0.06	c0.28				0.09	c0.38			c0.22	0.04	
v/s Ratio Perm			0.21	0.06								
v/c Ratio	0.75	0.84	0.64	0.06		0.74	1.01			1.19	0.21	
Uniform Delay, d1	71.6	49.6	45.3	0.0		67.0	49.7			64.7	54.8	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	20.6	6.8	3.1	0.1		12.8	28.8			115.4	0.2	
Delay (s)	92.2	56.4	48.5	0.1		79.8	78.5			180.1	54.9	
Level of Service	F	E	D	A		E	E			F	D	
Approach Delay (s)		53.5					78.7			140.0		
Approach LOS		D					E			F		

Intersection Summary			
HCM 2000 Control Delay	77.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	159.2	Sum of lost time (s)	23.9
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	79	96	313	139	53
Future Volume (vph)	79	96	313	139	53
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	1.00	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2964	1350	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2964	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	101	329	146	56
RTOR Reduction (vph)	0	0	0	0	55
Lane Group Flow (vph)	0	0	513	146	1
Confl. Bikes (#/hr)					
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.0	159.2	3.9
Effective Green, g (s)			29.0	159.2	3.9
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			539	1350	33
v/s Ratio Prot			c0.17		0.00
v/s Ratio Perm				c0.11	
v/c Ratio			0.95	0.11	0.04
Uniform Delay, d1			64.4	0.0	75.8
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			26.8	0.2	0.2
Delay (s)			91.2	0.2	76.0
Level of Service			F	A	E
Approach Delay (s)			71.1		
Approach LOS			E		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	961	29	25	1091	5	176	1	41	0	0	0
Future Volume (vph)	23	961	29	25	1091	5	176	1	41	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.94				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.97				
Satd. Flow (prot)	1509	3004		1509	3016		1433	1380				
Flt Permitted	0.19	1.00		0.22	1.00		0.95	0.97				
Satd. Flow (perm)	298	3004		352	3016		1433	1380				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	24	1045	32	27	1186	5	191	1	45	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	24	1076	0	27	1191	0	120	91	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	57.7	57.7		57.7	57.7		12.0	12.0				
Effective Green, g (s)	57.7	57.7		57.7	57.7		12.0	12.0				
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.13	0.13				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	191	1925		225	1933		191	184				
v/s Ratio Prot		0.36			c0.39							
v/s Ratio Perm	0.08			0.08			c0.08	0.07				
v/c Ratio	0.13	0.56		0.12	0.62		0.63	0.49				
Uniform Delay, d1	6.3	9.0		6.3	9.6		36.9	36.2				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	1.3	1.2		1.1	1.5		6.3	2.1				
Delay (s)	7.7	10.2		7.4	11.1		43.2	38.3				
Level of Service	A	B		A	B		D	D				
Approach Delay (s)		10.2			11.0			40.8			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	947	12	62	1170	0	72
Future Vol, veh/h	947	12	62	1170	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	997	13	65	1232	0	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1009	0	1749	505
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	746	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	683	-	77	512
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	430	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	683	-	70	512
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	389	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	512	-	-	683	-
HCM Lane V/C Ratio	0.148	-	-	0.096	-
HCM Control Delay (s)	13.2	-	-	10.8	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	938	61	168	1099	65	64	76	189	106	84	18
Future Volume (veh/h)	86	938	61	168	1099	65	64	76	189	106	84	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	91	987	64	177	1157	68	67	80	199	112	88	19
Adj No. of Lanes	1	2	0	1	2	0	0	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	238	1469	95	312	1565	92	102	105	223	212	352	76
Arrive On Green	0.04	0.51	0.51	0.07	0.54	0.54	0.28	0.28	0.28	0.28	0.28	0.27
Sat Flow, veh/h	1513	2878	187	1513	2897	170	213	379	803	1096	1267	273
Grp Volume(v), veh/h	91	517	534	177	602	623	346	0	0	112	0	107
Grp Sat Flow(s),veh/h/ln	1513	1509	1555	1513	1509	1558	1396	0	0	1096	0	1540
Q Serve(g_s), s	2.9	25.6	25.6	5.6	30.6	30.6	18.1	0.0	0.0	1.1	0.0	5.4
Cycle Q Clear(g_c), s	2.9	25.6	25.6	5.6	30.6	30.6	23.8	0.0	0.0	24.9	0.0	5.4
Prop In Lane	1.00		0.12	1.00		0.11	0.19		0.58	1.00		0.18
Lane Grp Cap(c), veh/h	238	770	794	312	815	842	431	0	0	212	0	428
V/C Ratio(X)	0.38	0.67	0.67	0.57	0.74	0.74	0.80	0.00	0.00	0.53	0.00	0.25
Avail Cap(c_a), veh/h	335	770	794	364	815	842	443	0	0	222	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.54	0.54	0.54	0.80	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.7	18.2	18.2	15.0	17.6	17.6	34.6	0.0	0.0	35.9	0.0	28.1
Incr Delay (d2), s/veh	0.4	4.6	4.5	0.3	3.3	3.2	8.2	0.0	0.0	2.1	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	11.6	12.0	2.3	13.3	13.7	10.1	0.0	0.0	3.1	0.0	2.3
LnGrp Delay(d),s/veh	16.1	22.9	22.7	15.3	20.9	20.8	42.7	0.0	0.0	38.0	0.0	28.4
LnGrp LOS	B	C	C	B	C	C	D			D		C
Approach Vol, veh/h		1142			1402			346			219	
Approach Delay, s/veh		22.3			20.1			42.7			33.3	
Approach LOS		C			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	11.6	56.4		32.1	8.6	59.3		32.1
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	7.6	27.6		26.9	4.9	32.6		25.8
Green Ext Time (p_c), s	0.1	16.8		0.4	0.0	12.7		0.7

Intersection Summary		
HCM 2010 Ctrl Delay		24.4
HCM 2010 LOS		C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

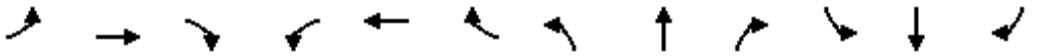
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1062	96	203	1162	76	117	340	177	69	335	82
Future Volume (veh/h)	91	1062	96	203	1162	76	117	340	177	69	335	82
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	96	1118	101	214	1223	80	123	358	186	73	353	86
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	1349	122	385	1501	98	221	852	381	232	680	163
Arrive On Green	0.10	0.96	0.96	0.08	0.52	0.52	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1513	2796	252	1513	2873	188	946	3018	1350	859	2407	579
Grp Volume(v), veh/h	96	603	616	214	642	661	123	358	186	73	220	219
Grp Sat Flow(s),veh/h/ln	1513	1509	1539	1513	1509	1551	946	1509	1350	859	1509	1477
Q Serve(g_s), s	3.2	7.0	7.1	6.9	35.3	35.5	12.6	9.7	11.5	7.6	12.2	12.5
Cycle Q Clear(g_c), s	3.2	7.0	7.1	6.9	35.3	35.5	25.1	9.7	11.5	17.2	12.2	12.5
Prop In Lane	1.00		0.16	1.00		0.12	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	217	728	743	385	789	811	221	852	381	232	426	417
V/C Ratio(X)	0.44	0.83	0.83	0.56	0.81	0.82	0.56	0.42	0.49	0.32	0.52	0.53
Avail Cap(c_a), veh/h	309	728	743	416	789	811	225	866	387	236	433	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)	0.79	0.79	0.79	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	1.0	1.0	11.0	19.8	19.9	40.8	29.2	29.9	36.2	30.1	30.2
Incr Delay (d2), s/veh	0.4	8.5	8.4	0.6	9.0	8.9	3.7	0.5	1.4	1.1	1.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.0	3.1	2.9	16.6	17.1	3.5	4.1	4.4	1.9	5.2	5.3
LnGrp Delay(d),s/veh	17.5	9.5	9.4	11.6	28.8	28.7	44.5	29.7	31.2	37.3	31.5	31.8
LnGrp LOS	B	A	A	B	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1315			1517			667			512	
Approach Delay, s/veh		10.1			26.4			32.8			32.5	
Approach LOS		B			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	12.9	53.5		33.5	8.9	57.6		33.5
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 46		* 29	* 11	* 46		* 29
Max Q Clear Time (g_c+I1), s	8.9	9.1		19.2	5.2	37.5		27.1
Green Ext Time (p_c), s	0.0	31.5		5.3	0.0	7.8		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	793	100	168	716	21	198	576	127	0	691	450
Future Volume (vph)	330	793	100	168	716	21	198	576	127	0	691	450
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3005		2927	2936			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3005		2927	2936			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	835	105	177	754	22	208	606	134	0	727	474
RTOR Reduction (vph)	0	0	72	0	2	0	0	19	0	0	0	217
Lane Group Flow (vph)	347	835	33	177	774	0	208	721	0	0	727	257
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	12.9	31.3	31.3	8.3	27.7		8.8	45.4			32.6	32.6
Effective Green, g (s)	12.9	31.8	31.3	8.3	28.2		9.8	46.4			33.6	33.6
Actuated g/C Ratio	0.13	0.32	0.31	0.08	0.28		0.10	0.46			0.34	0.34
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	377	959	422	242	847		286	1362			1014	453
v/s Ratio Prot	0.12	c0.28		0.06	c0.26		c0.07	0.25			c0.24	
v/s Ratio Perm			0.02									0.19
v/c Ratio	0.92	0.87	0.08	0.73	0.91		0.73	0.53			0.72	0.57
Uniform Delay, d1	43.0	32.2	24.2	44.8	34.7		43.8	19.0			29.0	27.2
Progression Factor	1.00	1.00	1.00	1.30	0.90		1.00	1.00			1.00	1.00
Incremental Delay, d2	27.0	9.4	0.2	7.0	11.5		7.6	1.5			4.3	5.1
Delay (s)	70.0	41.6	24.4	65.3	42.6		51.4	20.5			33.4	32.3
Level of Service	E	D	C	E	D		D	C			C	C
Approach Delay (s)		47.8			46.9			27.3			33.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	29	403	3	0	19	86	202	0	5	8	10
Future Vol, veh/h	0	29	403	3	0	19	86	202	0	5	8	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	438	3	0	21	93	220	0	5	9	11
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	15	9	8.9
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	7%	18%	0%	67%
Vol Thru, %	35%	93%	82%	0%	5%
Vol Right, %	43%	1%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	435	105	202	75
LT Vol	5	29	19	0	50
Through Vol	8	403	86	0	4
RT Vol	10	3	0	202	21
Lane Flow Rate	25	473	114	220	82
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.039	0.615	0.168	0.275	0.129
Departure Headway (Hd)	5.615	4.681	5.307	4.51	5.678
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	631	771	673	793	626
Service Time	3.711	2.729	3.061	2.263	3.76
HCM Lane V/C Ratio	0.04	0.613	0.169	0.277	0.131
HCM Control Delay	8.9	15	9.1	9	9.6
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.1	4.3	0.6	1.1	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	50	4	21
Future Vol, veh/h	0	50	4	21
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	54	4	23
Number of Lanes	0	0	1	0

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

Lane

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	14	464	269	39	55	39
Future Vol, veh/h	14	464	269	39	55	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	488	283	41	58	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	324	0	-	0	822	304
Stage 1	-	-	-	-	304	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1236	-	-	-	344	736
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1236	-	-	-	338	736
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	436
HCM Lane V/C Ratio	0.012	-	-	-	0.227
HCM Control Delay (s)	7.9	0	-	-	15.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	387	84	218	234	84	41	255	228	73	203	26
Future Volume (veh/h)	25	387	84	218	234	84	41	255	228	73	203	26
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	26	407	88	229	246	88	43	268	240	77	214	27
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	744	156	516	964	819	249	446	379	200	388	49
Arrive On Green	0.61	0.61	0.61	1.00	1.00	1.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	39	1226	257	899	1588	1350	1134	1588	1350	888	1383	174
Grp Volume(v), veh/h	521	0	0	229	246	88	43	268	240	77	0	241
Grp Sat Flow(s),veh/h/ln	1522	0	0	899	1588	1350	1134	1588	1350	888	0	1557
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	0.0	3.0	13.1	14.0	7.4	0.0	11.8
Cycle Q Clear(g_c), s	18.0	0.0	0.0	18.8	0.0	0.0	14.9	13.1	14.0	20.5	0.0	11.8
Prop In Lane	0.05		0.17	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	974	0	0	516	964	819	249	446	379	200	0	437
V/C Ratio(X)	0.53	0.00	0.00	0.44	0.26	0.11	0.17	0.60	0.63	0.39	0.00	0.55
Avail Cap(c_a), veh/h	974	0	0	516	964	819	324	551	468	258	0	540
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	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00	0.87	0.00	0.87
Uniform Delay (d), s/veh	10.5	0.0	0.0	0.2	0.0	0.0	33.9	28.0	28.3	36.9	0.0	27.5
Incr Delay (d2), s/veh	2.1	0.0	0.0	2.5	0.6	0.2	0.3	1.3	1.9	1.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	0.0	0.7	0.2	0.1	1.0	5.9	5.4	1.9	0.0	5.2
LnGrp Delay(d),s/veh	12.6	0.0	0.0	2.7	0.6	0.2	34.2	29.3	30.2	37.9	0.0	28.5
LnGrp LOS	B			A	A	A	C	C	C	D		C
Approach Vol, veh/h		521			563			551			318	
Approach Delay, s/veh		12.6			1.4			30.1			30.8	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.9		30.1		59.9		30.1
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		20.8		16.9		20.0		22.5
Green Ext Time (p_c), s		9.2		3.5		9.3		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	567	57	123	440	194	75	427	129	130	453	68
Future Volume (veh/h)	40	567	57	123	440	194	75	427	129	130	453	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	42	597	60	129	463	204	79	449	136	137	477	72
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	342	1478	148	493	847	720	274	798	240	235	1052	471
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	766	2770	278	773	1588	1350	855	2288	688	827	3018	1350
Grp Volume(v), veh/h	42	325	332	129	463	204	79	295	290	137	477	72
Grp Sat Flow(s),veh/h/ln	766	1509	1539	773	1588	1350	855	1509	1467	827	1509	1350
Q Serve(g_s), s	2.0	0.0	0.0	8.4	17.3	7.5	7.1	14.2	14.5	14.5	11.0	3.3
Cycle Q Clear(g_c), s	19.3	0.0	0.0	8.4	17.3	7.5	18.1	14.2	14.5	29.0	11.0	3.3
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	342	805	821	493	847	720	274	526	511	235	1052	471
V/C Ratio(X)	0.12	0.40	0.40	0.26	0.55	0.28	0.29	0.56	0.57	0.58	0.45	0.15
Avail Cap(c_a), veh/h	342	805	821	493	847	720	277	531	517	238	1063	476
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	3.5	0.0	0.0	11.8	13.8	11.5	29.7	23.7	23.8	35.6	22.7	20.2
Incr Delay (d2), s/veh	0.6	1.3	1.2	1.3	2.5	1.0	0.2	0.8	0.9	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	0.5	0.3	0.3	2.0	8.1	3.0	1.7	6.0	5.9	3.5	4.6	1.2
LnGrp Delay(d),s/veh	4.1	1.3	1.2	13.0	16.3	12.5	29.9	24.5	24.7	37.8	22.8	20.2
LnGrp LOS	A	A	A	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h		699			796			664			686	
Approach Delay, s/veh		1.4			14.8			25.2			25.5	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.3		36.7		53.3		36.7
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		21.3		31.0		19.3		20.1
Green Ext Time (p_c), s		8.3		0.4		8.4		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	550	110	231	630	81	72	813	230	84	822	140
Future Volume (veh/h)	114	550	110	231	630	81	72	813	230	84	822	140
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	120	579	116	243	663	0	76	856	242	88	865	147
Adj No. of Lanes	1	2	0	1	2	1	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	226	639	128	201	1172	524	230	1253	354	159	1392	236
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	769	2508	501	1513	3018	1350	555	2325	657	511	2581	439
Grp Volume(v), veh/h	120	348	347	243	663	0	76	555	543	88	506	506
Grp Sat Flow(s),veh/h/ln	769	1509	1500	1513	1509	1350	555	1509	1472	511	1509	1511
Q Serve(g_s), s	17.4	26.8	26.9	10.4	20.7	0.0	15.5	41.3	41.4	20.1	27.9	28.0
Cycle Q Clear(g_c), s	22.1	26.8	26.9	10.4	20.7	0.0	43.4	41.3	41.4	61.5	27.9	28.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.45	1.00		0.29
Lane Grp Cap(c), veh/h	226	385	382	201	1172	524	230	814	794	159	814	815
V/C Ratio(X)	0.53	0.90	0.91	1.21	0.57	0.00	0.33	0.68	0.68	0.55	0.62	0.62
Avail Cap(c_a), veh/h	226	385	382	201	1172	524	230	814	794	159	814	815
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	43.3	43.5	36.7	28.8	0.0	53.7	39.7	39.7	47.0	19.2	19.3
Incr Delay (d2), s/veh	7.3	23.7	24.4	130.3	2.0	0.0	3.8	4.6	4.7	13.1	3.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	13.6	13.8	12.2	8.9	0.0	2.6	18.4	18.0	3.4	12.3	12.4
LnGrp Delay(d),s/veh	50.9	67.0	67.9	166.9	30.8	0.0	57.6	44.3	44.5	60.1	22.7	22.8
LnGrp LOS	D	E	E	F	C		E	D	D	E	C	C
Approach Vol, veh/h		815			906			1174			1100	
Approach Delay, s/veh		65.0			67.3			45.3			25.8	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		63.5		22.7		45.4	12.4	28.9
Green Ext Time (p_c), s		0.2		7.9		11.7	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	48.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	749	87	197	720	88	97	379	130	78	337	74
Future Volume (veh/h)	81	749	87	197	720	88	97	379	130	78	337	74
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	85	788	92	207	758	93	102	399	137	82	355	78
Adj No. of Lanes	1	2	0	1	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	313	987	115	318	980	120	214	424	146	119	475	104
Arrive On Green	0.10	0.35	0.35	0.11	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2850	333	1587	2832	347	998	1182	406	908	1324	291
Grp Volume(v), veh/h	85	438	442	207	424	427	102	0	536	82	0	433
Grp Sat Flow(s),veh/h/ln	1587	1583	1599	1587	1583	1596	998	0	1588	908	0	1615
Q Serve(g_s), s	2.6	20.0	20.0	6.6	19.1	19.1	8.0	0.0	26.1	2.6	0.0	18.8
Cycle Q Clear(g_c), s	2.6	20.0	20.0	6.6	19.1	19.1	26.8	0.0	26.1	28.7	0.0	18.8
Prop In Lane	1.00		0.21	1.00		0.22	1.00		0.26	1.00		0.18
Lane Grp Cap(c), veh/h	313	548	554	318	548	553	214	0	570	119	0	579
V/C Ratio(X)	0.27	0.80	0.80	0.65	0.77	0.77	0.48	0.00	0.94	0.69	0.00	0.75
Avail Cap(c_a), veh/h	313	548	554	318	548	553	214	0	570	119	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.2	23.6	23.6	17.7	23.3	23.3	34.2	0.0	24.8	39.5	0.0	22.5
Incr Delay (d2), s/veh	2.1	11.5	11.5	9.9	10.2	10.1	7.5	0.0	25.6	27.8	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.4	10.5	3.7	9.9	10.0	2.6	0.0	15.4	2.7	0.0	9.7
LnGrp Delay(d),s/veh	18.3	35.2	35.1	27.6	33.5	33.5	41.7	0.0	50.4	67.4	0.0	31.0
LnGrp LOS	B	D	D	C	C	C	D		D	E		C
Approach Vol, veh/h		965			1058			638			515	
Approach Delay, s/veh		33.6			32.3			49.0			36.8	
Approach LOS		C			C			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	13.0	33.0		34.0	13.0	33.0		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 9	* 28		* 29	* 9	* 28		* 29
Max Q Clear Time (g_c+I1), s	4.6	21.1		30.7	8.6	22.0		28.8
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0	4.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	875	108	109	812	86	89	323	162	81	300	157
Future Volume (veh/h)	96	875	108	109	812	86	89	323	162	81	300	157
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	101	921	114	115	855	91	94	340	171	85	316	165
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1064	132	162	1083	115	350	1160	671	446	489	255
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.16	0.16	0.16	0.47	0.47	0.46
Sat Flow, veh/h	619	2837	351	570	2888	307	955	2451	1417	929	1032	539
Grp Volume(v), veh/h	101	514	521	115	469	477	94	340	171	85	0	481
Grp Sat Flow(s),veh/h/ln	619	1583	1605	570	1583	1612	955	2451	1417	929	0	1572
Q Serve(g_s), s	5.9	18.0	18.0	4.5	16.6	16.6	5.6	7.4	6.4	3.9	0.0	14.0
Cycle Q Clear(g_c), s	22.5	18.0	18.0	22.5	16.6	16.6	19.6	7.4	6.4	11.3	0.0	14.0
Prop In Lane	1.00		0.22	1.00		0.19	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	181	594	602	162	594	605	350	1160	671	446	0	744
V/C Ratio(X)	0.56	0.87	0.87	0.71	0.79	0.79	0.27	0.29	0.26	0.19	0.00	0.65
Avail Cap(c_a), veh/h	181	594	602	162	594	605	350	1160	671	446	0	744
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.68	0.68	0.68	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	17.4	17.4	32.9	20.2	20.3	28.3	16.4	16.0	13.9	0.0	12.1
Incr Delay (d2), s/veh	11.9	15.5	15.4	15.7	6.9	6.8	1.3	0.4	0.6	0.9	0.0	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	2.3	10.4	10.5	2.6	8.3	8.5	1.6	5.1	2.6	1.1	0.0	6.9
LnGrp Delay(d),s/veh	40.1	32.9	32.8	48.6	27.2	27.1	29.5	16.9	16.6	14.9	0.0	16.4
LnGrp LOS	D	C	C	D	C	C	C	B	B	B		B
Approach Vol, veh/h		1136			1061			605			566	
Approach Delay, s/veh		33.5			29.4			18.8			16.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		16.0		24.5		21.6
Green Ext Time (p_c), s		0.0		4.6		0.0		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

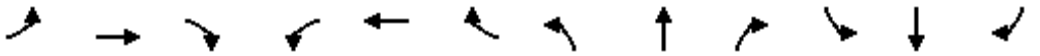
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	900	175	96	886	117	129	454	169	188	495	124
Future Volume (veh/h)	65	900	175	96	886	117	129	454	169	188	495	124
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	68	947	184	101	933	123	136	478	178	198	521	131
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	142	1465	655	272	1301	172	352	1470	658	360	1470	658
Arrive On Green	0.93	0.93	0.93	0.15	0.15	0.15	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	558	3167	1417	520	2814	371	815	3167	1417	812	3167	1417
Grp Volume(v), veh/h	68	947	184	101	525	531	136	478	178	198	521	131
Grp Sat Flow(s),veh/h/ln	558	1583	1417	520	1583	1601	815	1583	1417	812	1583	1417
Q Serve(g_s), s	13.6	6.7	1.6	21.6	37.9	37.9	15.4	11.4	9.2	24.4	12.7	6.6
Cycle Q Clear(g_c), s	51.5	6.7	1.6	28.3	37.9	37.9	28.1	11.4	9.2	35.8	12.7	6.6
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	1465	655	272	732	741	352	1470	658	360	1470	658
V/C Ratio(X)	0.48	0.65	0.28	0.37	0.72	0.72	0.39	0.33	0.27	0.55	0.35	0.20
Avail Cap(c_a), veh/h	142	1465	655	272	732	741	352	1470	658	360	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	2.7	2.5	42.4	43.4	43.4	29.6	20.3	19.7	31.6	20.6	19.0
Incr Delay (d2), s/veh	9.8	1.9	0.9	0.8	1.2	1.2	3.2	0.6	1.0	6.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.8	0.7	3.2	16.9	17.1	3.8	5.1	3.8	6.0	5.6	2.7
LnGrp Delay(d),s/veh	31.8	4.6	3.4	43.2	44.6	44.6	32.8	20.9	20.7	37.6	21.3	19.7
LnGrp LOS	C	A	A	D	D	D	C	C	C	D	C	B
Approach Vol, veh/h		1199			1157			792			850	
Approach Delay, s/veh		6.0			44.5			22.9			24.8	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		39.9		37.8		53.5		30.1
Green Ext Time (p_c), s		10.0		8.3		0.1		10.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

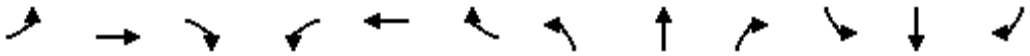
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	1040	52	156	940	83	169	63	234	131	86	38
Future Volume (vph)	18	1040	52	156	940	83	169	63	234	131	86	38
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (prot)	1509	3018	1350	1509	2981		1433	1475	1350		1720	
Flt Permitted	0.25	1.00	1.00	0.17	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (perm)	399	3018	1350	265	2981		1433	1475	1350		1720	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	1095	55	164	989	87	178	66	246	138	91	40
RTOR Reduction (vph)	0	0	25	0	5	0	0	0	78	0	5	0
Lane Group Flow (vph)	19	1095	30	164	1071	0	121	123	168	0	264	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	66.2	66.2	66.2	77.2	77.2		14.8	14.8	21.8		14.0	
Effective Green, g (s)	66.2	66.2	66.2	76.2	77.2		14.3	14.3	19.8		13.5	
Actuated g/C Ratio	0.55	0.55	0.55	0.64	0.64		0.12	0.12	0.17		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	220	1664	744	230	1917		170	175	222		193	
v/s Ratio Prot		0.36		0.04	c0.36		0.08	0.08	c0.04		c0.15	
v/s Ratio Perm	0.05		0.02	c0.42					0.09			
v/c Ratio	0.09	0.66	0.04	0.71	0.56		0.71	0.70	0.76		1.37	
Uniform Delay, d1	12.7	18.9	12.3	13.4	11.9		50.9	50.8	47.8		53.2	
Progression Factor	1.00	1.00	1.00	1.85	1.53		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.8	2.1	0.1	5.0	0.6		13.2	12.1	13.8		194.3	
Delay (s)	13.4	21.0	12.4	29.7	18.8		64.0	62.9	61.6		247.5	
Level of Service	B	C	B	C	B		E	E	E		F	
Approach Delay (s)		20.5			20.2			62.5			247.5	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1312	111	160	1080	25	230	41	351	26	17	15
Future Volume (vph)	9	1312	111	160	1080	25	230	41	351	26	17	15
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1287	1282	1509	1476	
Flt Permitted	0.25	1.00	1.00	0.12	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	397	3018	1350	189	3018	1350	1433	1287	1282	1509	1476	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	1381	117	168	1137	26	242	43	369	27	18	16
RTOR Reduction (vph)	0	0	43	0	0	7	0	69	185	0	15	0
Lane Group Flow (vph)	9	1381	74	168	1137	19	218	153	29	27	19	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	74.6	74.6	74.6	87.6	87.6	87.6	9.0	9.0	18.0	9.4	9.4	
Effective Green, g (s)	74.6	74.6	74.6	86.6	87.6	87.6	9.0	9.0	16.0	8.4	8.4	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.73	0.73	0.08	0.08	0.13	0.07	0.07	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	246	1876	839	224	2203	985	107	96	170	105	103	
v/s Ratio Prot		0.46		c0.05	0.38		c0.15	0.12	0.01	c0.02	0.01	
v/s Ratio Perm	0.02		0.05	c0.49		0.01			0.01			
v/c Ratio	0.04	0.74	0.09	0.75	0.52	0.02	2.04	1.59	0.17	0.26	0.19	
Uniform Delay, d1	8.8	15.8	9.1	13.8	7.0	4.4	55.5	55.5	46.1	52.8	52.6	
Progression Factor	0.90	0.68	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	2.4	0.2	11.8	0.9	0.0	497.8	308.9	0.2	1.3	0.9	
Delay (s)	8.1	13.1	8.6	25.6	7.9	4.5	553.3	364.4	46.3	54.1	53.5	
Level of Service	A	B	A	C	A	A	F	F	D	D	D	
Approach Delay (s)		12.7			10.1			323.3			53.8	
Approach LOS		B			B			F			D	

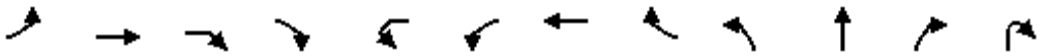
Intersection Summary			
HCM 2000 Control Delay	69.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	708	138	53	22	298	11	0	1225	611	56	1073	8
Future Volume (vph)	708	138	53	22	298	11	0	1225	611	56	1073	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		0.99			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2924			3018	1350	1509	3014	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2924			3018	1350	153	3014	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	745	145	56	23	314	12	0	1289	643	59	1129	8
RTOR Reduction (vph)	0	0	41	0	57	0	0	0	0	0	1	0
Lane Group Flow (vph)	745	145	15	0	292	0	0	1289	643	59	1136	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	26.1	26.1	26.1		14.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	26.1	26.1	26.1		14.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.15			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	804	370	370		446			1315	588	66	1313	
v/s Ratio Prot	c0.25	0.11	0.01		c0.10			0.43			0.38	
v/s Ratio Perm									c0.48	0.38		
v/c Ratio	0.93	0.39	0.04		0.66			0.98	1.09	0.89	0.87	
Uniform Delay, d1	33.5	28.0	25.3		37.9			26.4	26.8	24.8	24.3	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.2	0.3	0.0		3.5			20.5	65.2	83.6	7.8	
Delay (s)	49.7	28.3	25.3		41.3			46.9	92.0	108.3	32.1	
Level of Service	D	C	C		D			D	F	F	C	
Approach Delay (s)	45.0				41.3			61.9			35.9	
Approach LOS	D				D			E			D	

Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

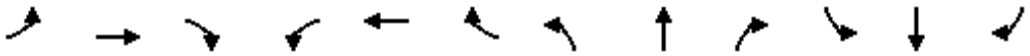


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	83	834	353	131	8	135	945	67	34	294	100	72
Future Volume (vph)	83	834	353	131	8	135	945	67	34	294	100	72
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (prot)	1509	3018	1350	1331		1509	2983			1580	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (perm)	1509	3018	1350	1331		1509	2983			1580	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	878	372	138	8	142	995	71	36	309	105	76
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	112	0
Lane Group Flow (vph)	87	878	372	138	0	150	1063	0	0	345	69	0
Confl. Bikes (#/hr)				8				5			1	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	12.4	54.1	54.1	158.9		17.4	59.1			29.8	29.8	
Effective Green, g (s)	12.4	54.1	54.1	158.9		17.4	59.1			29.8	29.8	
Actuated g/C Ratio	0.08	0.34	0.34	1.00		0.11	0.37			0.19	0.19	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	117	1027	459	1331		165	1109			296	253	
v/s Ratio Prot	0.06	c0.29				0.10	c0.36			c0.22	0.05	
v/s Ratio Perm			0.28	c0.10								
v/c Ratio	0.74	0.85	0.81	0.10		0.91	0.96			1.17	0.27	
Uniform Delay, d1	71.7	48.7	47.7	0.0		70.0	48.7			64.5	55.3	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	19.8	7.3	10.7	0.2		43.4	17.8			104.9	0.2	
Delay (s)	91.5	56.0	58.4	0.2		113.4	66.5			169.4	55.5	
Level of Service	F	E	E	A		F	E			F	E	
Approach Delay (s)		53.5					72.3			130.2		
Approach LOS		D					E			F		

Intersection Summary			
HCM 2000 Control Delay	78.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	158.9	Sum of lost time (s)	23.9
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	64	139	361	120	46
Future Volume (vph)	64	139	361	120	46
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	0.99	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2964	1333	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2964	1333	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	146	380	126	48
RTOR Reduction (vph)	0	0	0	0	47
Lane Group Flow (vph)	0	0	593	126	1
Confl. Bikes (#/hr)				3	
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.8	158.9	3.9
Effective Green, g (s)			29.8	158.9	3.9
Actuated g/C Ratio			0.19	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			555	1333	33
v/s Ratio Prot			c0.20		0.00
v/s Ratio Perm				0.09	
v/c Ratio			1.07	0.09	0.04
Uniform Delay, d1			64.5	0.0	75.7
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			57.8	0.1	0.2
Delay (s)			122.3	0.1	75.8
Level of Service			F	A	E
Approach Delay (s)			100.9		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1070	27	19	1036	1	188	1	33	0	0	2
Future Volume (vph)	24	1070	27	19	1036	1	188	1	33	0	0	2
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.95			0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.97			1.00	
Satd. Flow (prot)	1509	3007		1509	3017		1433	1392			0	
Flt Permitted	0.21	1.00		0.20	1.00		0.95	0.97			1.00	
Satd. Flow (perm)	340	3007		312	3017		1433	1392			0	
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	25	1163	29	21	1126	1	204	1	36	0	0	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	2	0
Lane Group Flow (vph)	25	1191	0	21	1127	0	122	104	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	75.9	75.9		75.9	75.9		13.8	13.8			0.0	
Effective Green, g (s)	75.9	75.9		75.9	75.9		13.8	13.8			0.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.13	0.13			0.00	
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	234	2074		215	2081		179	174			0	
v/s Ratio Prot		c0.40			0.37							
v/s Ratio Perm	0.07			0.07			c0.09	0.07				
v/c Ratio	0.11	0.57		0.10	0.54		0.68	0.60			0.00	
Uniform Delay, d1	5.7	8.8		5.7	8.4		46.0	45.5			55.0	
Progression Factor	1.00	1.00		1.40	1.49		1.00	1.00			1.00	
Incremental Delay, d2	0.9	1.2		0.8	0.9		10.2	5.4			0.0	
Delay (s)	6.6	9.9		8.7	13.5		56.2	50.9			55.0	
Level of Service	A	A		A	B		E	D			D	
Approach Delay (s)		9.9			13.4			53.6			55.0	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	1075	14	61	1050	0	47
Future Vol, veh/h	1075	14	61	1050	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1132	15	64	1105	0	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1146	0	1820	573
Stage 1	-	-	-	-	1139	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	605	-	69	463
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	605	-	62	463
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	415	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	463	-	-	605	-
HCM Lane V/C Ratio	0.107	-	-	0.106	-
HCM Control Delay (s)	13.7	-	-	11.7	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	943	36	176	997	33	74	107	267	143	140	18
Future Volume (veh/h)	62	943	36	176	997	33	74	107	267	143	140	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	65	993	38	185	1049	35	78	113	281	151	147	19
Adj No. of Lanes	1	2	0	1	2	0	0	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	288	1580	60	329	1690	56	80	85	185	157	372	48
Arrive On Green	0.03	0.53	0.53	0.07	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2964	113	1513	2980	99	154	313	687	986	1379	178
Grp Volume(v), veh/h	65	506	525	185	531	553	472	0	0	151	0	166
Grp Sat Flow(s),veh/h/ln	1513	1509	1568	1513	1509	1571	1154	0	0	986	0	1557
Q Serve(g_s), s	2.2	25.9	25.9	6.0	25.9	25.9	20.1	0.0	0.0	0.0	0.0	9.6
Cycle Q Clear(g_c), s	2.2	25.9	25.9	6.0	25.9	25.9	29.7	0.0	0.0	29.7	0.0	9.6
Prop In Lane	1.00		0.07	1.00		0.06	0.17		0.60	1.00		0.11
Lane Grp Cap(c), veh/h	288	804	836	329	856	891	350	0	0	157	0	420
V/C Ratio(X)	0.23	0.63	0.63	0.56	0.62	0.62	1.35	0.00	0.00	0.96	0.00	0.39
Avail Cap(c_a), veh/h	407	804	836	397	856	891	350	0	0	157	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.64	0.64	0.64	0.75	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	18.0	18.0	14.7	15.9	15.9	43.1	0.0	0.0	46.0	0.0	32.8
Incr Delay (d2), s/veh	0.1	3.7	3.6	0.4	2.2	2.1	171.1	0.0	0.0	60.4	0.0	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	0.9	11.5	11.9	2.5	11.3	11.7	27.2	0.0	0.0	7.2	0.0	4.2
LnGrp Delay(d),s/veh	13.7	21.7	21.6	15.0	18.1	18.0	214.2	0.0	0.0	106.4	0.0	33.4
LnGrp LOS	B	C	C	B	B	B	F			F		C
Approach Vol, veh/h		1096			1269			472			317	
Approach Delay, s/veh		21.2			17.6			214.2			68.2	
Approach LOS		C			B			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	12.1	63.9		34.0	8.3	67.7		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	8.0	27.9		31.7	4.2	27.9		31.7
Green Ext Time (p_c), s	0.1	20.7		0.0	0.0	20.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

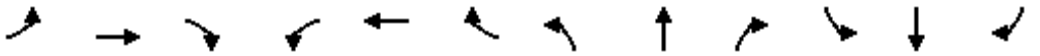
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1245	52	161	1015	73	114	636	242	78	426	68
Future Volume (veh/h)	99	1245	52	161	1015	73	114	636	242	78	426	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	104	1311	55	169	1068	77	120	669	255	82	448	72
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	1675	70	381	1676	121	130	705	308	75	608	97
Arrive On Green	0.09	1.00	1.00	0.06	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2948	124	1513	2852	206	878	3018	1317	603	2601	415
Grp Volume(v), veh/h	104	670	696	169	565	580	120	669	255	82	259	261
Grp Sat Flow(s),veh/h/ln	1513	1509	1562	1513	1509	1548	878	1509	1317	603	1509	1508
Q Serve(g_s), s	3.2	0.0	0.0	5.2	27.1	27.2	8.0	24.0	20.2	1.7	17.4	17.7
Cycle Q Clear(g_c), s	3.2	0.0	0.0	5.2	27.1	27.2	25.7	24.0	20.2	25.7	17.4	17.7
Prop In Lane	1.00		0.08	1.00		0.13	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	301	857	888	381	887	910	130	705	308	75	353	352
V/C Ratio(X)	0.34	0.78	0.78	0.44	0.64	0.64	0.93	0.95	0.83	1.10	0.73	0.74
Avail Cap(c_a), veh/h	383	857	888	433	887	910	130	705	308	75	353	352
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)	0.75	0.75	0.75	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	0.0	8.7	14.9	14.9	52.9	41.5	40.1	54.9	39.0	39.1
Incr Delay (d2), s/veh	0.2	5.3	5.2	0.3	3.5	3.4	56.9	22.1	17.4	133.3	8.3	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.3	1.3	2.1	12.0	12.5	5.7	12.2	8.9	5.0	8.1	8.2
LnGrp Delay(d),s/veh	12.0	5.3	5.2	9.0	18.4	18.3	109.8	63.6	57.4	188.7	47.3	47.8
LnGrp LOS	B	A	A	A	B	B	F	E	E	F	D	D
Approach Vol, veh/h		1470			1314			1044			602	
Approach Delay, s/veh		5.7			17.2			67.4			66.8	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	67.8		31.0	9.0	70.0		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 59		* 26	* 11	* 59		* 26
Max Q Clear Time (g_c+I1), s	7.2	2.0		27.7	5.2	29.2		27.7
Green Ext Time (p_c), s	0.1	45.3		0.0	0.0	26.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	532	1010	81	145	624	14	154	808	135	2	666	459
Future Volume (vph)	532	1010	81	145	624	14	154	808	135	2	666	459
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3008		2927	2953			3017	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3008		2927	2953			2876	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	560	1063	85	153	657	15	162	851	142	2	701	483
RTOR Reduction (vph)	0	0	53	0	1	0	0	12	0	0	0	308
Lane Group Flow (vph)	560	1063	32	153	671	0	162	981	0	0	703	175
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2							4		4
Actuated Green, G (s)	21.8	41.2	41.2	9.2	29.6		6.0	44.6			34.6	34.6
Effective Green, g (s)	21.8	41.7	41.2	9.2	30.1		7.0	45.6			35.6	35.6
Actuated g/C Ratio	0.20	0.38	0.37	0.08	0.27		0.06	0.41			0.32	0.32
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	580	1144	505	244	823		186	1224			930	436
v/s Ratio Prot	0.19	c0.35		0.05	c0.22		c0.06	c0.33				
v/s Ratio Perm			0.02								0.24	0.13
v/c Ratio	0.97	0.93	0.06	0.63	0.81		0.87	0.80			0.76	0.40
Uniform Delay, d1	43.7	32.7	22.0	48.7	37.3		51.1	28.2			33.3	28.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	28.5	13.4	0.1	3.6	7.0		32.2	5.6			5.7	2.7
Delay (s)	72.2	46.1	22.1	52.3	44.4		83.2	33.8			39.0	31.6
Level of Service	E	D	C	D	D		F	C			D	C
Approach Delay (s)		53.5			45.8			40.8			36.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	21.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	29	527	6	0	50	78	236	0	5	11	45
Future Vol, veh/h	0	29	527	6	0	50	78	236	0	5	11	45
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	573	7	0	54	85	257	0	5	12	49
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	32.1	10.6	10.1
HCM LOS	D	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	5%	39%	0%	75%
Vol Thru, %	18%	94%	61%	0%	4%
Vol Right, %	74%	1%	0%	100%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	562	128	236	102
LT Vol	5	29	50	0	76
Through Vol	11	527	78	0	4
RT Vol	45	6	0	236	22
Lane Flow Rate	66	611	139	257	111
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.114	0.867	0.231	0.36	0.2
Departure Headway (Hd)	6.187	5.11	5.967	5.059	6.489
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	577	709	601	711	552
Service Time	4.25	3.142	3.707	2.798	4.545
HCM Lane V/C Ratio	0.114	0.862	0.231	0.361	0.201
HCM Control Delay	10.1	32.1	10.5	10.6	11.2
HCM Lane LOS	B	D	B	B	B
HCM 95th-tile Q	0.4	10.4	0.9	1.6	0.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	76	4	22
Future Vol, veh/h	0	76	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	83	4	24
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.2
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	28	609	325	42	43	34
Future Vol, veh/h	28	609	325	42	43	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	641	342	44	45	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	386	0	-	0	1064	364
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1172	-	-	-	247	681
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	493	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1172	-	-	-	238	681
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	474	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1172	-	-	-	334
HCM Lane V/C Ratio	0.025	-	-	-	0.243
HCM Control Delay (s)	8.2	0	-	-	19.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	497	120	206	275	112	69	328	265	101	272	26
Future Volume (veh/h)	62	497	120	206	275	112	69	328	265	101	272	26
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	65	523	126	217	289	118	73	345	279	106	286	27
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	613	143	278	868	738	268	542	461	207	488	46
Arrive On Green	0.55	0.55	0.55	0.91	0.91	0.91	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	97	1122	261	779	1588	1350	1062	1588	1350	797	1429	135
Grp Volume(v), veh/h	714	0	0	217	289	118	73	345	279	106	0	313
Grp Sat Flow(s),veh/h/ln	1481	0	0	779	1588	1350	1062	1588	1350	797	0	1564
Q Serve(g_s), s	24.0	0.0	0.0	11.9	2.1	0.8	5.5	16.4	15.4	11.6	0.0	14.8
Cycle Q Clear(g_c), s	37.3	0.0	0.0	49.2	2.1	0.8	20.3	16.4	15.4	28.1	0.0	14.8
Prop In Lane	0.09		0.18	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	861	0	0	278	868	738	268	542	461	207	0	534
V/C Ratio(X)	0.83	0.00	0.00	0.78	0.33	0.16	0.27	0.64	0.61	0.51	0.00	0.59
Avail Cap(c_a), veh/h	861	0	0	278	868	738	273	551	468	211	0	542
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	0.00	0.00	0.82	0.82	0.82	1.00	1.00	1.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	17.5	0.0	0.0	12.3	1.9	1.8	32.8	24.9	24.6	36.7	0.0	24.4
Incr Delay (d2), s/veh	9.1	0.0	0.0	16.2	0.8	0.4	0.5	2.4	2.2	1.7	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	0.0	0.0	6.6	1.0	0.3	1.6	7.5	6.0	2.7	0.0	6.5
LnGrp Delay(d),s/veh	26.6	0.0	0.0	28.4	2.7	2.2	33.3	27.3	26.8	38.4	0.0	25.7
LnGrp LOS	C			C	A	A	C	C	C	D		C
Approach Vol, veh/h		714			624			697			419	
Approach Delay, s/veh		26.6			11.6			27.7			28.9	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.5		35.5		54.5		35.5
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		51.2		22.3		39.3		30.1
Green Ext Time (p_c), s		0.0		3.7		6.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	587	110	149	474	227	94	684	139	111	563	45
Future Volume (veh/h)	100	587	110	149	474	227	94	684	139	111	563	45
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	105	618	116	157	499	239	99	720	146	117	593	47
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	306	1345	252	462	842	716	232	881	179	137	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	717	2538	475	720	1588	1350	786	2501	507	636	3018	1350
Grp Volume(v), veh/h	105	367	367	157	499	239	99	434	432	117	593	47
Grp Sat Flow(s),veh/h/ln	717	1509	1504	720	1588	1350	786	1509	1499	636	1509	1350
Q Serve(g_s), s	7.4	0.0	0.0	11.8	19.4	9.1	10.5	23.6	23.6	8.1	14.3	2.1
Cycle Q Clear(g_c), s	26.8	0.0	0.0	11.8	19.4	9.1	24.7	23.6	23.6	31.7	14.3	2.1
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	306	800	797	462	842	716	232	531	528	137	1063	476
V/C Ratio(X)	0.34	0.46	0.46	0.34	0.59	0.33	0.43	0.82	0.82	0.85	0.56	0.10
Avail Cap(c_a), veh/h	306	800	797	462	842	716	232	531	528	137	1063	476
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)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	5.4	0.0	0.0	12.7	14.5	12.1	33.5	26.5	26.5	43.0	23.5	19.6
Incr Delay (d2), s/veh	1.9	1.2	1.2	2.0	3.1	1.3	0.5	9.1	9.2	35.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.3	0.3	2.6	9.2	3.6	2.3	11.1	11.1	4.2	6.0	0.8
LnGrp Delay(d),s/veh	7.3	1.2	1.2	14.7	17.6	13.3	33.9	35.6	35.7	78.4	23.9	19.6
LnGrp LOS	A	A	A	B	B	B	C	D	D	E	C	B
Approach Vol, veh/h		839			895			965			757	
Approach Delay, s/veh		1.9			15.9			35.4			32.0	
Approach LOS		A			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		28.8		33.7		21.4		26.7
Green Ext Time (p_c), s		9.1		0.0		10.6		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	934	40	241	639	76	61	1015	278	59	743	111
Future Volume (veh/h)	156	934	40	241	639	76	61	1015	278	59	743	111
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	164	983	42	254	673	0	64	1068	293	62	782	117
Adj No. of Lanes	1	2	0	1	2	1	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	222	752	32	191	1172	524	272	1265	344	106	1420	212
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.36	0.36	0.36	0.54	0.54	0.53
Sat Flow, veh/h	762	2949	126	1513	3018	1350	617	2346	639	398	2634	394
Grp Volume(v), veh/h	164	503	522	254	673	0	64	684	677	62	448	451
Grp Sat Flow(s),veh/h/ln	762	1509	1566	1513	1509	1350	617	1509	1476	398	1509	1519
Q Serve(g_s), s	25.5	30.6	30.6	10.4	21.1	0.0	10.3	49.9	50.8	13.9	23.4	23.4
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	21.1	0.0	33.7	49.9	50.8	64.7	23.4	23.4
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.43	1.00		0.26
Lane Grp Cap(c), veh/h	222	385	399	191	1172	524	272	814	796	106	814	819
V/C Ratio(X)	0.74	1.31	1.31	1.33	0.57	0.00	0.24	0.84	0.85	0.58	0.55	0.55
Avail Cap(c_a), veh/h	222	385	399	191	1172	524	272	814	796	106	814	819
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	44.7	44.7	35.4	28.9	0.0	38.1	33.6	33.9	54.8	18.1	18.2
Incr Delay (d2), s/veh	16.7	153.3	152.8	179.5	2.1	0.0	2.0	10.2	11.1	21.3	2.7	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	6.5	29.1	30.1	14.2	9.1	0.0	1.9	23.1	23.1	2.7	10.3	10.4
LnGrp Delay(d),s/veh	64.1	198.0	197.5	215.0	30.9	0.0	40.1	43.9	44.9	76.1	20.8	20.9
LnGrp LOS	E	F	F	F	C		D	D	D	E	C	C
Approach Vol, veh/h		1189			927			1425			961	
Approach Delay, s/veh		179.3			81.4			44.2			24.4	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		23.1		52.8	12.4	32.6
Green Ext Time (p_c), s		0.0		10.4		8.3	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		83.3
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

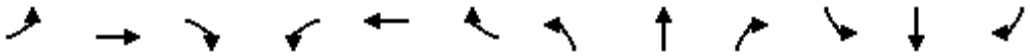
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	924	90	169	839	108	126	387	125	85	350	44
Future Volume (veh/h)	158	924	90	169	839	108	126	387	125	85	350	44
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	166	973	95	178	883	114	133	407	132	89	368	46
Adj No. of Lanes	1	2	0	1	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	268	992	97	267	960	124	244	450	146	129	543	68
Arrive On Green	0.11	0.34	0.34	0.04	0.11	0.11	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2908	284	1587	2813	363	1016	1201	389	905	1450	181
Grp Volume(v), veh/h	166	530	538	178	497	500	133	0	539	89	0	414
Grp Sat Flow(s),veh/h/ln	1587	1583	1609	1587	1583	1593	1016	0	1590	905	0	1632
Q Serve(g_s), s	5.9	29.8	29.8	6.2	28.0	28.0	11.4	0.0	28.9	4.8	0.0	19.1
Cycle Q Clear(g_c), s	5.9	29.8	29.8	6.2	28.0	28.0	30.5	0.0	28.9	33.7	0.0	19.1
Prop In Lane	1.00		0.18	1.00		0.23	1.00		0.24	1.00		0.11
Lane Grp Cap(c), veh/h	268	540	549	267	540	544	244	0	595	129	0	611
V/C Ratio(X)	0.62	0.98	0.98	0.67	0.92	0.92	0.54	0.00	0.91	0.69	0.00	0.68
Avail Cap(c_a), veh/h	268	540	549	267	540	544	244	0	595	129	0	611
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	29.4	29.4	22.1	38.7	38.7	36.4	0.0	26.6	43.7	0.0	23.6
Incr Delay (d2), s/veh	10.3	34.3	34.0	12.4	23.3	23.2	8.5	0.0	19.7	26.4	0.0	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	3.3	18.1	18.3	3.6	15.8	15.9	3.8	0.0	15.8	3.1	0.0	9.6
LnGrp Delay(d),s/veh	30.9	63.6	63.4	34.4	62.0	61.9	44.8	0.0	46.4	70.1	0.0	29.5
LnGrp LOS	C	E	E	C	E	E	D		D	E		C
Approach Vol, veh/h		1234			1175			672			503	
Approach Delay, s/veh		59.1			57.8			46.1			36.7	
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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	7.9	30.0		35.7	8.2	31.8		32.5
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	53.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	924	90	169	839	108	126	387	125	85	350	44
Future Volume (vph)	158	924	90	169	839	108	126	387	125	85	350	44
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3118		1583	3105		1583	1599		1583	1636	
Flt Permitted	0.13	1.00		0.12	1.00		0.34	1.00		0.21	1.00	
Satd. Flow (perm)	210	3118		206	3105		570	1599		342	1636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	166	973	95	178	883	114	133	407	132	89	368	46
RTOR Reduction (vph)	0	8	0	0	11	0	0	13	0	0	5	0
Lane Group Flow (vph)	166	1060	0	178	986	0	133	526	0	89	409	0
Confl. Bikes (#/hr)			3			1			8			3
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.5	32.7		41.9	32.9		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.5	32.7		40.9	32.9		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.36		0.45	0.37		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Vehicle Extension (s)	1.0	5.0		1.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	211	1132		223	1135		213	598		128	612	
v/s Ratio Prot	0.07	c0.34		c0.08	0.32			c0.33			0.25	
v/s Ratio Perm	0.28			0.29			0.23			0.26		
v/c Ratio	0.79	0.94		0.80	0.87		0.62	0.88		0.70	0.67	
Uniform Delay, d1	18.6	27.7		18.6	26.5		23.0	26.3		23.8	23.5	
Progression Factor	1.00	1.00		0.66	1.09		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.2	15.3		4.2	2.3		13.0	16.8		26.8	5.7	
Delay (s)	34.7	43.0		16.5	31.3		36.0	43.0		50.6	29.2	
Level of Service	C	D		B	C		D	D		D	C	
Approach Delay (s)		41.9			29.0			41.6			33.0	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	921	56	99	910	78	80	434	163	68	313	167
Future Volume (veh/h)	95	921	56	99	910	78	80	434	163	68	313	167
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	100	969	59	104	958	82	84	457	172	72	329	176
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	1137	69	167	1107	95	328	1160	671	501	484	259
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	567	3033	185	573	2953	253	934	2451	1417	833	1023	547
Grp Volume(v), veh/h	100	506	522	104	514	526	84	457	172	72	0	505
Grp Sat Flow(s),veh/h/ln	567	1583	1634	573	1583	1622	934	2451	1417	833	0	1570
Q Serve(g_s), s	3.9	17.6	17.6	4.9	18.6	18.6	3.6	1.0	0.5	3.1	0.0	15.0
Cycle Q Clear(g_c), s	22.5	17.6	17.6	22.5	18.6	18.6	18.7	1.0	0.5	4.0	0.0	15.0
Prop In Lane	1.00		0.11	1.00		0.16	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	157	594	613	167	594	608	328	1160	671	501	0	743
V/C Ratio(X)	0.64	0.85	0.85	0.62	0.87	0.87	0.26	0.39	0.26	0.14	0.00	0.68
Avail Cap(c_a), veh/h	157	594	613	167	594	608	328	1160	671	501	0	743
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.61	0.61	0.61	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	17.2	17.2	32.6	21.0	21.0	6.4	0.9	0.9	9.7	0.0	12.4
Incr Delay (d2), s/veh	18.3	14.4	14.0	11.0	10.8	10.6	1.1	0.6	0.6	0.6	0.0	5.0
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	10.0	10.2	2.2	9.9	10.1	1.0	0.7	0.3	0.8	0.0	7.5
LnGrp Delay(d),s/veh	47.6	31.6	31.2	43.6	31.8	31.6	7.6	1.5	1.4	10.3	0.0	17.3
LnGrp LOS	D	C	C	D	C	C	A	A	A	B		B
Approach Vol, veh/h		1128			1144			713			577	
Approach Delay, s/veh		32.8			32.8			2.2			16.4	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		17.0		24.5		20.7
Green Ext Time (p_c), s		0.0		4.8		0.0		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

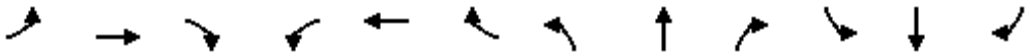
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1134	138	66	778	155	125	847	446	224	740	117
Future Volume (veh/h)	57	1134	138	66	778	155	125	847	446	224	740	117
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	60	1194	145	69	819	163	132	892	469	236	779	123
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	300	1465	655	208	1218	242	247	1470	658	166	1470	658
Arrive On Green	0.93	0.93	0.93	0.93	0.93	0.93	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	599	3167	1417	427	2633	524	646	3167	1417	418	3167	1417
Grp Volume(v), veh/h	60	1194	145	69	492	490	132	892	469	236	779	123
Grp Sat Flow(s),veh/h/ln	599	1583	1417	427	1583	1574	646	1583	1417	418	1583	1417
Q Serve(g_s), s	3.0	13.8	1.2	8.7	7.4	7.4	21.9	25.2	31.8	30.5	21.0	6.1
Cycle Q Clear(g_c), s	10.4	13.8	1.2	22.5	7.4	7.4	42.9	25.2	31.8	55.7	21.0	6.1
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	1465	655	208	732	728	247	1470	658	166	1470	658
V/C Ratio(X)	0.20	0.82	0.22	0.33	0.67	0.67	0.53	0.61	0.71	1.42	0.53	0.19
Avail Cap(c_a), veh/h	300	1465	655	208	732	728	247	1470	658	166	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	2.9	2.5	6.4	2.7	2.7	38.1	24.0	25.8	50.3	22.8	18.9
Incr Delay (d2), s/veh	1.3	4.5	0.7	0.8	1.0	1.0	8.1	1.9	6.5	220.6	1.4	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	5.9	0.5	1.0	2.9	2.9	4.4	11.4	13.6	15.7	9.4	2.5
LnGrp Delay(d),s/veh	5.0	7.4	3.1	7.2	3.7	3.7	46.2	25.9	32.2	270.8	24.2	19.5
LnGrp LOS	A	A	A	A	A	A	D	C	C	F	C	B
Approach Vol, veh/h		1399			1051			1493			1138	
Approach Delay, s/veh		6.9			3.9			29.7			74.8	
Approach LOS		A			A			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		24.5		57.7		15.8		44.9
Green Ext Time (p_c), s		17.4		0.0		20.1		8.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1104	90	112	787	59	101	502	45	79	499	48
Future Volume (vph)	148	1104	90	112	787	59	101	502	45	79	499	48
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1311	1509	4336	1318	1509	1588	1327	1509	1565	
Flt Permitted	0.30	1.00	1.00	0.17	1.00	1.00	0.25	1.00	1.00	0.30	1.00	
Satd. Flow (perm)	474	4336	1311	278	4336	1318	398	1588	1327	472	1565	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	1162	95	118	828	62	106	528	47	83	525	51
RTOR Reduction (vph)	0	0	56	0	0	37	0	0	21	0	6	0
Lane Group Flow (vph)	156	1162	39	118	828	25	106	528	26	83	570	0
Confl. Bikes (#/hr)			10			4			10			5
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	24.5	24.5	24.5	24.5	24.5	24.5	25.5	25.5	25.5	25.5	25.5	
Effective Green, g (s)	24.5	24.5	24.5	24.5	24.5	24.5	25.5	25.5	25.5	25.5	25.5	
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	193	1770	535	113	1770	538	169	674	563	200	665	
v/s Ratio Prot		0.27			0.19			0.33			c0.36	
v/s Ratio Perm	0.33		0.03	c0.42		0.02	0.27		0.02	0.18		
v/c Ratio	0.81	0.66	0.07	1.04	0.47	0.05	0.63	0.78	0.05	0.41	0.86	
Uniform Delay, d1	15.7	14.3	10.8	17.8	13.0	10.7	13.5	14.9	10.1	12.0	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.29	
Incremental Delay, d2	29.3	1.9	0.3	97.0	0.9	0.2	7.1	5.9	0.0	1.2	9.1	
Delay (s)	45.0	16.3	11.1	114.8	13.9	10.9	20.6	20.8	10.2	17.2	29.1	
Level of Service	D	B	B	F	B	B	C	C	B	B	C	
Approach Delay (s)		19.1			25.5			20.0			27.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	12/7/2015
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	PM	Reviewed by:		Project:	Robertson Lane Hotel Project

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
No. of Phases			3			3			3				3				3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
	EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	
NORTHBOUND																		
Left	101	1	**101**	0	101	**101**	5	110	1	**110**	0	110	1	**110**	0	110	1	**110**
Left-Through		0							0				0				0	
Through	502	1	502	12	514	514	77	599	1	599	12	611	1	611	0	611	1	611
Through-Right		0							0				0				0	
Right	45	1	0	0	45	0	0	47	1	0	0	47	1	0	0	47	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	79	1	79	0	79	79	0	82	1	82	0	82	1	82	0	82	1	82
Left-Through		0							0				0				0	
Through	499	0	**547**	8	507	**555**	81	600	0	**650**	8	608	0	**658**	0	608	0	**658**
Through-Right		1							1				1				1	
Right	48	0	0	0	48	0	0	50	0	0	0	50	0	0	0	50	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	148	1	148	0	148	148	0	154	1	154	0	154	1	154	0	154	1	154
Left-Through		0							0				0				0	
Through	1104	3	**368**	0	1104	**368**	33	1182	3	**394**	0	1182	3	**394**	0	1182	3	**394**
Through-Right		0							0				0				0	
Right	90	1	40	0	90	40	8	102	1	47	0	102	1	47	0	102	1	47
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	112	1	**112**	0	112	**112**	0	117	1	**117**	0	117	1	**117**	0	117	1	**117**
Left-Through		0							0				0				0	
Through	787	3	262	0	787	262	49	868	3	289	0	868	3	289	0	868	3	289
Through-Right		0							0				0				0	
Right	59	1	20	0	59	20	0	61	1	20	0	61	1	20	0	61	1	20
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		648	*North-South:*		656	*North-South:*		760		*North-South:*		768		*North-South:*		768	
	East-West:		480	*East-West:*		480	*East-West:*		511		*East-West:*		511		*East-West:*		511	
	SUM:		1128	*SUM:*		1136	*SUM:*		1271		*SUM:*		1279		*SUM:*		1279	
VOLUME/CAPACITY *(V/C)* RATIO:			0.792			0.797			0.892				0.898				0.898	
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.692			0.697			0.792				0.798				0.798	
LEVEL OF SERVICE (LOS):			B			B			C				C				C	

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.005

Significant impacted? NO

PROPOSED PROJECT IMPACT

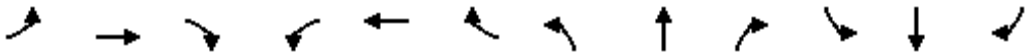
Change in *v/c* due to project: 0.006

Significant impacted? NO

Δ*v/c* after mitigation: 0.006

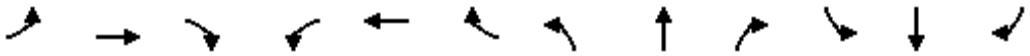
Fully mitigated? N/A

APPENDIX C
Intersection Level of Service Worksheets
Existing Plus Project Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	820	95	126	1487	87	165	86	108	86	49	15
Future Volume (vph)	23	820	95	126	1487	87	165	86	108	86	49	15
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (prot)	1509	3018	1350	1509	2993		1433	1485	1350		1726	
Flt Permitted	0.09	1.00	1.00	0.24	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (perm)	147	3018	1350	385	2993		1433	1485	1350		1726	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	863	100	133	1565	92	174	91	114	91	52	16
RTOR Reduction (vph)	0	0	41	0	3	0	0	0	95	0	4	0
Lane Group Flow (vph)	24	863	59	133	1654	0	130	135	19	0	155	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	65.9	65.9	65.9	76.9	76.9		15.4	15.4	22.4		13.7	
Effective Green, g (s)	65.9	65.9	65.9	75.9	76.9		14.9	14.9	20.4		13.2	
Actuated g/C Ratio	0.55	0.55	0.55	0.63	0.64		0.12	0.12	0.17		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	80	1657	741	299	1918		177	184	229		189	
v/s Ratio Prot		0.29		0.02	c0.55		0.09	c0.09	0.00		c0.09	
v/s Ratio Perm	0.16		0.04	0.26					0.01			
v/c Ratio	0.30	0.52	0.08	0.44	0.86		0.73	0.73	0.08		0.82	
Uniform Delay, d1	14.6	17.1	12.8	10.8	17.3		50.6	50.6	41.9		52.3	
Progression Factor	1.00	1.00	1.00	1.20	1.24		1.00	1.00	1.00		1.00	
Incremental Delay, d2	9.4	1.2	0.2	0.5	2.7		14.6	14.0	0.2		26.1	
Delay (s)	24.0	18.3	13.0	13.4	24.2		65.2	64.7	42.1		78.3	
Level of Service	C	B	B	B	C		E	E	D		E	
Approach Delay (s)		17.9			23.4			58.1			78.3	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	836	185	130	1553	19	189	16	198	32	40	24
Future Volume (vph)	9	836	185	130	1553	19	189	16	198	32	40	24
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1310	1282	1509	1499	
Flt Permitted	0.13	1.00	1.00	0.26	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	201	3018	1350	409	3018	1350	1433	1310	1282	1509	1499	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	880	195	137	1635	20	199	17	208	34	42	25
RTOR Reduction (vph)	0	0	74	0	0	5	0	31	117	0	19	0
Lane Group Flow (vph)	9	880	121	137	1635	15	147	111	18	34	48	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	74.2	74.2	74.2	87.2	87.2	87.2	9.0	9.0	18.0	9.8	9.8	
Effective Green, g (s)	74.2	74.2	74.2	86.2	87.2	87.2	9.0	9.0	16.0	8.8	8.8	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.73	0.73	0.08	0.08	0.13	0.07	0.07	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	124	1866	834	367	2193	981	107	98	170	110	109	
v/s Ratio Prot		0.29		0.02	c0.54		c0.10	0.08	0.01	0.02	c0.03	
v/s Ratio Perm	0.04		0.09	0.24		0.01			0.01			
v/c Ratio	0.07	0.47	0.14	0.37	0.75	0.01	1.37	1.13	0.11	0.31	0.44	
Uniform Delay, d1	9.2	12.3	9.6	6.7	9.8	4.5	55.5	55.5	45.7	52.7	53.2	
Progression Factor	0.69	1.14	2.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.7	0.3	0.2	2.4	0.0	216.3	129.6	0.1	1.6	2.8	
Delay (s)	7.3	14.9	25.9	6.9	12.1	4.6	271.8	185.1	45.8	54.3	56.0	
Level of Service	A	B	C	A	B	A	F	F	D	D	E	
Approach Delay (s)		16.8			11.7			170.8			55.4	
Approach LOS		B			B			F			E	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	688	127	23	50	307	3	0	927	526	59	1420	9
Future Volume (vph)	688	127	23	50	307	3	0	927	526	59	1420	9
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2932			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.17	1.00	
Satd. Flow (perm)	2927	1350	1350		2932			3018	1350	277	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	724	134	24	53	323	3	0	976	554	62	1495	9
RTOR Reduction (vph)	0	0	18	0	56	0	0	0	0	0	1	0
Lane Group Flow (vph)	724	134	6	0	323	0	0	976	554	62	1503	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.4	25.4	25.4		15.2			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.4	25.4	25.4		15.2			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	782	360	360		469			1315	588	120	1313	
v/s Ratio Prot	c0.25	0.10	0.00		c0.11			0.32			c0.50	
v/s Ratio Perm									0.41	0.22		
v/c Ratio	0.93	0.37	0.02		0.69			0.74	0.94	0.52	1.15	
Uniform Delay, d1	33.9	28.3	25.6		37.7			22.3	25.7	19.5	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.5	0.2	0.0		4.2			3.8	25.3	15.0	74.7	
Delay (s)	50.4	28.6	25.6		41.8			26.2	50.9	34.5	101.5	
Level of Service	D	C	C		D			C	D	C	F	
Approach Delay (s)	46.4				41.8			35.1			98.9	
Approach LOS	D				D			D			F	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

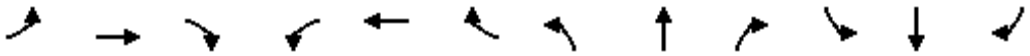
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	64	560	283	32	130	1458	51	38	283	62	28	32
Future Volume (vph)	64	560	283	32	130	1458	51	38	283	62	28	32
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0	4.0	5.3			5.3	5.3		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.95			1.00	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00			1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt	1.00	1.00	0.85	0.85	1.00	0.99			1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (prot)	1509	3018	1350	1333	1509	2998			1579	1350		
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (perm)	1509	3018	1350	1333	1509	2998			1579	1350		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	589	298	34	137	1535	54	40	298	65	29	34
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	75	0	0
Lane Group Flow (vph)	67	589	298	34	137	1588	0	0	338	19	0	0
Confl. Bikes (#/hr)				2			19			3		
Turn Type	Prot	NA	Perm	Free	Prot	NA		Split	NA	custom		Split
Protected Phases	5	2			1	6		4	4	4		3
Permitted Phases			2	Free						4		
Actuated Green, G (s)	9.2	41.2	41.2	148.8	28.4	60.4			30.1	30.1		
Effective Green, g (s)	9.2	41.2	41.2	148.8	28.4	60.4			30.1	30.1		
Actuated g/C Ratio	0.06	0.28	0.28	1.00	0.19	0.41			0.20	0.20		
Clearance Time (s)	4.0	5.3	5.3		4.0	5.3			5.3	5.3		
Vehicle Extension (s)	2.0	3.5	3.5		2.0	3.5			2.0	2.0		
Lane Grp Cap (vph)	93	835	373	1333	288	1216			319	273		
v/s Ratio Prot	0.04	0.20			0.09	c0.53			c0.21	0.01		
v/s Ratio Perm			c0.22	0.03								
v/c Ratio	0.72	0.71	0.80	0.03	0.48	1.31			1.06	0.07		
Uniform Delay, d1	68.5	48.3	50.0	0.0	53.6	44.2			59.4	48.0		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	20.6	2.8	11.7	0.0	0.5	143.6			67.0	0.0		
Delay (s)	89.1	51.2	61.6	0.0	54.0	187.8			126.3	48.1		
Level of Service	F	D	E	A	D	F			F	D		
Approach Delay (s)		55.1				177.2			109.3			
Approach LOS		E				F			F			

Intersection Summary			
HCM 2000 Control Delay	118.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	148.8	Sum of lost time (s)	23.9
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWR2
Lane Configurations				
Traffic Volume (vph)	90	224	120	25
Future Volume (vph)	90	224	120	25
Ideal Flow (vphpl)	1620	1620	1620	1620
Total Lost time (s)		5.3	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	0.85	0.86
Flt Protected		0.98	1.00	1.00
Satd. Flow (prot)		2965	1350	1374
Flt Permitted		0.98	1.00	1.00
Satd. Flow (perm)		2965	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	236	126	26
RTOR Reduction (vph)	0	0	0	26
Lane Group Flow (vph)	0	365	126	0
Confl. Bikes (#/hr)				
Turn Type	Split	NA	Free	Prot
Protected Phases	3	3		7
Permitted Phases			Free	
Actuated Green, G (s)		22.4	148.8	2.8
Effective Green, g (s)		22.4	148.8	2.8
Actuated g/C Ratio		0.15	1.00	0.02
Clearance Time (s)		5.3		4.0
Vehicle Extension (s)		2.0		2.0
Lane Grp Cap (vph)		446	1350	25
v/s Ratio Prot		c0.12		0.00
v/s Ratio Perm			c0.09	
v/c Ratio		0.82	0.09	0.02
Uniform Delay, d1		61.2	0.0	71.7
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		10.6	0.1	0.1
Delay (s)		71.8	0.1	71.8
Level of Service		E	A	E
Approach Delay (s)		53.4		
Approach LOS		D		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	647	15	10	1570	1	258	0	7	0	0	0
Future Volume (vph)	14	647	15	10	1570	1	258	0	7	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.99				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95				
Satd. Flow (prot)	1509	3008		1509	3017		1433	1429				
Flt Permitted	0.08	1.00		0.36	1.00		0.95	0.95				
Satd. Flow (perm)	132	3008		567	3017		1433	1429				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	15	703	16	11	1707	1	280	0	8	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	15	718	0	11	1708	0	146	83	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	74.3	74.3		74.3	74.3		15.4	15.4				
Effective Green, g (s)	74.3	74.3		74.3	74.3		15.4	15.4				
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.14	0.14				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	89	2031		382	2037		200	200				
v/s Ratio Prot		0.24			c0.57							
v/s Ratio Perm	0.11			0.02			c0.10	0.06				
v/c Ratio	0.17	0.35		0.03	0.84		0.73	0.41				
Uniform Delay, d1	6.5	7.6		5.9	13.4		45.3	43.2				
Progression Factor	1.00	1.00		0.27	0.27		1.00	1.00				
Incremental Delay, d2	4.1	0.5		0.1	1.7		12.5	1.4				
Delay (s)	10.6	8.1		1.7	5.3		57.8	44.6				
Level of Service	B	A		A	A		E	D				
Approach Delay (s)		8.1			5.3			51.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	636	34	51	1589	0	49
Future Vol, veh/h	636	34	51	1589	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	669	36	54	1673	0	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	705	0	-	353
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	889	-	0	643
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	889	-	-	643
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	643	-	-	889	-
HCM Lane V/C Ratio	0.08	-	-	0.06	-
HCM Control Delay (s)	11.1	-	-	9.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	605	39	152	1557	44	80	101	129	41	129	13
Future Volume (veh/h)	46	605	39	152	1557	44	80	101	129	41	129	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	48	637	41	160	1639	46	84	106	136	43	136	14
Adj No. of Lanes	1	2	0	1	2	0	0	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	125	1558	100	465	1713	48	110	119	134	186	382	39
Arrive On Green	0.03	0.54	0.54	0.06	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2879	185	1513	2998	84	254	441	498	1133	1417	146
Grp Volume(v), veh/h	48	334	344	160	823	862	326	0	0	43	0	150
Grp Sat Flow(s),veh/h/ln	1513	1509	1556	1513	1509	1573	1193	0	0	1133	0	1563
Q Serve(g_s), s	1.6	14.3	14.4	5.1	56.5	57.2	21.2	0.0	0.0	0.0	0.0	8.5
Cycle Q Clear(g_c), s	1.6	14.3	14.4	5.1	56.5	57.2	29.7	0.0	0.0	8.5	0.0	8.5
Prop In Lane	1.00		0.12	1.00		0.05	0.26		0.42	1.00		0.09
Lane Grp Cap(c), veh/h	125	817	842	465	862	899	363	0	0	186	0	422
V/C Ratio(X)	0.38	0.41	0.41	0.34	0.95	0.96	0.90	0.00	0.00	0.23	0.00	0.36
Avail Cap(c_a), veh/h	251	817	842	545	862	899	363	0	0	186	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)	1.00	1.00	1.00	0.28	0.28	0.28	0.84	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	14.9	14.9	10.9	22.2	22.4	41.6	0.0	0.0	32.4	0.0	32.4
Incr Delay (d2), s/veh	0.7	1.5	1.5	0.0	8.7	8.9	21.0	0.0	0.0	0.6	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	0.8	6.3	6.5	2.1	25.4	26.9	12.0	0.0	0.0	1.1	0.0	3.7
LnGrp Delay(d),s/veh	26.5	16.4	16.3	11.0	30.9	31.3	62.6	0.0	0.0	33.1	0.0	32.9
LnGrp LOS	C	B	B	B	C	C	E			C		C
Approach Vol, veh/h		726			1845			326			193	
Approach Delay, s/veh		17.0			29.3			62.6			33.0	
Approach LOS		B			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	11.2	64.8		34.0	7.8	68.2		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	7.1	16.4		10.5	3.6	59.2		31.7
Green Ext Time (p_c), s	0.1	31.4		2.2	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

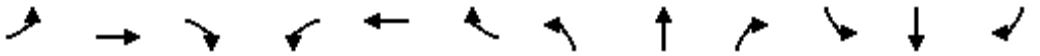
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	656	20	102	1494	101	48	423	61	43	451	85
Future Volume (veh/h)	72	656	20	102	1494	101	48	423	61	43	451	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	76	691	21	107	1573	106	51	445	64	45	475	89
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1758	53	556	1699	114	112	705	315	155	592	110
Arrive On Green	0.08	1.00	1.00	0.04	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2989	91	1513	2867	192	843	3018	1350	887	2534	472
Grp Volume(v), veh/h	76	349	363	107	823	856	51	445	64	45	282	282
Grp Sat Flow(s),veh/h/ln	1513	1509	1571	1513	1509	1550	843	1509	1350	887	1509	1497
Q Serve(g_s), s	2.2	0.0	0.0	3.1	53.8	55.3	6.1	14.6	4.2	5.3	19.3	19.6
Cycle Q Clear(g_c), s	2.2	0.0	0.0	3.1	53.8	55.3	25.7	14.6	4.2	19.9	19.3	19.6
Prop In Lane	1.00		0.06	1.00		0.12	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	154	887	924	556	894	919	112	705	315	155	353	350
V/C Ratio(X)	0.49	0.39	0.39	0.19	0.92	0.93	0.45	0.63	0.20	0.29	0.80	0.81
Avail Cap(c_a), veh/h	284	887	924	680	894	919	112	705	315	155	353	350
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)	0.92	0.92	0.92	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	0.0	8.3	20.1	20.4	52.2	37.9	33.9	46.8	39.7	39.8
Incr Delay (d2), s/veh	0.8	1.2	1.2	0.1	16.0	17.2	4.0	2.1	0.4	1.5	12.8	13.6
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	1.3	0.3	0.3	1.3	26.2	27.9	1.7	6.3	1.6	1.4	9.3	9.4
LnGrp Delay(d),s/veh	25.0	1.2	1.2	8.4	36.1	37.6	56.2	40.0	34.3	48.3	52.5	53.5
LnGrp LOS	C	A	A	A	D	D	E	D	C	D	D	D
Approach Vol, veh/h		788			1786			560			609	
Approach Delay, s/veh		3.5			35.2			40.8			52.7	
Approach LOS		A			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	9.0	70.0		31.0	8.5	70.5		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 14	* 56		* 26	* 14	* 56		* 26
Max Q Clear Time (g_c+I1), s	5.1	2.0		21.9	4.2	57.3		27.7
Green Ext Time (p_c), s	0.1	42.8		2.5	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	448	45	173	1106	2	171	434	81	0	733	537
Future Volume (vph)	176	448	45	173	1106	2	171	434	81	0	733	537
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3017		2927	2947			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3017		2927	2947			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	472	47	182	1164	2	180	457	85	0	772	565
RTOR Reduction (vph)	0	0	30	0	0	0	0	14	0	0	0	139
Lane Group Flow (vph)	185	472	17	182	1166	0	180	528	0	0	772	426
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	9.2	40.9	40.9	10.3	43.0		7.0	43.8			32.8	32.8
Effective Green, g (s)	9.2	41.4	40.9	10.3	43.5		8.0	44.8			33.8	33.8
Actuated g/C Ratio	0.08	0.38	0.37	0.09	0.40		0.07	0.41			0.31	0.31
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	244	1135	501	274	1193		212	1200			927	414
v/s Ratio Prot	c0.06	0.16		0.06	c0.39		c0.06	0.18			0.26	
v/s Ratio Perm			0.01									c0.32
v/c Ratio	0.76	0.42	0.03	0.66	0.98		0.85	0.44			0.83	1.03
Uniform Delay, d1	49.3	25.4	22.0	48.2	32.8		50.4	23.5			35.5	38.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	11.3	0.5	0.1	4.6	20.8		24.9	1.2			8.7	51.7
Delay (s)	60.6	25.9	22.0	52.8	53.5		75.3	24.7			44.1	89.8
Level of Service	E	C	C	D	D		E	C			D	F
Approach Delay (s)		34.8			53.5			37.3			63.4	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	50.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	370	4	0	16	131	278	0	2	3	4
Future Vol, veh/h	0	10	370	4	0	16	131	278	0	2	3	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	402	4	0	17	142	302	0	2	3	4
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	12.5	9.2	8.7
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	3%	11%	0%	55%
Vol Thru, %	33%	96%	89%	0%	15%
Vol Right, %	44%	1%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	384	147	278	20
LT Vol	2	10	16	0	11
Through Vol	3	370	131	0	3
RT Vol	4	4	0	278	6
Lane Flow Rate	10	417	160	302	22
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.015	0.525	0.221	0.354	0.034
Departure Headway (Hd)	5.524	4.531	4.971	4.212	5.651
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	646	797	724	855	632
Service Time	3.571	2.548	2.687	1.928	3.696
HCM Lane V/C Ratio	0.015	0.523	0.221	0.353	0.035
HCM Control Delay	8.7	12.5	9.1	9.2	8.9
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0	3.1	0.8	1.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	11	3	6
Future Vol, veh/h	0	11	3	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	3	7
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	384	398	44	42	36
Future Vol, veh/h	14	384	398	44	42	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	404	419	46	44	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	465	0	-	0	876	442
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1096	-	-	-	319	615
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1096	-	-	-	313	615
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	641	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1096	-	-	-	405
HCM Lane V/C Ratio	0.013	-	-	-	0.203
HCM Control Delay (s)	8.3	0	-	-	16.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	354	57	473	389	92	34	232	180	51	242	8
Future Volume (veh/h)	12	354	57	473	389	92	34	232	180	51	242	8
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	13	373	60	498	409	97	36	244	189	54	255	8
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	52	845	133	621	1021	868	184	389	330	182	375	12
Arrive On Green	0.65	0.64	0.64	0.64	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	17	1314	207	951	1588	1350	1112	1588	1350	951	1532	48
Grp Volume(v), veh/h	446	0	0	498	409	97	36	244	189	54	0	263
Grp Sat Flow(s),veh/h/ln	1538	0	0	951	1588	1350	1112	1588	1350	951	0	1580
Q Serve(g_s), s	0.0	0.0	0.0	36.4	11.1	2.5	2.7	12.3	11.1	4.8	0.0	13.6
Cycle Q Clear(g_c), s	12.9	0.0	0.0	49.3	11.1	2.5	16.3	12.3	11.1	17.2	0.0	13.6
Prop In Lane	0.03		0.13	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	1039	0	0	621	1021	868	184	389	330	182	0	387
V/C Ratio(X)	0.43	0.00	0.00	0.80	0.40	0.11	0.20	0.63	0.57	0.30	0.00	0.68
Avail Cap(c_a), veh/h	1039	0	0	621	1021	868	298	551	468	279	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.37	0.37	0.37	1.00	1.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	8.0	0.0	0.0	17.1	7.7	6.2	38.2	30.3	29.9	38.0	0.0	30.8
Incr Delay (d2), s/veh	1.3	0.0	0.0	4.2	0.4	0.1	0.5	1.7	1.6	0.8	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	5.8	0.0	0.0	11.8	5.0	0.9	0.9	5.6	4.2	1.3	0.0	6.1
LnGrp Delay(d),s/veh	9.3	0.0	0.0	21.3	8.2	6.3	38.7	32.0	31.4	38.8	0.0	32.8
LnGrp LOS	A			C	A	A	D	C	C	D		C
Approach Vol, veh/h		446			1004			469			317	
Approach Delay, s/veh		9.3			14.5			32.3			33.8	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.2		26.8		63.2		26.8
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		51.3		18.3		14.9		19.2
Green Ext Time (p_c), s		0.0		2.9		14.8		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	493	48	176	833	122	89	546	111	110	494	48
Future Volume (veh/h)	28	493	48	176	833	122	89	546	111	110	494	48
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	29	519	51	185	877	128	94	575	117	116	520	51
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	103	1602	157	474	916	779	218	793	161	156	957	428
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	558	2777	272	838	1588	1350	838	2500	507	749	3018	1350
Grp Volume(v), veh/h	29	281	289	185	877	128	94	346	346	116	520	51
Grp Sat Flow(s),veh/h/ln	558	1509	1540	838	1588	1350	838	1509	1499	749	1509	1350
Q Serve(g_s), s	5.2	9.7	9.8	14.7	52.2	4.4	10.4	20.3	20.5	11.2	14.2	2.7
Cycle Q Clear(g_c), s	57.3	9.7	9.8	24.5	52.2	4.4	24.7	20.3	20.5	31.7	14.2	2.7
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	103	871	889	474	916	779	218	478	475	156	957	428
V/C Ratio(X)	0.28	0.32	0.32	0.39	0.96	0.16	0.43	0.72	0.73	0.74	0.54	0.12
Avail Cap(c_a), veh/h	103	871	889	474	916	779	218	478	475	156	957	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	47.1	11.0	11.0	17.4	20.0	9.9	38.4	30.3	30.3	45.9	28.2	24.2
Incr Delay (d2), s/veh	6.1	0.9	0.9	2.4	21.0	0.5	0.5	4.7	4.9	15.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.2	4.3	3.7	28.0	1.7	2.4	9.1	9.1	3.9	6.0	1.0
LnGrp Delay(d),s/veh	53.2	11.9	11.9	19.8	41.0	10.3	38.9	35.0	35.2	61.3	28.5	24.3
LnGrp LOS	D	B	B	B	D	B	D	C	D	E	C	C
Approach Vol, veh/h		599			1190			786			687	
Approach Delay, s/veh		13.9			34.4			35.5			33.8	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 58		* 32		* 58		* 32
Max Q Clear Time (g_c+I1), s		59.3		33.7		54.2		26.7
Green Ext Time (p_c), s		0.0		0.0		2.7		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	448	46	467	902	39	64	615	181	72	848	129
Future Volume (veh/h)	49	448	46	467	902	39	64	615	181	72	848	129
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	52	472	48	492	949	0	67	647	191	76	893	136
Adj No. of Lanes	1	2	0	1	2	1	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	123	706	71	265	1172	524	224	1240	366	245	1416	216
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	589	2767	280	1513	3018	1350	546	2299	678	653	2627	400
Grp Volume(v), veh/h	52	257	263	492	949	0	67	424	414	76	513	516
Grp Sat Flow(s),veh/h/ln	589	1509	1539	1513	1509	1350	546	1509	1469	653	1509	1518
Q Serve(g_s), s	10.4	18.3	18.5	10.4	33.7	0.0	13.8	30.6	30.6	11.3	28.5	28.6
Cycle Q Clear(g_c), s	28.0	18.3	18.5	10.4	33.7	0.0	42.4	30.6	30.6	41.9	28.5	28.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.46	1.00		0.26
Lane Grp Cap(c), veh/h	123	385	392	265	1172	524	224	814	792	245	814	818
V/C Ratio(X)	0.42	0.67	0.67	1.86	0.81	0.00	0.30	0.52	0.52	0.31	0.63	0.63
Avail Cap(c_a), veh/h	123	385	392	265	1172	524	224	814	792	245	814	818
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	40.1	40.3	40.9	32.7	0.0	53.6	35.3	35.3	34.8	19.3	19.4
Incr Delay (d2), s/veh	8.6	7.5	7.5	399.3	6.1	0.0	3.4	2.4	2.5	3.3	3.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	8.4	8.6	35.9	15.0	0.0	2.3	13.3	13.0	2.3	12.7	12.8
LnGrp Delay(d),s/veh	61.0	47.6	47.7	440.1	38.9	0.0	56.9	37.7	37.8	38.1	23.0	23.1
LnGrp LOS	E	D	D	F	D		E	D	D	D	C	C
Approach Vol, veh/h		572			1441			905			1105	
Approach Delay, s/veh		48.9			175.9			39.2			24.1	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		43.9		35.7		44.4	12.4	30.0
Green Ext Time (p_c), s		10.6		5.3		10.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.4
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

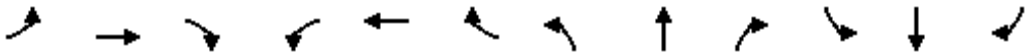
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	723	69	222	1073	43	95	334	87	39	386	165
Future Volume (veh/h)	47	723	69	222	1073	43	95	334	87	39	386	165
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	49	761	73	234	1129	45	100	352	92	41	406	174
Adj No. of Lanes	1	2	0	1	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	256	994	95	336	1059	42	89	476	124	213	413	177
Arrive On Green	0.11	0.34	0.34	0.23	0.68	0.68	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2913	279	1587	3104	124	872	1271	332	988	1103	473
Grp Volume(v), veh/h	49	413	421	234	576	598	100	0	444	41	0	580
Grp Sat Flow(s),veh/h/ln	1587	1583	1610	1587	1583	1645	872	0	1603	988	0	1576
Q Serve(g_s), s	1.6	21.0	21.0	8.9	30.7	30.7	0.9	0.0	21.6	3.4	0.0	32.8
Cycle Q Clear(g_c), s	1.6	21.0	21.0	8.9	30.7	30.7	33.7	0.0	21.6	24.9	0.0	32.8
Prop In Lane	1.00		0.17	1.00		0.08	1.00		0.21	1.00		0.30
Lane Grp Cap(c), veh/h	256	540	549	336	540	561	89	0	600	213	0	590
V/C Ratio(X)	0.19	0.77	0.77	0.70	1.07	1.07	1.12	0.00	0.74	0.19	0.00	0.98
Avail Cap(c_a), veh/h	256	540	549	336	540	561	89	0	600	213	0	590
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	26.4	26.4	16.9	14.3	14.3	45.0	0.0	24.4	35.2	0.0	27.9
Incr Delay (d2), s/veh	1.7	9.9	9.8	11.4	57.5	56.9	133.1	0.0	8.0	2.0	0.0	33.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	10.6	10.7	4.8	21.2	22.0	5.5	0.0	10.8	1.0	0.0	19.6
LnGrp Delay(d),s/veh	21.1	36.4	36.3	28.2	71.8	71.2	178.1	0.0	32.3	37.2	0.0	60.9
LnGrp LOS	C	D	D	C	F	F	F		C	D		E
Approach Vol, veh/h		883			1408			544			621	
Approach Delay, s/veh		35.5			64.3			59.1			59.3	
Approach LOS		D			E			E			E	

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	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	3.6	32.7		34.8	10.9	23.0		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	723	69	222	1073	43	95	334	87	39	386	165
Future Volume (vph)	47	723	69	222	1073	43	95	334	87	39	386	165
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3119		1583	3148		1583	1610		1583	1586	
Flt Permitted	0.13	1.00		0.18	1.00		0.16	1.00		0.31	1.00	
Satd. Flow (perm)	224	3119		305	3148		270	1610		514	1586	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	49	761	73	234	1129	45	100	352	92	41	406	174
RTOR Reduction (vph)	0	8	0	0	3	0	0	11	0	0	17	0
Lane Group Flow (vph)	49	826	0	234	1171	0	100	433	0	41	563	0
Confl. Bikes (#/hr)			3						3			1
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		287	1073		101	602		192	593	
v/s Ratio Prot	0.02	0.26		c0.10	c0.37			0.27			0.36	
v/s Ratio Perm	0.06			0.27			c0.37			0.08		
v/c Ratio	0.20	0.78		0.82	1.09		0.99	0.72		0.21	0.95	
Uniform Delay, d1	18.3	26.6		17.7	29.6		28.0	24.1		19.1	27.3	
Progression Factor	1.00	1.00		2.01	0.43		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	5.6		5.8	45.1		86.9	7.3		2.5	26.4	
Delay (s)	20.0	32.2		41.4	57.8		114.9	31.4		21.7	53.7	
Level of Service	C	C		D	E		F	C		C	D	
Approach Delay (s)		31.5			55.1			46.7			51.6	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	767	97	87	1020	39	60	331	109	32	432	337
Future Volume (veh/h)	56	767	97	87	1020	39	60	331	109	32	432	337
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	59	807	102	92	1074	41	63	348	115	34	455	355
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	1061	134	200	1166	45	120	1160	671	569	411	321
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	528	2829	358	641	3110	119	704	2451	1417	971	869	678
Grp Volume(v), veh/h	59	452	457	92	547	568	63	348	115	34	0	810
Grp Sat Flow(s),veh/h/ln	528	1583	1604	641	1583	1646	704	2451	1417	971	0	1547
Q Serve(g_s), s	2.3	15.0	15.0	7.5	20.2	20.2	0.0	0.6	0.3	1.2	0.0	28.4
Cycle Q Clear(g_c), s	22.5	15.0	15.0	22.5	20.2	20.2	28.4	0.6	0.3	1.8	0.0	28.4
Prop In Lane	1.00		0.22	1.00		0.07	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	140	594	601	200	594	617	120	1160	671	569	0	732
V/C Ratio(X)	0.42	0.76	0.76	0.46	0.92	0.92	0.52	0.30	0.17	0.06	0.00	1.11
Avail Cap(c_a), veh/h	140	594	601	200	594	617	120	1160	671	569	0	732
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.58	0.58	0.58	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	16.4	16.4	30.4	21.6	21.6	15.8	0.9	0.9	9.0	0.0	15.9
Incr Delay (d2), s/veh	9.0	8.9	8.8	4.9	15.9	15.4	9.2	0.4	0.3	0.2	0.0	66.2
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	8.0	8.1	1.8	11.4	11.8	1.3	0.5	0.2	0.3	0.0	25.5
LnGrp Delay(d),s/veh	38.6	25.3	25.2	35.3	37.5	37.1	25.0	1.2	1.2	9.2	0.0	82.2
LnGrp LOS	D	C	C	D	D	D	C	A	A	A		F
Approach Vol, veh/h		968			1207			526			844	
Approach Delay, s/veh		26.1			37.1			4.1			79.2	
Approach LOS		C			D			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		30.4		24.5		30.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

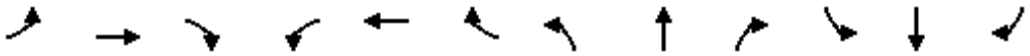
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	718	124	113	1217	113	125	673	88	123	589	158
Future Volume (veh/h)	34	718	124	113	1217	113	125	673	88	123	589	158
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	36	756	131	119	1281	119	132	708	93	129	620	166
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	107	1649	738	401	1526	141	248	1285	575	227	1285	575
Arrive On Green	1.00	1.00	1.00	0.35	0.35	0.35	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	403	3167	1417	655	2931	271	720	3167	1417	710	3167	1417
Grp Volume(v), veh/h	36	756	131	119	690	710	132	708	93	129	620	166
Grp Sat Flow(s),veh/h/ln	403	1583	1417	655	1583	1619	720	1583	1417	710	1583	1417
Q Serve(g_s), s	10.1	0.0	0.0	16.2	48.1	48.5	19.9	20.5	5.0	20.4	17.4	9.5
Cycle Q Clear(g_c), s	58.5	0.0	0.0	16.2	48.1	48.5	37.3	20.5	5.0	40.9	17.4	9.5
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	1649	738	401	825	843	248	1285	575	227	1285	575
V/C Ratio(X)	0.34	0.46	0.18	0.30	0.84	0.84	0.53	0.55	0.16	0.57	0.48	0.29
Avail Cap(c_a), veh/h	107	1649	738	401	825	843	248	1285	575	227	1285	575
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	0.0	0.0	24.0	34.4	34.5	40.1	27.3	22.7	42.9	26.3	24.0
Incr Delay (d2), s/veh	7.3	0.8	0.5	0.4	2.2	2.2	8.0	1.7	0.6	10.0	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	1.3	0.2	0.1	3.0	21.6	22.2	4.5	9.3	2.1	4.6	7.8	3.9
LnGrp Delay(d),s/veh	30.0	0.8	0.5	24.4	36.5	36.7	48.1	29.0	23.3	52.9	27.6	25.3
LnGrp LOS	C	A	A	C	D	D	D	C	C	D	C	C
Approach Vol, veh/h		923			1519			933			915	
Approach Delay, s/veh		1.9			35.6			31.1			30.8	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 61		* 47		* 61		* 47
Max Q Clear Time (g_c+I1), s		50.5		42.9		60.5		39.3
Green Ext Time (p_c), s		7.9		3.3		0.0		5.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	514	93	161	1318	98	64	541	21	41	537	45
Future Volume (vph)	95	514	93	161	1318	98	64	541	21	41	537	45
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1322	1509	4336	1313	1509	1588	1332	1509	1568	
Flt Permitted	0.17	1.00	1.00	0.44	1.00	1.00	0.23	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	267	4336	1322	699	4336	1313	362	1588	1332	425	1568	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	541	98	169	1387	103	67	569	22	43	565	47
RTOR Reduction (vph)	0	0	59	0	0	62	0	0	12	0	3	0
Lane Group Flow (vph)	100	541	39	169	1387	41	67	569	10	43	609	0
Confl. Bikes (#/hr)			1			8			2			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	23.8	23.8	23.8	23.8	23.8	23.8	26.2	26.2	26.2	26.2	26.2	
Effective Green, g (s)	23.8	23.8	23.8	23.8	23.8	23.8	26.2	26.2	26.2	26.2	26.2	
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	105	1719	524	277	1719	520	158	693	581	185	684	
v/s Ratio Prot		0.12			0.32			0.36			c0.39	
v/s Ratio Perm	c0.37		0.03	0.24		0.03	0.19		0.01	0.10		
v/c Ratio	0.95	0.31	0.07	0.61	0.81	0.08	0.42	0.82	0.02	0.23	0.89	
Uniform Delay, d1	17.6	12.5	11.3	14.4	16.1	11.3	11.7	14.8	9.6	10.6	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.31	1.29	
Incremental Delay, d2	75.7	0.5	0.3	9.6	4.2	0.3	1.8	7.7	0.0	0.2	4.1	
Delay (s)	93.2	13.0	11.5	24.0	20.2	11.6	13.5	22.6	9.6	14.0	24.3	
Level of Service	F	B	B	C	C	B	B	C	A	B	C	
Approach Delay (s)		23.6			20.1			21.2			23.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	1/20/2017
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	AM	Reviewed by:		Project:	Robertson Lane Hotel Project

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			3			3			3				3				3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	64	1	**64**	0	64	**64**	8	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	534	1	534	7	541	541	72	628	1	628	7	635	1	635	0	635	1	635
	Through-Right		0							0				0				0	
	Right	21	1	0	0	21	0	0	22	1	0	0	22	1	0	0	22	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	41	1	41	0	41	41	0	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	532	0	**577**	5	537	**582**	58	612	0	**666**	5	617	0	**671**	0	617	0	**671**
	Through-Right		1							1				1				1	
	Right	45	0	0	0	45	0	7	54	0	0	0	54	0	0	0	54	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	95	1	**95**	0	95	**95**	0	99	1	**99**	0	99	1	**99**	0	99	1	**99**
	Left-Through		0							0				0				0	
	Through	514	3	171	0	514	171	37	572	3	191	0	572	3	191	0	572	3	191
	Through-Right		0							0				0				0	
	Right	93	1	61	0	93	61	4	101	1	64	0	101	1	64	0	101	1	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	161	1	161	0	161	161	0	168	1	168	0	168	1	168	0	168	1	168
	Left-Through		0							0				0				0	
	Through	1318	3	**439**	0	1318	**439**	27	1399	3	**466**	0	1399	3	**466**	0	1399	3	**466**
	Through-Right		0							0				0				0	
	Right	98	1	78	0	98	78	0	102	1	81	0	102	1	81	0	102	1	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		641	*North-South:*		646	*North-South:*			741	*North-South:*			746	*North-South:*			746
		East-West:		534	*East-West:*		534	*East-West:*			565	*East-West:*			565	*East-West:*			565
		SUM:		1175	*SUM:*		1180	*SUM:*			1306	*SUM:*			1311	*SUM:*			1311
VOLUME/CAPACITY (*V/C*) RATIO:				0.825			0.828				0.916				0.920				0.920
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.725			0.728				0.816				0.820				0.820
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.003

Significant impacted? NO

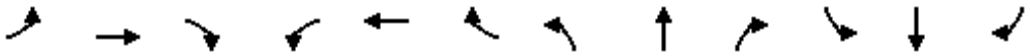
PROPOSED PROJECT IMPACT

Change in *v/c* due to project: 0.004

Significant impacted? NO

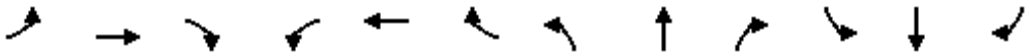
Δ*v/c* after mitigation: 0.004

Fully mitigated? N/A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	923	99	165	996	81	177	77	147	113	71	52
Future Volume (vph)	33	923	99	165	996	81	177	77	147	113	71	52
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2984		1433	1479	1350		1706	
Flt Permitted	0.22	1.00	1.00	0.17	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	357	3018	1350	273	2984		1433	1479	1350		1706	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	972	104	174	1048	85	186	81	155	119	75	55
RTOR Reduction (vph)	0	0	55	0	5	0	0	0	100	0	10	0
Lane Group Flow (vph)	35	972	49	174	1128	0	132	135	55	0	239	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	46.8	46.8	46.8	57.8	57.8		14.2	14.2	21.2		14.0	
Effective Green, g (s)	46.8	46.8	46.8	56.8	57.8		13.7	13.7	19.2		13.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.57	0.58		0.14	0.14	0.19		0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	167	1412	631	229	1724		196	202	259		230	
v/s Ratio Prot		0.32		0.05	c0.38		c0.09	0.09	0.01		c0.14	
v/s Ratio Perm	0.10		0.04	c0.39					0.03			
v/c Ratio	0.21	0.69	0.08	0.76	0.65		0.67	0.67	0.21		1.04	
Uniform Delay, d1	15.7	20.9	14.7	14.1	14.3		41.0	41.0	34.0		43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.8	2.8	0.2	13.5	1.9		8.8	8.1	0.4		69.5	
Delay (s)	18.5	23.6	14.9	27.6	16.3		49.8	49.1	34.4		112.7	
Level of Service	B	C	B	C	B		D	D	C		F	
Approach Delay (s)		22.7			17.8			43.9			112.7	
Approach LOS		C			B			D			F	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1061	156	165	1176	22	134	18	211	30	26	22
Future Volume (vph)	11	1061	156	165	1176	22	134	18	211	30	26	22
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1276	1282	1509	1479	
Flt Permitted	0.23	1.00	1.00	0.16	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	359	3018	1350	250	3018	1350	1433	1276	1282	1509	1479	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	1117	164	174	1238	23	141	19	222	32	27	23
RTOR Reduction (vph)	0	0	75	0	0	7	0	89	104	0	21	0
Lane Group Flow (vph)	12	1117	89	174	1238	16	127	42	20	32	29	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	54.1	54.1	54.1	67.6	67.6	67.6	9.0	9.0	18.5	9.4	9.4	
Effective Green, g (s)	54.1	54.1	54.1	66.6	67.6	67.6	9.0	9.0	16.5	8.4	8.4	
Actuated g/C Ratio	0.54	0.54	0.54	0.67	0.68	0.68	0.09	0.09	0.16	0.08	0.08	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	194	1632	730	273	2040	912	128	114	211	126	124	
v/s Ratio Prot		c0.37		0.05	c0.41		c0.09	0.03	0.01	c0.02	0.02	
v/s Ratio Perm	0.03		0.07	0.37		0.01			0.01			
v/c Ratio	0.06	0.68	0.12	0.64	0.61	0.02	0.99	0.37	0.10	0.25	0.23	
Uniform Delay, d1	10.9	16.7	11.3	10.6	8.9	5.3	45.5	42.8	35.4	42.9	42.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	2.4	0.3	3.6	1.4	0.0	76.9	2.0	0.1	1.1	1.0	
Delay (s)	11.5	19.1	11.6	14.2	10.3	5.3	122.3	44.8	35.5	43.9	43.8	
Level of Service	B	B	B	B	B	A	F	D	D	D	D	
Approach Delay (s)		18.1			10.7			67.6			43.8	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	632	67	38	37	208	6	0	1131	524	76	1185	8
Future Volume (vph)	632	67	38	37	208	6	0	1131	524	76	1185	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2928			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.11	1.00	
Satd. Flow (perm)	2927	1350	1350		2928			3018	1350	181	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	665	71	40	39	219	6	0	1191	552	80	1247	8
RTOR Reduction (vph)	0	0	29	0	58	0	0	0	0	0	1	0
Lane Group Flow (vph)	665	71	11	0	206	0	0	1191	552	80	1254	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	26.0	26.0	26.0		12.2			43.8	43.8	43.8	43.8	
Effective Green, g (s)	26.0	26.0	26.0		12.2			43.8	43.8	43.8	43.8	
Actuated g/C Ratio	0.27	0.27	0.27		0.13			0.46	0.46	0.46	0.46	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	801	369	369		376			1391	622	83	1390	
v/s Ratio Prot	c0.23	0.05	0.01		c0.07			0.39			0.42	
v/s Ratio Perm									0.41	c0.44		
v/c Ratio	0.83	0.19	0.03		0.55			0.86	0.89	0.96	0.90	
Uniform Delay, d1	32.4	26.5	25.3		38.8			22.8	23.4	24.8	23.6	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.0	0.1	0.0		1.6			7.0	17.1	89.2	9.8	
Delay (s)	39.4	26.5	25.3		40.4			29.8	40.4	114.0	33.4	
Level of Service	D	C	C		D			C	D	F	C	
Approach Delay (s)	37.5				40.4			33.1			38.3	
Approach LOS	D				D			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

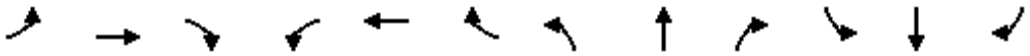
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	86	826	269	81	3	146	1049	55	38	296	103	66
Future Volume (vph)	86	826	269	81	3	146	1049	55	38	296	103	66
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (prot)	1509	3018	1350	1333		1509	2991			1579	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (perm)	1509	3018	1350	1333		1509	2991			1579	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	869	283	85	3	154	1104	58	40	312	108	69
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	112	0
Lane Group Flow (vph)	91	869	283	85	0	157	1159	0	0	352	65	0
Confl. Bikes (#/hr)				4				7			4	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	12.8	53.5	53.5	159.7		19.1	59.8			29.8	29.8	
Effective Green, g (s)	12.8	53.5	53.5	159.7		19.1	59.8			29.8	29.8	
Actuated g/C Ratio	0.08	0.34	0.34	1.00		0.12	0.37			0.19	0.19	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	120	1011	452	1333		180	1119			294	251	
v/s Ratio Prot	0.06	c0.29				0.10	c0.39			c0.22	0.05	
v/s Ratio Perm			0.21	0.06								
v/c Ratio	0.76	0.86	0.63	0.06		0.87	1.04			1.20	0.26	
Uniform Delay, d1	71.9	49.6	44.7	0.0		69.1	49.9			64.9	55.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	21.3	7.6	2.8	0.1		33.2	36.7			117.0	0.2	
Delay (s)	93.2	57.2	47.5	0.1		102.3	86.7			181.9	55.7	
Level of Service	F	E	D	A		F	F			F	E	
Approach Delay (s)		53.9					88.5			139.7		
Approach LOS		D					F			F		

Intersection Summary			
HCM 2000 Control Delay	80.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	159.7	Sum of lost time (s)	23.9
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	87	96	313	139	53
Future Volume (vph)	87	96	313	139	53
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	1.00	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2963	1350	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2963	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	92	101	329	146	56
RTOR Reduction (vph)	0	0	0	0	55
Lane Group Flow (vph)	0	0	522	146	1
Confl. Bikes (#/hr)					
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.5	159.7	3.9
Effective Green, g (s)			29.5	159.7	3.9
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			547	1350	33
v/s Ratio Prot			c0.18		0.00
v/s Ratio Perm				c0.11	
v/c Ratio			0.95	0.11	0.04
Uniform Delay, d1			64.4	0.0	76.1
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			27.0	0.2	0.2
Delay (s)			91.5	0.2	76.3
Level of Service			F	A	E
Approach Delay (s)			71.5		
Approach LOS			E		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	1004	29	25	1131	5	176	1	41	0	0	0
Future Volume (vph)	23	1004	29	25	1131	5	176	1	41	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.94				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.97				
Satd. Flow (prot)	1509	3005		1509	3016		1433	1380				
Flt Permitted	0.18	1.00		0.21	1.00		0.95	0.97				
Satd. Flow (perm)	280	3005		329	3016		1433	1380				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	24	1091	32	27	1229	5	191	1	45	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	24	1122	0	27	1234	0	120	91	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	57.7	57.7		57.7	57.7		12.0	12.0				
Effective Green, g (s)	57.7	57.7		57.7	57.7		12.0	12.0				
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.13	0.13				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	179	1926		210	1933		191	184				
v/s Ratio Prot		0.37			c0.41							
v/s Ratio Perm	0.09			0.08			c0.08	0.07				
v/c Ratio	0.13	0.58		0.13	0.64		0.63	0.49				
Uniform Delay, d1	6.3	9.2		6.3	9.8		36.9	36.2				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	1.6	1.3		1.3	1.6		6.3	2.1				
Delay (s)	7.9	10.5		7.6	11.4		43.2	38.3				
Level of Service	A	B		A	B		D	D				
Approach Delay (s)		10.5			11.4			40.8			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	958	44	69	1210	0	77
Future Vol, veh/h	958	44	69	1210	0	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1008	46	73	1274	0	81

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1055	0	-	527
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	656	-	0	496
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	656	-	-	496
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	496	-	-	656	-
HCM Lane V/C Ratio	0.163	-	-	0.111	-
HCM Control Delay (s)	13.7	-	-	11.2	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.6	-	-	0.4	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	943	72	190	1106	65	104	77	203	106	86	18
Future Volume (veh/h)	86	943	72	190	1106	65	104	77	203	106	86	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	91	993	76	200	1164	68	109	81	214	112	91	19
Adj No. of Lanes	1	2	0	1	2	0	0	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	229	1400	107	305	1538	90	132	84	192	206	366	76
Arrive On Green	0.04	0.49	0.49	0.08	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.28
Sat Flow, veh/h	1513	2841	217	1513	2898	169	299	294	668	1080	1275	266
Grp Volume(v), veh/h	91	527	542	200	606	626	404	0	0	112	0	110
Grp Sat Flow(s),veh/h/ln	1513	1509	1550	1513	1509	1558	1261	0	0	1080	0	1541
Q Serve(g_s), s	3.0	27.2	27.3	6.4	31.5	31.5	23.2	0.0	0.0	0.0	0.0	5.5
Cycle Q Clear(g_c), s	3.0	27.2	27.3	6.4	31.5	31.5	28.7	0.0	0.0	22.5	0.0	5.5
Prop In Lane	1.00		0.14	1.00		0.11	0.27		0.53	1.00		0.17
Lane Grp Cap(c), veh/h	229	744	764	305	801	827	408	0	0	206	0	442
V/C Ratio(X)	0.40	0.71	0.71	0.66	0.76	0.76	0.99	0.00	0.00	0.54	0.00	0.25
Avail Cap(c_a), veh/h	325	744	764	344	801	827	408	0	0	206	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.53	0.53	0.53	0.79	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	19.8	19.8	16.7	18.4	18.4	37.9	0.0	0.0	33.4	0.0	27.4
Incr Delay (d2), s/veh	0.4	5.7	5.5	1.4	3.6	3.5	37.2	0.0	0.0	2.9	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	1.3	12.4	12.8	2.7	13.8	14.2	15.3	0.0	0.0	3.1	0.0	2.4
LnGrp Delay(d),s/veh	17.0	25.4	25.3	18.1	22.0	21.9	75.1	0.0	0.0	36.4	0.0	27.7
LnGrp LOS	B	C	C	B	C	C	E			D		C
Approach Vol, veh/h		1160			1432			404			222	
Approach Delay, s/veh		24.7			21.4			75.1			32.1	
Approach LOS		C			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	12.4	54.6		33.0	8.6	58.4		33.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	8.4	29.3		24.5	5.0	33.5		30.7
Green Ext Time (p_c), s	0.1	15.5		1.1	0.0	11.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

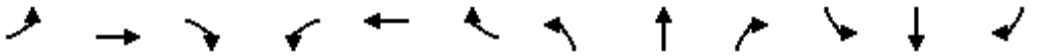
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	1074	96	203	1180	76	120	340	177	69	335	91
Future Volume (veh/h)	97	1074	96	203	1180	76	120	340	177	69	335	91
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	102	1131	101	214	1242	80	126	358	186	73	353	96
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1339	119	373	1487	96	219	860	385	234	669	179
Arrive On Green	0.10	0.96	0.96	0.09	0.52	0.52	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1513	2799	250	1513	2876	185	937	3018	1350	859	2347	629
Grp Volume(v), veh/h	102	609	623	214	651	671	126	358	186	73	225	224
Grp Sat Flow(s),veh/h/ln	1513	1509	1540	1513	1509	1552	937	1509	1350	859	1509	1467
Q Serve(g_s), s	3.5	9.1	9.2	7.0	36.6	36.8	13.1	9.6	11.4	7.5	12.5	12.9
Cycle Q Clear(g_c), s	3.5	9.1	9.2	7.0	36.6	36.8	26.0	9.6	11.4	17.2	12.5	12.9
Prop In Lane	1.00		0.16	1.00		0.12	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	212	722	737	373	780	803	219	860	385	234	430	418
V/C Ratio(X)	0.48	0.84	0.85	0.57	0.83	0.84	0.58	0.42	0.48	0.31	0.52	0.54
Avail Cap(c_a), veh/h	300	722	737	403	780	803	220	866	387	236	433	421
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)	0.61	0.61	0.61	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	1.3	1.3	11.7	20.5	20.5	41.1	29.0	29.6	36.0	30.0	30.2
Incr Delay (d2), s/veh	0.4	7.4	7.4	0.9	10.2	10.1	4.4	0.5	1.3	1.1	1.5	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	1.5	3.8	3.9	3.0	17.4	17.9	3.7	4.0	4.4	1.9	5.4	5.4
LnGrp Delay(d),s/veh	18.3	8.8	8.7	12.6	30.7	30.6	45.5	29.4	31.0	37.0	31.6	31.9
LnGrp LOS	B	A	A	B	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1334			1536			670			522	
Approach Delay, s/veh		9.5			28.1			32.9			32.5	
Approach LOS		A			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	13.1	53.1		33.8	9.2	57.0		33.8
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 46		* 29	* 11	* 46		* 29
Max Q Clear Time (g_c+I1), s	9.0	11.2		19.2	5.5	38.8		28.0
Green Ext Time (p_c), s	0.0	30.2		5.4	0.0	6.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	805	100	168	734	21	198	576	127	0	691	450
Future Volume (vph)	330	805	100	168	734	21	198	576	127	0	691	450
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3005		2927	2936			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3005		2927	2936			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	847	105	177	773	22	208	606	134	0	727	474
RTOR Reduction (vph)	0	0	72	0	2	0	0	19	0	0	0	217
Lane Group Flow (vph)	347	847	33	177	793	0	208	721	0	0	727	257
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	12.9	31.5	31.5	8.3	27.9		8.8	45.2			32.4	32.4
Effective Green, g (s)	12.9	32.0	31.5	8.3	28.4		9.8	46.2			33.4	33.4
Actuated g/C Ratio	0.13	0.32	0.32	0.08	0.28		0.10	0.46			0.33	0.33
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	377	965	425	242	853		286	1356			1008	450
v/s Ratio Prot	0.12	c0.28		0.06	c0.26		c0.07	0.25			c0.24	
v/s Ratio Perm			0.02									0.19
v/c Ratio	0.92	0.88	0.08	0.73	0.93		0.73	0.53			0.72	0.57
Uniform Delay, d1	43.0	32.1	24.1	44.8	34.8		43.8	19.2			29.2	27.4
Progression Factor	1.00	1.00	1.00	1.30	0.89		1.00	1.00			1.00	1.00
Incremental Delay, d2	27.0	9.8	0.2	7.0	13.2		7.6	1.5			4.5	5.2
Delay (s)	70.0	42.0	24.2	65.3	44.4		51.4	20.7			33.7	32.6
Level of Service	E	D	C	E	D		D	C			C	C
Approach Delay (s)		48.0			48.2			27.4			33.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	29	409	3	0	19	86	202	0	5	8	10
Future Vol, veh/h	0	29	409	3	0	19	86	202	0	5	8	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	445	3	0	21	93	220	0	5	9	11
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	15.2	9	9
HCM LOS	C	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	7%	18%	0%	67%
Vol Thru, %	35%	93%	82%	0%	5%
Vol Right, %	43%	1%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	441	105	202	75
LT Vol	5	29	19	0	50
Through Vol	8	409	86	0	4
RT Vol	10	3	0	202	21
Lane Flow Rate	25	479	114	220	82
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.039	0.623	0.168	0.275	0.129
Departure Headway (Hd)	5.631	4.682	5.312	4.515	5.693
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	629	767	672	790	624
Service Time	3.725	2.729	3.066	2.269	3.773
HCM Lane V/C Ratio	0.04	0.625	0.17	0.278	0.131
HCM Control Delay	9	15.2	9.1	9	9.6
HCM Lane LOS	A	C	A	A	A
HCM 95th-tile Q	0.1	4.4	0.6	1.1	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	50	4	21
Future Vol, veh/h	0	50	4	21
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	54	4	23
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	464	269	44	68	39
Future Vol, veh/h	20	464	269	44	68	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	488	283	46	72	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	329	0	-	0	837	306
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	531	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1231	-	-	-	337	734
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1231	-	-	-	329	734
Mov Cap-2 Maneuver	-	-	-	-	329	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1231	-	-	-	412
HCM Lane V/C Ratio	0.017	-	-	-	0.273
HCM Control Delay (s)	8	0	-	-	17
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	393	91	218	239	99	41	275	228	83	203	26
Future Volume (veh/h)	25	393	91	218	239	99	41	275	228	83	203	26
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	26	414	96	229	252	104	43	289	240	87	214	27
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	711	160	478	934	794	275	476	405	205	415	52
Arrive On Green	0.59	0.59	0.59	0.98	0.98	0.98	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	38	1209	272	886	1588	1350	1134	1588	1350	871	1383	174
Grp Volume(v), veh/h	536	0	0	229	252	104	43	289	240	87	0	241
Grp Sat Flow(s),veh/h/ln	1519	0	0	886	1588	1350	1134	1588	1350	871	0	1557
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.4	0.1	2.9	14.0	13.6	8.6	0.0	11.5
Cycle Q Clear(g_c), s	19.7	0.0	0.0	22.7	0.4	0.1	14.5	14.0	13.6	22.6	0.0	11.5
Prop In Lane	0.05		0.18	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	944	0	0	478	934	794	275	476	405	205	0	467
V/C Ratio(X)	0.57	0.00	0.00	0.48	0.27	0.13	0.16	0.61	0.59	0.42	0.00	0.52
Avail Cap(c_a), veh/h	944	0	0	478	934	794	328	551	468	246	0	540
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	0.00	0.00	0.88	0.88	0.88	1.00	1.00	1.00	0.79	0.00	0.79
Uniform Delay (d), s/veh	11.7	0.0	0.0	1.4	0.3	0.3	32.1	27.0	26.8	36.6	0.0	26.1
Incr Delay (d2), s/veh	2.5	0.0	0.0	3.0	0.6	0.3	0.3	1.5	1.5	1.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	0.0	2.8	0.3	0.1	0.9	6.3	5.2	2.1	0.0	5.0
LnGrp Delay(d),s/veh	14.2	0.0	0.0	4.4	1.0	0.6	32.4	28.5	28.4	37.7	0.0	26.8
LnGrp LOS	B			A	A	A	C	C	C	D		C
Approach Vol, veh/h		536			585			572			328	
Approach Delay, s/veh		14.2			2.2			28.7			29.7	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		58.2		31.8		58.2		31.8
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		24.7		16.5		21.7		24.6
Green Ext Time (p_c), s		9.1		3.7		9.5		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	575	64	123	452	194	83	430	129	130	453	68
Future Volume (veh/h)	40	575	64	123	452	194	83	430	129	130	453	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	42	605	67	129	476	204	87	453	136	137	477	72
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	332	1460	161	486	846	719	274	802	239	235	1055	472
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	757	2741	303	763	1588	1350	855	2293	683	824	3018	1350
Grp Volume(v), veh/h	42	333	339	129	476	204	87	297	292	137	477	72
Grp Sat Flow(s),veh/h/ln	757	1509	1535	763	1588	1350	855	1509	1468	824	1509	1350
Q Serve(g_s), s	2.1	0.0	0.0	8.6	18.0	7.5	7.9	14.3	14.6	14.6	11.0	3.3
Cycle Q Clear(g_c), s	20.1	0.0	0.0	8.6	18.0	7.5	18.9	14.3	14.6	29.1	11.0	3.3
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	332	804	818	486	846	719	274	527	513	235	1055	472
V/C Ratio(X)	0.13	0.41	0.42	0.27	0.56	0.28	0.32	0.56	0.57	0.58	0.45	0.15
Avail Cap(c_a), veh/h	332	804	818	486	846	719	277	531	517	237	1063	476
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)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	3.8	0.0	0.0	11.8	14.0	11.6	29.9	23.7	23.8	35.6	22.6	20.1
Incr Delay (d2), s/veh	0.6	1.3	1.3	1.3	2.7	1.0	0.2	0.8	0.9	2.4	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	0.5	0.3	0.3	2.0	8.4	3.0	1.9	6.1	6.0	3.5	4.6	1.2
LnGrp Delay(d),s/veh	4.4	1.3	1.3	13.2	16.7	12.6	30.1	24.5	24.7	38.0	22.7	20.2
LnGrp LOS	A	A	A	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h		714			809			676			686	
Approach Delay, s/veh		1.5			15.1			25.3			25.5	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.2		36.8		53.2		36.8
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		22.1		31.1		20.0		20.9
Green Ext Time (p_c), s		8.4		0.3		8.6		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	558	110	231	642	81	72	813	230	84	822	140
Future Volume (veh/h)	114	558	110	231	642	81	72	813	230	84	822	140
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	120	587	116	243	676	0	76	856	242	88	865	147
Adj No. of Lanes	1	2	0	1	2	1	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	221	641	126	199	1172	524	230	1253	354	159	1392	236
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	760	2514	496	1513	3018	1350	555	2325	657	511	2581	439
Grp Volume(v), veh/h	120	352	351	243	676	0	76	555	543	88	506	506
Grp Sat Flow(s),veh/h/ln	760	1509	1501	1513	1509	1350	555	1509	1472	511	1509	1511
Q Serve(g_s), s	17.7	27.2	27.3	10.4	21.2	0.0	15.5	41.3	41.4	20.1	27.9	28.0
Cycle Q Clear(g_c), s	22.9	27.2	27.3	10.4	21.2	0.0	43.4	41.3	41.4	61.5	27.9	28.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.45	1.00		0.29
Lane Grp Cap(c), veh/h	221	385	383	199	1172	524	230	814	794	159	814	815
V/C Ratio(X)	0.54	0.91	0.92	1.22	0.58	0.00	0.33	0.68	0.68	0.55	0.62	0.62
Avail Cap(c_a), veh/h	221	385	383	199	1172	524	230	814	794	159	814	815
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	43.4	43.6	36.4	28.9	0.0	53.7	39.7	39.7	47.0	19.2	19.3
Incr Delay (d2), s/veh	7.8	25.2	25.9	136.2	2.1	0.0	3.8	4.6	4.7	13.1	3.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	14.0	14.1	12.4	9.2	0.0	2.6	18.4	18.0	3.4	12.3	12.4
LnGrp Delay(d),s/veh	52.1	68.6	69.5	172.6	31.0	0.0	57.6	44.3	44.5	60.1	22.7	22.8
LnGrp LOS	D	E	E	F	C		E	D	D	E	C	C
Approach Vol, veh/h		823			919			1174			1100	
Approach Delay, s/veh		66.6			68.4			45.3			25.8	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		63.5		23.2		45.4	12.4	29.3
Green Ext Time (p_c), s		0.2		8.0		11.7	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	49.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	749	87	197	720	88	97	390	139	78	351	74
Future Volume (veh/h)	81	749	87	197	720	88	97	390	139	78	351	74
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	85	788	92	207	758	93	102	411	146	82	369	78
Adj No. of Lanes	1	2	0	1	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	313	987	115	318	980	120	202	420	149	100	479	101
Arrive On Green	0.10	0.35	0.35	0.11	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2850	333	1587	2832	347	986	1171	416	890	1335	282
Grp Volume(v), veh/h	85	438	442	207	424	427	102	0	557	82	0	447
Grp Sat Flow(s),veh/h/ln	1587	1583	1599	1587	1583	1596	986	0	1586	890	0	1617
Q Serve(g_s), s	2.6	20.0	20.0	6.6	19.1	19.1	8.2	0.0	27.8	0.9	0.0	19.6
Cycle Q Clear(g_c), s	2.6	20.0	20.0	6.6	19.1	19.1	27.8	0.0	27.8	28.7	0.0	19.6
Prop In Lane	1.00		0.21	1.00		0.22	1.00		0.26	1.00		0.17
Lane Grp Cap(c), veh/h	313	548	554	318	548	553	202	0	569	100	0	580
V/C Ratio(X)	0.27	0.80	0.80	0.65	0.77	0.77	0.50	0.00	0.98	0.82	0.00	0.77
Avail Cap(c_a), veh/h	313	548	554	318	548	553	202	0	569	100	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.2	23.6	23.6	17.7	23.3	23.3	35.0	0.0	25.3	39.9	0.0	22.7
Incr Delay (d2), s/veh	2.1	11.5	11.5	9.9	10.2	10.1	8.7	0.0	32.8	49.7	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	1.3	10.4	10.5	3.7	9.9	10.0	2.7	0.0	17.3	3.2	0.0	10.2
LnGrp Delay(d),s/veh	18.3	35.2	35.1	27.6	33.5	33.5	43.8	0.0	58.2	89.6	0.0	32.3
LnGrp LOS	B	D	D	C	C	C	D		E	F		C
Approach Vol, veh/h		965			1058			659			529	
Approach Delay, s/veh		33.6			32.3			56.0			41.2	
Approach LOS		C			C			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	13.0	33.0		34.0	13.0	33.0		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 9	* 28		* 29	* 9	* 28		* 29
Max Q Clear Time (g_c+I1), s	4.6	21.1		30.7	8.6	22.0		29.8
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0	4.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	875	108	109	812	86	89	334	162	81	307	157
Future Volume (veh/h)	105	875	108	109	812	86	89	334	162	81	307	157
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	111	921	114	115	855	91	94	352	171	85	323	165
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1064	132	162	1083	115	344	1160	671	438	493	252
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.16	0.16	0.16	0.47	0.47	0.46
Sat Flow, veh/h	619	2837	351	570	2888	307	949	2451	1417	919	1041	532
Grp Volume(v), veh/h	111	514	521	115	469	477	94	352	171	85	0	488
Grp Sat Flow(s),veh/h/ln	619	1583	1605	570	1583	1612	949	2451	1417	919	0	1573
Q Serve(g_s), s	5.9	18.0	18.0	4.5	16.6	16.6	5.7	7.6	6.4	4.0	0.0	14.3
Cycle Q Clear(g_c), s	22.5	18.0	18.0	22.5	16.6	16.6	19.9	7.6	6.4	11.6	0.0	14.3
Prop In Lane	1.00		0.22	1.00		0.19	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	181	594	602	162	594	605	344	1160	671	438	0	744
V/C Ratio(X)	0.61	0.87	0.87	0.71	0.79	0.79	0.27	0.30	0.26	0.19	0.00	0.66
Avail Cap(c_a), veh/h	181	594	602	162	594	605	344	1160	671	438	0	744
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.67	0.67	0.67	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	17.4	17.4	32.9	20.2	20.3	28.5	16.6	16.0	14.1	0.0	12.2
Incr Delay (d2), s/veh	14.6	15.5	15.4	15.7	6.9	6.8	1.3	0.5	0.6	1.0	0.0	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	2.6	10.4	10.5	2.6	8.3	8.5	1.6	5.3	2.6	1.1	0.0	7.0
LnGrp Delay(d),s/veh	42.9	32.9	32.8	48.6	27.2	27.1	29.8	17.0	16.6	15.1	0.0	16.6
LnGrp LOS	D	C	C	D	C	C	C	B	B	B		B
Approach Vol, veh/h		1146			1061			617			573	
Approach Delay, s/veh		33.8			29.4			18.9			16.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		16.3		24.5		21.9
Green Ext Time (p_c), s		0.0		4.6		0.0		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

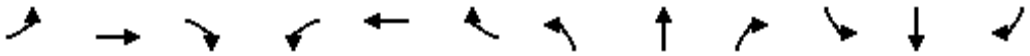
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	900	175	96	886	117	129	465	169	188	502	124
Future Volume (veh/h)	65	900	175	96	886	117	129	465	169	188	502	124
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	68	947	184	101	933	123	136	489	178	198	528	131
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	142	1465	655	272	1301	172	349	1470	658	355	1470	658
Arrive On Green	0.93	0.93	0.93	0.15	0.15	0.15	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	558	3167	1417	520	2814	371	810	3167	1417	804	3167	1417
Grp Volume(v), veh/h	68	947	184	101	525	531	136	489	178	198	528	131
Grp Sat Flow(s),veh/h/ln	558	1583	1417	520	1583	1601	810	1583	1417	804	1583	1417
Q Serve(g_s), s	13.6	6.7	1.6	21.6	37.9	37.9	15.6	11.7	9.2	24.8	12.9	6.6
Cycle Q Clear(g_c), s	51.5	6.7	1.6	28.3	37.9	37.9	28.4	11.7	9.2	36.6	12.9	6.6
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	1465	655	272	732	741	349	1470	658	355	1470	658
V/C Ratio(X)	0.48	0.65	0.28	0.37	0.72	0.72	0.39	0.33	0.27	0.56	0.36	0.20
Avail Cap(c_a), veh/h	142	1465	655	272	732	741	349	1470	658	355	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	2.7	2.5	42.4	43.4	43.4	29.8	20.4	19.7	32.0	20.7	19.0
Incr Delay (d2), s/veh	9.8	1.9	0.9	0.8	1.2	1.2	3.3	0.6	1.0	6.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.8	0.7	3.2	16.9	17.1	3.8	5.2	3.8	6.1	5.7	2.7
LnGrp Delay(d),s/veh	31.8	4.6	3.4	43.2	44.6	44.6	33.1	21.0	20.7	38.2	21.4	19.7
LnGrp LOS	C	A	A	D	D	D	C	C	C	D	C	B
Approach Vol, veh/h		1199			1157			803			857	
Approach Delay, s/veh		6.0			44.5			23.0			25.0	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		39.9		38.6		53.5		30.4
Green Ext Time (p_c), s		10.0		8.2		0.1		10.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

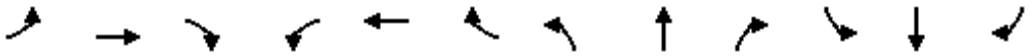
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



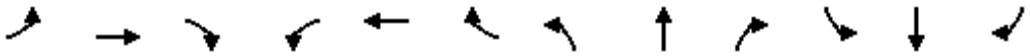
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	597	111	104	678	96	89	503	46	53	447	71
Future Volume (vph)	137	597	111	104	678	96	89	503	46	53	447	71
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1317	1509	4336	1321	1509	1588	1332	1509	1553	
Flt Permitted	0.36	1.00	1.00	0.40	1.00	1.00	0.27	1.00	1.00	0.28	1.00	
Satd. Flow (perm)	565	4336	1317	637	4336	1321	424	1588	1332	451	1553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	144	628	117	109	714	101	94	529	48	56	471	75
RTOR Reduction (vph)	0	0	68	0	0	58	0	0	28	0	11	0
Lane Group Flow (vph)	144	628	49	109	714	43	94	529	20	56	535	0
Confl. Bikes (#/hr)			5			2			3			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	25.3	25.3	25.3	25.3	25.3	25.3	24.7	24.7	24.7	24.7	24.7	
Effective Green, g (s)	25.3	25.3	25.3	25.3	25.3	25.3	24.7	24.7	24.7	24.7	24.7	
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.41	0.41	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	238	1828	555	268	1828	557	174	653	548	185	639	
v/s Ratio Prot		0.14			0.16			0.33			c0.34	
v/s Ratio Perm	c0.25		0.04	0.17		0.03	0.22		0.01	0.12		
v/c Ratio	0.61	0.34	0.09	0.41	0.39	0.08	0.54	0.81	0.04	0.30	0.84	
Uniform Delay, d1	13.5	11.7	10.4	12.1	12.0	10.4	13.4	15.6	10.5	11.9	15.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	
Incremental Delay, d2	10.9	0.5	0.3	4.5	0.6	0.3	3.4	7.5	0.0	0.6	6.8	
Delay (s)	24.4	12.2	10.7	16.6	12.6	10.6	16.8	23.1	10.6	13.0	23.3	
Level of Service	C	B	B	B	B	B	B	C	B	B	C	
Approach Delay (s)		14.0			12.9			21.3			22.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	1040	52	156	940	83	169	68	234	131	92	38
Future Volume (vph)	18	1040	52	156	940	83	169	68	234	131	92	38
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2981		1433	1477	1350		1721	
Flt Permitted	0.25	1.00	1.00	0.17	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	398	3018	1350	264	2981		1433	1477	1350		1721	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	1095	55	164	989	87	178	72	246	138	97	40
RTOR Reduction (vph)	0	0	25	0	5	0	0	0	78	0	5	0
Lane Group Flow (vph)	19	1095	30	164	1071	0	123	127	169	0	270	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	66.0	66.0	66.0	77.0	77.0		15.0	15.0	22.0		14.0	
Effective Green, g (s)	66.0	66.0	66.0	76.0	77.0		14.5	14.5	20.0		13.5	
Actuated g/C Ratio	0.55	0.55	0.55	0.63	0.64		0.12	0.12	0.17		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	218	1659	742	229	1912		173	178	225		193	
v/s Ratio Prot		0.36		0.04	c0.36		0.09	0.09	c0.04		c0.16	
v/s Ratio Perm	0.05		0.02	c0.42					0.09			
v/c Ratio	0.09	0.66	0.04	0.72	0.56		0.71	0.71	0.75		1.40	
Uniform Delay, d1	12.8	19.1	12.4	13.5	12.0		50.7	50.8	47.6		53.2	
Progression Factor	1.00	1.00	1.00	1.85	1.52		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.8	2.1	0.1	5.1	0.6		12.9	12.7	12.8		207.1	
Delay (s)	13.5	21.2	12.5	30.1	18.9		63.6	63.5	60.4		260.3	
Level of Service	B	C	B	C	B		E	E	E		F	
Approach Delay (s)		20.6			20.4			62.0			260.3	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1312	111	160	1080	25	230	45	351	26	23	15
Future Volume (vph)	9	1312	111	160	1080	25	230	45	351	26	23	15
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1290	1282	1509	1493	
Flt Permitted	0.25	1.00	1.00	0.12	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	397	3018	1350	189	3018	1350	1433	1290	1282	1509	1493	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	1381	117	168	1137	26	242	47	369	27	24	16
RTOR Reduction (vph)	0	0	43	0	0	7	0	66	185	0	15	0
Lane Group Flow (vph)	9	1381	74	168	1137	19	218	160	29	27	25	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	74.6	74.6	74.6	87.6	87.6	87.6	9.0	9.0	18.0	9.4	9.4	
Effective Green, g (s)	74.6	74.6	74.6	86.6	87.6	87.6	9.0	9.0	16.0	8.4	8.4	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.73	0.73	0.08	0.08	0.13	0.07	0.07	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	246	1876	839	224	2203	985	107	96	170	105	104	
v/s Ratio Prot		0.46		c0.05	0.38		c0.15	0.12	0.01	c0.02	0.02	
v/s Ratio Perm	0.02		0.05	c0.49		0.01			0.01			
v/c Ratio	0.04	0.74	0.09	0.75	0.52	0.02	2.04	1.67	0.17	0.26	0.24	
Uniform Delay, d1	8.8	15.8	9.1	13.8	7.0	4.4	55.5	55.5	46.1	52.8	52.8	
Progression Factor	0.89	0.67	0.92	1.01	1.00	1.01	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	2.4	0.2	11.8	0.9	0.0	497.8	342.6	0.2	1.3	1.2	
Delay (s)	8.1	13.0	8.6	25.8	7.9	4.5	553.3	398.1	46.3	54.1	54.0	
Level of Service	A	B	A	C	A	A	F	F	D	D	D	
Approach Delay (s)		12.7			10.1			335.1			54.1	
Approach LOS		B			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	72.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	708	138	53	22	298	11	0	1245	611	56	1092	8
Future Volume (vph)	708	138	53	22	298	11	0	1245	611	56	1092	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		0.99			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2924			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2924			3018	1350	153	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	745	145	56	23	314	12	0	1311	643	59	1149	8
RTOR Reduction (vph)	0	0	41	0	57	0	0	0	0	0	1	0
Lane Group Flow (vph)	745	145	15	0	292	0	0	1311	643	59	1156	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	26.1	26.1	26.1		14.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	26.1	26.1	26.1		14.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.15			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	804	370	370		446			1315	588	66	1313	
v/s Ratio Prot	c0.25	0.11	0.01		c0.10			0.43			0.38	
v/s Ratio Perm									c0.48	0.38		
v/c Ratio	0.93	0.39	0.04		0.66			1.00	1.09	0.89	0.88	
Uniform Delay, d1	33.5	28.0	25.3		37.9			26.7	26.8	24.8	24.5	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.2	0.3	0.0		3.5			24.1	65.2	83.6	8.7	
Delay (s)	49.7	28.3	25.3		41.3			50.8	92.0	108.3	33.3	
Level of Service	D	C	C		D			D	F	F	C	
Approach Delay (s)	45.0				41.3			64.4			36.9	
Approach LOS	D				D			E			D	

Intersection Summary			
HCM 2000 Control Delay	51.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

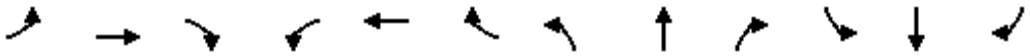
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	83	854	353	131	8	148	964	72	34	294	103	76
Future Volume (vph)	83	854	353	131	8	148	964	72	34	294	103	76
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (prot)	1509	3018	1350	1331		1509	2981			1580	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (perm)	1509	3018	1350	1331		1509	2981			1580	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	899	372	138	8	156	1015	76	36	309	108	80
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	112	0
Lane Group Flow (vph)	87	899	372	138	0	164	1088	0	0	345	76	0
Confl. Bikes (#/hr)				8				5			1	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	12.5	54.7	54.7	159.5		17.6	59.8			29.7	29.7	
Effective Green, g (s)	12.5	54.7	54.7	159.5		17.6	59.8			29.7	29.7	
Actuated g/C Ratio	0.08	0.34	0.34	1.00		0.11	0.37			0.19	0.19	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	118	1035	462	1331		166	1117			294	251	
v/s Ratio Prot	0.06	c0.30				0.11	c0.36			c0.22	0.06	
v/s Ratio Perm			0.28	c0.10								
v/c Ratio	0.74	0.87	0.81	0.10		0.99	0.97			1.17	0.30	
Uniform Delay, d1	71.9	49.0	47.6	0.0		70.8	49.1			64.9	56.0	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	18.5	8.1	10.1	0.2		65.5	20.8			108.0	0.2	
Delay (s)	90.4	57.1	57.7	0.2		136.4	69.9			172.9	56.2	
Level of Service	F	E	E	A		F	E			F	E	
Approach Delay (s)		53.9					78.6			131.7		
Approach LOS		D					E			F		

Intersection Summary			
HCM 2000 Control Delay	81.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	159.5	Sum of lost time (s)	23.9
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	69	139	361	120	46
Future Volume (vph)	69	139	361	120	46
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	0.99	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2963	1333	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2963	1333	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	146	380	126	48
RTOR Reduction (vph)	0	0	0	0	47
Lane Group Flow (vph)	0	0	599	126	1
Confl. Bikes (#/hr)				3	
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	159.5	3.9
Effective Green, g (s)			29.7	159.5	3.9
Actuated g/C Ratio			0.19	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			551	1333	33
v/s Ratio Prot			c0.20		0.00
v/s Ratio Perm				0.09	
v/c Ratio			1.09	0.09	0.04
Uniform Delay, d1			64.9	0.0	76.0
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			64.1	0.1	0.2
Delay (s)			129.0	0.1	76.1
Level of Service			F	A	E
Approach Delay (s)			106.6		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1098	27	19	1073	1	188	1	33	0	0	2
Future Volume (vph)	24	1098	27	19	1073	1	188	1	33	0	0	2
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.95			0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.97			1.00	
Satd. Flow (prot)	1509	3007		1509	3017		1433	1392			0	
Flt Permitted	0.20	1.00		0.19	1.00		0.95	0.97			1.00	
Satd. Flow (perm)	323	3007		299	3017		1433	1392			0	
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	25	1193	29	21	1166	1	204	1	36	0	0	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	2	0
Lane Group Flow (vph)	25	1221	0	21	1167	0	122	104	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	75.9	75.9		75.9	75.9		13.8	13.8			0.0	
Effective Green, g (s)	75.9	75.9		75.9	75.9		13.8	13.8			0.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.13	0.13			0.00	
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	222	2074		206	2081		179	174			0	
v/s Ratio Prot		c0.41			0.39							
v/s Ratio Perm	0.08			0.07			c0.09	0.07				
v/c Ratio	0.11	0.59		0.10	0.56		0.68	0.60			0.00	
Uniform Delay, d1	5.7	8.9		5.7	8.6		46.0	45.5			55.0	
Progression Factor	1.00	1.00		1.36	1.45		1.00	1.00			1.00	
Incremental Delay, d2	1.0	1.2		0.7	0.8		10.2	5.4			0.0	
Delay (s)	6.8	10.1		8.5	13.3		56.2	50.9			55.0	
Level of Service	A	B		A	B		E	D			D	
Approach Delay (s)		10.1			13.2			53.6			55.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1082	35	66	1087	0	51
Future Vol, veh/h	1082	35	66	1087	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1139	37	69	1144	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1176	0	-	588
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	590	-	0	452
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	590	-	-	452
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	452	-	-	590	-
HCM Lane V/C Ratio	0.119	-	-	0.118	-
HCM Control Delay (s)	14	-	-	11.9	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	947	43	191	1002	33	111	108	280	143	141	18
Future Volume (veh/h)	62	947	43	191	1002	33	111	108	280	143	141	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	65	997	45	201	1055	35	117	114	295	151	148	19
Adj No. of Lanes	1	2	0	1	2	0	0	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	286	1555	70	328	1691	56	95	67	156	175	373	48
Arrive On Green	0.03	0.53	0.53	0.07	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2941	133	1513	2981	99	204	248	578	973	1380	177
Grp Volume(v), veh/h	65	511	531	201	534	556	526	0	0	151	0	167
Grp Sat Flow(s),veh/h/ln	1513	1509	1565	1513	1509	1571	1030	0	0	973	0	1557
Q Serve(g_s), s	2.2	26.6	26.6	6.5	26.1	26.1	20.0	0.0	0.0	0.0	0.0	9.7
Cycle Q Clear(g_c), s	2.2	26.6	26.6	6.5	26.1	26.1	29.7	0.0	0.0	29.7	0.0	9.7
Prop In Lane	1.00		0.08	1.00		0.06	0.22		0.56	1.00		0.11
Lane Grp Cap(c), veh/h	286	798	827	328	856	891	318	0	0	175	0	420
V/C Ratio(X)	0.23	0.64	0.64	0.61	0.62	0.62	1.65	0.00	0.00	0.87	0.00	0.40
Avail Cap(c_a), veh/h	405	798	827	390	856	891	318	0	0	175	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.62	0.62	0.62	0.74	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	18.5	18.5	15.3	15.9	16.0	44.5	0.0	0.0	44.3	0.0	32.9
Incr Delay (d2), s/veh	0.1	3.9	3.8	0.6	2.1	2.1	304.4	0.0	0.0	33.6	0.0	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	0.9	12.0	12.4	2.7	11.3	11.8	36.5	0.0	0.0	6.2	0.0	4.2
LnGrp Delay(d),s/veh	13.8	22.4	22.3	15.9	18.1	18.0	348.8	0.0	0.0	77.9	0.0	33.5
LnGrp LOS	B	C	C	B	B	B	F			E		C
Approach Vol, veh/h		1107			1291			526			318	
Approach Delay, s/veh		21.9			17.7			348.8			54.6	
Approach LOS		C			B			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	63.5		34.0	8.3	67.7		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	8.5	28.6		31.7	4.2	28.1		31.7
Green Ext Time (p_c), s	0.1	20.3		0.0	0.0	20.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

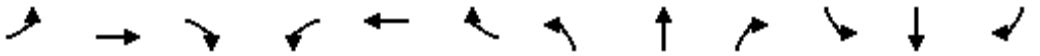
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1257	52	161	1027	73	116	636	242	78	426	74
Future Volume (veh/h)	105	1257	52	161	1027	73	116	636	242	78	426	74
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	111	1323	55	169	1081	77	122	669	255	82	448	78
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	1675	70	379	1671	119	127	705	308	75	600	104
Arrive On Green	0.10	1.00	1.00	0.06	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2949	122	1513	2854	203	873	3018	1317	603	2567	444
Grp Volume(v), veh/h	111	676	702	169	571	587	122	669	255	82	262	264
Grp Sat Flow(s),veh/h/ln	1513	1509	1563	1513	1509	1549	873	1509	1317	603	1509	1503
Q Serve(g_s), s	3.4	0.0	0.0	5.2	27.8	27.8	7.7	24.0	20.2	1.7	17.7	18.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	5.2	27.8	27.8	25.7	24.0	20.2	25.7	17.7	18.0
Prop In Lane	1.00		0.08	1.00		0.13	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	299	857	888	379	883	907	127	705	308	75	353	351
V/C Ratio(X)	0.37	0.79	0.79	0.45	0.65	0.65	0.96	0.95	0.83	1.10	0.74	0.75
Avail Cap(c_a), veh/h	377	857	888	431	883	907	127	705	308	75	353	351
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)	0.58	0.58	0.58	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	0.0	8.7	15.2	15.2	53.1	41.5	40.1	54.9	39.1	39.2
Incr Delay (d2), s/veh	0.2	4.3	4.2	0.3	3.6	3.6	67.5	22.1	17.4	133.3	8.9	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	0.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.0	1.0	2.1	12.3	12.6	6.1	12.2	8.9	5.0	8.2	8.4
LnGrp Delay(d),s/veh	12.2	4.3	4.2	9.0	18.9	18.8	120.6	63.6	57.4	188.7	47.9	48.6
LnGrp LOS	B	A	A	A	B	B	F	E	E	F	D	D
Approach Vol, veh/h		1489			1327			1046			608	
Approach Delay, s/veh		4.9			17.6			68.8			67.2	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	67.8		31.0	9.3	69.7		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 59		* 26	* 11	* 59		* 26
Max Q Clear Time (g_c+I1), s	7.2	2.0		27.7	5.4	29.8		27.7
Green Ext Time (p_c), s	0.1	45.7		0.0	0.0	25.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	532	1022	81	145	636	14	154	808	135	2	666	459
Future Volume (vph)	532	1022	81	145	636	14	154	808	135	2	666	459
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3008		2927	2953			3017	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3008		2927	2953			2876	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	560	1076	85	153	669	15	162	851	142	2	701	483
RTOR Reduction (vph)	0	0	53	0	1	0	0	12	0	0	0	308
Lane Group Flow (vph)	560	1076	32	153	683	0	162	981	0	0	703	175
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2							4		4
Actuated Green, G (s)	21.8	41.4	41.4	9.2	29.8		6.0	44.4			34.4	34.4
Effective Green, g (s)	21.8	41.9	41.4	9.2	30.3		7.0	45.4			35.4	35.4
Actuated g/C Ratio	0.20	0.38	0.38	0.08	0.28		0.06	0.41			0.32	0.32
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	580	1149	508	244	828		186	1218			925	434
v/s Ratio Prot	0.19	c0.36		0.05	c0.23		c0.06	c0.33				
v/s Ratio Perm			0.02								0.24	0.13
v/c Ratio	0.97	0.94	0.06	0.63	0.82		0.87	0.81			0.76	0.40
Uniform Delay, d1	43.7	32.8	21.9	48.7	37.4		51.1	28.4			33.5	29.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	28.5	14.3	0.1	3.6	7.5		32.2	5.7			5.8	2.8
Delay (s)	72.2	47.1	22.0	52.3	44.8		83.2	34.2			39.3	31.8
Level of Service	E	D	C	D	D		F	C			D	C
Approach Delay (s)		54.0			46.2			41.0			36.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	22.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	29	531	6	0	50	78	236	0	5	11	45
Future Vol, veh/h	0	29	531	6	0	50	78	236	0	5	11	45
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	577	7	0	54	85	257	0	5	12	49
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	32.8	10.6	10.1
HCM LOS	D	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	5%	39%	0%	75%
Vol Thru, %	18%	94%	61%	0%	4%
Vol Right, %	74%	1%	0%	100%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	566	128	236	102
LT Vol	5	29	50	0	76
Through Vol	11	531	78	0	4
RT Vol	45	6	0	236	22
Lane Flow Rate	66	615	139	257	111
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.114	0.873	0.231	0.361	0.2
Departure Headway (Hd)	6.199	5.111	5.971	5.063	6.5
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	576	708	601	711	551
Service Time	4.262	3.143	3.711	2.803	4.557
HCM Lane V/C Ratio	0.115	0.869	0.231	0.361	0.201
HCM Control Delay	10.1	32.8	10.5	10.7	11.2
HCM Lane LOS	B	D	B	B	B
HCM 95th-tile Q	0.4	10.6	0.9	1.6	0.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	76	4	22
Future Vol, veh/h	0	76	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	83	4	24
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.2
HCM LOS	B

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	609	325	45	55	34
Future Vol, veh/h	32	609	325	45	55	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	641	342	47	58	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	389	0	-	0	1074	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	708	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1170	-	-	-	243	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	488	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	232	679
Mov Cap-2 Maneuver	-	-	-	-	232	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	466	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	21.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1170	-	-	-	310
HCM Lane V/C Ratio	0.029	-	-	-	0.302
HCM Control Delay (s)	8.2	0	-	-	21.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	502	127	206	278	122	69	341	265	110	272	26
Future Volume (veh/h)	62	502	127	206	278	122	69	341	265	110	272	26
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	65	528	134	217	293	128	73	359	279	116	286	27
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	601	147	257	859	730	275	551	468	203	496	47
Arrive On Green	0.55	0.54	0.54	0.90	0.90	0.90	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	95	1110	272	770	1588	1350	1062	1588	1350	787	1429	135
Grp Volume(v), veh/h	727	0	0	217	293	128	73	359	279	116	0	313
Grp Sat Flow(s),veh/h/ln	1478	0	0	770	1588	1350	1062	1588	1350	787	0	1564
Q Serve(g_s), s	26.1	0.0	0.0	9.4	2.3	1.0	5.4	17.2	15.3	13.1	0.0	14.7
Cycle Q Clear(g_c), s	39.3	0.0	0.0	48.7	2.3	1.0	20.1	17.2	15.3	30.3	0.0	14.7
Prop In Lane	0.09		0.18	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	852	0	0	257	859	731	275	551	468	203	0	542
V/C Ratio(X)	0.85	0.00	0.00	0.84	0.34	0.18	0.27	0.65	0.60	0.57	0.00	0.58
Avail Cap(c_a), veh/h	852	0	0	257	859	731	275	551	468	203	0	542
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	0.00	0.00	0.81	0.81	0.81	1.00	1.00	1.00	0.80	0.00	0.80
Uniform Delay (d), s/veh	18.3	0.0	0.0	14.0	2.1	2.0	32.2	24.8	24.2	37.6	0.0	24.0
Incr Delay (d2), s/veh	10.6	0.0	0.0	23.0	0.9	0.4	0.5	2.7	2.1	3.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.2	0.0	0.0	7.0	1.1	0.4	1.6	7.9	5.9	3.0	0.0	6.5
LnGrp Delay(d),s/veh	28.9	0.0	0.0	36.9	3.0	2.5	32.7	27.6	26.3	40.7	0.0	25.2
LnGrp LOS	C			D	A	A	C	C	C	D		C
Approach Vol, veh/h		727			638			711			429	
Approach Delay, s/veh		28.9			14.4			27.6			29.4	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		50.7		22.1		41.3		32.3
Green Ext Time (p_c), s		0.0		3.8		5.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	595	117	149	482	227	99	686	139	111	563	45
Future Volume (veh/h)	100	595	117	149	482	227	99	686	139	111	563	45
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	105	626	123	157	507	239	104	722	146	117	593	47
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	300	1334	262	456	842	716	232	881	178	137	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	712	2516	494	710	1588	1350	786	2502	506	635	3018	1350
Grp Volume(v), veh/h	105	375	374	157	507	239	104	435	433	117	593	47
Grp Sat Flow(s),veh/h/ln	712	1509	1501	710	1588	1350	786	1509	1499	635	1509	1350
Q Serve(g_s), s	7.6	0.0	0.0	12.0	19.8	9.1	11.1	23.6	23.7	8.0	14.3	2.1
Cycle Q Clear(g_c), s	27.5	0.0	0.0	12.0	19.8	9.1	25.3	23.6	23.7	31.7	14.3	2.1
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	300	800	796	456	842	716	232	531	528	137	1063	476
V/C Ratio(X)	0.35	0.47	0.47	0.34	0.60	0.33	0.45	0.82	0.82	0.86	0.56	0.10
Avail Cap(c_a), veh/h	300	800	796	456	842	716	232	531	528	137	1063	476
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)	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	5.7	0.0	0.0	12.8	14.6	12.1	33.7	26.5	26.5	43.1	23.5	19.6
Incr Delay (d2), s/veh	1.8	1.1	1.1	2.1	3.2	1.3	0.5	9.2	9.3	36.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.3	0.3	2.6	9.3	3.6	2.4	11.2	11.1	4.3	6.0	0.8
LnGrp Delay(d),s/veh	7.5	1.1	1.1	14.8	17.8	13.3	34.2	35.7	35.8	79.4	23.9	19.6
LnGrp LOS	A	A	A	B	B	B	C	D	D	E	C	B
Approach Vol, veh/h		854			903			972			757	
Approach Delay, s/veh		1.9			16.1			35.6			32.2	
Approach LOS		A			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		29.5		33.7		21.8		27.3
Green Ext Time (p_c), s		9.1		0.0		10.7		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	942	40	241	647	76	61	1015	278	59	743	111
Future Volume (veh/h)	156	942	40	241	647	76	61	1015	278	59	743	111
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	164	992	42	254	681	0	64	1068	293	62	782	117
Adj No. of Lanes	1	2	0	1	2	1	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	219	752	32	191	1172	524	272	1265	344	106	1420	212
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.36	0.36	0.36	0.54	0.54	0.53
Sat Flow, veh/h	756	2950	125	1513	3018	1350	617	2346	639	398	2634	394
Grp Volume(v), veh/h	164	507	527	254	681	0	64	684	677	62	448	451
Grp Sat Flow(s),veh/h/ln	756	1509	1566	1513	1509	1350	617	1509	1476	398	1509	1519
Q Serve(g_s), s	25.2	30.6	30.6	10.4	21.4	0.0	10.3	49.9	50.8	13.9	23.4	23.4
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	21.4	0.0	33.7	49.9	50.8	64.7	23.4	23.4
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.43	1.00		0.26
Lane Grp Cap(c), veh/h	219	385	399	191	1172	524	272	814	796	106	814	819
V/C Ratio(X)	0.75	1.32	1.32	1.33	0.58	0.00	0.24	0.84	0.85	0.58	0.55	0.55
Avail Cap(c_a), veh/h	219	385	399	191	1172	524	272	814	796	106	814	819
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	44.7	44.7	35.4	29.0	0.0	38.1	33.6	33.9	54.8	18.1	18.2
Incr Delay (d2), s/veh	17.7	158.1	157.6	179.5	2.1	0.0	2.0	10.2	11.1	21.3	2.7	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	6.5	29.6	30.7	14.2	9.2	0.0	1.9	23.1	23.1	2.7	10.3	10.4
LnGrp Delay(d),s/veh	65.5	202.8	202.3	215.0	31.1	0.0	40.1	43.9	44.9	76.1	20.8	20.9
LnGrp LOS	E	F	F	F	C		D	D	D	E	C	C
Approach Vol, veh/h		1198			935			1425			961	
Approach Delay, s/veh		183.8			81.0			44.2			24.4	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		23.4		52.8	12.4	32.6
Green Ext Time (p_c), s		0.0		10.5		8.3	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		84.6
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

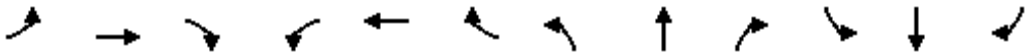
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	924	90	169	839	108	126	394	131	85	363	44
Future Volume (veh/h)	158	924	90	169	839	108	126	394	131	85	363	44
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	166	973	95	178	883	114	133	415	138	89	382	46
Adj No. of Lanes	1	2	0	1	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	268	992	97	267	960	124	233	446	148	116	546	66
Arrive On Green	0.11	0.34	0.34	0.04	0.11	0.11	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2908	284	1587	2813	363	1003	1192	396	894	1457	175
Grp Volume(v), veh/h	166	530	538	178	497	500	133	0	553	89	0	428
Grp Sat Flow(s),veh/h/ln	1587	1583	1609	1587	1583	1593	1003	0	1589	894	0	1633
Q Serve(g_s), s	5.9	29.8	29.8	6.2	28.0	28.0	11.7	0.0	30.1	3.6	0.0	20.0
Cycle Q Clear(g_c), s	5.9	29.8	29.8	6.2	28.0	28.0	31.7	0.0	30.1	33.7	0.0	20.0
Prop In Lane	1.00		0.18	1.00		0.23	1.00		0.25	1.00		0.11
Lane Grp Cap(c), veh/h	268	540	549	267	540	544	233	0	595	116	0	611
V/C Ratio(X)	0.62	0.98	0.98	0.67	0.92	0.92	0.57	0.00	0.93	0.77	0.00	0.70
Avail Cap(c_a), veh/h	268	540	549	267	540	544	233	0	595	116	0	611
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	29.4	29.4	22.1	38.7	38.7	37.3	0.0	27.0	44.3	0.0	23.9
Incr Delay (d2), s/veh	10.3	34.3	34.0	12.4	23.3	23.2	9.8	0.0	23.1	37.5	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	3.3	18.1	18.3	3.6	15.8	15.9	3.8	0.0	16.9	3.4	0.0	10.0
LnGrp Delay(d),s/veh	30.9	63.6	63.4	34.4	62.0	61.9	47.1	0.0	50.1	81.7	0.0	30.4
LnGrp LOS	C	E	E	C	E	E	D		D	F		C
Approach Vol, veh/h		1234			1175			686			517	
Approach Delay, s/veh		59.1			57.8			49.5			39.2	
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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	7.9	30.0		35.7	8.2	31.8		33.7
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		54.0
HCM 2010 LOS		D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	924	90	169	839	108	126	394	131	85	363	44
Future Volume (vph)	158	924	90	169	839	108	126	394	131	85	363	44
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3118		1583	3105		1583	1598		1583	1637	
Flt Permitted	0.13	1.00		0.13	1.00		0.33	1.00		0.19	1.00	
Satd. Flow (perm)	224	3118		221	3105		544	1598		317	1637	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	166	973	95	178	883	114	133	415	138	89	382	46
RTOR Reduction (vph)	0	8	0	0	11	0	0	13	0	0	5	0
Lane Group Flow (vph)	166	1060	0	178	986	0	133	540	0	89	423	0
Confl. Bikes (#/hr)			3			1			8			3
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		258	1059		203	598		118	612	
v/s Ratio Prot	0.07	c0.34		c0.08	0.32			c0.34			0.26	
v/s Ratio Perm	0.22			0.23			0.24			0.28		
v/c Ratio	0.67	1.00		0.69	0.93		0.66	0.90		0.75	0.69	
Uniform Delay, d1	18.5	29.6		18.6	28.6		23.3	26.6		24.5	23.8	
Progression Factor	1.00	1.00		0.67	1.10		1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.3	27.0		3.4	4.5		15.3	19.4		35.5	6.3	
Delay (s)	31.7	56.6		15.9	35.9		38.7	46.0		60.0	30.1	
Level of Service	C	E		B	D		D	D		E	C	
Approach Delay (s)		53.2			32.8			44.6			35.2	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	921	56	99	910	78	80	441	163	68	320	167
Future Volume (veh/h)	101	921	56	99	910	78	80	441	163	68	320	167
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	106	969	59	104	958	82	84	464	172	72	337	176
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	1137	69	167	1107	95	322	1160	671	498	489	255
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	567	3033	185	573	2953	253	927	2451	1417	828	1032	539
Grp Volume(v), veh/h	106	506	522	104	514	526	84	464	172	72	0	513
Grp Sat Flow(s),veh/h/ln	567	1583	1634	573	1583	1622	927	2451	1417	828	0	1572
Q Serve(g_s), s	3.9	17.6	17.6	4.9	18.6	18.6	3.8	1.0	0.5	3.1	0.0	15.4
Cycle Q Clear(g_c), s	22.5	17.6	17.6	22.5	18.6	18.6	19.1	1.0	0.5	4.1	0.0	15.4
Prop In Lane	1.00		0.11	1.00		0.16	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	157	594	613	167	594	608	322	1160	671	498	0	744
V/C Ratio(X)	0.68	0.85	0.85	0.62	0.87	0.87	0.26	0.40	0.26	0.14	0.00	0.69
Avail Cap(c_a), veh/h	157	594	613	167	594	608	322	1160	671	498	0	744
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.60	0.60	0.60	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	17.2	17.2	32.6	21.0	21.0	6.7	0.9	0.9	9.7	0.0	12.4
Incr Delay (d2), s/veh	21.0	14.4	14.0	11.0	10.8	10.6	1.2	0.6	0.6	0.6	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	2.7	10.0	10.2	2.2	9.9	10.1	1.0	0.7	0.3	0.8	0.0	7.6
LnGrp Delay(d),s/veh	50.4	31.6	31.2	43.6	31.8	31.6	7.8	1.5	1.4	10.3	0.0	17.6
LnGrp LOS	D	C	C	D	C	C	A	A	A	B		B
Approach Vol, veh/h		1134			1144			720			585	
Approach Delay, s/veh		33.2			32.8			2.2			16.7	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		17.4		24.5		21.1
Green Ext Time (p_c), s		0.0		4.7		0.0		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

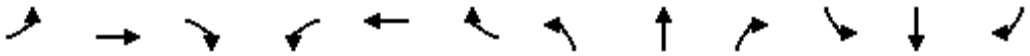
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1134	138	66	778	155	125	854	446	224	747	117
Future Volume (veh/h)	57	1134	138	66	778	155	125	854	446	224	747	117
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	60	1194	145	69	819	163	132	899	469	236	786	123
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	300	1465	655	208	1218	242	244	1470	658	164	1470	658
Arrive On Green	0.93	0.93	0.93	0.93	0.93	0.93	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	599	3167	1417	427	2633	524	641	3167	1417	415	3167	1417
Grp Volume(v), veh/h	60	1194	145	69	492	490	132	899	469	236	786	123
Grp Sat Flow(s),veh/h/ln	599	1583	1417	427	1583	1574	641	1583	1417	415	1583	1417
Q Serve(g_s), s	3.0	13.8	1.2	8.7	7.4	7.4	22.2	25.5	31.8	30.2	21.2	6.1
Cycle Q Clear(g_c), s	10.4	13.8	1.2	22.5	7.4	7.4	43.4	25.5	31.8	55.7	21.2	6.1
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	1465	655	208	732	728	244	1470	658	164	1470	658
V/C Ratio(X)	0.20	0.82	0.22	0.33	0.67	0.67	0.54	0.61	0.71	1.43	0.53	0.19
Avail Cap(c_a), veh/h	300	1465	655	208	732	728	244	1470	658	164	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	2.9	2.5	6.4	2.7	2.7	38.4	24.1	25.8	50.4	22.9	18.9
Incr Delay (d2), s/veh	1.3	4.5	0.7	0.8	1.0	1.0	8.3	1.9	6.5	226.8	1.4	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	5.9	0.5	1.0	2.9	2.9	4.5	11.5	13.6	15.8	9.6	2.5
LnGrp Delay(d),s/veh	5.0	7.4	3.1	7.2	3.7	3.7	46.7	26.0	32.2	277.2	24.3	19.5
LnGrp LOS	A	A	A	A	A	A	D	C	C	F	C	B
Approach Vol, veh/h		1399			1051			1500			1145	
Approach Delay, s/veh		6.9			3.9			29.8			75.9	
Approach LOS		A			A			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		24.5		57.7		15.8		45.4
Green Ext Time (p_c), s		17.4		0.0		20.1		7.8

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1104	90	112	787	59	101	509	45	79	506	48
Future Volume (vph)	148	1104	90	112	787	59	101	509	45	79	506	48
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1311	1509	4336	1318	1509	1588	1327	1509	1565	
Flt Permitted	0.30	1.00	1.00	0.17	1.00	1.00	0.25	1.00	1.00	0.29	1.00	
Satd. Flow (perm)	473	4336	1311	276	4336	1318	391	1588	1327	464	1565	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	1162	95	118	828	62	106	536	47	83	533	51
RTOR Reduction (vph)	0	0	57	0	0	37	0	0	21	0	6	0
Lane Group Flow (vph)	156	1162	38	118	828	25	106	536	26	83	578	0
Confl. Bikes (#/hr)			10			4			10			5
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	24.3	24.3	24.3	24.3	24.3	24.3	25.7	25.7	25.7	25.7	25.7	
Effective Green, g (s)	24.3	24.3	24.3	24.3	24.3	24.3	25.7	25.7	25.7	25.7	25.7	
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41	0.41	0.43	0.43	0.43	0.43	0.43	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	191	1756	530	111	1756	533	167	680	568	198	670	
v/s Ratio Prot		0.27			0.19			0.34			c0.37	
v/s Ratio Perm	0.33		0.03	c0.43		0.02	0.27		0.02	0.18		
v/c Ratio	0.82	0.66	0.07	1.06	0.47	0.05	0.63	0.79	0.05	0.42	0.86	
Uniform Delay, d1	15.9	14.5	10.9	17.9	13.1	10.8	13.5	14.8	10.0	11.9	15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.30	
Incremental Delay, d2	30.6	2.0	0.3	103.4	0.9	0.2	7.7	6.0	0.0	1.2	9.5	
Delay (s)	46.5	16.5	11.2	121.3	14.0	11.0	21.1	20.8	10.0	17.2	29.6	
Level of Service	D	B	B	F	B	B	C	C	B	B	C	
Approach Delay (s)		19.4			26.4			20.1			28.1	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	1/20/2017
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	PM	Reviewed by:		Project:	Robertson Lane Hotel Project

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			3			3			3				3				3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	101	1	**101**	0	101	**101**	5	110	1	**110**	0	110	1	**110**	0	110	1	**110**
	Left-Through		0							0				0				0	
	Through	502	1	502	7	509	509	77	599	1	599	7	606	1	606	0	606	1	606
	Through-Right		0							0				0				0	
	Right	45	1	0	0	45	0	0	47	1	0	0	47	1	0	0	47	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	79	1	79	0	79	79	0	82	1	82	0	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	499	0	**547**	7	506	**554**	99	618	0	**686**	7	625	0	**693**	0	625	0	**693**
	Through-Right		1							1				1				1	
	Right	48	0	0	0	48	0	18	68	0	0	0	68	0	0	0	68	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	148	1	148	0	148	148	0	154	1	154	0	154	1	154	0	154	1	154
	Left-Through		0							0				0				0	
	Through	1104	3	**368**	0	1104	**368**	33	1182	3	**394**	0	1182	3	**394**	0	1182	3	**394**
	Through-Right		0							0				0				0	
	Right	90	1	40	0	90	40	8	102	1	47	0	102	1	47	0	102	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	112	1	**112**	0	112	**112**	0	117	1	**117**	0	117	1	**117**	0	117	1	**117**
	Left-Through		0							0				0				0	
	Through	787	3	262	0	787	262	49	868	3	289	0	868	3	289	0	868	3	289
	Through-Right		0							0				0				0	
	Right	59	1	20	0	59	20	0	61	1	20	0	61	1	20	0	61	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		648	*North-South:*		655	*North-South:*			796	*North-South:*			803	*North-South:*			803
		East-West:		480	*East-West:*		480	*East-West:*			511	*East-West:*			511	*East-West:*			511
		SUM:		1128	*SUM:*		1135	*SUM:*			1307	*SUM:*			1314	*SUM:*			1314
VOLUME/CAPACITY *(V/C)* RATIO:				0.792			0.796				0.917				0.922				0.922
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.692			0.696				0.817				0.822				0.822
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.004

Significant impacted? NO

PROPOSED PROJECT IMPACT

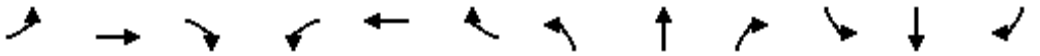
Change in *v/c* due to project: 0.005

Significant impacted? NO

$\Delta v/c$ after mitigation: 0.005

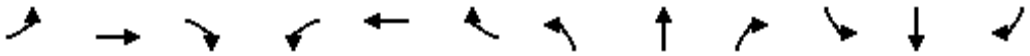
Fully mitigated? N/A

APPENDIX D
Intersection Level of Service Worksheets
Future Without Project (Year 2019)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	909	101	151	1623	101	171	112	141	100	97	16
Future Volume (vph)	24	909	101	151	1623	101	171	112	141	100	97	16
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2991		1433	1492	1350		1741	
Flt Permitted	0.06	1.00	1.00	0.21	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	98	3018	1350	327	2991		1433	1492	1350		1741	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	957	106	159	1708	106	180	118	148	105	102	17
RTOR Reduction (vph)	0	0	42	0	4	0	0	0	112	0	3	0
Lane Group Flow (vph)	25	957	64	159	1810	0	146	152	36	0	221	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	64.8	64.8	64.8	75.8	75.8		16.2	16.2	23.2		14.0	
Effective Green, g (s)	64.8	64.8	64.8	74.8	75.8		15.7	15.7	21.2		13.5	
Actuated g/C Ratio	0.54	0.54	0.54	0.62	0.63		0.13	0.13	0.18		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	52	1629	729	262	1889		187	195	238		195	
v/s Ratio Prot		0.32		0.03	c0.61		c0.10	0.10	0.01		c0.13	
v/s Ratio Perm	0.26		0.05	0.35					0.02			
v/c Ratio	0.48	0.59	0.09	0.61	0.96		0.78	0.78	0.15		1.14	
Uniform Delay, d1	17.1	18.6	13.3	12.4	20.6		50.5	50.5	41.8		53.2	
Progression Factor	1.00	1.00	1.00	1.30	1.09		1.00	1.00	1.00		1.00	
Incremental Delay, d2	28.6	1.6	0.2	1.9	7.5		18.8	17.7	0.3		105.5	
Delay (s)	45.7	20.2	13.6	18.0	29.9		69.3	68.1	42.1		158.7	
Level of Service	D	C	B	B	C		E	E	D		F	
Approach Delay (s)		20.1			29.0			59.9			158.7	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	925	232	137	1704	20	247	92	207	33	166	41
Future Volume (vph)	21	925	232	137	1704	20	247	92	207	33	166	41
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1475	2376	1509	1541	
Flt Permitted	0.07	1.00	1.00	0.20	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	115	3018	1350	318	3018	1350	1433	1475	2376	1509	1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	974	244	144	1794	21	260	97	218	35	175	43
RTOR Reduction (vph)	0	0	112	0	0	7	0	0	145	0	8	0
Lane Group Flow (vph)	22	974	132	144	1794	14	177	180	73	35	210	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	64.9	64.9	64.9	77.9	77.9	77.9	9.0	9.0	18.0	19.1	19.1	
Effective Green, g (s)	64.9	64.9	64.9	76.9	77.9	77.9	9.0	9.0	16.0	18.1	18.1	
Actuated g/C Ratio	0.54	0.54	0.54	0.64	0.65	0.65	0.08	0.08	0.13	0.15	0.15	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	62	1632	730	283	1959	876	107	110	316	227	232	
v/s Ratio Prot		0.32		0.03	c0.59		c0.12	0.12	0.02	0.02	c0.14	
v/s Ratio Perm	0.19		0.10	0.29		0.01			0.02			
v/c Ratio	0.35	0.60	0.18	0.51	0.92	0.02	1.65	1.64	0.23	0.15	0.91	
Uniform Delay, d1	15.7	18.7	14.0	11.5	18.2	7.5	55.5	55.5	46.5	44.3	50.1	
Progression Factor	1.13	1.51	5.06	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.2	1.4	0.5	0.5	8.2	0.0	332.1	323.6	0.1	0.3	34.7	
Delay (s)	30.9	29.6	71.5	11.9	26.4	7.5	387.6	379.1	46.6	44.6	84.8	
Level of Service	C	C	E	B	C	A	F	F	D	D	F	
Approach Delay (s)		37.8			25.1			255.7			79.2	
Approach LOS		D			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	65.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	751	132	25	52	319	3	0	1040	563	64	1545	9
Future Volume (vph)	751	132	25	52	319	3	0	1040	563	64	1545	9
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2932			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.13	1.00	
Satd. Flow (perm)	2927	1350	1350		2932			3018	1350	208	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	791	139	26	55	336	3	0	1095	593	67	1626	9
RTOR Reduction (vph)	0	0	19	0	56	0	0	0	0	0	1	0
Lane Group Flow (vph)	791	139	7	0	338	0	0	1095	593	67	1634	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.1	25.1	25.1		15.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.1	25.1	25.1		15.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.26	0.26	0.26		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	773	356	356		478			1315	588	90	1313	
v/s Ratio Prot	c0.27	0.10	0.01		c0.12			0.36			c0.54	
v/s Ratio Perm									0.44	0.32		
v/c Ratio	1.02	0.39	0.02		0.71			0.83	1.01	0.74	1.24	
Uniform Delay, d1	35.0	28.7	25.8		37.6			23.7	26.8	22.4	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	38.4	0.3	0.0		4.7			6.3	39.2	42.5	116.7	
Delay (s)	73.4	28.9	25.9		42.3			30.0	66.0	64.9	143.5	
Level of Service	E	C	C		D			C	E	E	F	
Approach Delay (s)	65.6				42.3			42.7			140.4	
Approach LOS	E				D			D			F	

Intersection Summary			
HCM 2000 Control Delay	82.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

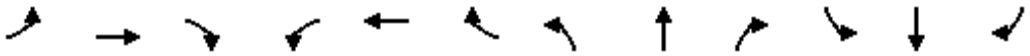
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	84	605	335	35	167	1570	54	40	331	84	64	32
Future Volume (vph)	84	605	335	35	167	1570	54	40	331	84	64	32
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0	4.0	5.3			5.3	5.3		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.95			1.00	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00			1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt	1.00	1.00	0.85	0.85	1.00	0.99			1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (prot)	1509	3018	1350	1333	1509	2999			1580	1350		
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (perm)	1509	3018	1350	1333	1509	2999			1580	1350		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	637	353	37	176	1653	57	42	348	88	67	34
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	112	0	0
Lane Group Flow (vph)	88	637	353	37	176	1709	0	0	390	43	0	0
Confl. Bikes (#/hr)				2			19			3		
Turn Type	Prot	NA	Perm	Free	Prot	NA		Split	NA	custom		Split
Protected Phases	5	2			1	6		4	4	4		3
Permitted Phases			2	Free						4		
Actuated Green, G (s)	12.4	47.9	47.9	155.8	24.5	60.0			29.8	29.8		
Effective Green, g (s)	12.4	47.9	47.9	155.8	24.5	60.0			29.8	29.8		
Actuated g/C Ratio	0.08	0.31	0.31	1.00	0.16	0.39			0.19	0.19		
Clearance Time (s)	4.0	5.3	5.3		4.0	5.3			5.3	5.3		
Vehicle Extension (s)	2.0	3.5	3.5		2.0	3.5			2.0	2.0		
Lane Grp Cap (vph)	120	927	415	1333	237	1154			302	258		
v/s Ratio Prot	0.06	0.21			0.12	c0.57			c0.25	0.03		
v/s Ratio Perm			c0.26	0.03								
v/c Ratio	0.73	0.69	0.85	0.03	0.74	1.48			1.29	0.17		
Uniform Delay, d1	70.1	47.4	50.6	0.0	62.6	47.9			63.0	52.6		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	17.9	2.2	15.6	0.0	10.5	221.0			153.7	0.1		
Delay (s)	88.0	49.6	66.2	0.0	73.1	268.9			216.7	52.8		
Level of Service	F	D	E	A	E	F			F	D		
Approach Delay (s)		56.2				250.7			170.0			
Approach LOS		E				F			F			

Intersection Summary			
HCM 2000 Control Delay	159.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	155.8	Sum of lost time (s)	23.9
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWR2
Lane Configurations				
Traffic Volume (vph)	117	291	137	26
Future Volume (vph)	117	291	137	26
Ideal Flow (vphpl)	1620	1620	1620	1620
Total Lost time (s)		5.3	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	0.85	0.86
Flt Protected		0.98	1.00	1.00
Satd. Flow (prot)		2967	1350	1374
Flt Permitted		0.98	1.00	1.00
Satd. Flow (perm)		2967	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	306	144	27
RTOR Reduction (vph)	0	0	0	27
Lane Group Flow (vph)	0	463	144	0
Confl. Bikes (#/hr)				
Turn Type	Split	NA	Free	Prot
Protected Phases	3	3		7
Permitted Phases			Free	
Actuated Green, G (s)		26.9	155.8	2.8
Effective Green, g (s)		26.9	155.8	2.8
Actuated g/C Ratio		0.17	1.00	0.02
Clearance Time (s)		5.3		4.0
Vehicle Extension (s)		2.0		2.0
Lane Grp Cap (vph)		512	1350	24
v/s Ratio Prot		c0.16		0.00
v/s Ratio Perm			c0.11	
v/c Ratio		0.90	0.11	0.02
Uniform Delay, d1		63.2	0.0	75.2
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		18.9	0.2	0.1
Delay (s)		82.1	0.2	75.3
Level of Service		F	A	E
Approach Delay (s)		62.7		
Approach LOS		E		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	714	16	58	1712	1	274	0	24	0	0	0
Future Volume (vph)	15	714	16	58	1712	1	274	0	24	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.98				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96				
Satd. Flow (prot)	1509	3008		1509	3017		1433	1413				
Flt Permitted	0.06	1.00		0.32	1.00		0.95	0.96				
Satd. Flow (perm)	88	3008		513	3017		1433	1413				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	16	776	17	63	1861	1	298	0	26	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	58	0	0	0	0
Lane Group Flow (vph)	16	792	0	63	1862	0	164	102	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	72.9	72.9		72.9	72.9		16.8	16.8				
Effective Green, g (s)	72.9	72.9		72.9	72.9		16.8	16.8				
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.15	0.15				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	58	1993		339	1999		218	215				
v/s Ratio Prot		0.26			c0.62							
v/s Ratio Perm	0.18			0.12			c0.11	0.07				
v/c Ratio	0.28	0.40		0.19	0.93		0.75	0.47				
Uniform Delay, d1	7.7	8.5		7.1	16.3		44.6	42.6				
Progression Factor	1.00	1.00		0.22	0.39		1.00	1.00				
Incremental Delay, d2	11.4	0.6		0.1	1.1		13.6	1.6				
Delay (s)	19.1	9.1		1.7	7.5		58.2	44.2				
Level of Service	B	A		A	A		E	D				
Approach Delay (s)		9.3			7.3			51.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	730	14	48	1792	0	48
Future Vol, veh/h	730	14	48	1792	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	768	15	51	1886	0	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	783	0	-	392
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	831	-	0	607
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	831	-	-	607
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	607	-	-	831	-
HCM Lane V/C Ratio	0.083	-	-	0.061	-
HCM Control Delay (s)	11.5	-	-	9.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	701	33	177	1776	46	61	104	143	43	133	14
Future Volume (veh/h)	48	701	33	177	1776	46	61	104	143	43	133	14
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	51	738	35	186	1869	48	64	109	151	45	140	15
Adj No. of Lanes	1	2	0	1	2	0	0	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	113	1566	74	427	1715	44	91	131	159	182	381	41
Arrive On Green	0.03	0.53	0.53	0.07	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2933	139	1513	3007	77	193	484	591	1115	1410	151
Grp Volume(v), veh/h	51	379	394	186	934	983	324	0	0	45	0	155
Grp Sat Flow(s),veh/h/ln	1513	1509	1564	1513	1509	1575	1268	0	0	1115	0	1562
Q Serve(g_s), s	1.7	17.2	17.2	5.9	62.8	62.8	19.0	0.0	0.0	0.0	0.0	8.9
Cycle Q Clear(g_c), s	1.7	17.2	17.2	5.9	62.8	62.8	27.8	0.0	0.0	10.7	0.0	8.9
Prop In Lane	1.00		0.09	1.00		0.05	0.20		0.47	1.00		0.10
Lane Grp Cap(c), veh/h	113	805	835	427	861	898	381	0	0	182	0	422
V/C Ratio(X)	0.45	0.47	0.47	0.44	1.09	1.09	0.85	0.00	0.00	0.25	0.00	0.37
Avail Cap(c_a), veh/h	237	805	835	496	861	898	381	0	0	182	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)	1.00	1.00	1.00	0.09	0.09	0.09	0.85	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	16.0	16.0	11.6	23.6	23.6	40.1	0.0	0.0	33.2	0.0	32.6
Incr Delay (d2), s/veh	1.0	2.0	1.9	0.0	40.6	44.3	14.3	0.0	0.0	0.7	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	0.9	7.6	7.9	2.4	35.5	38.0	11.1	0.0	0.0	1.2	0.0	3.9
LnGrp Delay(d),s/veh	27.4	17.9	17.9	11.6	64.3	68.0	54.4	0.0	0.0	33.9	0.0	33.1
LnGrp LOS	C	B	B	B	F	F	D			C		C
Approach Vol, veh/h		824			2103			324			200	
Approach Delay, s/veh		18.5			61.3			54.4			33.3	
Approach LOS		B			E			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	12.0	64.0		34.0	7.9	68.1		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	7.9	19.2		12.7	3.7	64.8		29.8
Green Ext Time (p_c), s	0.1	31.7		2.1	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

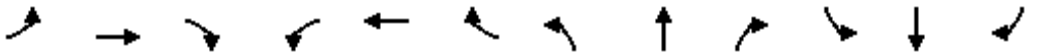
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	731	21	117	1655	128	51	509	71	61	546	160
Future Volume (veh/h)	107	731	21	117	1655	128	51	509	71	61	546	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	113	769	22	123	1742	135	54	536	75	64	575	168
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1746	50	530	1661	127	65	705	315	120	537	156
Arrive On Green	0.10	1.00	1.00	0.05	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2995	86	1513	2837	217	714	3018	1350	807	2298	670
Grp Volume(v), veh/h	113	387	404	123	916	961	54	536	75	64	377	366
Grp Sat Flow(s),veh/h/ln	1513	1509	1572	1513	1509	1545	714	1509	1350	807	1509	1459
Q Serve(g_s), s	3.4	0.0	0.0	3.7	64.4	64.4	0.0	18.2	5.0	7.5	25.7	25.7
Cycle Q Clear(g_c), s	3.4	0.0	0.0	3.7	64.4	64.4	25.7	18.2	5.0	25.7	25.7	25.7
Prop In Lane	1.00		0.05	1.00		0.14	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	138	879	916	530	884	905	65	705	315	120	353	341
V/C Ratio(X)	0.82	0.44	0.44	0.23	1.04	1.06	0.82	0.76	0.24	0.53	1.07	1.07
Avail Cap(c_a), veh/h	258	879	916	646	884	905	65	705	315	120	353	341
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)	0.89	0.89	0.89	1.00	1.00	1.00	0.98	0.98	0.98	0.96	0.96	0.96
Uniform Delay (d), s/veh	25.5	0.0	0.0	8.4	22.8	22.8	55.0	39.3	34.2	51.8	42.2	42.2
Incr Delay (d2), s/veh	4.0	1.4	1.4	0.1	40.2	47.7	56.4	5.1	0.5	5.6	66.7	69.0
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	0.3	0.3	1.5	36.4	39.1	2.7	8.1	1.9	2.1	17.2	16.9
LnGrp Delay(d),s/veh	29.5	1.4	1.4	8.5	63.0	70.5	111.4	44.4	34.7	57.4	108.8	111.1
LnGrp LOS	C	A	A	A	F	F	F	D	C	E	F	F
Approach Vol, veh/h		904			2000			665			807	
Approach Delay, s/veh		4.9			63.2			48.7			105.8	
Approach LOS		A			E			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	9.6	69.4		31.0	9.3	69.7		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 14	* 56		* 26	* 14	* 56		* 26
Max Q Clear Time (g_c+I1), s	5.7	2.0		27.7	5.4	66.4		27.7
Green Ext Time (p_c), s	0.1	47.1		0.0	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.8
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	490	61	204	1196	17	188	508	97	0	848	617
Future Volume (vph)	224	490	61	204	1196	17	188	508	97	0	848	617
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3011		2927	2945			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3011		2927	2945			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	236	516	64	215	1259	18	198	535	102	0	893	649
RTOR Reduction (vph)	0	0	40	0	1	0	0	14	0	0	0	136
Lane Group Flow (vph)	236	516	24	215	1276	0	198	623	0	0	893	513
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	9.9	40.4	40.4	11.5	43.0		7.0	43.1			32.1	32.1
Effective Green, g (s)	9.9	40.9	40.4	11.5	43.5		8.0	44.1			33.1	33.1
Actuated g/C Ratio	0.09	0.37	0.37	0.10	0.40		0.07	0.40			0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	263	1122	495	306	1190		212	1180			908	406
v/s Ratio Prot	c0.08	0.17		0.07	c0.42		c0.07	0.21			0.30	
v/s Ratio Perm			0.02									c0.38
v/c Ratio	0.90	0.46	0.05	0.70	1.07		0.93	0.53			0.98	1.26
Uniform Delay, d1	49.5	26.2	22.4	47.6	33.2		50.7	25.0			38.2	38.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	29.3	0.6	0.1	5.9	47.9		42.9	1.7			26.1	136.7
Delay (s)	78.9	26.8	22.5	53.5	81.2		93.7	26.7			64.3	175.1
Level of Service	E	C	C	D	F		F	C			E	F
Approach Delay (s)		41.5			77.2			42.6			111.0	
Approach LOS		D			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	75.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	33	437	7	0	17	194	290	0	2	3	4
Future Vol, veh/h	0	33	437	7	0	17	194	290	0	2	3	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	475	8	0	18	211	315	0	2	3	4
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	17.7	10.3	9.2
HCM LOS	C	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	7%	8%	0%	16%
Vol Thru, %	33%	92%	92%	0%	4%
Vol Right, %	44%	1%	0%	100%	79%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	477	211	290	68
LT Vol	2	33	17	0	11
Through Vol	3	437	194	0	3
RT Vol	4	7	0	290	54
Lane Flow Rate	10	518	229	315	74
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.017	0.687	0.332	0.392	0.116
Departure Headway (Hd)	6.133	4.773	5.219	4.473	5.643
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	587	752	686	801	630
Service Time	4.133	2.824	2.973	2.226	3.729
HCM Lane V/C Ratio	0.017	0.689	0.334	0.393	0.117
HCM Control Delay	9.2	17.7	10.6	10.1	9.5
HCM Lane LOS	A	C	B	B	A
HCM 95th-tile Q	0.1	5.5	1.5	1.9	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	11	3	54
Future Vol, veh/h	0	11	3	54
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	3	59
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	456	473	43	35	37
Future Vol, veh/h	10	456	473	43	35	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	480	498	45	37	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	543	0	-	0	1022	521
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1026	-	-	-	261	555
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	257	555
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	600	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1026	-	-	-	355
HCM Lane V/C Ratio	0.01	-	-	-	0.213
HCM Control Delay (s)	8.5	0	-	-	17.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.8

HCM 2010 Signalized Intersection Summary
12: Melrose Ave & Robertson Blvd

7/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	386	88	502	422	87	74	248	194	48	284	8
Future Volume (veh/h)	12	386	88	502	422	87	74	248	194	48	284	8
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	13	406	93	528	444	92	78	261	204	51	299	8
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	737	165	502	948	806	208	462	393	220	448	12
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	15	1235	277	895	1588	1350	1068	1588	1350	924	1540	41
Grp Volume(v), veh/h	512	0	0	528	444	92	78	261	204	51	0	307
Grp Sat Flow(s),veh/h/ln	1527	0	0	895	1588	1350	1068	1588	1350	924	0	1581
Q Serve(g_s), s	0.0	0.0	0.0	35.7	14.1	2.7	6.2	12.5	11.4	4.5	0.0	15.4
Cycle Q Clear(g_c), s	18.0	0.0	0.0	53.7	14.1	2.7	21.6	12.5	11.4	17.0	0.0	15.4
Prop In Lane	0.03		0.18	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	961	0	0	502	948	806	208	462	393	220	0	460
V/C Ratio(X)	0.53	0.00	0.00	1.05	0.47	0.11	0.37	0.56	0.52	0.23	0.00	0.67
Avail Cap(c_a), veh/h	961	0	0	502	948	806	268	551	468	271	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.22	0.22	0.22	1.00	1.00	1.00	0.89	0.00	0.89
Uniform Delay (d), s/veh	10.9	0.0	0.0	26.4	10.2	7.9	37.6	27.1	26.6	34.3	0.0	28.1
Incr Delay (d2), s/veh	2.1	0.0	0.0	34.4	0.4	0.1	1.1	1.1	1.1	0.5	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	8.1	0.0	0.0	17.2	6.1	1.0	1.9	5.6	4.4	1.2	0.0	7.0
LnGrp Delay(d),s/veh	13.1	0.0	0.0	60.9	10.5	7.9	38.7	28.1	27.7	34.8	0.0	30.2
LnGrp LOS	B			F	B	A	D	C	C	C		C
Approach Vol, veh/h		512			1064			543			358	
Approach Delay, s/veh		13.1			35.3			29.5			30.9	
Approach LOS		B			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.0		31.0		59.0		31.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		55.7		23.6		20.0		19.0
Green Ext Time (p_c), s		0.0		2.6		15.5		3.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

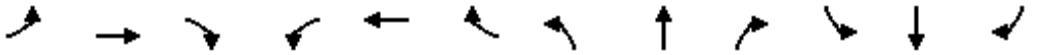
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	535	45	195	890	133	87	636	126	120	591	56
Future Volume (veh/h)	34	535	45	195	890	133	87	636	126	120	591	56
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	36	563	47	205	937	140	92	669	133	126	622	59
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	72	1627	136	453	916	779	178	796	158	118	957	428
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	522	2821	235	808	1588	1350	756	2510	499	676	3018	1350
Grp Volume(v), veh/h	36	301	309	205	937	140	92	402	400	126	622	59
Grp Sat Flow(s),veh/h/ln	522	1509	1547	808	1588	1350	756	1509	1500	676	1509	1350
Q Serve(g_s), s	0.0	10.5	10.6	18.0	57.7	4.9	11.9	24.8	24.8	6.9	17.7	3.1
Cycle Q Clear(g_c), s	57.7	10.5	10.6	28.6	57.7	4.9	29.6	24.8	24.8	31.7	17.7	3.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	72	871	892	453	916	779	178	478	476	118	957	428
V/C Ratio(X)	0.50	0.35	0.35	0.45	1.02	0.18	0.52	0.84	0.84	1.07	0.65	0.14
Avail Cap(c_a), veh/h	72	871	892	453	916	779	178	478	476	118	957	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	50.0	11.2	11.2	18.7	21.1	10.0	42.1	31.8	31.8	48.7	29.4	24.4
Incr Delay (d2), s/veh	19.9	0.9	0.9	3.2	35.5	0.5	1.2	12.0	12.2	100.8	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.6	4.7	4.4	34.0	1.9	2.5	11.9	11.8	6.6	7.5	1.2
LnGrp Delay(d),s/veh	69.9	12.1	12.1	22.0	56.7	10.5	43.4	43.8	44.0	149.6	30.6	24.4
LnGrp LOS	E	B	B	C	F	B	D	D	D	F	C	C
Approach Vol, veh/h		646			1282			894			807	
Approach Delay, s/veh		15.3			46.1			43.8			48.7	
Approach LOS		B			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 58		* 32		* 58		* 32
Max Q Clear Time (g_c+I1), s		59.7		33.7		59.7		31.6
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	479	57	498	960	44	78	709	196	77	993	143
Future Volume (veh/h)	58	479	57	498	960	44	78	709	196	77	993	143
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	61	504	60	524	1011	0	82	746	206	81	1045	151
Adj No. of Lanes	1	2	0	1	2	1	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	105	693	82	248	1172	524	171	1260	348	204	1427	206
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	555	2718	322	1513	3018	1350	466	2338	646	587	2648	382
Grp Volume(v), veh/h	61	279	285	524	1011	0	82	481	471	81	595	601
Grp Sat Flow(s),veh/h/ln	555	1509	1531	1513	1509	1350	466	1509	1474	587	1509	1521
Q Serve(g_s), s	9.6	20.3	20.5	10.4	37.0	0.0	20.7	35.2	35.2	14.5	36.0	36.2
Cycle Q Clear(g_c), s	30.6	20.3	20.5	10.4	37.0	0.0	56.9	35.2	35.2	49.7	36.0	36.2
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.44	1.00		0.25
Lane Grp Cap(c), veh/h	105	385	390	248	1172	524	171	814	795	204	814	820
V/C Ratio(X)	0.58	0.73	0.73	2.11	0.86	0.00	0.48	0.59	0.59	0.40	0.73	0.73
Avail Cap(c_a), veh/h	105	385	390	248	1172	524	171	814	795	204	814	820
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	40.9	41.0	40.2	33.8	0.0	63.8	37.2	37.2	39.6	21.0	21.2
Incr Delay (d2), s/veh	18.4	9.6	9.6	513.1	8.5	0.0	9.4	3.2	3.2	5.7	5.8	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	2.5	9.5	9.7	41.5	16.7	0.0	3.1	15.5	15.1	2.7	16.2	16.5
LnGrp Delay(d),s/veh	74.9	50.4	50.7	553.2	42.2	0.0	73.2	40.3	40.4	45.2	26.8	26.9
LnGrp LOS	E	D	D	F	D		E	D	D	D	C	C
Approach Vol, veh/h		625			1535			1034			1277	
Approach Delay, s/veh		52.9			216.7			43.0			28.0	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		51.7		39.0		58.9	12.4	32.6
Green Ext Time (p_c), s		8.8		4.2		4.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		99.7
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

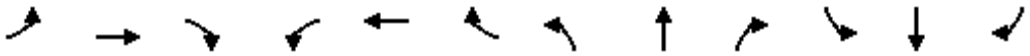
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	774	77	246	1149	53	100	429	97	46	465	172
Future Volume (veh/h)	50	774	77	246	1149	53	100	429	97	46	465	172
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	53	815	81	259	1209	56	105	452	102	48	489	181
Adj No. of Lanes	1	2	0	1	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	256	990	98	316	1051	49	80	492	111	121	433	160
Arrive On Green	0.11	0.34	0.34	0.23	0.68	0.68	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2903	288	1587	3082	143	802	1313	296	893	1157	428
Grp Volume(v), veh/h	53	445	451	259	621	644	105	0	554	48	0	670
Grp Sat Flow(s),veh/h/ln	1587	1583	1608	1587	1583	1641	802	0	1610	893	0	1585
Q Serve(g_s), s	1.7	23.1	23.2	10.4	30.7	30.7	0.0	0.0	29.6	4.1	0.0	33.7
Cycle Q Clear(g_c), s	1.7	23.1	23.2	10.4	30.7	30.7	33.7	0.0	29.6	33.7	0.0	33.7
Prop In Lane	1.00		0.18	1.00		0.09	1.00		0.18	1.00		0.27
Lane Grp Cap(c), veh/h	256	540	548	316	540	560	80	0	603	121	0	593
V/C Ratio(X)	0.21	0.82	0.82	0.82	1.15	1.15	1.31	0.00	0.92	0.40	0.00	1.13
Avail Cap(c_a), veh/h	256	540	548	316	540	560	80	0	603	121	0	593
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	27.2	27.2	17.9	14.3	14.3	45.0	0.0	26.9	43.2	0.0	28.2
Incr Delay (d2), s/veh	1.8	13.3	13.1	20.6	87.0	87.0	205.3	0.0	21.4	9.4	0.0	77.9
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	12.1	12.3	6.2	25.6	26.6	6.5	0.0	16.7	1.5	0.0	27.5
LnGrp Delay(d),s/veh	21.3	40.4	40.3	38.5	101.3	101.3	250.3	0.0	48.3	52.6	0.0	106.0
LnGrp LOS	C	D	D	D	F	F	F		D	D		F
Approach Vol, veh/h		949			1524			659			718	
Approach Delay, s/veh		39.3			90.6			80.4			102.5	
Approach LOS		D			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	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	3.7	32.7		35.7	12.4	25.2		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	78.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	774	77	246	1149	53	100	429	97	46	465	172
Future Volume (vph)	50	774	77	246	1149	53	100	429	97	46	465	172
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3146		1583	1617		1583	1594	
Flt Permitted	0.13	1.00		0.15	1.00		0.12	1.00		0.19	1.00	
Satd. Flow (perm)	224	3117		253	3146		198	1617		316	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	815	81	259	1209	56	105	452	102	48	489	181
RTOR Reduction (vph)	0	9	0	0	4	0	0	9	0	0	15	0
Lane Group Flow (vph)	53	887	0	259	1261	0	105	545	0	48	655	0
Confl. Bikes (#/hr)			3						3			1
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		269	1073		74	605		118	596	
v/s Ratio Prot	0.02	0.28		c0.11	c0.40			0.34			0.41	
v/s Ratio Perm	0.07			0.32			c0.53			0.15		
v/c Ratio	0.21	0.83		0.96	1.18		1.42	0.90		0.41	1.10	
Uniform Delay, d1	18.3	27.3		19.3	29.6		28.1	26.6		20.8	28.1	
Progression Factor	1.00	1.00		2.04	0.43		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	7.8		18.4	81.3		250.5	19.0		10.1	66.9	
Delay (s)	20.3	35.1		57.7	94.2		278.7	45.6		30.9	95.0	
Level of Service	C	D		E	F		F	D		C	F	
Approach Delay (s)		34.2			88.0			82.7			90.7	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	74.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	821	106	95	1105	41	70	399	115	33	499	372
Future Volume (veh/h)	56	821	106	95	1105	41	70	399	115	33	499	372
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	59	864	112	100	1163	43	74	420	121	35	525	392
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1057	137	179	1168	43	120	1160	671	535	420	314
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	484	2820	366	602	3115	115	637	2451	1417	904	887	662
Grp Volume(v), veh/h	59	485	491	100	591	615	74	420	121	35	0	917
Grp Sat Flow(s),veh/h/ln	484	1583	1602	602	1583	1646	637	2451	1417	904	0	1550
Q Serve(g_s), s	0.1	16.6	16.6	5.9	22.4	22.4	0.0	0.8	0.3	1.3	0.0	28.4
Cycle Q Clear(g_c), s	22.5	16.6	16.6	22.5	22.4	22.4	28.4	0.8	0.3	2.1	0.0	28.4
Prop In Lane	1.00		0.23	1.00		0.07	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	121	594	601	179	594	617	120	1160	671	535	0	734
V/C Ratio(X)	0.49	0.82	0.82	0.56	1.00	1.00	0.62	0.36	0.18	0.07	0.00	1.25
Avail Cap(c_a), veh/h	121	594	601	179	594	617	120	1160	671	535	0	734
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.46	0.46	0.46	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	16.9	16.9	31.9	22.4	22.4	15.8	0.9	0.9	9.1	0.0	15.9
Incr Delay (d2), s/veh	13.4	11.8	11.7	7.9	28.7	28.3	10.4	0.4	0.3	0.2	0.0	123.7
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	1.4	9.1	9.2	2.0	14.5	15.0	1.5	0.6	0.2	0.4	0.0	37.2
LnGrp Delay(d),s/veh	43.4	28.7	28.6	39.9	51.2	50.8	26.2	1.3	1.1	9.4	0.0	139.6
LnGrp LOS	D	C	C	D	D	D	C	A	A	A		F
Approach Vol, veh/h		1035			1306			615			952	
Approach Delay, s/veh		29.5			50.1			4.2			134.8	
Approach LOS		C			D			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		30.4		24.5		30.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.1
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

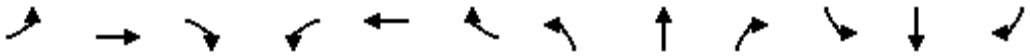
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	768	133	126	1305	126	135	765	97	133	688	168
Future Volume (veh/h)	35	768	133	126	1305	126	135	765	97	133	688	168
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	37	808	140	133	1374	133	142	805	102	140	724	177
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	85	1649	738	382	1520	146	208	1285	575	191	1285	575
Arrive On Green	1.00	1.00	1.00	0.35	0.35	0.35	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	363	3167	1417	618	2919	281	646	3167	1417	643	3167	1417
Grp Volume(v), veh/h	37	808	140	133	742	765	142	805	102	140	724	177
Grp Sat Flow(s),veh/h/ln	363	1583	1417	618	1583	1617	646	1583	1417	643	1583	1417
Q Serve(g_s), s	8.4	0.0	0.0	19.6	53.4	54.1	26.0	24.3	5.5	24.4	21.1	10.2
Cycle Q Clear(g_c), s	62.5	0.0	0.0	19.6	53.4	54.1	47.2	24.3	5.5	48.7	21.1	10.2
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	1649	738	382	825	842	208	1285	575	191	1285	575
V/C Ratio(X)	0.43	0.49	0.19	0.35	0.90	0.91	0.68	0.63	0.18	0.73	0.56	0.31
Avail Cap(c_a), veh/h	85	1649	738	382	825	842	208	1285	575	191	1285	575
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	0.0	25.1	36.1	36.3	45.6	28.4	22.8	48.6	27.5	24.2
Incr Delay (d2), s/veh	13.4	0.9	0.5	0.5	3.6	3.8	16.5	2.3	0.7	22.0	1.8	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	1.5	0.2	0.1	3.4	24.2	25.1	5.6	11.0	2.3	5.8	9.6	4.2
LnGrp Delay(d),s/veh	41.8	0.9	0.5	25.6	39.7	40.1	62.2	30.7	23.5	70.7	29.3	25.6
LnGrp LOS	D	A	A	C	D	D	E	C	C	E	C	C
Approach Vol, veh/h		985			1640			1049			1041	
Approach Delay, s/veh		2.4			38.8			34.3			34.2	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 61		* 47		* 61		* 47
Max Q Clear Time (g_c+I1), s		56.1		50.7		64.5		49.2
Green Ext Time (p_c), s		4.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	572	101	168	1399	102	75	628	22	43	612	54
Future Volume (vph)	99	572	101	168	1399	102	75	628	22	43	612	54
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1322	1509	4336	1312	1509	1588	1333	1509	1567	
Flt Permitted	0.18	1.00	1.00	0.41	1.00	1.00	0.18	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	286	4336	1322	648	4336	1312	279	1588	1333	334	1567	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	104	602	106	177	1473	107	79	661	23	45	644	57
RTOR Reduction (vph)	0	0	67	0	0	67	0	0	12	0	2	0
Lane Group Flow (vph)	104	602	39	177	1473	40	79	661	11	45	699	0
Confl. Bikes (#/hr)			1			8			2			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	22.2	22.2	22.2	22.2	22.2	22.2	27.8	27.8	27.8	27.8	27.8	
Effective Green, g (s)	22.2	22.2	22.2	22.2	22.2	22.2	27.8	27.8	27.8	27.8	27.8	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	105	1604	489	239	1604	485	129	735	617	154	726	
v/s Ratio Prot		0.14			0.34			0.42			c0.45	
v/s Ratio Perm	c0.36		0.03	0.27		0.03	0.28		0.01	0.13		
v/c Ratio	0.99	0.38	0.08	0.74	0.92	0.08	0.61	0.90	0.02	0.29	0.96	
Uniform Delay, d1	18.8	13.8	12.3	16.4	18.0	12.3	12.1	14.8	8.7	10.0	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.30	1.24	
Incremental Delay, d2	85.3	0.7	0.3	18.6	9.9	0.3	8.3	13.8	0.0	0.1	4.3	
Delay (s)	104.1	14.5	12.6	35.0	28.0	12.6	20.4	28.6	8.7	13.1	23.6	
Level of Service	F	B	B	C	C	B	C	C	A	B	C	
Approach Delay (s)		25.7			27.7			27.2			22.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	7/15/2016
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	AM	Reviewed by:		Project:	Robertson Lane Hotel Project

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	64	1	**64**	0	64	**64**	8	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	534	1	534	8	542	542	72	628	1	628	8	636	1	636	0	636	1	636
	Through-Right		0							0				0				0	
	Right	21	1	0	0	21	0	0	22	1	0	0	22	1	0	0	22	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	41	1	41	0	41	41	0	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	532	0	**577**	5	537	**582**	58	612	0	**666**	5	617	0	**671**	0	617	0	**671**
	Through-Right		1							1				1				1	
	Right	45	0	0	0	45	0	7	54	0	0	0	54	0	0	0	54	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	95	1	**95**	0	95	**95**	0	99	1	**99**	0	99	1	**99**	0	99	1	**99**
	Left-Through		0							0				0				0	
	Through	514	3	171	0	514	171	37	572	3	191	0	572	3	191	0	572	3	191
	Through-Right		0							0				0				0	
	Right	93	1	61	0	93	61	4	101	1	64	0	101	1	64	0	101	1	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	161	1	161	0	161	161	0	168	1	168	0	168	1	168	0	168	1	168
	Left-Through		0							0				0				0	
	Through	1318	3	**439**	0	1318	**439**	27	1399	3	**466**	0	1399	3	**466**	0	1399	3	**466**
	Through-Right		0							0				0				0	
	Right	98	1	78	0	98	78	0	102	1	81	0	102	1	81	0	102	1	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		641	*North-South:*		646	*North-South:*			741	*North-South:*			746	*North-South:*			746
		East-West:		534	*East-West:*		534	*East-West:*			565	*East-West:*			565	*East-West:*			565
		SUM:		1175	*SUM:*		1180	*SUM:*			1306	*SUM:*			1311	*SUM:*			1311
VOLUME/CAPACITY *(V/C)* RATIO:				0.825			0.828				0.916				0.920				0.920
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.725			0.728				0.816				0.820				0.820
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.003

Significant impacted? NO

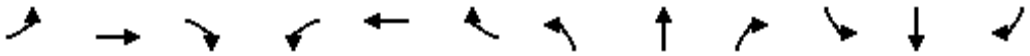
PROPOSED PROJECT IMPACT

Change in *v/c* due to project: 0.004

Significant impacted? NO

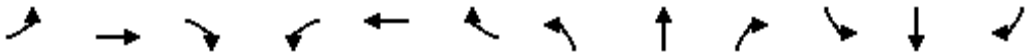
Δ*v/c* after mitigation: 0.004

Fully mitigated? N/A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1135	108	196	1207	101	185	147	184	135	146	54
Future Volume (vph)	34	1135	108	196	1207	101	185	147	184	135	146	54
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2983		1433	1499	1350		1726	
Flt Permitted	0.14	1.00	1.00	0.09	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	217	3018	1350	149	2983		1433	1499	1350		1726	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	36	1195	114	206	1271	106	195	155	194	142	154	57
RTOR Reduction (vph)	0	0	60	0	6	0	0	0	68	0	7	0
Lane Group Flow (vph)	36	1195	54	206	1371	0	172	178	126	0	346	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	45.0	45.0	45.0	56.0	56.0		16.0	16.0	23.0		14.0	
Effective Green, g (s)	45.0	45.0	45.0	55.0	56.0		15.5	15.5	21.0		13.5	
Actuated g/C Ratio	0.45	0.45	0.45	0.55	0.56		0.16	0.16	0.21		0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	97	1358	607	163	1670		222	232	283		233	
v/s Ratio Prot		0.40		c0.08	0.46		c0.12	0.12	0.03		c0.20	
v/s Ratio Perm	0.17		0.04	c0.62					0.07			
v/c Ratio	0.37	0.88	0.09	1.26	0.82		0.77	0.77	0.45		1.49	
Uniform Delay, d1	18.2	25.0	15.8	21.2	17.9		40.6	40.5	34.4		43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	10.6	8.4	0.3	158.4	4.7		15.4	14.1	1.1		239.9	
Delay (s)	28.7	33.4	16.0	179.5	22.6		56.0	54.6	35.5		283.2	
Level of Service	C	C	B	F	C		E	D	D		F	
Approach Delay (s)		31.8			43.0			48.2			283.2	
Approach LOS		C			D			D			F	

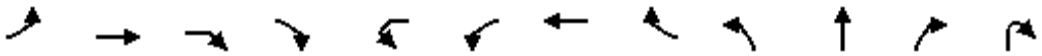
Intersection Summary			
HCM 2000 Control Delay	62.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1271	225	174	1393	23	209	216	221	31	218	40
Future Volume (vph)	25	1271	225	174	1393	23	209	216	221	31	218	40
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1502	2376	1509	1551	
Flt Permitted	0.13	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	200	3018	1350	133	3018	1350	1433	1502	2376	1509	1551	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	1338	237	183	1466	24	220	227	233	33	229	42
RTOR Reduction (vph)	0	0	132	0	0	10	0	0	136	0	7	0
Lane Group Flow (vph)	26	1338	105	183	1466	14	198	249	97	33	264	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	43.8	43.8	43.8	57.6	57.6	57.6	9.0	9.0	18.8	19.4	19.4	
Effective Green, g (s)	43.8	43.8	43.8	56.6	57.6	57.6	9.0	9.0	16.8	18.4	18.4	
Actuated g/C Ratio	0.44	0.44	0.44	0.57	0.58	0.58	0.09	0.09	0.17	0.18	0.18	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	87	1321	591	196	1738	777	128	135	399	277	285	
v/s Ratio Prot		c0.44		0.08	c0.49		0.14	c0.17	0.02	0.02	c0.17	
v/s Ratio Perm	0.13		0.08	0.45		0.01			0.02			
v/c Ratio	0.30	1.01	0.18	0.93	0.84	0.02	1.55	1.84	0.24	0.12	0.93	
Uniform Delay, d1	18.2	28.1	17.1	26.7	17.5	9.1	45.5	45.5	36.1	34.0	40.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.6	28.0	0.7	45.0	5.2	0.0	280.9	407.2	0.1	0.2	34.4	
Delay (s)	26.8	56.1	17.8	71.7	22.7	9.1	326.4	452.7	36.2	34.2	74.6	
Level of Service	C	E	B	E	C	A	F	F	D	C	E	
Approach Delay (s)		49.9			27.9			273.2			70.2	
Approach LOS		D			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	78.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

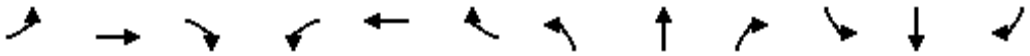


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	106	997	351	84	3	222	1243	75	40	375	178	106
Future Volume (vph)	106	997	351	84	3	222	1243	75	40	375	178	106
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (prot)	1509	3018	1350	1333		1509	2987			1581	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (perm)	1509	3018	1350	1333		1509	2987			1581	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	1049	369	88	3	234	1308	79	42	395	187	112
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	113	0
Lane Group Flow (vph)	112	1049	369	88	0	237	1384	0	0	437	186	0
Confl. Bikes (#/hr)				4				7			4	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	14.1	58.9	58.9	161.1		15.0	59.8			29.7	29.7	
Effective Green, g (s)	14.1	58.9	58.9	161.1		15.0	59.8			29.7	29.7	
Actuated g/C Ratio	0.09	0.37	0.37	1.00		0.09	0.37			0.18	0.18	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	132	1103	493	1333		140	1108			291	248	
v/s Ratio Prot	0.07	c0.35				c0.16	c0.46			c0.28	0.14	
v/s Ratio Perm			0.27	0.07								
v/c Ratio	0.85	0.95	0.75	0.07		1.69	1.25			1.50	0.75	
Uniform Delay, d1	72.4	49.7	44.6	0.0		73.0	50.6			65.7	62.2	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	35.7	16.7	6.3	0.1		340.5	119.9			243.0	10.8	
Delay (s)	108.1	66.4	51.0	0.1		413.6	170.6			308.7	73.0	
Level of Service	F	E	D	A		F	F			F	E	
Approach Delay (s)		62.2					206.0			212.9		
Approach LOS		E					F			F		

Intersection Summary			
HCM 2000 Control Delay	146.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	161.1	Sum of lost time (s)	23.9
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	96	128	407	160	55
Future Volume (vph)	96	128	407	160	55
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	1.00	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2965	1350	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2965	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	135	428	168	58
RTOR Reduction (vph)	0	0	0	0	57
Lane Group Flow (vph)	0	0	664	168	1
Confl. Bikes (#/hr)					
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	161.1	3.9
Effective Green, g (s)			29.7	161.1	3.9
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			546	1350	33
v/s Ratio Prot			c0.22		0.00
v/s Ratio Perm				c0.12	
v/c Ratio			1.22	0.12	0.04
Uniform Delay, d1			65.7	0.0	76.8
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			113.2	0.2	0.2
Delay (s)			178.9	0.2	77.0
Level of Service			F	A	E
Approach Delay (s)			142.8		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1259	30	81	1395	5	205	1	96	0	0	0
Future Volume (vph)	24	1259	30	81	1395	5	205	1	96	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.90				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98				
Satd. Flow (prot)	1509	3007		1509	3016		1433	1338				
Flt Permitted	0.10	1.00		0.13	1.00		0.95	0.98				
Satd. Flow (perm)	158	3007		199	3016		1433	1338				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	25	1368	33	88	1516	5	223	1	104	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	75	0	0	0	0
Lane Group Flow (vph)	25	1400	0	88	1521	0	169	84	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	54.9	54.9		54.9	54.9		14.8	14.8				
Effective Green, g (s)	54.9	54.9		54.9	54.9		14.8	14.8				
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.16	0.16				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	96	1834		121	1839		235	220				
v/s Ratio Prot		0.47			c0.50							
v/s Ratio Perm	0.16			0.44			c0.12	0.06				
v/c Ratio	0.26	0.76		0.73	0.83		0.72	0.38				
Uniform Delay, d1	8.1	12.8		12.3	13.8		35.6	33.5				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	6.5	3.1		31.6	4.4		10.1	1.1				
Delay (s)	14.6	15.9		43.9	18.2		45.7	34.6				
Level of Service	B	B		D	B		D	C				
Approach Delay (s)		15.9			19.6			40.3			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1283	12	65	1557	0	75
Future Vol, veh/h	1283	12	65	1557	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1351	13	68	1639	0	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1363	0	-	682
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	500	-	0	392
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	500	-	-	392
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	392	-	-	500	-
HCM Lane V/C Ratio	0.201	-	-	0.137	-
HCM Control Delay (s)	16.5	-	-	13.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0.5	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1269	69	204	1468	68	82	79	227	110	87	19
Future Volume (veh/h)	89	1269	69	204	1468	68	82	79	227	110	87	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	94	1336	73	215	1545	72	86	83	239	116	92	20
Adj No. of Lanes	1	2	0	1	2	0	0	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	139	1359	74	234	1550	72	111	91	223	185	363	79
Arrive On Green	0.04	0.47	0.47	0.10	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.28
Sat Flow, veh/h	1513	2910	159	1513	2937	136	233	316	777	1053	1265	275
Grp Volume(v), veh/h	94	691	718	215	791	826	408	0	0	116	0	112
Grp Sat Flow(s),veh/h/ln	1513	1509	1560	1513	1509	1564	1326	0	0	1053	0	1540
Q Serve(g_s), s	3.3	45.1	45.4	9.0	52.1	52.8	23.1	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	3.3	45.1	45.4	9.0	52.1	52.8	28.7	0.0	0.0	28.7	0.0	5.6
Prop In Lane	1.00		0.10	1.00		0.09	0.21		0.59	1.00		0.18
Lane Grp Cap(c), veh/h	139	705	729	234	796	826	424	0	0	185	0	442
V/C Ratio(X)	0.68	0.98	0.98	0.92	0.99	1.00	0.96	0.00	0.00	0.63	0.00	0.25
Avail Cap(c_a), veh/h	231	705	729	234	796	826	424	0	0	185	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.76	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	26.2	26.3	28.1	23.4	23.6	36.9	0.0	0.0	36.0	0.0	27.4
Incr Delay (d2), s/veh	2.1	29.6	29.8	5.8	8.2	9.4	28.7	0.0	0.0	6.5	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	24.4	25.4	6.2	23.3	24.9	14.6	0.0	0.0	3.5	0.0	2.4
LnGrp Delay(d),s/veh	25.8	55.9	56.1	33.9	31.6	33.0	65.6	0.0	0.0	42.5	0.0	27.7
LnGrp LOS	C	E	E	C	C	F	E			D		C
Approach Vol, veh/h		1503			1832			408			228	
Approach Delay, s/veh		54.1			32.5			65.6			35.2	
Approach LOS		D			C			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	15.0	52.0		33.0	8.9	58.1		33.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	11.0	47.4		30.7	5.3	54.8		30.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

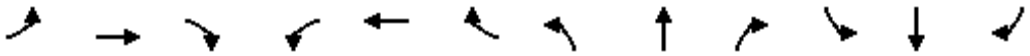
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	1328	100	241	1451	131	127	475	212	118	461	192
Future Volume (veh/h)	194	1328	100	241	1451	131	127	475	212	118	461	192
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	204	1398	105	254	1527	138	134	500	223	124	485	202
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1299	97	231	1302	117	124	866	378	178	598	247
Arrive On Green	0.20	0.91	0.91	0.10	0.47	0.47	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1513	2843	213	1513	2798	251	752	3018	1316	727	2083	862
Grp Volume(v), veh/h	204	739	764	254	818	847	134	500	223	124	351	336
Grp Sat Flow(s),veh/h/ln	1513	1509	1547	1513	1509	1539	752	1509	1316	727	1509	1436
Q Serve(g_s), s	8.2	45.7	45.7	10.5	46.5	46.5	6.9	14.2	14.5	14.5	21.6	21.8
Cycle Q Clear(g_c), s	8.2	45.7	45.7	10.5	46.5	46.5	28.7	14.2	14.5	28.7	21.6	21.8
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	226	690	707	231	702	716	124	866	378	178	433	412
V/C Ratio(X)	0.90	1.07	1.08	1.10	1.16	1.18	1.08	0.58	0.59	0.70	0.81	0.82
Avail Cap(c_a), veh/h	238	690	707	231	702	716	124	866	378	178	433	412
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)	0.14	0.14	0.14	1.00	1.00	1.00	0.98	0.98	0.98	0.86	0.86	0.86
Uniform Delay (d), s/veh	22.0	4.3	4.3	29.3	26.7	26.7	48.6	30.5	30.6	43.8	33.1	33.2
Incr Delay (d2), s/veh	6.8	37.3	40.6	88.7	89.2	96.3	104.1	1.2	2.9	10.8	10.0	11.0
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	5.8	22.1	23.3	12.0	36.7	38.9	7.0	6.0	5.6	3.9	10.2	9.9
LnGrp Delay(d),s/veh	28.8	41.6	44.9	118.0	115.9	123.1	152.7	31.6	33.5	54.6	43.1	44.2
LnGrp LOS	C	F	F	F	F	F	F	C	C	D	D	D
Approach Vol, veh/h		1707			1919			857			811	
Approach Delay, s/veh		41.5			119.4			51.0			45.3	
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	15.0	51.0		34.0	14.2	51.8		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 46		* 29	* 11	* 46		* 29
Max Q Clear Time (g_c+I1), s	12.5	47.7		30.7	10.2	48.5		30.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	514	913	135	218	849	47	233	825	167	0	930	628
Future Volume (vph)	514	913	135	218	849	47	233	825	167	0	930	628
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	2994		2927	2941			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	2994		2927	2941			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	541	961	142	229	894	49	245	868	176	0	979	661
RTOR Reduction (vph)	0	0	98	0	4	0	0	17	0	0	0	210
Lane Group Flow (vph)	541	961	44	229	939	0	245	1027	0	0	979	451
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	13.0	31.1	31.1	8.9	28.0		9.0	45.0			32.0	32.0
Effective Green, g (s)	13.0	31.6	31.1	8.9	28.5		10.0	46.0			33.0	33.0
Actuated g/C Ratio	0.13	0.32	0.31	0.09	0.28		0.10	0.46			0.33	0.33
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	380	953	419	260	853		292	1352			995	445
v/s Ratio Prot	c0.18	0.32		0.08	c0.31		c0.08	0.35			0.32	
v/s Ratio Perm			0.03									c0.33
v/c Ratio	1.42	1.01	0.11	0.88	1.10		0.84	0.76			0.98	1.01
Uniform Delay, d1	43.5	34.2	24.5	45.0	35.8		44.2	22.4			33.2	33.5
Progression Factor	1.00	1.00	1.00	1.28	0.89		1.00	1.00			1.00	1.00
Incremental Delay, d2	205.4	31.2	0.2	21.0	58.3		17.9	4.1			24.9	45.9
Delay (s)	248.9	65.4	24.8	78.7	90.1		62.1	26.5			58.2	79.4
Level of Service	F	E	C	E	F		E	C			E	E
Approach Delay (s)		122.3			87.9			33.2			66.7	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	79.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	54.3
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	102	594	14	0	20	154	213	0	5	8	10
Future Vol, veh/h	0	102	594	14	0	20	154	213	0	5	8	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	646	15	0	22	167	232	0	5	9	11
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	87.3	10.9	10.4
HCM LOS	F	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	14%	11%	0%	39%
Vol Thru, %	35%	84%	89%	0%	3%
Vol Right, %	43%	2%	0%	100%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	710	174	213	133
LT Vol	5	102	20	0	52
Through Vol	8	594	154	0	4
RT Vol	10	14	0	213	77
Lane Flow Rate	25	772	189	232	145
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.047	1.104	0.306	0.326	0.253
Departure Headway (Hd)	7.038	5.15	6.017	5.247	6.547
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	512	710	601	690	552
Service Time	5.038	3.15	3.717	2.947	4.547
HCM Lane V/C Ratio	0.049	1.087	0.314	0.336	0.263
HCM Control Delay	10.4	87.3	11.3	10.5	11.7
HCM Lane LOS	B	F	B	B	B
HCM 95th-tile Q	0.1	22.2	1.3	1.4	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	52	4	77
Future Vol, veh/h	0	52	4	77
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	57	4	84
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	658	348	41	57	41
Future Vol, veh/h	15	658	348	41	57	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	693	366	43	60	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	409	0	-	0	1112	388
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	724	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1150	-	-	-	231	660
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	480	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1150	-	-	-	226	660
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1150	-	-	-	312
HCM Lane V/C Ratio	0.014	-	-	-	0.331
HCM Control Delay (s)	8.2	0	-	-	22.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.4

HCM 2010 Signalized Intersection Summary
12: Melrose Ave & Robertson Blvd

7/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	469	196	278	269	95	87	302	263	80	241	27
Future Volume (veh/h)	26	469	196	278	269	95	87	302	263	80	241	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	27	494	206	293	283	100	92	318	277	84	254	28
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	596	242	283	907	771	261	503	427	199	445	49
Arrive On Green	0.58	0.57	0.57	0.95	0.95	0.95	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	29	1043	424	743	1588	1350	1093	1588	1350	819	1406	155
Grp Volume(v), veh/h	727	0	0	293	283	100	92	318	277	84	0	282
Grp Sat Flow(s),veh/h/ln	1496	0	0	743	1588	1350	1093	1588	1350	819	0	1561
Q Serve(g_s), s	11.6	0.0	0.0	15.6	1.1	0.4	6.9	15.4	15.9	8.8	0.0	13.6
Cycle Q Clear(g_c), s	35.9	0.0	0.0	51.4	1.1	0.4	20.5	15.4	15.9	24.2	0.0	13.6
Prop In Lane	0.04		0.28	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	904	0	0	283	907	771	261	503	427	199	0	494
V/C Ratio(X)	0.80	0.00	0.00	1.03	0.31	0.13	0.35	0.63	0.65	0.42	0.00	0.57
Avail Cap(c_a), veh/h	904	0	0	283	907	771	294	551	468	224	0	541
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	0.00	0.00	0.79	0.79	0.79	1.00	1.00	1.00	0.62	0.00	0.62
Uniform Delay (d), s/veh	15.9	0.0	0.0	15.4	0.9	0.9	34.2	26.3	26.4	36.6	0.0	25.7
Incr Delay (d2), s/veh	7.5	0.0	0.0	56.6	0.7	0.3	0.8	2.1	2.7	0.9	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	16.4	0.0	0.0	11.4	0.6	0.2	2.1	7.0	6.3	2.0	0.0	5.9
LnGrp Delay(d),s/veh	23.4	0.0	0.0	72.1	1.6	1.2	35.0	28.3	29.2	37.5	0.0	26.4
LnGrp LOS	C			F	A	A	C	C	C	D		C
Approach Vol, veh/h		727			676			687			366	
Approach Delay, s/veh		23.4			32.1			29.6			28.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.7		33.3		56.7		33.3
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		53.4		22.5		37.9		26.2
Green Ext Time (p_c), s		0.0		3.4		7.4		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	684	59	183	533	220	78	556	169	152	575	93
Future Volume (veh/h)	66	684	59	183	533	220	78	556	169	152	575	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	69	720	62	193	561	232	82	585	178	160	605	98
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	1491	128	445	842	716	221	804	244	170	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	681	2812	242	688	1588	1350	741	2282	693	701	3018	1350
Grp Volume(v), veh/h	69	386	396	193	561	232	82	386	377	160	605	98
Grp Sat Flow(s),veh/h/ln	681	1509	1546	688	1588	1350	741	1509	1466	701	1509	1350
Q Serve(g_s), s	5.5	0.0	0.0	16.5	23.1	8.8	9.1	20.1	20.2	11.5	14.6	4.6
Cycle Q Clear(g_c), s	28.6	0.0	0.0	16.5	23.1	8.8	23.7	20.1	20.2	31.7	14.6	4.6
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	266	800	819	445	842	716	221	531	516	170	1063	476
V/C Ratio(X)	0.26	0.48	0.48	0.43	0.67	0.32	0.37	0.73	0.73	0.94	0.57	0.21
Avail Cap(c_a), veh/h	266	800	819	445	842	716	221	531	516	170	1063	476
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)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	6.9	0.0	0.0	13.8	15.4	12.0	33.2	25.4	25.4	41.8	23.6	20.4
Incr Delay (d2), s/veh	1.5	1.4	1.3	3.1	4.2	1.2	0.4	4.3	4.6	51.3	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	0.3	3.5	10.9	3.5	1.9	9.0	8.8	6.4	6.1	1.7
LnGrp Delay(d),s/veh	8.4	1.4	1.3	16.9	19.5	13.2	33.6	29.7	30.0	93.0	24.1	20.4
LnGrp LOS	A	A	A	B	B	B	C	C	C	F	C	C
Approach Vol, veh/h		851			986			845			863	
Approach Delay, s/veh		1.9			17.5			30.2			36.4	
Approach LOS		A			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		30.6		33.7		25.1		25.7
Green Ext Time (p_c), s		9.2		0.0		10.7		3.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
14: La Cienega Blvd & Melrose Ave

7/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	626	159	244	708	85	117	1098	240	87	1107	179
Future Volume (veh/h)	154	626	159	244	708	85	117	1098	240	87	1107	179
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	162	659	167	257	745	0	123	1156	253	92	1165	188
Adj No. of Lanes	1	2	0	1	2	1	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	194	609	154	191	1172	524	125	1330	289	90	1404	226
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	713	2386	604	1513	3018	1350	401	2467	536	380	2605	419
Grp Volume(v), veh/h	162	416	410	257	745	0	123	704	705	92	673	680
Grp Sat Flow(s),veh/h/ln	713	1509	1482	1513	1509	1350	401	1509	1494	380	1509	1514
Q Serve(g_s), s	22.5	30.6	30.6	10.4	24.1	0.0	19.5	54.4	55.2	9.5	44.5	45.2
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	24.1	0.0	64.7	54.4	55.2	64.7	44.5	45.2
Prop In Lane	1.00		0.41	1.00		1.00	1.00		0.36	1.00		0.28
Lane Grp Cap(c), veh/h	194	385	378	191	1172	524	125	814	805	90	814	816
V/C Ratio(X)	0.84	1.08	1.08	1.34	0.64	0.00	0.98	0.87	0.88	1.02	0.83	0.83
Avail Cap(c_a), veh/h	194	385	378	191	1172	524	125	814	805	90	814	816
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	44.7	44.9	35.4	29.8	0.0	76.5	45.1	45.4	58.4	23.0	23.3
Incr Delay (d2), s/veh	28.5	65.9	66.9	185.9	2.6	0.0	75.5	11.9	12.8	100.3	9.4	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	19.8	19.5	11.8	10.5	0.0	6.7	25.5	25.8	5.5	20.6	20.9
LnGrp Delay(d),s/veh	79.2	110.6	111.8	221.3	32.4	0.0	152.0	57.0	58.2	158.9	32.4	33.0
LnGrp LOS	E	F	F	F	C		F	E	E	F	C	C
Approach Vol, veh/h		988			1002			1532			1445	
Approach Delay, s/veh		105.9			80.9			65.2			40.8	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		26.1		66.7	12.4	32.6
Green Ext Time (p_c), s		0.0		9.2		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		69.3
HCM 2010 LOS		E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	794	94	224	832	107	106	565	150	87	484	78
Future Volume (veh/h)	85	794	94	224	832	107	106	565	150	87	484	78
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	89	836	99	236	876	113	112	595	158	92	509	82
Adj No. of Lanes	1	2	0	1	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	271	985	117	301	974	126	90	454	121	90	503	81
Arrive On Green	0.10	0.35	0.35	0.11	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2845	337	1587	2813	363	863	1266	336	742	1401	226
Grp Volume(v), veh/h	89	465	470	236	493	496	112	0	753	92	0	591
Grp Sat Flow(s),veh/h/ln	1587	1583	1598	1587	1583	1592	863	0	1602	742	0	1627
Q Serve(g_s), s	2.7	21.8	21.8	7.7	23.7	23.7	0.0	0.0	28.7	0.0	0.0	28.7
Cycle Q Clear(g_c), s	2.7	21.8	21.8	7.7	23.7	23.7	28.7	0.0	28.7	28.7	0.0	28.7
Prop In Lane	1.00		0.21	1.00		0.23	1.00		0.21	1.00		0.14
Lane Grp Cap(c), veh/h	271	548	553	301	548	551	90	0	575	90	0	584
V/C Ratio(X)	0.33	0.85	0.85	0.78	0.90	0.90	1.24	0.00	1.31	1.02	0.00	1.01
Avail Cap(c_a), veh/h	271	548	553	301	548	551	90	0	575	90	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	24.2	24.2	18.5	24.8	24.8	40.0	0.0	25.7	40.0	0.0	25.7
Incr Delay (d2), s/veh	3.2	15.1	15.0	18.2	20.3	20.2	174.3	0.0	151.8	101.0	0.0	40.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	11.7	11.8	4.9	13.4	13.4	6.3	0.0	36.8	4.5	0.0	19.4
LnGrp Delay(d),s/veh	20.9	39.3	39.2	36.8	45.1	45.0	214.3	0.0	177.5	141.3	0.0	66.1
LnGrp LOS	C	D	D	D	D	D	F		F	F		F
Approach Vol, veh/h		1024			1225			865			683	
Approach Delay, s/veh		37.6			43.5			182.2			76.2	
Approach LOS		D			D			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	13.0	33.0		34.0	13.0	33.0		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 9	* 28		* 29	* 9	* 28		* 29
Max Q Clear Time (g_c+I1), s	4.7	25.7		30.7	9.7	23.8		30.7
Green Ext Time (p_c), s	0.0	1.9		0.0	0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	945	113	118	903	89	95	443	175	84	455	210
Future Volume (veh/h)	100	945	113	118	903	89	95	443	175	84	455	210
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	105	995	119	124	951	94	100	466	184	88	479	221
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1068	128	141	1092	108	162	1160	671	367	511	236
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.16	0.16	0.16	0.47	0.47	0.46
Sat Flow, veh/h	564	2849	341	529	2911	288	780	2451	1417	817	1080	498
Grp Volume(v), veh/h	105	553	561	124	517	528	100	466	184	88	0	700
Grp Sat Flow(s),veh/h/ln	564	1583	1607	529	1583	1616	780	2451	1417	817	0	1579
Q Serve(g_s), s	3.7	20.1	20.1	2.4	18.8	18.8	3.2	10.3	6.9	5.1	0.0	25.2
Cycle Q Clear(g_c), s	22.5	20.1	20.1	22.5	18.8	18.8	28.4	10.3	6.9	15.3	0.0	25.2
Prop In Lane	1.00		0.21	1.00		0.18	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	155	594	602	141	594	606	162	1160	671	367	0	747
V/C Ratio(X)	0.68	0.93	0.93	0.88	0.87	0.87	0.62	0.40	0.27	0.24	0.00	0.94
Avail Cap(c_a), veh/h	155	594	602	141	594	606	162	1160	671	367	0	747
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.49	0.49	0.49	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	18.0	18.0	33.5	21.1	21.1	38.8	17.7	16.2	16.4	0.0	15.0
Incr Delay (d2), s/veh	21.3	23.3	23.2	36.6	11.2	11.0	8.4	0.5	0.5	1.5	0.0	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	2.6	12.6	12.8	3.5	10.1	10.3	2.0	7.1	2.8	1.3	0.0	15.2
LnGrp Delay(d),s/veh	50.7	41.3	41.2	70.1	32.3	32.1	47.3	18.2	16.7	17.9	0.0	35.7
LnGrp LOS	D	D	D	E	C	C	D	B	B	B		D
Approach Vol, veh/h		1219			1169			750			788	
Approach Delay, s/veh		42.1			36.2			21.7			33.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		27.2		24.5		30.4
Green Ext Time (p_c), s		0.0		0.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

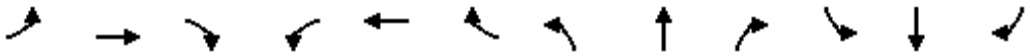
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	976	183	109	964	131	136	610	187	207	645	147
Future Volume (veh/h)	68	976	183	109	964	131	136	610	187	207	645	147
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	72	1027	193	115	1015	138	143	642	197	218	679	155
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	118	1465	655	248	1296	176	279	1470	658	285	1470	658
Arrive On Green	0.93	0.93	0.93	0.15	0.15	0.15	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	509	3167	1417	478	2802	381	688	3167	1417	685	3167	1417
Grp Volume(v), veh/h	72	1027	193	115	573	580	143	642	197	218	679	155
Grp Sat Flow(s),veh/h/ln	509	1583	1417	478	1583	1599	688	1583	1417	685	1583	1417
Q Serve(g_s), s	13.6	8.3	1.7	27.3	41.8	41.9	21.5	16.4	10.4	37.7	17.6	7.9
Cycle Q Clear(g_c), s	55.5	8.3	1.7	35.6	41.8	41.9	39.0	16.4	10.4	54.0	17.6	7.9
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1465	655	248	732	740	279	1470	658	285	1470	658
V/C Ratio(X)	0.61	0.70	0.29	0.46	0.78	0.78	0.51	0.44	0.30	0.77	0.46	0.24
Avail Cap(c_a), veh/h	118	1465	655	248	732	740	279	1470	658	285	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	2.7	2.5	46.3	45.0	45.1	35.2	21.6	20.0	39.8	21.9	19.3
Incr Delay (d2), s/veh	19.0	2.5	1.0	1.2	1.7	1.7	6.6	0.9	1.2	17.7	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	3.0	3.4	0.7	3.7	18.7	18.9	4.6	7.3	4.3	8.5	7.9	3.3
LnGrp Delay(d),s/veh	45.7	5.2	3.5	47.6	46.8	46.8	41.8	22.6	21.2	57.5	23.0	20.2
LnGrp LOS	D	A	A	D	D	D	D	C	C	E	C	C
Approach Vol, veh/h		1292			1268			982			1052	
Approach Delay, s/veh		7.2			46.8			25.1			29.7	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		43.9		56.0		57.5		41.0
Green Ext Time (p_c), s		8.0		0.0		0.0		9.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

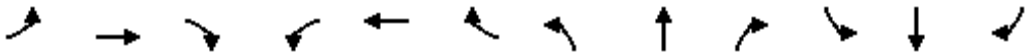
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1236	57	195	1092	102	178	122	282	154	135	40
Future Volume (vph)	19	1236	57	195	1092	102	178	122	282	154	135	40
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2979		1433	1494	1350		1730	
Flt Permitted	0.19	1.00	1.00	0.11	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	297	3018	1350	168	2979		1433	1494	1350		1730	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	1301	60	205	1149	107	187	128	297	162	142	42
RTOR Reduction (vph)	0	0	28	0	6	0	0	0	49	0	4	0
Lane Group Flow (vph)	20	1301	32	205	1250	0	155	160	248	0	342	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	64.2	64.2	64.2	75.2	75.2		16.8	16.8	23.8		14.0	
Effective Green, g (s)	64.2	64.2	64.2	74.2	75.2		16.3	16.3	21.8		13.5	
Actuated g/C Ratio	0.54	0.54	0.54	0.62	0.63		0.14	0.14	0.18		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	158	1614	722	170	1866		194	202	245		194	
v/s Ratio Prot		0.43		c0.06	0.42		0.11	0.11	c0.05		c0.20	
v/s Ratio Perm	0.07		0.02	c0.68					0.13			
v/c Ratio	0.13	0.81	0.04	1.21	0.67		0.80	0.79	1.01		1.76	
Uniform Delay, d1	13.9	22.8	13.3	20.1	14.4		50.3	50.2	49.1		53.2	
Progression Factor	1.00	1.00	1.00	2.42	1.47		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.6	4.4	0.1	116.4	0.9		20.1	18.8	60.6		362.6	
Delay (s)	15.6	27.2	13.4	165.1	22.1		70.4	69.0	109.7		415.8	
Level of Service	B	C	B	F	C		E	E	F		F	
Approach Delay (s)		26.5			42.2			89.1			415.8	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	78.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	1521	187	167	1248	26	305	199	367	27	142	37
Future Volume (vph)	29	1521	187	167	1248	26	305	199	367	27	142	37
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1492	2376	1509	1539	
Flt Permitted	0.19	1.00	1.00	0.06	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	295	3018	1350	90	3018	1350	1433	1492	2376	1509	1539	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	1601	197	176	1314	27	321	209	386	28	149	39
RTOR Reduction (vph)	0	0	74	0	0	9	0	0	171	0	8	0
Lane Group Flow (vph)	31	1601	123	176	1314	18	260	270	215	28	180	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	66.2	66.2	66.2	79.2	79.2	79.2	9.0	9.0	18.0	17.8	17.8	
Effective Green, g (s)	66.2	66.2	66.2	78.2	79.2	79.2	9.0	9.0	16.0	16.8	16.8	
Actuated g/C Ratio	0.55	0.55	0.55	0.65	0.66	0.66	0.08	0.08	0.13	0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	162	1664	744	153	1991	891	107	111	316	211	215	
v/s Ratio Prot		0.53		c0.08	0.44		c0.18	0.18	0.05	0.02	c0.12	
v/s Ratio Perm	0.11		0.09	c0.67		0.01			0.05			
v/c Ratio	0.19	0.96	0.17	1.15	0.66	0.02	2.43	2.43	0.68	0.13	0.84	
Uniform Delay, d1	13.5	25.7	13.3	36.2	12.3	7.0	55.5	55.5	49.6	45.2	50.3	
Progression Factor	0.78	0.83	0.75	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.5	14.1	0.4	118.9	1.7	0.0	670.9	671.0	4.8	0.3	23.8	
Delay (s)	13.0	35.6	10.3	155.3	13.9	7.1	726.4	726.5	54.3	45.5	74.1	
Level of Service	B	D	B	F	B	A	F	F	D	D	E	
Approach Delay (s)		32.5			30.2			443.2			70.4	
Approach LOS		C			C			F			E	

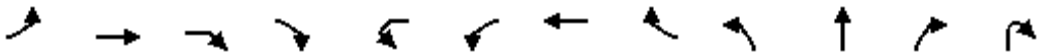
Intersection Summary			
HCM 2000 Control Delay	117.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	793	144	60	23	310	11	0	1471	654	60	1239	8
Future Volume (vph)	793	144	60	23	310	11	0	1471	654	60	1239	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2924			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2924			3018	1350	153	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	835	152	63	24	326	12	0	1548	688	63	1304	8
RTOR Reduction (vph)	0	0	46	0	57	0	0	0	0	0	1	0
Lane Group Flow (vph)	835	152	17	0	305	0	0	1548	688	63	1311	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.8	25.8	25.8		14.8			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.8	25.8	25.8		14.8			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	794	366	366		455			1315	588	66	1313	
v/s Ratio Prot	c0.29	0.11	0.01		c0.10			c0.51			0.43	
v/s Ratio Perm									0.51	0.41		
v/c Ratio	1.05	0.42	0.05		0.67			1.18	1.17	0.95	1.00	
Uniform Delay, d1	34.6	28.4	25.5		37.8			26.8	26.8	25.9	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	46.4	0.3	0.0		3.9			88.0	93.7	98.5	24.6	
Delay (s)	81.0	28.7	25.5		41.7			114.8	120.5	124.4	51.3	
Level of Service	F	C	C		D			F	F	F	D	
Approach Delay (s)	70.1				41.7			116.5			54.7	
Approach LOS	E				D			F			D	

Intersection Summary			
HCM 2000 Control Delay	84.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	107.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

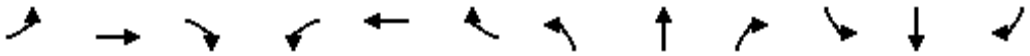


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	107	1005	401	137	8	185	1087	87	35	367	157	100
Future Volume (vph)	107	1005	401	137	8	185	1087	87	35	367	157	100
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (prot)	1509	3018	1350	1331		1509	2978			1581	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (perm)	1509	3018	1350	1331		1509	2978			1581	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	1058	422	144	8	195	1144	92	37	386	165	105
RTOR Reduction (vph)	0	0	0	0	0	0	4	0	0	0	113	0
Lane Group Flow (vph)	113	1058	422	144	0	203	1232	0	0	423	157	0
Confl. Bikes (#/hr)				8				5			1	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	14.1	59.3	59.3	161.5		15.0	60.2			29.7	29.7	
Effective Green, g (s)	14.1	59.3	59.3	161.5		15.0	60.2			29.7	29.7	
Actuated g/C Ratio	0.09	0.37	0.37	1.00		0.09	0.37			0.18	0.18	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	131	1108	495	1331		140	1110			290	248	
v/s Ratio Prot	0.07	c0.35				c0.13	c0.41			c0.27	0.12	
v/s Ratio Perm			0.31	0.11								
v/c Ratio	0.86	0.95	0.85	0.11		1.45	1.11			1.46	0.63	
Uniform Delay, d1	72.7	49.8	47.1	0.0		73.2	50.6			65.9	60.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	39.4	17.3	13.6	0.2		237.8	62.5			224.5	3.9	
Delay (s)	112.2	67.1	60.7	0.2		311.0	113.2			290.4	64.8	
Level of Service	F	E	E	A		F	F			F	E	
Approach Delay (s)		62.9					141.1			202.5		
Approach LOS		E					F			F		

Intersection Summary			
HCM 2000 Control Delay	126.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	161.5	Sum of lost time (s)	23.9
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	74	161	433	146	48
Future Volume (vph)	74	161	433	146	48
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	0.99	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2966	1333	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2966	1333	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	169	456	154	51
RTOR Reduction (vph)	0	0	0	0	50
Lane Group Flow (vph)	0	0	703	154	1
Confl. Bikes (#/hr)				3	
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	161.5	3.9
Effective Green, g (s)			29.7	161.5	3.9
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			545	1333	33
v/s Ratio Prot			c0.24		0.00
v/s Ratio Perm				c0.12	
v/c Ratio			1.29	0.12	0.04
Uniform Delay, d1			65.9	0.0	77.0
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			143.8	0.2	0.2
Delay (s)			209.7	0.2	77.1
Level of Service			F	A	E
Approach Delay (s)			172.0		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1311	28	51	1226	1	213	1	79	0	0	2
Future Volume (vph)	25	1311	28	51	1226	1	213	1	79	0	0	2
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.92			0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98			1.00	
Satd. Flow (prot)	1509	3008		1509	3017		1433	1353			0	
Flt Permitted	0.15	1.00		0.13	1.00		0.95	0.98			1.00	
Satd. Flow (perm)	243	3008		200	3017		1433	1353			0	
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	26	1425	30	55	1333	1	232	1	86	0	0	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	41	0	0	2	0
Lane Group Flow (vph)	26	1454	0	55	1334	0	165	113	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	72.8	72.8		72.8	72.8		16.9	16.9			0.0	
Effective Green, g (s)	72.8	72.8		72.8	72.8		16.9	16.9			0.0	
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.15	0.15			0.00	
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	160	1990		132	1996		220	207			0	
v/s Ratio Prot		c0.48			0.44							
v/s Ratio Perm	0.11			0.27			c0.12	0.08				
v/c Ratio	0.16	0.73		0.42	0.67		0.75	0.54			0.00	
Uniform Delay, d1	7.0	12.2		8.7	11.3		44.5	43.0			55.0	
Progression Factor	1.00	1.00		1.24	1.37		1.00	1.00			1.00	
Incremental Delay, d2	2.2	2.4		5.8	1.1		13.4	2.9			0.0	
Delay (s)	9.2	14.6		16.6	16.6		57.9	45.9			55.0	
Level of Service	A	B		B	B		E	D			D	
Approach Delay (s)		14.5			16.6			52.1			55.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1359	15	63	1284	0	49
Future Vol, veh/h	1359	15	63	1284	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1431	16	66	1352	0	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1446	0	-	723
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	465	-	0	369
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	465	-	-	369
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	465	-
HCM Lane V/C Ratio	0.14	-	-	0.143	-
HCM Control Delay (s)	16.3	-	-	14	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.5	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1217	41	210	1220	34	85	111	317	149	146	19
Future Volume (veh/h)	65	1217	41	210	1220	34	85	111	317	149	146	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	68	1281	43	221	1284	36	89	117	334	157	154	20
Adj No. of Lanes	1	2	0	1	2	0	0	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	217	1554	52	251	1699	48	78	72	181	157	372	48
Arrive On Green	0.04	0.52	0.52	0.08	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2979	100	1513	2998	84	149	266	672	936	1378	179
Grp Volume(v), veh/h	68	648	676	221	646	674	540	0	0	157	0	174
Grp Sat Flow(s),veh/h/ln	1513	1509	1571	1513	1509	1573	1086	0	0	936	0	1557
Q Serve(g_s), s	2.3	39.6	39.7	7.2	35.7	35.7	19.6	0.0	0.0	0.0	0.0	10.1
Cycle Q Clear(g_c), s	2.3	39.6	39.7	7.2	35.7	35.7	29.7	0.0	0.0	29.7	0.0	10.1
Prop In Lane	1.00		0.06	1.00		0.05	0.16		0.62	1.00		0.11
Lane Grp Cap(c), veh/h	217	787	819	251	855	891	331	0	0	157	0	420
V/C Ratio(X)	0.31	0.82	0.82	0.88	0.76	0.76	1.63	0.00	0.00	1.00	0.00	0.41
Avail Cap(c_a), veh/h	336	787	819	302	855	891	331	0	0	157	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.15	0.15	0.15	0.68	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.7	22.1	22.1	22.8	18.1	18.1	43.6	0.0	0.0	46.3	0.0	33.0
Incr Delay (d2), s/veh	0.3	9.5	9.2	3.8	1.0	0.9	292.6	0.0	0.0	72.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	18.5	19.2	3.8	14.9	15.6	37.0	0.0	0.0	7.9	0.0	4.4
LnGrp Delay(d),s/veh	17.0	31.6	31.3	26.6	19.0	19.0	336.3	0.0	0.0	118.5	0.0	33.7
LnGrp LOS	B	C	C	C	B	B	F			F		C
Approach Vol, veh/h		1392			1541			540			331	
Approach Delay, s/veh		30.7			20.1			336.3			73.9	
Approach LOS		C			C			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	13.3	62.7		34.0	8.4	67.6		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	9.2	41.7		31.7	4.3	37.7		31.7
Green Ext Time (p_c), s	0.1	11.4		0.0	0.0	15.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

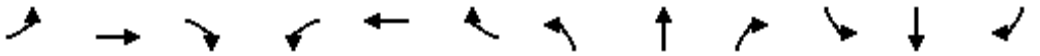
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1483	55	183	1195	106	124	769	270	118	535	137
Future Volume (veh/h)	190	1483	55	183	1195	106	124	769	270	118	535	137
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	200	1561	58	193	1258	112	131	809	284	124	563	144
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1659	61	342	1554	138	65	705	308	65	555	141
Arrive On Green	0.16	1.00	1.00	0.07	0.55	0.55	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2964	110	1513	2800	249	738	3018	1317	514	2375	605
Grp Volume(v), veh/h	200	792	827	193	676	694	131	809	284	124	357	350
Grp Sat Flow(s),veh/h/ln	1513	1509	1565	1513	1509	1540	738	1509	1317	514	1509	1471
Q Serve(g_s), s	6.6	0.0	0.0	6.1	39.8	40.1	0.0	25.7	23.2	0.0	25.7	25.7
Cycle Q Clear(g_c), s	6.6	0.0	0.0	6.1	39.8	40.1	25.7	25.7	23.2	25.7	25.7	25.7
Prop In Lane	1.00		0.07	1.00		0.16	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	260	844	876	342	837	855	65	705	308	65	353	344
V/C Ratio(X)	0.77	0.94	0.94	0.56	0.81	0.81	2.00	1.15	0.92	1.89	1.01	1.02
Avail Cap(c_a), veh/h	292	844	876	381	837	855	65	705	308	65	353	344
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)	0.15	0.15	0.15	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97
Uniform Delay (d), s/veh	19.4	0.0	0.0	9.1	19.7	19.8	55.0	42.2	41.2	55.0	42.2	42.2
Incr Delay (d2), s/veh	1.4	4.1	4.3	0.6	8.2	8.3	499.4	82.2	32.1	452.6	50.4	52.4
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	0.1	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.0	1.1	2.6	18.3	18.9	11.1	18.7	11.1	10.2	15.6	15.4
LnGrp Delay(d),s/veh	20.9	4.1	4.3	9.7	28.0	28.1	554.4	124.3	73.3	507.6	92.6	94.6
LnGrp LOS	C	A	A	A	C	C	F	F	E	F	F	F
Approach Vol, veh/h		1819			1563			1224			831	
Approach Delay, s/veh		6.1			25.8			158.5			155.4	
Approach LOS		A			C			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	12.1	66.9		31.0	12.7	66.3		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 59		* 26	* 11	* 59		* 26
Max Q Clear Time (g_c+I1), s	8.1	2.0		27.7	8.6	42.1		27.7
Green Ext Time (p_c), s	0.1	51.6		0.0	0.0	16.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	675	1126	102	182	717	39	182	1004	178	2	803	573
Future Volume (vph)	675	1126	102	182	717	39	182	1004	178	2	803	573
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	2994		2927	2950			3017	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (perm)	2927	3018	1350	2927	2994		2927	2950			2874	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	1185	107	192	755	41	192	1057	187	2	845	603
RTOR Reduction (vph)	0	0	66	0	4	0	0	13	0	0	0	309
Lane Group Flow (vph)	711	1185	41	192	792	0	192	1231	0	0	847	294
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2							4		4
Actuated Green, G (s)	22.0	41.9	41.9	10.6	31.5		6.0	42.5			32.5	32.5
Effective Green, g (s)	22.0	42.4	41.9	10.6	32.0		7.0	43.5			33.5	33.5
Actuated g/C Ratio	0.20	0.39	0.38	0.10	0.29		0.06	0.40			0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	585	1163	514	282	870		186	1166			875	411
v/s Ratio Prot	c0.24	c0.39		0.07	c0.26		0.07	c0.42				
v/s Ratio Perm			0.03								0.29	0.22
v/c Ratio	1.22	1.02	0.08	0.68	0.91		1.03	1.06			0.97	0.72
Uniform Delay, d1	44.0	33.8	21.7	48.1	37.6		51.5	33.2			37.7	34.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	112.0	31.2	0.1	5.3	14.2		74.7	42.5			23.6	10.2
Delay (s)	156.0	65.0	21.9	53.4	51.8		126.2	75.7			61.3	44.2
Level of Service	F	E	C	D	D		F	E			E	D
Approach Delay (s)		95.0			52.1			82.5			54.2	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	74.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	126.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	92
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	91	678	15	0	52	118	247	0	5	11	47
Future Vol, veh/h	0	91	678	15	0	52	118	247	0	5	11	47
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	99	737	16	0	57	128	268	0	5	12	51
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	154.8	12.2	11.3
HCM LOS	F	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	12%	31%	0%	58%
Vol Thru, %	17%	86%	69%	0%	3%
Vol Right, %	75%	2%	0%	100%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	784	170	247	137
LT Vol	5	91	52	0	79
Through Vol	11	678	118	0	4
RT Vol	47	15	0	247	54
Lane Flow Rate	68	852	185	268	149
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.126	1.278	0.318	0.398	0.276
Departure Headway (Hd)	7.277	5.401	6.534	5.663	7.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	496	673	554	639	499
Service Time	5.277	3.426	4.234	3.363	5.24
HCM Lane V/C Ratio	0.137	1.266	0.334	0.419	0.299
HCM Control Delay	11.3	154.8	12.3	12.1	13
HCM Lane LOS	B	F	B	B	B
HCM 95th-tile Q	0.4	32.8	1.4	1.9	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	79	4	54
Future Vol, veh/h	0	79	4	54
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	86	4	59
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	764	376	44	45	35
Future Vol, veh/h	29	764	376	44	45	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	804	396	46	47	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	442	0	-	0	1284	419
Stage 1	-	-	-	-	419	-
Stage 2	-	-	-	-	865	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1118	-	-	-	182	634
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1118	-	-	-	173	634
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	26
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1118	-	-	-	254
HCM Lane V/C Ratio	0.027	-	-	-	0.332
HCM Control Delay (s)	8.3	0	-	-	26
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4

HCM 2010 Signalized Intersection Summary
12: Melrose Ave & Robertson Blvd

7/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	555	217	233	300	120	97	385	285	106	312	27
Future Volume (veh/h)	65	555	217	233	300	120	97	385	285	106	312	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	68	584	228	245	316	126	102	405	300	112	328	28
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	542	205	180	859	730	238	551	468	171	500	43
Arrive On Green	0.55	0.54	0.54	0.90	0.90	0.90	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	83	1002	379	669	1588	1350	1021	1588	1350	740	1443	123
Grp Volume(v), veh/h	880	0	0	245	316	126	102	405	300	112	0	356
Grp Sat Flow(s),veh/h/ln	1465	0	0	669	1588	1350	1021	1588	1350	740	0	1566
Q Serve(g_s), s	36.5	0.0	0.0	0.0	2.6	1.0	8.4	20.1	16.8	11.1	0.0	17.3
Cycle Q Clear(g_c), s	49.2	0.0	0.0	48.7	2.6	1.0	25.7	20.1	16.8	31.2	0.0	17.3
Prop In Lane	0.08		0.26	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	844	0	0	180	859	731	238	551	468	171	0	543
V/C Ratio(X)	1.04	0.00	0.00	1.36	0.37	0.17	0.43	0.74	0.64	0.65	0.00	0.66
Avail Cap(c_a), veh/h	844	0	0	180	859	731	238	551	468	171	0	543
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	0.00	0.00	0.74	0.74	0.74	1.00	1.00	1.00	0.65	0.00	0.65
Uniform Delay (d), s/veh	21.8	0.0	0.0	15.1	2.1	2.0	35.7	25.8	24.7	40.5	0.0	24.9
Incr Delay (d2), s/veh	42.8	0.0	0.0	186.4	0.9	0.4	1.2	5.1	2.9	5.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.8	0.0	0.0	13.7	1.2	0.4	2.5	9.6	6.6	3.0	0.0	7.7
LnGrp Delay(d),s/veh	64.5	0.0	0.0	201.5	3.0	2.4	37.0	30.9	27.6	46.2	0.0	26.7
LnGrp LOS	F			F	A	A	D	C	C	D		C
Approach Vol, veh/h		880			687			807			468	
Approach Delay, s/veh		64.5			73.7			30.4			31.4	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		50.7		27.7		51.2		33.2
Green Ext Time (p_c), s		0.0		2.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	659	114	181	526	245	98	825	160	125	678	54
Future Volume (veh/h)	112	659	114	181	526	245	98	825	160	125	678	54
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	118	694	120	191	554	258	103	868	168	132	714	57
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	1364	236	434	842	716	185	889	172	87	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	669	2574	445	668	1588	1350	696	2523	488	542	3018	1350
Grp Volume(v), veh/h	118	407	407	191	554	258	103	519	517	132	714	57
Grp Sat Flow(s),veh/h/ln	669	1509	1510	668	1588	1350	696	1509	1502	542	1509	1350
Q Serve(g_s), s	11.3	0.0	0.0	16.9	22.7	10.0	13.3	30.6	30.6	1.1	18.1	2.6
Cycle Q Clear(g_c), s	34.0	0.0	0.0	16.9	22.7	10.0	31.3	30.6	30.6	31.7	18.1	2.6
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	266	800	800	434	842	716	185	531	529	87	1063	476
V/C Ratio(X)	0.44	0.51	0.51	0.44	0.66	0.36	0.56	0.98	0.98	1.52	0.67	0.12
Avail Cap(c_a), veh/h	266	800	800	434	842	716	185	531	529	87	1063	476
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)	0.30	0.30	0.30	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	8.1	0.0	0.0	13.9	15.3	12.3	38.0	28.8	28.8	45.0	24.7	19.7
Incr Delay (d2), s/veh	1.6	0.7	0.7	3.2	4.0	1.4	2.2	32.9	33.0	284.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.2	0.2	3.5	10.8	4.0	2.7	17.5	17.5	9.0	7.7	1.0
LnGrp Delay(d),s/veh	9.7	0.7	0.7	17.1	19.3	13.7	40.2	61.7	61.8	329.5	26.1	19.8
LnGrp LOS	A	A	A	B	B	B	D	E	E	F	C	B
Approach Vol, veh/h		932			1003			1139			903	
Approach Delay, s/veh		1.8			17.4			59.8			70.0	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		36.0		33.7		24.7		33.3
Green Ext Time (p_c), s		7.7		0.0		11.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	1007	61	257	690	81	79	1261	298	63	915	130
Future Volume (veh/h)	178	1007	61	257	690	81	79	1261	298	63	915	130
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	187	1060	64	271	726	0	83	1327	314	66	963	137
Adj No. of Lanes	1	2	0	1	2	1	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	201	737	45	191	1172	524	201	1311	305	60	1431	203
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.54	0.54	0.54	0.54	0.54	0.53
Sat Flow, veh/h	725	2892	175	1513	3018	1350	510	2432	565	304	2653	377
Grp Volume(v), veh/h	187	553	571	271	726	0	83	814	827	66	547	553
Grp Sat Flow(s),veh/h/ln	725	1509	1557	1513	1509	1350	510	1509	1489	304	1509	1522
Q Serve(g_s), s	23.3	30.6	30.6	10.4	23.3	0.0	16.9	64.7	64.7	0.0	31.5	31.6
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	23.3	0.0	48.5	64.7	64.7	64.7	31.5	31.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.38	1.00		0.25
Lane Grp Cap(c), veh/h	201	385	397	191	1172	524	201	814	803	60	814	820
V/C Ratio(X)	0.93	1.44	1.44	1.42	0.62	0.00	0.41	1.00	1.03	1.10	0.67	0.67
Avail Cap(c_a), veh/h	201	385	397	191	1172	524	201	814	803	60	814	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.2	44.7	44.8	35.4	29.6	0.0	37.6	27.6	27.7	60.0	20.0	20.1
Incr Delay (d2), s/veh	42.3	208.8	208.8	216.0	2.5	0.0	6.2	31.6	39.9	146.4	4.4	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	1.6	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	35.0	36.2	16.1	10.1	0.0	2.7	34.0	35.4	4.4	14.1	14.2
LnGrp Delay(d),s/veh	93.5	253.5	253.5	251.4	32.0	0.0	43.7	59.3	67.6	208.1	24.4	24.5
LnGrp LOS	F	F	F	F	C		D	F	F	F	C	C
Approach Vol, veh/h		1311			997			1724			1166	
Approach Delay, s/veh		230.7			91.7			62.5			34.9	
Approach LOS		F			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		25.3		66.7	12.4	32.6
Green Ext Time (p_c), s		0.0		11.1		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		104.3
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

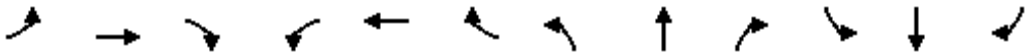
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	978	97	191	935	126	136	528	146	93	445	47
Future Volume (veh/h)	165	978	97	191	935	126	136	528	146	93	445	47
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	174	1029	102	201	984	133	143	556	154	98	468	49
Adj No. of Lanes	1	2	0	1	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	256	990	98	265	954	129	159	469	130	80	555	58
Arrive On Green	0.11	0.34	0.34	0.04	0.11	0.11	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2904	288	1587	2796	378	924	1252	347	773	1482	155
Grp Volume(v), veh/h	174	561	570	201	557	560	143	0	710	98	0	517
Grp Sat Flow(s),veh/h/ln	1587	1583	1608	1587	1583	1590	924	0	1599	773	0	1637
Q Serve(g_s), s	6.2	30.7	30.7	7.1	30.7	30.7	7.7	0.0	33.7	0.0	0.0	26.0
Cycle Q Clear(g_c), s	6.2	30.7	30.7	7.1	30.7	30.7	33.7	0.0	33.7	33.7	0.0	26.0
Prop In Lane	1.00		0.18	1.00		0.24	1.00		0.22	1.00		0.09
Lane Grp Cap(c), veh/h	256	540	548	265	540	543	159	0	599	80	0	613
V/C Ratio(X)	0.68	1.04	1.04	0.76	1.03	1.03	0.90	0.00	1.19	1.22	0.00	0.84
Avail Cap(c_a), veh/h	256	540	548	265	540	543	159	0	599	80	0	613
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	29.6	29.7	22.3	39.9	39.9	42.9	0.0	28.2	45.0	0.0	25.7
Incr Delay (d2), s/veh	13.6	49.1	49.1	18.2	47.0	47.2	48.6	0.0	99.9	173.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	20.7	21.0	4.4	20.5	20.6	5.7	0.0	31.4	5.8	0.0	13.9
LnGrp Delay(d),s/veh	34.2	78.7	78.7	40.5	86.9	87.1	91.5	0.0	128.0	218.0	0.0	39.1
LnGrp LOS	C	F	F	D	F	F	F		F	F		D
Approach Vol, veh/h		1305			1318			853			615	
Approach Delay, s/veh		72.8			79.9			121.9			67.6	
Approach LOS		E			E			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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	8.2	32.7		35.7	9.1	32.7		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		84.5
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	978	97	191	935	126	136	528	146	93	445	47
Future Volume (vph)	165	978	97	191	935	126	136	528	146	93	445	47
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3102		1583	1607		1583	1641	
Flt Permitted	0.13	1.00		0.13	1.00		0.23	1.00		0.12	1.00	
Satd. Flow (perm)	224	3117		221	3102		381	1607		198	1641	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	1029	102	201	984	133	143	556	154	98	468	49
RTOR Reduction (vph)	0	9	0	0	12	0	0	11	0	0	4	0
Lane Group Flow (vph)	174	1122	0	201	1105	0	143	699	0	98	513	0
Confl. Bikes (#/hr)			3			1			8			3
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		258	1058		142	601		74	614	
v/s Ratio Prot	0.08	c0.36		c0.09	0.36			0.43			0.31	
v/s Ratio Perm	0.23			0.26			0.37			c0.50		
v/c Ratio	0.70	1.06		0.78	1.04		1.01	1.16		1.32	0.83	
Uniform Delay, d1	19.4	29.6		19.4	29.6		28.1	28.1		28.1	25.6	
Progression Factor	1.00	1.00		0.67	1.10		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.1	43.6		5.2	26.7		77.4	90.5		213.8	12.7	
Delay (s)	34.5	73.3		18.3	59.4		105.5	118.6		241.9	38.3	
Level of Service	C	E		B	E		F	F		F	D	
Approach Delay (s)		68.1			53.1			116.5			70.7	
Approach LOS		E			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	73.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	995	67	105	984	81	90	519	173	71	432	209
Future Volume (veh/h)	110	995	67	105	984	81	90	519	173	71	432	209
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	116	1047	71	111	1036	85	95	546	182	75	455	220
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1129	77	142	1111	91	183	1160	671	463	503	243
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	525	3010	204	527	2964	243	798	2451	1417	760	1062	514
Grp Volume(v), veh/h	116	551	567	111	553	568	95	546	182	75	0	675
Grp Sat Flow(s),veh/h/ln	525	1583	1631	527	1583	1624	798	2451	1417	760	0	1576
Q Serve(g_s), s	2.0	20.0	20.0	2.5	20.5	20.5	4.7	1.3	0.6	3.6	0.0	23.7
Cycle Q Clear(g_c), s	22.5	20.0	20.0	22.5	20.5	20.5	28.4	1.3	0.6	4.9	0.0	23.7
Prop In Lane	1.00		0.13	1.00		0.15	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	137	594	611	142	594	609	183	1160	671	463	0	746
V/C Ratio(X)	0.84	0.93	0.93	0.78	0.93	0.93	0.52	0.47	0.27	0.16	0.00	0.90
Avail Cap(c_a), veh/h	137	594	611	142	594	609	183	1160	671	463	0	746
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.42	0.42	0.42	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	18.0	18.0	33.5	21.7	21.7	14.3	0.9	0.9	10.0	0.0	14.7
Incr Delay (d2), s/veh	43.8	22.8	22.4	23.9	17.3	17.0	4.4	0.6	0.4	0.7	0.0	16.5
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	3.6	12.3	12.6	2.8	11.8	12.0	1.8	0.8	0.3	0.8	0.0	13.6
LnGrp Delay(d),s/veh	73.6	40.8	40.4	57.4	39.0	38.8	18.6	1.4	1.3	10.7	0.0	31.2
LnGrp LOS	E	D	D	E	D	D	B	A	A	B		C
Approach Vol, veh/h		1234			1232			823			750	
Approach Delay, s/veh		43.7			40.6			3.4			29.2	
Approach LOS		D			D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		25.7		24.5		30.4
Green Ext Time (p_c), s		0.0		1.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

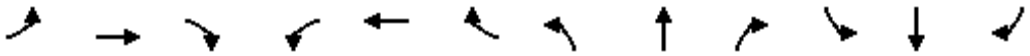
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1213	151	73	835	165	136	1005	470	239	873	131
Future Volume (veh/h)	59	1213	151	73	835	165	136	1005	470	239	873	131
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	62	1277	159	77	879	174	143	1058	495	252	919	138
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	277	1465	655	179	1219	241	197	1470	658	128	1470	658
Arrive On Green	0.93	0.93	0.93	0.93	0.93	0.93	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	560	3167	1417	389	2636	522	558	3167	1417	348	3167	1417
Grp Volume(v), veh/h	62	1277	159	77	528	525	143	1058	495	252	919	138
Grp Sat Flow(s),veh/h/ln	560	1583	1417	389	1583	1575	558	1583	1417	348	1583	1417
Q Serve(g_s), s	3.8	18.8	1.3	15.2	9.0	9.0	29.4	32.3	34.5	23.4	26.3	6.9
Cycle Q Clear(g_c), s	12.9	18.8	1.3	34.0	9.0	9.0	55.7	32.3	34.5	55.7	26.3	6.9
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1465	655	179	732	728	197	1470	658	128	1470	658
V/C Ratio(X)	0.22	0.87	0.24	0.43	0.72	0.72	0.73	0.72	0.75	1.97	0.63	0.21
Avail Cap(c_a), veh/h	277	1465	655	179	732	728	197	1470	658	128	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.2	3.1	2.5	9.7	2.8	2.8	45.9	25.9	26.5	53.8	24.3	19.1
Incr Delay (d2), s/veh	1.6	6.6	0.8	1.5	1.2	1.2	20.8	3.1	7.8	463.7	2.0	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	0.7	8.1	0.6	1.7	3.5	3.5	5.9	14.7	14.9	20.7	11.9	2.9
LnGrp Delay(d),s/veh	5.8	9.7	3.2	11.2	4.0	4.0	66.8	28.9	34.3	517.5	26.3	19.8
LnGrp LOS	A	A	A	B	A	A	E	C	C	F	C	B
Approach Vol, veh/h		1498			1130			1696			1309	
Approach Delay, s/veh		8.9			4.5			33.7			120.2	
Approach LOS		A			A			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		36.0		57.7		20.8		57.7
Green Ext Time (p_c), s		13.3		0.0		20.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1182	102	117	868	61	110	599	47	82	618	68
Future Volume (vph)	154	1182	102	117	868	61	110	599	47	82	618	68
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1309	1509	4336	1318	1509	1588	1327	1509	1562	
Flt Permitted	0.25	1.00	1.00	0.18	1.00	1.00	0.16	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	397	4336	1309	289	4336	1318	255	1588	1327	379	1562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	1244	107	123	914	64	116	631	49	86	651	72
RTOR Reduction (vph)	0	0	68	0	0	41	0	0	19	0	6	0
Lane Group Flow (vph)	162	1244	39	123	914	23	116	631	30	86	717	0
Confl. Bikes (#/hr)			10			4			10			5
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	22.0	22.0	22.0	22.0	22.0	22.0	28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	22.0	22.0	22.0	22.0	22.0	22.0	28.0	28.0	28.0	28.0	28.0	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	145	1589	479	105	1589	483	119	741	619	176	728	
v/s Ratio Prot		0.29			0.21			0.40			c0.46	
v/s Ratio Perm	0.41		0.03	c0.43		0.02	0.45		0.02	0.23		
v/c Ratio	1.12	0.78	0.08	1.17	0.58	0.05	0.97	0.85	0.05	0.49	0.98	
Uniform Delay, d1	19.0	16.9	12.4	19.0	15.2	12.3	15.7	14.2	8.7	11.1	15.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.42	1.42	
Incremental Delay, d2	109.7	3.9	0.3	141.2	1.5	0.2	74.0	9.3	0.0	1.5	23.6	
Delay (s)	128.7	20.8	12.7	160.2	16.8	12.4	89.7	23.5	8.8	17.2	46.0	
Level of Service	F	C	B	F	B	B	F	C	A	B	D	
Approach Delay (s)		31.8			32.5			32.2			42.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	7/15/2016
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	PM	Reviewed by:		Project:	Robertson Lane Hotel Project

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	101	1	**101**	0	101	**101**	5	110	1	**110**	0	110	1	**110**	0	110	1	**110**
	Left-Through		0							0				0				0	
	Through	502	1	502	12	514	514	77	599	1	599	12	611	1	611	0	611	1	611
	Through-Right		0							0				0				0	
	Right	45	1	0	0	45	0	0	47	1	0	0	47	1	0	0	47	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	79	1	79	0	79	79	0	82	1	82	0	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	499	0	**547**	9	508	**556**	99	618	0	**686**	9	627	0	**695**	0	627	0	**695**
	Through-Right		1							1				1				1	
	Right	48	0	0	0	48	0	18	68	0	0	0	68	0	0	0	68	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	148	1	148	0	148	148	0	154	1	154	0	154	1	154	0	154	1	154
	Left-Through		0							0				0				0	
	Through	1104	3	**368**	0	1104	**368**	33	1182	3	**394**	0	1182	3	**394**	0	1182	3	**394**
	Through-Right		0							0				0				0	
	Right	90	1	40	0	90	40	8	102	1	47	0	102	1	47	0	102	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	112	1	**112**	0	112	**112**	0	117	1	**117**	0	117	1	**117**	0	117	1	**117**
	Left-Through		0							0				0				0	
	Through	787	3	262	0	787	262	49	868	3	289	0	868	3	289	0	868	3	289
	Through-Right		0							0				0				0	
	Right	59	1	20	0	59	20	0	61	1	20	0	61	1	20	0	61	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		648	*North-South:*		657	*North-South:*			796	*North-South:*			805	*North-South:*			805
		East-West:		480	*East-West:*		480	*East-West:*			511	*East-West:*			511	*East-West:*			511
		SUM:		1128	*SUM:*		1137	*SUM:*			1307	*SUM:*			1316	*SUM:*			1316
VOLUME/CAPACITY *(V/C)* RATIO:				0.792			0.798				0.917				0.924				0.924
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.692			0.698				0.817				0.824				0.824
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.006

Significant impacted? NO

PROPOSED PROJECT IMPACT

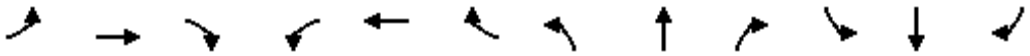
Change in *v/c* due to project: 0.007

Significant impacted? NO

$\Delta v/c$ after mitigation: 0.007

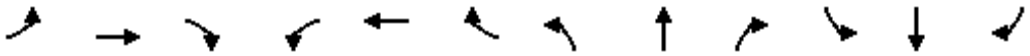
Fully mitigated? N/A

APPENDIX E
Intersection Level of Service Worksheets
Future With Project (Year 2019)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	909	101	151	1623	101	171	116	141	100	102	16
Future Volume (vph)	24	909	101	151	1623	101	171	116	141	100	102	16
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2991		1433	1493	1350		1742	
Flt Permitted	0.06	1.00	1.00	0.21	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	98	3018	1350	326	2991		1433	1493	1350		1742	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	957	106	159	1708	106	180	122	148	105	107	17
RTOR Reduction (vph)	0	0	42	0	4	0	0	0	112	0	3	0
Lane Group Flow (vph)	25	957	64	159	1810	0	148	154	36	0	226	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	64.7	64.7	64.7	75.7	75.7		16.3	16.3	23.3		14.0	
Effective Green, g (s)	64.7	64.7	64.7	74.7	75.7		15.8	15.8	21.3		13.5	
Actuated g/C Ratio	0.54	0.54	0.54	0.62	0.63		0.13	0.13	0.18		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	52	1627	727	262	1886		188	196	239		195	
v/s Ratio Prot		0.32		0.03	c0.61		c0.10	0.10	0.01		c0.13	
v/s Ratio Perm	0.25		0.05	0.35					0.02			
v/c Ratio	0.48	0.59	0.09	0.61	0.96		0.79	0.79	0.15		1.16	
Uniform Delay, d1	17.2	18.7	13.4	12.4	20.7		50.5	50.5	41.7		53.2	
Progression Factor	1.00	1.00	1.00	1.29	1.07		1.00	1.00	1.00		1.00	
Incremental Delay, d2	28.6	1.6	0.2	1.9	7.7		19.2	18.4	0.3		114.4	
Delay (s)	45.8	20.2	13.6	18.0	30.0		69.7	68.9	42.0		167.7	
Level of Service	D	C	B	B	C		E	E	D		F	
Approach Delay (s)		20.2			29.0			60.3			167.7	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	925	232	137	1704	20	247	94	207	33	172	41
Future Volume (vph)	21	925	232	137	1704	20	247	94	207	33	172	41
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1475	2376	1509	1543	
Flt Permitted	0.07	1.00	1.00	0.20	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	114	3018	1350	317	3018	1350	1433	1475	2376	1509	1543	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	974	244	144	1794	21	260	99	218	35	181	43
RTOR Reduction (vph)	0	0	112	0	0	7	0	0	143	0	7	0
Lane Group Flow (vph)	22	974	132	144	1794	14	177	182	75	35	217	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	64.7	64.7	64.7	77.7	77.7	77.7	9.0	9.0	18.0	19.3	19.3	
Effective Green, g (s)	64.7	64.7	64.7	76.7	77.7	77.7	9.0	9.0	16.0	18.3	18.3	
Actuated g/C Ratio	0.54	0.54	0.54	0.64	0.65	0.65	0.08	0.08	0.13	0.15	0.15	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	61	1627	727	282	1954	874	107	110	316	230	235	
v/s Ratio Prot		0.32		0.03	c0.59		c0.12	0.12	0.02	0.02	c0.14	
v/s Ratio Perm	0.19		0.10	0.29		0.01			0.02			
v/c Ratio	0.36	0.60	0.18	0.51	0.92	0.02	1.65	1.65	0.24	0.15	0.92	
Uniform Delay, d1	15.8	18.8	14.1	11.6	18.4	7.5	55.5	55.5	46.5	44.1	50.2	
Progression Factor	1.13	1.50	5.05	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.8	1.4	0.5	0.7	8.4	0.0	332.1	331.3	0.1	0.3	38.4	
Delay (s)	31.7	29.6	71.8	12.1	26.8	7.6	387.6	386.8	46.7	44.4	88.5	
Level of Service	C	C	E	B	C	A	F	F	D	D	F	
Approach Delay (s)		38.0			25.5			258.5			82.6	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	66.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	751	132	25	52	319	3	0	1060	563	64	1558	9
Future Volume (vph)	751	132	25	52	319	3	0	1060	563	64	1558	9
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2932			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.12	1.00	
Satd. Flow (perm)	2927	1350	1350		2932			3018	1350	196	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	791	139	26	55	336	3	0	1116	593	67	1640	9
RTOR Reduction (vph)	0	0	19	0	56	0	0	0	0	0	1	0
Lane Group Flow (vph)	791	139	7	0	338	0	0	1116	593	67	1648	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.1	25.1	25.1		15.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.1	25.1	25.1		15.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.26	0.26	0.26		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	773	356	356		478			1315	588	85	1313	
v/s Ratio Prot	c0.27	0.10	0.01		c0.12			0.37			c0.55	
v/s Ratio Perm									0.44	0.34		
v/c Ratio	1.02	0.39	0.02		0.71			0.85	1.01	0.79	1.26	
Uniform Delay, d1	35.0	28.7	25.8		37.6			24.0	26.8	23.0	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	38.4	0.3	0.0		4.7			7.0	39.2	51.3	121.3	
Delay (s)	73.4	28.9	25.9		42.3			31.0	66.0	74.3	148.1	
Level of Service	E	C	C		D			C	E	E	F	
Approach Delay (s)	65.6				42.3			43.1			145.3	
Approach LOS	E				D			D			F	

Intersection Summary			
HCM 2000 Control Delay	84.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

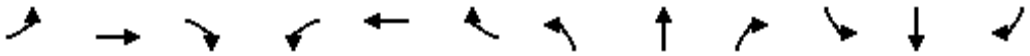
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	84	624	335	35	175	1583	57	40	331	87	68	37
Future Volume (vph)	84	624	335	35	175	1583	57	40	331	87	68	37
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0	4.0	5.3			5.3	5.3		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.95			1.00	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00			1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt	1.00	1.00	0.85	0.85	1.00	0.99			1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (prot)	1509	3018	1350	1333	1509	2998			1580	1350		
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (perm)	1509	3018	1350	1333	1509	2998			1580	1350		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	657	353	37	184	1666	60	42	348	92	72	39
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	112	0	0
Lane Group Flow (vph)	88	657	353	37	184	1725	0	0	390	52	0	0
Confl. Bikes (#/hr)				2			19			3		
Turn Type	Prot	NA	Perm	Free	Prot	NA		Split	NA	custom		Split
Protected Phases	5	2			1	6		4	4	4		3
Permitted Phases			2	Free						4		
Actuated Green, G (s)	12.4	48.2	48.2	155.9	24.2	60.0			29.8	29.8		
Effective Green, g (s)	12.4	48.2	48.2	155.9	24.2	60.0			29.8	29.8		
Actuated g/C Ratio	0.08	0.31	0.31	1.00	0.16	0.38			0.19	0.19		
Clearance Time (s)	4.0	5.3	5.3		4.0	5.3			5.3	5.3		
Vehicle Extension (s)	2.0	3.5	3.5		2.0	3.5			2.0	2.0		
Lane Grp Cap (vph)	120	933	417	1333	234	1153			302	258		
v/s Ratio Prot	0.06	0.22			0.12	c0.58			c0.25	0.04		
v/s Ratio Perm			c0.26	0.03								
v/c Ratio	0.73	0.70	0.85	0.03	0.79	1.50			1.29	0.20		
Uniform Delay, d1	70.1	47.6	50.4	0.0	63.4	48.0			63.1	53.1		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	17.9	2.5	15.0	0.0	14.7	227.8			153.7	0.1		
Delay (s)	88.1	50.1	65.3	0.0	78.1	275.7			216.7	53.2		
Level of Service	F	D	E	A	E	F			F	D		
Approach Delay (s)		56.1				256.7			168.3			
Approach LOS		E				F			F			

Intersection Summary			
HCM 2000 Control Delay	162.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	155.9	Sum of lost time (s)	23.9
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWR2
Lane Configurations				
Traffic Volume (vph)	117	291	137	26
Future Volume (vph)	117	291	137	26
Ideal Flow (vphpl)	1620	1620	1620	1620
Total Lost time (s)		5.3	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	0.85	0.86
Flt Protected		0.98	1.00	1.00
Satd. Flow (prot)		2966	1350	1374
Flt Permitted		0.98	1.00	1.00
Satd. Flow (perm)		2966	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	306	144	27
RTOR Reduction (vph)	0	0	0	27
Lane Group Flow (vph)	0	468	144	0
Confl. Bikes (#/hr)				
Turn Type	Split	NA	Free	Prot
Protected Phases	3	3		7
Permitted Phases			Free	
Actuated Green, G (s)		27.0	155.9	2.8
Effective Green, g (s)		27.0	155.9	2.8
Actuated g/C Ratio		0.17	1.00	0.02
Clearance Time (s)		5.3		4.0
Vehicle Extension (s)		2.0		2.0
Lane Grp Cap (vph)		513	1350	24
v/s Ratio Prot		c0.16		0.00
v/s Ratio Perm			c0.11	
v/c Ratio		0.91	0.11	0.02
Uniform Delay, d1		63.3	0.0	75.2
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		20.2	0.2	0.1
Delay (s)		83.5	0.2	75.3
Level of Service		F	A	E
Approach Delay (s)		63.9		
Approach LOS		E		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	742	16	58	1736	1	274	0	24	0	0	0
Future Volume (vph)	15	742	16	58	1736	1	274	0	24	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.98				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96				
Satd. Flow (prot)	1509	3008		1509	3017		1433	1413				
Flt Permitted	0.05	1.00		0.31	1.00		0.95	0.96				
Satd. Flow (perm)	87	3008		494	3017		1433	1413				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	16	807	17	63	1887	1	298	0	26	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	58	0	0	0	0
Lane Group Flow (vph)	16	823	0	63	1888	0	164	102	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	72.9	72.9		72.9	72.9		16.8	16.8				
Effective Green, g (s)	72.9	72.9		72.9	72.9		16.8	16.8				
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.15	0.15				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	57	1993		327	1999		218	215				
v/s Ratio Prot		0.27			c0.63							
v/s Ratio Perm	0.18			0.13			c0.11	0.07				
v/c Ratio	0.28	0.41		0.19	0.94		0.75	0.47				
Uniform Delay, d1	7.7	8.6		7.2	16.7		44.6	42.6				
Progression Factor	1.00	1.00		0.25	0.40		1.00	1.00				
Incremental Delay, d2	11.9	0.6		0.1	1.3		13.6	1.6				
Delay (s)	19.6	9.2		1.9	8.1		58.2	44.2				
Level of Service	B	A		A	A		E	D				
Approach Delay (s)		9.4			7.9			51.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	737	35	53	1816	0	51
Future Vol, veh/h	737	35	53	1816	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	776	37	56	1912	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	813	0	-	406
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	810	-	0	594
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	810	-	-	594
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	594	-	-	810	-
HCM Lane V/C Ratio	0.09	-	-	0.069	-
HCM Control Delay (s)	11.7	-	-	9.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	704	40	192	1780	46	86	105	151	43	134	14
Future Volume (veh/h)	48	704	40	192	1780	46	86	105	151	43	134	14
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	51	741	42	202	1874	48	91	111	159	45	141	15
Adj No. of Lanes	1	2	0	1	2	0	0	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	113	1534	87	426	1715	44	107	108	136	184	381	41
Arrive On Green	0.03	0.53	0.53	0.07	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2904	165	1513	3007	77	243	399	505	1105	1412	150
Grp Volume(v), veh/h	51	385	398	202	937	985	361	0	0	45	0	156
Grp Sat Flow(s),veh/h/ln	1513	1509	1559	1513	1509	1575	1147	0	0	1105	0	1562
Q Serve(g_s), s	1.7	17.8	17.8	6.5	62.8	62.8	20.8	0.0	0.0	0.0	0.0	8.9
Cycle Q Clear(g_c), s	1.7	17.8	17.8	6.5	62.8	62.8	29.7	0.0	0.0	9.1	0.0	8.9
Prop In Lane	1.00		0.11	1.00		0.05	0.25		0.44	1.00		0.10
Lane Grp Cap(c), veh/h	113	797	824	426	861	898	351	0	0	184	0	422
V/C Ratio(X)	0.45	0.48	0.48	0.47	1.09	1.10	1.03	0.00	0.00	0.24	0.00	0.37
Avail Cap(c_a), veh/h	237	797	824	486	861	898	351	0	0	184	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)	1.00	1.00	1.00	0.09	0.09	0.09	0.83	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	16.4	16.4	11.9	23.6	23.6	43.4	0.0	0.0	32.6	0.0	32.6
Incr Delay (d2), s/veh	1.0	2.1	2.0	0.0	41.8	45.6	51.4	0.0	0.0	0.7	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	0.8	7.8	8.1	2.7	35.8	38.3	15.6	0.0	0.0	1.1	0.0	3.9
LnGrp Delay(d),s/veh	27.4	18.5	18.5	11.9	65.5	69.2	94.8	0.0	0.0	33.3	0.0	33.1
LnGrp LOS	C	B	B	B	F	F	F			C		C
Approach Vol, veh/h		834			2124			361			201	
Approach Delay, s/veh		19.0			62.1			94.8			33.2	
Approach LOS		B			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.6	63.4		34.0	7.9	68.1		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	8.5	19.8		11.1	3.7	64.8		31.7
Green Ext Time (p_c), s	0.1	31.3		2.4	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

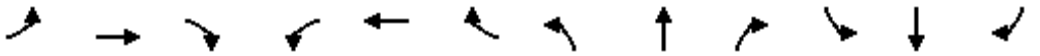
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	738	21	117	1667	128	53	509	71	61	546	166
Future Volume (veh/h)	111	738	21	117	1667	128	53	509	71	61	546	166
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	117	777	22	123	1755	135	56	536	75	64	575	175
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	1746	49	527	1659	126	65	705	315	120	531	161
Arrive On Green	0.10	1.00	1.00	0.05	0.58	0.58	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2996	85	1513	2838	216	709	3018	1350	807	2274	690
Grp Volume(v), veh/h	117	391	408	123	922	968	56	536	75	64	381	369
Grp Sat Flow(s),veh/h/ln	1513	1509	1572	1513	1509	1545	709	1509	1350	807	1509	1455
Q Serve(g_s), s	3.5	0.0	0.0	3.7	64.3	64.3	0.0	18.2	5.0	7.5	25.7	25.7
Cycle Q Clear(g_c), s	3.5	0.0	0.0	3.7	64.3	64.3	25.7	18.2	5.0	25.7	25.7	25.7
Prop In Lane	1.00		0.05	1.00		0.14	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	140	879	916	527	882	903	65	705	315	120	353	340
V/C Ratio(X)	0.84	0.44	0.45	0.23	1.05	1.07	0.86	0.76	0.24	0.53	1.08	1.09
Avail Cap(c_a), veh/h	258	879	916	643	882	903	65	705	315	120	353	340
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	0.98	0.98	0.98	0.96	0.96	0.96
Uniform Delay (d), s/veh	25.4	0.0	0.0	8.4	22.9	22.9	55.0	39.3	34.2	51.8	42.2	42.2
Incr Delay (d2), s/veh	4.3	1.4	1.4	0.1	43.0	51.1	64.4	5.1	0.5	5.6	70.4	72.8
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	0.3	0.3	1.5	37.0	39.9	2.9	8.1	1.9	2.1	17.6	17.2
LnGrp Delay(d),s/veh	29.7	1.4	1.4	8.5	65.8	73.9	119.4	44.4	34.7	57.4	112.5	114.9
LnGrp LOS	C	A	A	A	F	F	F	D	C	E	F	F
Approach Vol, veh/h		916			2013			667			814	
Approach Delay, s/veh		5.0			66.2			49.6			109.3	
Approach LOS		A			E			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	9.6	69.4		31.0	9.4	69.6		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 14	* 56		* 26	* 14	* 56		* 26
Max Q Clear Time (g_c+I1), s	5.7	2.0		27.7	5.5	66.3		27.7
Green Ext Time (p_c), s	0.1	47.3		0.0	0.1	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		58.9
HCM 2010 LOS		E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	498	61	204	1208	17	188	508	97	0	848	617
Future Volume (vph)	224	498	61	204	1208	17	188	508	97	0	848	617
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3011		2927	2945			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3011		2927	2945			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	236	524	64	215	1272	18	198	535	102	0	893	649
RTOR Reduction (vph)	0	0	40	0	1	0	0	14	0	0	0	136
Lane Group Flow (vph)	236	524	24	215	1289	0	198	623	0	0	893	513
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	9.9	40.4	40.4	11.5	43.0		7.0	43.1			32.1	32.1
Effective Green, g (s)	9.9	40.9	40.4	11.5	43.5		8.0	44.1			33.1	33.1
Actuated g/C Ratio	0.09	0.37	0.37	0.10	0.40		0.07	0.40			0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	263	1122	495	306	1190		212	1180			908	406
v/s Ratio Prot	c0.08	0.17		0.07	c0.43		c0.07	0.21			0.30	
v/s Ratio Perm			0.02									c0.38
v/c Ratio	0.90	0.47	0.05	0.70	1.08		0.93	0.53			0.98	1.26
Uniform Delay, d1	49.5	26.3	22.4	47.6	33.2		50.7	25.0			38.2	38.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	29.3	0.6	0.1	5.9	51.8		42.9	1.7			26.1	136.7
Delay (s)	78.9	26.9	22.5	53.5	85.1		93.7	26.7			64.3	175.1
Level of Service	E	C	C	D	F		F	C			E	F
Approach Delay (s)		41.5			80.6			42.6			111.0	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	76.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	33	441	7	0	17	194	290	0	2	3	4
Future Vol, veh/h	0	33	441	7	0	17	194	290	0	2	3	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	479	8	0	18	211	315	0	2	3	4
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	18	10.3	9.3
HCM LOS	C	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	7%	8%	0%	16%
Vol Thru, %	33%	92%	92%	0%	4%
Vol Right, %	44%	1%	0%	100%	79%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	481	211	290	68
LT Vol	2	33	17	0	11
Through Vol	3	441	194	0	3
RT Vol	4	7	0	290	54
Lane Flow Rate	10	523	229	315	74
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.017	0.694	0.333	0.392	0.116
Departure Headway (Hd)	6.145	4.776	5.225	4.478	5.651
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	586	753	686	801	628
Service Time	4.145	2.825	2.977	2.231	3.74
HCM Lane V/C Ratio	0.017	0.695	0.334	0.393	0.118
HCM Control Delay	9.3	18	10.6	10.1	9.5
HCM Lane LOS	A	C	B	B	A
HCM 95th-tile Q	0.1	5.7	1.5	1.9	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	11	3	54
Future Vol, veh/h	0	11	3	54
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	3	59
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	456	473	46	43	37
Future Vol, veh/h	14	456	473	46	43	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	480	498	48	45	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	546	0	-	0	1031	522
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	509	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1023	-	-	-	258	555
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1023	-	-	-	253	555
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	592	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1023	-	-	-	338
HCM Lane V/C Ratio	0.014	-	-	-	0.249
HCM Control Delay (s)	8.6	0	-	-	19.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	390	93	502	425	96	74	261	194	54	284	8
Future Volume (veh/h)	12	390	93	502	425	96	74	261	194	54	284	8
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	13	411	98	528	447	101	78	275	204	57	299	8
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	730	171	492	947	805	209	463	394	211	449	12
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	15	1224	286	887	1588	1350	1068	1588	1350	912	1540	41
Grp Volume(v), veh/h	522	0	0	528	447	101	78	275	204	57	0	307
Grp Sat Flow(s),veh/h/ln	1525	0	0	887	1588	1350	1068	1588	1350	912	0	1581
Q Serve(g_s), s	0.0	0.0	0.0	35.1	14.2	2.9	6.2	13.3	11.3	5.1	0.0	15.4
Cycle Q Clear(g_c), s	18.6	0.0	0.0	53.7	14.2	2.9	21.6	13.3	11.3	18.5	0.0	15.4
Prop In Lane	0.02		0.19	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	959	0	0	492	947	805	209	463	394	211	0	461
V/C Ratio(X)	0.54	0.00	0.00	1.07	0.47	0.13	0.37	0.59	0.52	0.27	0.00	0.67
Avail Cap(c_a), veh/h	959	0	0	492	947	805	268	551	468	261	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.20	0.20	0.20	1.00	1.00	1.00	0.88	0.00	0.88
Uniform Delay (d), s/veh	11.1	0.0	0.0	26.7	10.2	7.9	37.5	27.3	26.6	35.2	0.0	28.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	41.3	0.3	0.1	1.1	1.2	1.1	0.6	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	8.3	0.0	0.0	17.8	6.3	1.1	1.9	6.0	4.3	1.3	0.0	6.9
LnGrp Delay(d),s/veh	13.3	0.0	0.0	67.9	10.6	8.0	38.6	28.5	27.7	35.8	0.0	30.1
LnGrp LOS	B			F	B	A	D	C	C	D		C
Approach Vol, veh/h		522			1076			557			364	
Approach Delay, s/veh		13.3			38.5			29.6			31.0	
Approach LOS		B			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.0		31.0		59.0		31.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		55.7		23.6		20.6		20.5
Green Ext Time (p_c), s		0.0		2.7		15.6		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	541	50	195	897	133	92	638	126	120	591	56
Future Volume (veh/h)	34	541	50	195	897	133	92	638	126	120	591	56
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	36	569	53	205	944	140	97	672	133	126	622	59
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	72	1611	150	446	916	779	178	796	157	117	957	428
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	518	2792	260	799	1588	1350	756	2513	497	674	3018	1350
Grp Volume(v), veh/h	36	307	315	205	944	140	97	403	402	126	622	59
Grp Sat Flow(s),veh/h/ln	518	1509	1542	799	1588	1350	756	1509	1501	674	1509	1350
Q Serve(g_s), s	0.0	10.8	10.9	18.3	57.7	4.9	12.7	24.9	25.0	6.7	17.7	3.1
Cycle Q Clear(g_c), s	57.7	10.8	10.9	29.2	57.7	4.9	30.4	24.9	25.0	31.7	17.7	3.1
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	72	871	890	446	916	779	178	478	476	117	957	428
V/C Ratio(X)	0.50	0.35	0.35	0.46	1.03	0.18	0.55	0.84	0.84	1.07	0.65	0.14
Avail Cap(c_a), veh/h	72	871	890	446	916	779	178	478	476	117	957	428
HCM Platoon Ratio	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	50.0	11.2	11.2	19.0	21.1	10.0	42.5	31.8	31.9	48.7	29.4	24.4
Incr Delay (d2), s/veh	19.8	1.0	1.0	3.4	37.7	0.5	2.0	12.3	12.5	103.8	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.7	4.8	4.5	34.5	1.9	2.7	11.9	11.9	6.6	7.5	1.2
LnGrp Delay(d),s/veh	69.8	12.2	12.2	22.4	58.8	10.5	44.4	44.1	44.3	152.5	30.6	24.4
LnGrp LOS	E	B	B	C	F	B	D	D	D	F	C	C
Approach Vol, veh/h		658			1289			902			807	
Approach Delay, s/veh		15.3			47.8			44.2			49.2	
Approach LOS		B			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 58		* 32		* 58		* 32
Max Q Clear Time (g_c+I1), s		59.7		33.7		59.7		32.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	484	57	498	967	44	78	709	196	77	993	143
Future Volume (veh/h)	58	484	57	498	967	44	78	709	196	77	993	143
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	61	509	60	524	1018	0	82	746	206	81	1045	151
Adj No. of Lanes	1	2	0	1	2	1	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	102	694	82	247	1172	524	171	1260	348	204	1427	206
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	552	2721	320	1513	3018	1350	466	2338	646	587	2648	382
Grp Volume(v), veh/h	61	281	288	524	1018	0	82	481	471	81	595	601
Grp Sat Flow(s),veh/h/ln	552	1509	1532	1513	1509	1350	466	1509	1474	587	1509	1521
Q Serve(g_s), s	9.2	20.5	20.7	10.4	37.4	0.0	20.7	35.2	35.2	14.5	36.0	36.2
Cycle Q Clear(g_c), s	30.6	20.5	20.7	10.4	37.4	0.0	56.9	35.2	35.2	49.7	36.0	36.2
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.44	1.00		0.25
Lane Grp Cap(c), veh/h	102	385	391	247	1172	524	171	814	795	204	814	820
V/C Ratio(X)	0.60	0.73	0.74	2.13	0.87	0.00	0.48	0.59	0.59	0.40	0.73	0.73
Avail Cap(c_a), veh/h	102	385	391	247	1172	524	171	814	795	204	814	820
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	40.9	41.1	40.1	33.9	0.0	63.8	37.2	37.2	39.6	21.0	21.2
Incr Delay (d2), s/veh	19.5	9.9	9.9	519.9	8.8	0.0	9.4	3.2	3.2	5.7	5.8	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	2.6	9.6	9.8	41.6	17.0	0.0	3.1	15.5	15.1	2.7	16.2	16.5
LnGrp Delay(d),s/veh	76.3	50.8	51.0	560.0	42.7	0.0	73.2	40.3	40.4	45.2	26.8	26.9
LnGrp LOS	E	D	D	F	D		E	D	D	D	C	C
Approach Vol, veh/h		630			1542			1034			1277	
Approach Delay, s/veh		53.4			218.5			43.0			28.0	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		51.7		39.4		58.9	12.4	32.6
Green Ext Time (p_c), s		8.8		4.1		4.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		100.6
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

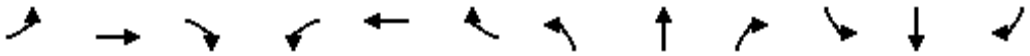
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	774	77	246	1149	53	100	436	103	46	473	172
Future Volume (veh/h)	50	774	77	246	1149	53	100	436	103	46	473	172
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	53	815	81	259	1209	56	105	459	108	48	498	181
Adj No. of Lanes	1	2	0	1	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	256	990	98	316	1051	49	80	487	115	110	435	158
Arrive On Green	0.11	0.34	0.34	0.23	0.68	0.68	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2903	288	1587	3082	143	795	1301	306	882	1163	423
Grp Volume(v), veh/h	53	445	451	259	621	644	105	0	567	48	0	679
Grp Sat Flow(s),veh/h/ln	1587	1583	1608	1587	1583	1641	795	0	1608	882	0	1586
Q Serve(g_s), s	1.7	23.1	23.2	10.4	30.7	30.7	0.0	0.0	30.7	3.0	0.0	33.7
Cycle Q Clear(g_c), s	1.7	23.1	23.2	10.4	30.7	30.7	33.7	0.0	30.7	33.7	0.0	33.7
Prop In Lane	1.00		0.18	1.00		0.09	1.00		0.19	1.00		0.27
Lane Grp Cap(c), veh/h	256	540	548	316	540	560	80	0	602	110	0	594
V/C Ratio(X)	0.21	0.82	0.82	0.82	1.15	1.15	1.31	0.00	0.94	0.44	0.00	1.14
Avail Cap(c_a), veh/h	256	540	548	316	540	560	80	0	602	110	0	594
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	27.2	27.2	17.9	14.3	14.3	45.0	0.0	27.2	44.1	0.0	28.2
Incr Delay (d2), s/veh	1.8	13.3	13.1	20.6	87.0	87.0	205.3	0.0	24.9	12.2	0.0	83.3
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	12.1	12.3	6.2	25.6	26.6	6.5	0.0	17.7	1.6	0.0	28.4
LnGrp Delay(d),s/veh	21.3	40.4	40.3	38.5	101.3	101.3	250.3	0.0	52.1	56.3	0.0	111.5
LnGrp LOS	C	D	D	D	F	F	F		D	E		F
Approach Vol, veh/h		949			1524			672			727	
Approach Delay, s/veh		39.3			90.6			83.0			107.8	
Approach LOS		D			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	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	3.7	32.7		35.7	12.4	25.2		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	774	77	246	1149	53	100	436	103	46	473	172
Future Volume (vph)	50	774	77	246	1149	53	100	436	103	46	473	172
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3146		1583	1615		1583	1595	
Flt Permitted	0.13	1.00		0.15	1.00		0.12	1.00		0.18	1.00	
Satd. Flow (perm)	224	3117		253	3146		198	1615		293	1595	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	815	81	259	1209	56	105	459	108	48	498	181
RTOR Reduction (vph)	0	9	0	0	4	0	0	9	0	0	14	0
Lane Group Flow (vph)	53	887	0	259	1261	0	105	558	0	48	665	0
Confl. Bikes (#/hr)			3						3			1
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		269	1073		74	604		109	597	
v/s Ratio Prot	0.02	0.28		c0.11	c0.40			0.35			0.42	
v/s Ratio Perm	0.07			0.32			c0.53			0.16		
v/c Ratio	0.21	0.83		0.96	1.18		1.42	0.92		0.44	1.11	
Uniform Delay, d1	18.3	27.3		19.3	29.6		28.1	26.9		21.1	28.1	
Progression Factor	1.00	1.00		2.04	0.43		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	7.8		18.4	81.3		250.5	21.9		12.4	72.0	
Delay (s)	20.3	35.1		57.7	94.2		278.7	48.8		33.5	100.1	
Level of Service	C	D		E	F		F	D		C	F	
Approach Delay (s)		34.2			88.0			84.7			95.7	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	75.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	111.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	821	106	95	1105	41	70	406	115	33	504	372
Future Volume (veh/h)	61	821	106	95	1105	41	70	406	115	33	504	372
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	64	864	112	100	1163	43	74	427	121	35	531	392
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1057	137	179	1168	43	120	1160	671	532	422	312
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	484	2820	366	602	3115	115	633	2451	1417	898	892	658
Grp Volume(v), veh/h	64	485	491	100	591	615	74	427	121	35	0	923
Grp Sat Flow(s),veh/h/ln	484	1583	1602	602	1583	1646	633	2451	1417	898	0	1550
Q Serve(g_s), s	0.1	16.6	16.6	5.9	22.4	22.4	0.0	0.9	0.3	1.3	0.0	28.4
Cycle Q Clear(g_c), s	22.5	16.6	16.6	22.5	22.4	22.4	28.4	0.9	0.3	2.2	0.0	28.4
Prop In Lane	1.00		0.23	1.00		0.07	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	121	594	601	179	594	617	120	1160	671	532	0	734
V/C Ratio(X)	0.53	0.82	0.82	0.56	1.00	1.00	0.62	0.37	0.18	0.07	0.00	1.26
Avail Cap(c_a), veh/h	121	594	601	179	594	617	120	1160	671	532	0	734
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.45	0.45	0.45	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	16.9	16.9	31.9	22.4	22.4	15.8	0.9	0.9	9.1	0.0	15.9
Incr Delay (d2), s/veh	15.6	11.8	11.7	7.9	28.7	28.3	10.3	0.4	0.3	0.2	0.0	126.9
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	1.6	9.1	9.2	2.0	14.5	15.0	1.5	0.6	0.2	0.4	0.0	37.9
LnGrp Delay(d),s/veh	45.6	28.7	28.6	39.9	51.2	50.8	26.1	1.3	1.1	9.4	0.0	142.8
LnGrp LOS	D	C	C	D	D	D	C	A	A	A		F
Approach Vol, veh/h		1040			1306			622			958	
Approach Delay, s/veh		29.7			50.1			4.2			138.0	
Approach LOS		C			D			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		30.4		24.5		30.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

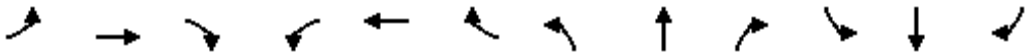
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	768	133	126	1305	126	135	772	97	133	692	168
Future Volume (veh/h)	35	768	133	126	1305	126	135	772	97	133	692	168
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	37	808	140	133	1374	133	142	813	102	140	728	177
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	85	1649	738	382	1520	146	207	1285	575	188	1285	575
Arrive On Green	1.00	1.00	1.00	0.35	0.35	0.35	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	363	3167	1417	618	2919	281	644	3167	1417	638	3167	1417
Grp Volume(v), veh/h	37	808	140	133	742	765	142	813	102	140	728	177
Grp Sat Flow(s),veh/h/ln	363	1583	1417	618	1583	1617	644	1583	1417	638	1583	1417
Q Serve(g_s), s	8.4	0.0	0.0	19.6	53.4	54.1	26.2	24.6	5.5	24.1	21.3	10.2
Cycle Q Clear(g_c), s	62.5	0.0	0.0	19.6	53.4	54.1	47.5	24.6	5.5	48.7	21.3	10.2
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	1649	738	382	825	842	207	1285	575	188	1285	575
V/C Ratio(X)	0.43	0.49	0.19	0.35	0.90	0.91	0.69	0.63	0.18	0.74	0.57	0.31
Avail Cap(c_a), veh/h	85	1649	738	382	825	842	207	1285	575	188	1285	575
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	0.0	25.1	36.1	36.3	45.8	28.5	22.8	49.0	27.5	24.2
Incr Delay (d2), s/veh	13.4	0.9	0.5	0.5	3.6	3.8	16.9	2.4	0.7	23.3	1.8	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	1.5	0.2	0.1	3.4	24.2	25.1	5.6	11.2	2.3	5.8	9.6	4.2
LnGrp Delay(d),s/veh	41.8	0.9	0.5	25.6	39.7	40.1	62.8	30.9	23.5	72.3	29.3	25.6
LnGrp LOS	D	A	A	C	D	D	E	C	C	E	C	C
Approach Vol, veh/h		985			1640			1057			1045	
Approach Delay, s/veh		2.4			38.8			34.4			34.4	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 61		* 47		* 61		* 47
Max Q Clear Time (g_c+I1), s		56.1		50.7		64.5		49.5
Green Ext Time (p_c), s		4.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	572	101	168	1399	102	75	635	22	43	616	54
Future Volume (vph)	99	572	101	168	1399	102	75	635	22	43	616	54
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1322	1509	4336	1312	1509	1588	1333	1509	1567	
Flt Permitted	0.18	1.00	1.00	0.41	1.00	1.00	0.17	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	287	4336	1322	648	4336	1312	277	1588	1333	327	1567	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	104	602	106	177	1473	107	79	668	23	45	648	57
RTOR Reduction (vph)	0	0	67	0	0	68	0	0	12	0	2	0
Lane Group Flow (vph)	104	602	39	177	1473	39	79	668	11	45	703	0
Confl. Bikes (#/hr)			1			8			2			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	22.1	22.1	22.1	22.1	22.1	22.1	27.9	27.9	27.9	27.9	27.9	
Effective Green, g (s)	22.1	22.1	22.1	22.1	22.1	22.1	27.9	27.9	27.9	27.9	27.9	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	105	1597	486	238	1597	483	128	738	619	152	728	
v/s Ratio Prot		0.14			0.34			0.42			c0.45	
v/s Ratio Perm	c0.36		0.03	0.27		0.03	0.29		0.01	0.14		
v/c Ratio	0.99	0.38	0.08	0.74	0.92	0.08	0.62	0.91	0.02	0.30	0.97	
Uniform Delay, d1	18.8	13.9	12.3	16.5	18.1	12.3	12.0	14.8	8.7	10.0	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.32	1.24	
Incremental Delay, d2	85.3	0.7	0.3	18.9	10.3	0.3	8.6	14.6	0.0	0.1	4.5	
Delay (s)	104.1	14.6	12.7	35.3	28.5	12.7	20.6	29.4	8.7	13.2	23.8	
Level of Service	F	B	B	D	C	B	C	C	A	B	C	
Approach Delay (s)		25.8			28.2			27.9			23.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	1/20/2017
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	AM	Reviewed by:		Project:	Robertson Lane Hotel Project

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			3			3			3				3				3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	64	1	**64**	0	64	**64**	8	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	534	1	534	7	541	541	72	628	1	628	7	635	1	635	0	635	1	635
	Through-Right		0							0				0				0	
	Right	21	1	0	0	21	0	0	22	1	0	0	22	1	0	0	22	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	41	1	41	0	41	41	0	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	532	0	**577**	5	537	**582**	58	612	0	**666**	5	617	0	**671**	0	617	0	**671**
	Through-Right		1							1				1				1	
	Right	45	0	0	0	45	0	7	54	0	0	0	54	0	0	0	54	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	95	1	**95**	0	95	**95**	0	99	1	**99**	0	99	1	**99**	0	99	1	**99**
	Left-Through		0							0				0				0	
	Through	514	3	171	0	514	171	37	572	3	191	0	572	3	191	0	572	3	191
	Through-Right		0							0				0				0	
	Right	93	1	61	0	93	61	4	101	1	64	0	101	1	64	0	101	1	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	161	1	161	0	161	161	0	168	1	168	0	168	1	168	0	168	1	168
	Left-Through		0							0				0				0	
	Through	1318	3	**439**	0	1318	**439**	27	1399	3	**466**	0	1399	3	**466**	0	1399	3	**466**
	Through-Right		0							0				0				0	
	Right	98	1	78	0	98	78	0	102	1	81	0	102	1	81	0	102	1	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		641	*North-South:*		646	*North-South:*			741	*North-South:*			746	*North-South:*			746
		East-West:		534	*East-West:*		534	*East-West:*			565	*East-West:*			565	*East-West:*			565
		SUM:		1175	*SUM:*		1180	*SUM:*			1306	*SUM:*			1311	*SUM:*			1311
VOLUME/CAPACITY (*V/C*) RATIO:				0.825			0.828				0.916				0.920				0.920
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.725			0.728				0.816				0.820				0.820
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.003

Significant impacted? NO

PROPOSED PROJECT IMPACT

Change in *v/c* due to project: 0.004

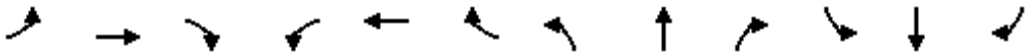
Significant impacted? NO

Δ*v/c* after mitigation: 0.004

Fully mitigated? N/A

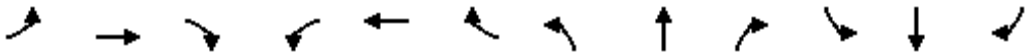
HCM Signalized Intersection Capacity Analysis
1: Doheny Dr & Sunset Blvd

01/24/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1135	108	196	1207	101	185	153	184	135	154	54
Future Volume (vph)	34	1135	108	196	1207	101	185	153	184	135	154	54
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2983		1433	1500	1350		1728	
Flt Permitted	0.14	1.00	1.00	0.09	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	216	3018	1350	147	2983		1433	1500	1350		1728	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	36	1195	114	206	1271	106	195	161	194	142	162	57
RTOR Reduction (vph)	0	0	60	0	6	0	0	0	68	0	7	0
Lane Group Flow (vph)	36	1195	54	206	1371	0	174	182	126	0	354	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	44.8	44.8	44.8	55.8	55.8		16.2	16.2	23.2		14.0	
Effective Green, g (s)	44.8	44.8	44.8	54.8	55.8		15.7	15.7	21.2		13.5	
Actuated g/C Ratio	0.45	0.45	0.45	0.55	0.56		0.16	0.16	0.21		0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	96	1352	604	162	1664		224	235	286		233	
v/s Ratio Prot		0.40		c0.08	0.46		c0.12	0.12	0.03		c0.20	
v/s Ratio Perm	0.17		0.04	c0.62					0.07			
v/c Ratio	0.38	0.88	0.09	1.27	0.82		0.78	0.77	0.44		1.52	
Uniform Delay, d1	18.3	25.2	15.9	21.4	18.1		40.5	40.5	34.3		43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	10.8	8.7	0.3	161.6	4.8		15.5	14.7	1.1		254.6	
Delay (s)	29.1	33.9	16.2	183.0	22.9		55.9	55.1	35.3		297.8	
Level of Service	C	C	B	F	C		E	E	D		F	
Approach Delay (s)		32.3			43.7			48.4			297.8	
Approach LOS		C			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	64.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1271	225	174	1393	23	209	220	221	31	228	40
Future Volume (vph)	25	1271	225	174	1393	23	209	220	221	31	228	40
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1502	2376	1509	1553	
Flt Permitted	0.12	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	198	3018	1350	134	3018	1350	1433	1502	2376	1509	1553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	1338	237	183	1466	24	220	232	233	33	240	42
RTOR Reduction (vph)	0	0	132	0	0	10	0	0	134	0	7	0
Lane Group Flow (vph)	26	1338	105	183	1466	14	198	254	99	33	275	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	43.5	43.5	43.5	57.3	57.3	57.3	9.0	9.0	18.8	19.7	19.7	
Effective Green, g (s)	43.5	43.5	43.5	56.3	57.3	57.3	9.0	9.0	16.8	18.7	18.7	
Actuated g/C Ratio	0.44	0.44	0.44	0.56	0.57	0.57	0.09	0.09	0.17	0.19	0.19	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	86	1312	587	196	1729	773	128	135	399	282	290	
v/s Ratio Prot		c0.44		0.08	c0.49		0.14	c0.17	0.02	0.02	c0.18	
v/s Ratio Perm	0.13		0.08	0.44		0.01			0.02			
v/c Ratio	0.30	1.02	0.18	0.93	0.85	0.02	1.55	1.88	0.25	0.12	0.95	
Uniform Delay, d1	18.4	28.2	17.3	26.7	17.7	9.2	45.5	45.5	36.1	33.8	40.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.8	29.9	0.7	45.0	5.4	0.0	280.9	423.3	0.1	0.2	39.0	
Delay (s)	27.2	58.2	18.0	71.7	23.1	9.3	326.4	468.8	36.2	34.0	79.2	
Level of Service	C	E	B	E	C	A	F	F	D	C	E	
Approach Delay (s)		51.7			28.2			280.5			74.5	
Approach LOS		D			C			F			E	

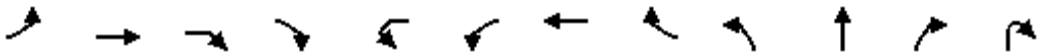
Intersection Summary			
HCM 2000 Control Delay	80.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	735	70	45	39	216	6	0	1435	562	81	1417	8
Future Volume (vph)	735	70	45	39	216	6	0	1435	562	81	1417	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2928			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2928			3018	1350	153	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	774	74	47	41	227	6	0	1511	592	85	1492	8
RTOR Reduction (vph)	0	0	33	0	58	0	0	0	0	0	1	0
Lane Group Flow (vph)	774	74	14	0	216	0	0	1511	592	85	1499	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	28.1	28.1	28.1		12.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	28.1	28.1	28.1		12.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.30	0.30	0.30		0.13			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	865	399	399		385			1315	588	66	1313	
v/s Ratio Prot	c0.26	0.05	0.01		c0.07			0.50			0.50	
v/s Ratio Perm									0.44	c0.55		
v/c Ratio	0.89	0.19	0.03		0.56			1.15	1.01	1.29	1.14	
Uniform Delay, d1	32.0	24.9	23.8		38.7			26.8	26.8	26.8	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.4	0.1	0.0		1.9			76.3	38.8	206.2	73.5	
Delay (s)	43.5	25.0	23.8		40.5			103.1	65.6	233.0	100.3	
Level of Service	D	C	C		D			F	E	F	F	
Approach Delay (s)	40.9				40.5			92.6			107.4	
Approach LOS	D				D			F			F	

Intersection Summary			
HCM 2000 Control Delay	85.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	102.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

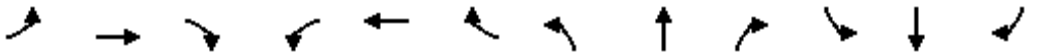


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	106	1027	351	84	3	236	1263	80	40	375	183	112
Future Volume (vph)	106	1027	351	84	3	236	1263	80	40	375	183	112
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (prot)	1509	3018	1350	1333		1509	2986			1581	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (perm)	1509	3018	1350	1333		1509	2986			1581	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	1081	369	88	3	248	1329	84	42	395	193	118
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	113	0
Lane Group Flow (vph)	112	1081	369	88	0	251	1410	0	0	437	198	0
Confl. Bikes (#/hr)				4				7			4	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	14.1	59.7	59.7	162.0		15.0	60.6			29.7	29.7	
Effective Green, g (s)	14.1	59.7	59.7	162.0		15.0	60.6			29.7	29.7	
Actuated g/C Ratio	0.09	0.37	0.37	1.00		0.09	0.37			0.18	0.18	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	131	1112	497	1333		139	1116			289	247	
v/s Ratio Prot	0.07	c0.36				c0.17	c0.47			c0.28	0.15	
v/s Ratio Perm			0.27	0.07								
v/c Ratio	0.85	0.97	0.74	0.07		1.81	1.26			1.51	0.80	
Uniform Delay, d1	72.9	50.3	44.5	0.0		73.5	50.7			66.2	63.3	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	37.5	20.5	6.1	0.1		389.6	126.0			247.6	16.1	
Delay (s)	110.5	70.8	50.6	0.1		463.1	176.7			313.7	79.4	
Level of Service	F	E	D	A		F	F			F	E	
Approach Delay (s)		65.2					219.9			216.3		
Approach LOS		E					F			F		

Intersection Summary			
HCM 2000 Control Delay	154.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	162.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	103	128	407	160	55
Future Volume (vph)	103	128	407	160	55
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	1.00	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2964	1350	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2964	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	135	428	168	58
RTOR Reduction (vph)	0	0	0	0	57
Lane Group Flow (vph)	0	0	671	168	1
Confl. Bikes (#/hr)					
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	162.0	4.0
Effective Green, g (s)			29.7	162.0	4.0
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			543	1350	33
v/s Ratio Prot			c0.23		0.00
v/s Ratio Perm				c0.12	
v/c Ratio			1.24	0.12	0.04
Uniform Delay, d1			66.2	0.0	77.1
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			121.3	0.2	0.2
Delay (s)			187.4	0.2	77.3
Level of Service			F	A	E
Approach Delay (s)			149.9		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1302	30	81	1434	5	205	1	96	0	0	0
Future Volume (vph)	24	1302	30	81	1434	5	205	1	96	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.90				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98				
Satd. Flow (prot)	1509	3007		1509	3016		1433	1338				
Flt Permitted	0.09	1.00		0.11	1.00		0.95	0.98				
Satd. Flow (perm)	144	3007		182	3016		1433	1338				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	25	1415	33	88	1559	5	223	1	104	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	75	0	0	0	0
Lane Group Flow (vph)	25	1447	0	88	1564	0	169	84	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	54.9	54.9		54.9	54.9		14.8	14.8				
Effective Green, g (s)	54.9	54.9		54.9	54.9		14.8	14.8				
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.16	0.16				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	87	1834		111	1839		235	220				
v/s Ratio Prot		0.48			c0.52							
v/s Ratio Perm	0.17			0.48			c0.12	0.06				
v/c Ratio	0.29	0.79		0.79	0.85		0.72	0.38				
Uniform Delay, d1	8.3	13.2		13.3	14.2		35.6	33.5				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	8.1	3.5		42.6	5.2		10.1	1.1				
Delay (s)	16.4	16.7		55.8	19.4		45.7	34.6				
Level of Service	B	B		E	B		D	C				
Approach Delay (s)		16.7			21.3			40.3			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1294	44	72	1597	0	80
Future Vol, veh/h	1294	44	72	1597	0	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1362	46	76	1681	0	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1408	0	-	704
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	481	-	0	379
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	481	-	-	379
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	379	-	-	481	-
HCM Lane V/C Ratio	0.222	-	-	0.158	-
HCM Control Delay (s)	17.2	-	-	13.9	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.6	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1273	79	226	1475	68	122	80	241	110	89	19
Future Volume (veh/h)	89	1273	79	226	1475	68	122	80	241	110	89	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	94	1340	83	238	1553	72	128	84	254	116	94	20
Adj No. of Lanes	1	2	0	1	2	0	0	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	139	1348	83	231	1551	72	132	71	188	208	365	78
Arrive On Green	0.04	0.47	0.47	0.10	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.28
Sat Flow, veh/h	1513	2887	178	1513	2937	136	300	247	656	1038	1270	270
Grp Volume(v), veh/h	94	699	724	238	795	830	466	0	0	116	0	114
Grp Sat Flow(s),veh/h/ln	1513	1509	1557	1513	1509	1564	1203	0	0	1038	0	1541
Q Serve(g_s), s	3.3	46.0	46.4	10.5	52.6	52.8	23.0	0.0	0.0	0.0	0.0	5.7
Cycle Q Clear(g_c), s	3.3	46.0	46.4	10.5	52.6	52.8	28.7	0.0	0.0	23.2	0.0	5.7
Prop In Lane	1.00		0.11	1.00		0.09	0.27		0.55	1.00		0.18
Lane Grp Cap(c), veh/h	139	705	727	231	796	826	391	0	0	208	0	442
V/C Ratio(X)	0.68	0.99	1.00	1.03	1.00	1.01	1.19	0.00	0.00	0.56	0.00	0.26
Avail Cap(c_a), veh/h	231	705	727	231	796	826	391	0	0	208	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.75	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	26.5	26.6	30.2	23.6	23.6	38.6	0.0	0.0	33.7	0.0	27.5
Incr Delay (d2), s/veh	2.1	32.0	32.4	26.3	9.2	10.6	103.9	0.0	0.0	3.3	0.0	0.3
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	1.4	25.3	26.3	8.0	23.7	25.1	22.0	0.0	0.0	3.2	0.0	2.4
LnGrp Delay(d),s/veh	25.8	58.4	59.0	56.6	32.7	34.3	142.5	0.0	0.0	37.0	0.0	27.8
LnGrp LOS	C	E	E	F	C	F	F			D		C
Approach Vol, veh/h		1517			1863			466			230	
Approach Delay, s/veh		56.7			36.5			142.5			32.4	
Approach LOS		E			D			F			C	

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	52.0		33.0	8.9	58.1		33.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	12.5	48.4		25.2	5.3	54.8		30.7
Green Ext Time (p_c), s	0.0	0.0		1.1	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

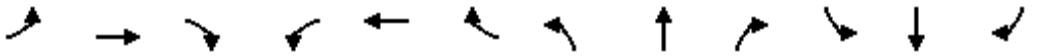
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1341	100	241	1469	131	130	475	212	118	461	201
Future Volume (veh/h)	200	1341	100	241	1469	131	130	475	212	118	461	201
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	211	1412	105	254	1546	138	137	500	223	124	485	212
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	1300	96	231	1291	114	119	866	387	178	586	254
Arrive On Green	0.21	0.91	0.91	0.10	0.46	0.46	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1513	2846	211	1513	2801	248	745	3018	1350	727	2040	886
Grp Volume(v), veh/h	211	746	771	254	827	857	137	500	223	124	358	339
Grp Sat Flow(s),veh/h/ln	1513	1509	1547	1513	1509	1540	745	1509	1350	727	1509	1418
Q Serve(g_s), s	8.6	45.7	45.7	10.5	46.1	46.1	6.3	14.2	14.1	14.5	22.2	22.4
Cycle Q Clear(g_c), s	8.6	45.7	45.7	10.5	46.1	46.1	28.7	14.2	14.1	28.7	22.2	22.4
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		0.63
Lane Grp Cap(c), veh/h	233	690	707	231	695	709	119	866	387	178	433	407
V/C Ratio(X)	0.91	1.08	1.09	1.10	1.19	1.21	1.15	0.58	0.58	0.70	0.83	0.83
Avail Cap(c_a), veh/h	238	690	707	231	695	709	119	866	387	178	433	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)	0.10	0.10	0.10	1.00	1.00	1.00	0.98	0.98	0.98	0.86	0.86	0.86
Uniform Delay (d), s/veh	22.2	4.3	4.3	29.3	27.0	27.0	48.8	30.5	30.4	43.8	33.3	33.4
Incr Delay (d2), s/veh	5.4	40.0	43.6	88.7	98.9	106.8	129.0	1.2	2.5	10.8	11.3	12.6
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	5.9	22.6	23.9	12.0	38.2	40.6	7.5	6.0	5.5	3.9	10.6	10.2
LnGrp Delay(d),s/veh	27.6	44.3	47.9	118.0	125.9	133.7	177.8	31.6	33.0	54.6	44.6	46.0
LnGrp LOS	C	F	F	F	F	F	F	C	C	D	D	D
Approach Vol, veh/h		1728			1938			860			821	
Approach Delay, s/veh		43.9			128.3			55.3			46.7	
Approach LOS		D			F			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	15.0	51.0		34.0	14.6	51.4		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 46		* 29	* 11	* 46		* 29
Max Q Clear Time (g_c+I1), s	12.5	47.7		30.7	10.6	48.1		30.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.8
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	514	925	135	218	867	47	233	825	167	0	930	628
Future Volume (vph)	514	925	135	218	867	47	233	825	167	0	930	628
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	2995		2927	2941			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	2995		2927	2941			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	541	974	142	229	913	49	245	868	176	0	979	661
RTOR Reduction (vph)	0	0	98	0	4	0	0	17	0	0	0	210
Lane Group Flow (vph)	541	974	44	229	958	0	245	1027	0	0	979	451
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	13.0	31.1	31.1	8.9	28.0		9.0	45.0			32.0	32.0
Effective Green, g (s)	13.0	31.6	31.1	8.9	28.5		10.0	46.0			33.0	33.0
Actuated g/C Ratio	0.13	0.32	0.31	0.09	0.28		0.10	0.46			0.33	0.33
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	380	953	419	260	853		292	1352			995	445
v/s Ratio Prot	c0.18	0.32		0.08	c0.32		c0.08	0.35			0.32	
v/s Ratio Perm			0.03									c0.33
v/c Ratio	1.42	1.02	0.11	0.88	1.12		0.84	0.76			0.98	1.01
Uniform Delay, d1	43.5	34.2	24.5	45.0	35.8		44.2	22.4			33.2	33.5
Progression Factor	1.00	1.00	1.00	1.28	0.89		1.00	1.00			1.00	1.00
Incremental Delay, d2	205.4	34.8	0.2	21.0	67.2		17.9	4.1			24.9	46.3
Delay (s)	248.9	69.0	24.8	78.7	99.0		62.1	26.5			58.2	79.8
Level of Service	F	E	C	E	F		E	C			E	E
Approach Delay (s)		124.0			95.1			33.2			66.9	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	81.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	55.7
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	102	600	14	0	20	154	213	0	5	8	10
Future Vol, veh/h	0	102	600	14	0	20	154	213	0	5	8	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	652	15	0	22	167	232	0	5	9	11
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	89.6	10.8	10.4
HCM LOS	F	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	14%	11%	0%	39%
Vol Thru, %	35%	84%	89%	0%	3%
Vol Right, %	43%	2%	0%	100%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	716	174	213	133
LT Vol	5	102	20	0	52
Through Vol	8	600	154	0	4
RT Vol	10	14	0	213	77
Lane Flow Rate	25	778	189	232	145
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.047	1.111	0.303	0.322	0.25
Departure Headway (Hd)	7.037	5.137	6.014	5.244	6.552
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	512	716	601	690	552
Service Time	5.037	3.139	3.714	2.944	4.552
HCM Lane V/C Ratio	0.049	1.087	0.314	0.336	0.263
HCM Control Delay	10.4	89.6	11.3	10.4	11.7
HCM Lane LOS	B	F	B	B	B
HCM 95th-tile Q	0.1	22.6	1.3	1.4	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	52	4	77
Future Vol, veh/h	0	52	4	77
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	57	4	84
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	658	348	46	70	41
Future Vol, veh/h	21	658	348	46	70	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	693	366	48	74	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	415	0	-	0	1128	391
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	737	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1144	-	-	-	226	658
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	473	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1144	-	-	-	219	658
Mov Cap-2 Maneuver	-	-	-	-	219	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	458	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	25.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1144	-	-	-	291
HCM Lane V/C Ratio	0.019	-	-	-	0.402
HCM Control Delay (s)	8.2	0	-	-	25.4
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	475	204	278	274	110	87	322	263	90	241	27
Future Volume (veh/h)	26	475	204	278	274	110	87	322	263	90	241	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	27	500	215	293	288	116	92	339	277	95	254	28
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	573	240	246	881	749	283	529	449	202	468	52
Arrive On Green	0.56	0.56	0.56	0.93	0.93	0.93	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	29	1032	433	733	1588	1350	1093	1588	1350	803	1406	155
Grp Volume(v), veh/h	742	0	0	293	288	116	92	339	277	95	0	282
Grp Sat Flow(s),veh/h/ln	1494	0	0	733	1588	1350	1093	1588	1350	803	0	1561
Q Serve(g_s), s	15.4	0.0	0.0	11.0	1.7	0.7	6.7	16.3	15.5	10.2	0.0	13.2
Cycle Q Clear(g_c), s	38.9	0.0	0.0	50.0	1.7	0.7	20.0	16.3	15.5	26.5	0.0	13.2
Prop In Lane	0.04		0.29	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	879	0	0	246	881	749	283	529	449	202	0	519
V/C Ratio(X)	0.84	0.00	0.00	1.19	0.33	0.15	0.33	0.64	0.62	0.47	0.00	0.54
Avail Cap(c_a), veh/h	879	0	0	246	881	749	298	551	468	213	0	541
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	0.00	0.00	0.77	0.77	0.77	1.00	1.00	1.00	0.49	0.00	0.49
Uniform Delay (d), s/veh	17.5	0.0	0.0	16.8	1.5	1.5	32.6	25.5	25.2	36.7	0.0	24.5
Incr Delay (d2), s/veh	9.7	0.0	0.0	113.6	0.8	0.3	0.7	2.4	2.3	0.8	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	18.2	0.0	0.0	13.8	0.8	0.3	2.1	7.5	6.1	2.3	0.0	5.8
LnGrp Delay(d),s/veh	27.2	0.0	0.0	130.4	2.3	1.8	33.2	27.9	27.5	37.6	0.0	25.0
LnGrp LOS	C			F	A	A	C	C	C	D		C
Approach Vol, veh/h		742			697			708			377	
Approach Delay, s/veh		27.2			56.1			28.4			28.1	
Approach LOS		C			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.3		34.7		55.3		34.7
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		52.0		22.0		40.9		28.5
Green Ext Time (p_c), s		0.0		3.6		5.7		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	693	66	183	545	220	86	559	169	152	575	93
Future Volume (veh/h)	66	693	66	183	545	220	86	559	169	152	575	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	69	729	69	193	574	232	91	588	178	160	605	98
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	258	1477	140	439	842	716	221	805	243	169	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	673	2787	264	678	1588	1350	741	2285	690	699	3018	1350
Grp Volume(v), veh/h	69	395	403	193	574	232	91	388	378	160	605	98
Grp Sat Flow(s),veh/h/ln	673	1509	1542	678	1588	1350	741	1509	1466	699	1509	1350
Q Serve(g_s), s	5.7	0.0	0.0	16.8	23.9	8.8	10.2	20.2	20.3	11.4	14.6	4.6
Cycle Q Clear(g_c), s	29.7	0.0	0.0	16.8	23.9	8.8	24.8	20.2	20.3	31.7	14.6	4.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	258	800	817	439	842	716	221	531	517	169	1063	476
V/C Ratio(X)	0.27	0.49	0.49	0.44	0.68	0.32	0.41	0.73	0.73	0.95	0.57	0.21
Avail Cap(c_a), veh/h	258	800	817	439	842	716	221	531	517	169	1063	476
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)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	7.4	0.0	0.0	13.9	15.6	12.0	33.7	25.4	25.4	41.8	23.6	20.4
Incr Delay (d2), s/veh	1.6	1.3	1.3	3.2	4.4	1.2	0.5	4.4	4.7	53.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	0.3	3.5	11.4	3.5	2.1	9.1	8.9	6.4	6.1	1.7
LnGrp Delay(d),s/veh	9.0	1.3	1.3	17.1	20.0	13.2	34.1	29.8	30.1	94.9	24.1	20.4
LnGrp LOS	A	A	A	B	C	B	C	C	C	F	C	C
Approach Vol, veh/h		867			999			857			863	
Approach Delay, s/veh		1.9			17.9			30.4			36.8	
Approach LOS		A			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		31.7		33.7		25.9		26.8
Green Ext Time (p_c), s		9.0		0.0		10.7		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	635	159	244	720	85	117	1098	240	87	1107	179
Future Volume (veh/h)	154	635	159	244	720	85	117	1098	240	87	1107	179
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	162	668	167	257	758	0	123	1156	253	92	1165	188
Adj No. of Lanes	1	2	0	1	2	1	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	189	610	152	191	1172	524	125	1330	289	90	1404	226
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	704	2394	598	1513	3018	1350	401	2467	536	380	2605	419
Grp Volume(v), veh/h	162	421	414	257	758	0	123	704	705	92	673	680
Grp Sat Flow(s),veh/h/ln	704	1509	1483	1513	1509	1350	401	1509	1494	380	1509	1514
Q Serve(g_s), s	22.0	30.6	30.6	10.4	24.6	0.0	19.5	54.4	55.2	9.5	44.5	45.2
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	24.6	0.0	64.7	54.4	55.2	64.7	44.5	45.2
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.36	1.00		0.28
Lane Grp Cap(c), veh/h	189	385	378	191	1172	524	125	814	805	90	814	816
V/C Ratio(X)	0.86	1.09	1.10	1.34	0.65	0.00	0.98	0.87	0.88	1.02	0.83	0.83
Avail Cap(c_a), veh/h	189	385	378	191	1172	524	125	814	805	90	814	816
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	44.7	44.9	35.4	30.0	0.0	76.5	45.1	45.4	58.4	23.0	23.3
Incr Delay (d2), s/veh	32.0	69.8	70.7	185.9	2.8	0.0	75.5	11.9	12.8	100.3	9.4	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	20.2	19.9	11.8	10.7	0.0	6.7	25.5	25.8	5.5	20.6	20.9
LnGrp Delay(d),s/veh	83.2	114.5	115.6	221.3	32.7	0.0	152.0	57.0	58.2	158.9	32.4	33.0
LnGrp LOS	F	F	F	F	C		F	E	E	F	C	C
Approach Vol, veh/h		997			1015			1532			1445	
Approach Delay, s/veh		109.9			80.5			65.2			40.8	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		26.6		66.7	12.4	32.6
Green Ext Time (p_c), s		0.0		9.2		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		70.1
HCM 2010 LOS		E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	794	94	224	832	107	106	576	159	87	498	78
Future Volume (veh/h)	85	794	94	224	832	107	106	576	159	87	498	78
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	89	836	99	236	876	113	112	606	167	92	524	82
Adj No. of Lanes	1	2	0	1	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	271	985	117	301	974	126	90	450	124	90	505	79
Arrive On Green	0.10	0.35	0.35	0.11	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2845	337	1587	2813	363	851	1254	346	728	1408	220
Grp Volume(v), veh/h	89	465	470	236	493	496	112	0	773	92	0	606
Grp Sat Flow(s),veh/h/ln	1587	1583	1598	1587	1583	1592	851	0	1600	728	0	1628
Q Serve(g_s), s	2.7	21.8	21.8	7.7	23.7	23.7	0.0	0.0	28.7	0.0	0.0	28.7
Cycle Q Clear(g_c), s	2.7	21.8	21.8	7.7	23.7	23.7	28.7	0.0	28.7	28.7	0.0	28.7
Prop In Lane	1.00		0.21	1.00		0.23	1.00		0.22	1.00		0.14
Lane Grp Cap(c), veh/h	271	548	553	301	548	551	90	0	574	90	0	584
V/C Ratio(X)	0.33	0.85	0.85	0.78	0.90	0.90	1.24	0.00	1.35	1.02	0.00	1.04
Avail Cap(c_a), veh/h	271	548	553	301	548	551	90	0	574	90	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	24.2	24.2	18.5	24.8	24.8	40.0	0.0	25.7	40.0	0.0	25.7
Incr Delay (d2), s/veh	3.2	15.1	15.0	18.2	20.3	20.2	174.3	0.0	167.4	101.0	0.0	47.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	11.7	11.8	4.9	13.4	13.4	6.3	0.0	39.3	4.5	0.0	20.5
LnGrp Delay(d),s/veh	20.9	39.3	39.2	36.8	45.1	45.0	214.3	0.0	193.0	141.3	0.0	73.0
LnGrp LOS	C	D	D	D	D	D	F		F	F		F
Approach Vol, veh/h		1024			1225			885			698	
Approach Delay, s/veh		37.6			43.5			195.7			82.0	
Approach LOS		D			D			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	13.0	33.0		34.0	13.0	33.0		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 9	* 28		* 29	* 9	* 28		* 29
Max Q Clear Time (g_c+I1), s	4.7	25.7		30.7	9.7	23.8		30.7
Green Ext Time (p_c), s	0.0	1.9		0.0	0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	945	113	118	903	89	95	453	175	84	463	210
Future Volume (veh/h)	109	945	113	118	903	89	95	453	175	84	463	210
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	115	995	119	124	951	94	100	477	184	88	487	221
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1068	128	141	1092	108	155	1160	671	361	514	233
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.16	0.16	0.16	0.47	0.47	0.46
Sat Flow, veh/h	564	2849	341	529	2911	288	774	2451	1417	809	1087	493
Grp Volume(v), veh/h	115	553	561	124	517	528	100	477	184	88	0	708
Grp Sat Flow(s),veh/h/ln	564	1583	1607	529	1583	1616	774	2451	1417	809	0	1580
Q Serve(g_s), s	3.7	20.1	20.1	2.4	18.8	18.8	2.7	10.5	6.9	5.1	0.0	25.7
Cycle Q Clear(g_c), s	22.5	20.1	20.1	22.5	18.8	18.8	28.4	10.5	6.9	15.7	0.0	25.7
Prop In Lane	1.00		0.21	1.00		0.18	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	155	594	602	141	594	606	155	1160	671	361	0	748
V/C Ratio(X)	0.74	0.93	0.93	0.88	0.87	0.87	0.64	0.41	0.27	0.24	0.00	0.95
Avail Cap(c_a), veh/h	155	594	602	141	594	606	155	1160	671	361	0	748
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.48	0.48	0.48	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	18.0	18.0	33.5	21.1	21.1	39.0	17.8	16.2	16.6	0.0	15.2
Incr Delay (d2), s/veh	27.1	23.3	23.2	36.6	11.2	11.0	9.5	0.5	0.5	1.6	0.0	22.2
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	3.1	12.6	12.8	3.5	10.1	10.3	2.1	7.3	2.8	1.3	0.0	15.6
LnGrp Delay(d),s/veh	56.6	41.3	41.2	70.1	32.3	32.1	48.5	18.3	16.7	18.2	0.0	37.4
LnGrp LOS	E	D	D	E	C	C	D	B	B	B		D
Approach Vol, veh/h		1229			1169			761			796	
Approach Delay, s/veh		42.7			36.2			21.9			35.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		27.7		24.5		30.4
Green Ext Time (p_c), s		0.0		0.1		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	976	183	109	964	131	136	621	187	207	652	147
Future Volume (veh/h)	68	976	183	109	964	131	136	621	187	207	652	147
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	72	1027	193	115	1015	138	143	654	197	218	686	155
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	118	1465	655	248	1296	176	276	1470	658	280	1470	658
Arrive On Green	0.93	0.93	0.93	0.15	0.15	0.15	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	509	3167	1417	478	2802	381	684	3167	1417	677	3167	1417
Grp Volume(v), veh/h	72	1027	193	115	573	580	143	654	197	218	686	155
Grp Sat Flow(s),veh/h/ln	509	1583	1417	478	1583	1599	684	1583	1417	677	1583	1417
Q Serve(g_s), s	13.6	8.3	1.7	27.3	41.8	41.9	21.7	16.7	10.4	38.5	17.8	7.9
Cycle Q Clear(g_c), s	55.5	8.3	1.7	35.6	41.8	41.9	39.5	16.7	10.4	55.2	17.8	7.9
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1465	655	248	732	740	276	1470	658	280	1470	658
V/C Ratio(X)	0.61	0.70	0.29	0.46	0.78	0.78	0.52	0.44	0.30	0.78	0.47	0.24
Avail Cap(c_a), veh/h	118	1465	655	248	732	740	276	1470	658	280	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	2.7	2.5	46.3	45.0	45.1	35.5	21.7	20.0	40.4	22.0	19.3
Incr Delay (d2), s/veh	19.0	2.5	1.0	1.2	1.7	1.7	6.8	1.0	1.2	19.0	1.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.4	0.7	3.7	18.7	18.9	4.6	7.5	4.3	8.7	7.9	3.3
LnGrp Delay(d),s/veh	45.7	5.2	3.5	47.6	46.8	46.8	42.3	22.7	21.2	59.4	23.1	20.2
LnGrp LOS	D	A	A	D	D	D	D	C	C	E	C	C
Approach Vol, veh/h		1292			1268			994			1059	
Approach Delay, s/veh		7.2			46.8			25.2			30.1	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		43.9		57.2		57.5		41.5
Green Ext Time (p_c), s		8.0		0.0		0.0		8.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

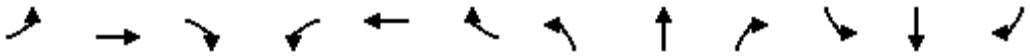
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	677	126	108	768	100	106	637	48	55	593	95
Future Volume (veh/h)	143	677	126	108	768	100	106	637	48	55	593	95
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1588	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	151	713	133	114	808	105	112	671	51	58	624	100
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	1590	483	277	1590	484	120	741	622	176	622	100
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.47	0.47	0.47	0.93	0.93	0.93
Sat Flow, veh/h	609	4336	1316	648	4336	1320	727	1588	1332	728	1334	214
Grp Volume(v), veh/h	151	713	133	114	808	105	112	671	51	58	0	724
Grp Sat Flow(s),veh/h/ln	609	1445	1316	648	1445	1320	727	1588	1332	728	0	1547
Q Serve(g_s), s	13.3	7.5	4.3	9.7	8.7	3.3	0.0	23.4	1.3	4.6	0.0	28.0
Cycle Q Clear(g_c), s	22.0	7.5	4.3	17.2	8.7	3.3	28.0	23.4	1.3	28.0	0.0	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	255	1590	483	277	1590	484	120	741	622	176	0	722
V/C Ratio(X)	0.59	0.45	0.28	0.41	0.51	0.22	0.93	0.91	0.08	0.33	0.00	1.00
Avail Cap(c_a), veh/h	255	1590	483	277	1590	484	120	741	622	176	0	722
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	0.21	0.00	0.21
Uniform Delay (d), s/veh	24.1	14.4	13.4	20.9	14.8	13.1	30.0	14.8	8.9	13.8	0.0	2.0
Incr Delay (d2), s/veh	9.7	0.9	1.4	4.5	1.2	1.0	61.6	14.7	0.1	0.2	0.0	16.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.1	1.7	2.1	3.6	1.3	3.9	13.1	0.5	0.9	0.0	9.6
LnGrp Delay(d),s/veh	33.8	15.3	14.8	25.4	16.0	14.1	91.6	29.5	8.9	14.0	0.0	18.0
LnGrp LOS	C	B	B	C	B	B	F	C	A	B		F
Approach Vol, veh/h		997			1027			834			782	
Approach Delay, s/veh		18.0			16.8			36.6			17.7	
Approach LOS		B			B			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		33.0		27.0		33.0		27.0
Change Period (Y+Rc), s		* 5		* 5		* 5		* 5
Max Green Setting (Gmax), s		* 28		* 22		* 28		* 22
Max Q Clear Time (g_c+I1), s		30.0		19.2		30.0		24.0
Green Ext Time (p_c), s		0.0		2.6		0.0		0.0

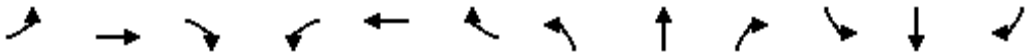
Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1236	57	195	1092	102	178	128	282	154	141	40
Future Volume (vph)	19	1236	57	195	1092	102	178	128	282	154	141	40
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2979		1433	1495	1350		1731	
Flt Permitted	0.19	1.00	1.00	0.11	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	297	3018	1350	167	2979		1433	1495	1350		1731	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	1301	60	205	1149	107	187	135	297	162	148	42
RTOR Reduction (vph)	0	0	28	0	6	0	0	0	49	0	4	0
Lane Group Flow (vph)	20	1301	32	205	1250	0	157	165	248	0	348	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	64.1	64.1	64.1	75.1	75.1		16.9	16.9	23.9		14.0	
Effective Green, g (s)	64.1	64.1	64.1	74.1	75.1		16.4	16.4	21.9		13.5	
Actuated g/C Ratio	0.53	0.53	0.53	0.62	0.63		0.14	0.14	0.18		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	158	1612	721	170	1864		195	204	246		194	
v/s Ratio Prot		0.43		c0.06	0.42		0.11	0.11	c0.05		c0.20	
v/s Ratio Perm	0.07		0.02	c0.68					0.13			
v/c Ratio	0.13	0.81	0.04	1.21	0.67		0.81	0.81	1.01		1.79	
Uniform Delay, d1	14.0	22.9	13.3	20.3	14.5		50.2	50.3	49.0		53.2	
Progression Factor	1.00	1.00	1.00	2.41	1.47		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.6	4.4	0.1	116.4	0.9		20.9	20.5	59.4		376.1	
Delay (s)	15.6	27.3	13.5	165.3	22.2		71.2	70.8	108.5		429.3	
Level of Service	B	C	B	F	C		E	E	F		F	
Approach Delay (s)		26.6			42.3			89.0			429.3	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	79.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	1521	187	167	1248	26	305	203	367	27	148	37
Future Volume (vph)	29	1521	187	167	1248	26	305	203	367	27	148	37
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1493	2376	1509	1541	
Flt Permitted	0.19	1.00	1.00	0.06	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	294	3018	1350	91	3018	1350	1433	1493	2376	1509	1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	1601	197	176	1314	27	321	214	386	28	156	39
RTOR Reduction (vph)	0	0	74	0	0	9	0	0	170	0	8	0
Lane Group Flow (vph)	31	1601	123	176	1314	18	263	272	216	28	187	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	65.9	65.9	65.9	78.9	78.9	78.9	9.0	9.0	18.0	18.1	18.1	
Effective Green, g (s)	65.9	65.9	65.9	77.9	78.9	78.9	9.0	9.0	16.0	17.1	17.1	
Actuated g/C Ratio	0.55	0.55	0.55	0.65	0.66	0.66	0.08	0.08	0.13	0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	161	1657	741	153	1984	887	107	111	316	215	219	
v/s Ratio Prot		0.53		c0.08	0.44		c0.18	0.18	0.05	0.02	c0.12	
v/s Ratio Perm	0.11		0.09	c0.67		0.01			0.05			
v/c Ratio	0.19	0.97	0.17	1.15	0.66	0.02	2.46	2.45	0.68	0.13	0.86	
Uniform Delay, d1	13.6	26.0	13.4	36.2	12.5	7.1	55.5	55.5	49.6	45.0	50.2	
Progression Factor	0.78	0.83	0.75	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.5	14.8	0.5	118.9	1.8	0.0	683.3	679.0	4.8	0.3	26.3	
Delay (s)	13.1	36.5	10.5	155.3	14.1	7.2	738.8	734.5	54.4	45.2	76.5	
Level of Service	B	D	B	F	B	A	F	F	D	D	E	
Approach Delay (s)		33.3			30.4			450.7			72.6	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	119.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	793	144	60	23	310	11	0	1491	654	60	1258	8
Future Volume (vph)	793	144	60	23	310	11	0	1491	654	60	1258	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2924			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2924			3018	1350	153	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	835	152	63	24	326	12	0	1569	688	63	1324	8
RTOR Reduction (vph)	0	0	46	0	57	0	0	0	0	0	1	0
Lane Group Flow (vph)	835	152	17	0	305	0	0	1569	688	63	1331	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.8	25.8	25.8		14.8			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.8	25.8	25.8		14.8			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	794	366	366		455			1315	588	66	1313	
v/s Ratio Prot	c0.29	0.11	0.01		c0.10			c0.52			0.44	
v/s Ratio Perm									0.51	0.41		
v/c Ratio	1.05	0.42	0.05		0.67			1.19	1.17	0.95	1.01	
Uniform Delay, d1	34.6	28.4	25.5		37.8			26.8	26.8	25.9	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	46.4	0.3	0.0		3.9			94.7	93.7	98.5	28.4	
Delay (s)	81.0	28.7	25.5		41.7			121.5	120.5	124.4	55.2	
Level of Service	F	C	C		D			F	F	F	E	
Approach Delay (s)	70.1				41.7			121.2			58.3	
Approach LOS	E				D			F			E	

Intersection Summary			
HCM 2000 Control Delay	87.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	107.4%	ICU Level of Service	G
Analysis Period (min)	15		

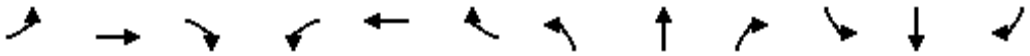
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	107	1025	401	137	8	198	1106	91	35	367	160	104
Future Volume (vph)	107	1025	401	137	8	198	1106	91	35	367	160	104
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (prot)	1509	3018	1350	1331		1509	2977			1581	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (perm)	1509	3018	1350	1331		1509	2977			1581	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	1079	422	144	8	208	1164	96	37	386	168	109
RTOR Reduction (vph)	0	0	0	0	0	0	4	0	0	0	113	0
Lane Group Flow (vph)	113	1079	422	144	0	216	1256	0	0	423	164	0
Confl. Bikes (#/hr)				8				5			1	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	14.1	59.7	59.7	162.0		15.0	60.6			29.7	29.7	
Effective Green, g (s)	14.1	59.7	59.7	162.0		15.0	60.6			29.7	29.7	
Actuated g/C Ratio	0.09	0.37	0.37	1.00		0.09	0.37			0.18	0.18	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	131	1112	497	1331		139	1113			289	247	
v/s Ratio Prot	0.07	c0.36				c0.14	c0.42			c0.27	0.12	
v/s Ratio Perm			0.31	0.11								
v/c Ratio	0.86	0.97	0.85	0.11		1.55	1.13			1.46	0.67	
Uniform Delay, d1	73.0	50.3	47.0	0.0		73.5	50.7			66.2	61.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	39.4	20.2	13.1	0.2		281.5	69.7			226.7	5.2	
Delay (s)	112.4	70.5	60.1	0.2		355.0	120.4			292.9	66.7	
Level of Service	F	E	E	A		F	F			F	E	
Approach Delay (s)		64.9					154.7			203.4		
Approach LOS		E					F			F		

Intersection Summary			
HCM 2000 Control Delay	132.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	162.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	79	161	433	146	48
Future Volume (vph)	79	161	433	146	48
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	0.99	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2965	1333	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2965	1333	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	169	456	154	51
RTOR Reduction (vph)	0	0	0	0	50
Lane Group Flow (vph)	0	0	708	154	1
Confl. Bikes (#/hr)				3	
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	162.0	4.0
Effective Green, g (s)			29.7	162.0	4.0
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			543	1333	33
v/s Ratio Prot			c0.24		0.00
v/s Ratio Perm				c0.12	
v/c Ratio			1.30	0.12	0.04
Uniform Delay, d1			66.2	0.0	77.1
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			149.7	0.2	0.2
Delay (s)			215.9	0.2	77.3
Level of Service			F	A	E
Approach Delay (s)			177.3		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1339	28	51	1263	1	213	1	79	0	0	2
Future Volume (vph)	25	1339	28	51	1263	1	213	1	79	0	0	2
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.92			0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98			1.00	
Satd. Flow (prot)	1509	3009		1509	3017		1433	1353			0	
Flt Permitted	0.14	1.00		0.12	1.00		0.95	0.98			1.00	
Satd. Flow (perm)	228	3009		190	3017		1433	1353			0	
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	26	1455	30	55	1373	1	232	1	86	0	0	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	41	0	0	2	0
Lane Group Flow (vph)	26	1484	0	55	1374	0	165	113	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	72.8	72.8		72.8	72.8		16.9	16.9			0.0	
Effective Green, g (s)	72.8	72.8		72.8	72.8		16.9	16.9			0.0	
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.15	0.15			0.00	
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	150	1991		125	1996		220	207			0	
v/s Ratio Prot		c0.49			0.46							
v/s Ratio Perm	0.11			0.29			c0.12	0.08				
v/c Ratio	0.17	0.75		0.44	0.69		0.75	0.54			0.00	
Uniform Delay, d1	7.1	12.4		8.9	11.6		44.5	43.0			55.0	
Progression Factor	1.00	1.00		1.22	1.33		1.00	1.00			1.00	
Incremental Delay, d2	2.5	2.6		6.1	1.1		13.4	2.9			0.0	
Delay (s)	9.6	15.0		16.9	16.4		57.9	45.9			55.0	
Level of Service	A	B		B	B		E	D			D	
Approach Delay (s)		14.9			16.4			52.1			55.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1366	36	68	1321	0	53
Future Vol, veh/h	1366	36	68	1321	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1438	38	72	1391	0	56

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1476	0	-	738
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	452	-	0	360
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	452	-	-	360
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	360	-	-	452	-
HCM Lane V/C Ratio	0.155	-	-	0.158	-
HCM Control Delay (s)	16.8	-	-	14.5	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.6	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1221	48	225	1225	34	122	112	330	149	147	19
Future Volume (veh/h)	65	1221	48	225	1225	34	122	112	330	149	147	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	68	1285	51	237	1289	36	128	118	347	157	155	20
Adj No. of Lanes	1	2	0	1	2	0	0	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	216	1515	60	255	1699	47	92	58	155	172	372	48
Arrive On Green	0.04	0.51	0.51	0.09	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2959	117	1513	2999	84	192	214	574	924	1379	178
Grp Volume(v), veh/h	68	655	681	237	648	677	593	0	0	157	0	175
Grp Sat Flow(s),veh/h/ln	1513	1509	1568	1513	1509	1573	980	0	0	924	0	1557
Q Serve(g_s), s	2.4	41.1	41.3	8.3	35.9	36.0	19.5	0.0	0.0	0.0	0.0	10.2
Cycle Q Clear(g_c), s	2.4	41.1	41.3	8.3	35.9	36.0	29.7	0.0	0.0	29.7	0.0	10.2
Prop In Lane	1.00		0.07	1.00		0.05	0.22		0.59	1.00		0.11
Lane Grp Cap(c), veh/h	216	773	803	255	855	892	304	0	0	172	0	420
V/C Ratio(X)	0.32	0.85	0.85	0.93	0.76	0.76	1.95	0.00	0.00	0.91	0.00	0.42
Avail Cap(c_a), veh/h	334	773	803	291	855	892	304	0	0	172	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.15	0.15	0.15	0.67	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.9	23.1	23.2	24.3	18.1	18.1	45.0	0.0	0.0	44.9	0.0	33.0
Incr Delay (d2), s/veh	0.3	11.1	10.9	7.2	1.0	0.9	434.5	0.0	0.0	43.8	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	1.0	19.5	20.2	7.6	15.0	15.6	46.0	0.0	0.0	6.9	0.0	4.5
LnGrp Delay(d),s/veh	17.2	34.2	34.0	31.5	19.1	19.0	479.5	0.0	0.0	88.7	0.0	33.7
LnGrp LOS	B	C	C	C	B	B	F			F		C
Approach Vol, veh/h		1404			1562			593			332	
Approach Delay, s/veh		33.3			20.9			479.5			59.7	
Approach LOS		C			C			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	14.4	61.6		34.0	8.4	67.6		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	10.3	43.3		31.7	4.4	38.0		31.7
Green Ext Time (p_c), s	0.1	10.0		0.0	0.0	14.8		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		98.6
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

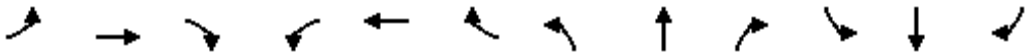
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1495	55	183	1207	106	125	769	270	118	535	143
Future Volume (veh/h)	195	1495	55	183	1207	106	125	769	270	118	535	143
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	205	1574	58	193	1271	112	132	809	284	124	563	151
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1659	61	339	1550	136	65	705	308	65	549	147
Arrive On Green	0.16	1.00	1.00	0.07	0.55	0.55	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2965	109	1513	2803	246	733	3018	1317	514	2348	628
Grp Volume(v), veh/h	205	798	834	193	683	700	132	809	284	124	361	353
Grp Sat Flow(s),veh/h/ln	1513	1509	1566	1513	1509	1540	733	1509	1317	514	1509	1467
Q Serve(g_s), s	6.8	0.0	0.0	6.1	40.6	41.0	0.0	25.7	23.2	0.0	25.7	25.7
Cycle Q Clear(g_c), s	6.8	0.0	0.0	6.1	40.6	41.0	25.7	25.7	23.2	25.7	25.7	25.7
Prop In Lane	1.00		0.07	1.00		0.16	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	258	844	876	339	834	852	65	705	308	65	353	343
V/C Ratio(X)	0.80	0.95	0.95	0.57	0.82	0.82	2.02	1.15	0.92	1.89	1.02	1.03
Avail Cap(c_a), veh/h	287	844	876	378	834	852	65	705	308	65	353	343
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)	0.14	0.14	0.14	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97
Uniform Delay (d), s/veh	19.8	0.0	0.0	9.2	20.1	20.2	55.0	42.2	41.2	55.0	42.2	42.2
Incr Delay (d2), s/veh	1.8	4.5	4.7	0.7	8.8	8.8	506.0	82.2	32.1	452.6	53.4	55.7
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	3.2	1.0	1.2	2.6	18.9	19.4	11.2	18.7	11.1	10.2	15.9	15.7
LnGrp Delay(d),s/veh	21.6	4.5	4.7	9.9	28.8	29.0	561.0	124.3	73.3	507.6	95.6	97.8
LnGrp LOS	C	A	A	A	C	C	F	F	E	F	F	F
Approach Vol, veh/h		1837			1576			1225			838	
Approach Delay, s/veh		6.5			26.6			159.5			157.5	
Approach LOS		A			C			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	12.2	66.8		31.0	12.9	66.1		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 59		* 26	* 11	* 59		* 26
Max Q Clear Time (g_c+I1), s	8.1	2.0		27.7	8.8	43.0		27.7
Green Ext Time (p_c), s	0.1	51.9		0.0	0.0	15.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	675	1138	102	182	729	39	182	1004	178	2	803	573
Future Volume (vph)	675	1138	102	182	729	39	182	1004	178	2	803	573
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	2995		2927	2950			3017	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (perm)	2927	3018	1350	2927	2995		2927	2950			2874	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	1198	107	192	767	41	192	1057	187	2	845	603
RTOR Reduction (vph)	0	0	66	0	4	0	0	13	0	0	0	308
Lane Group Flow (vph)	711	1198	41	192	804	0	192	1231	0	0	847	295
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2							4		4
Actuated Green, G (s)	22.0	42.0	42.0	10.6	31.6		6.0	42.4			32.4	32.4
Effective Green, g (s)	22.0	42.5	42.0	10.6	32.1		7.0	43.4			33.4	33.4
Actuated g/C Ratio	0.20	0.39	0.38	0.10	0.29		0.06	0.39			0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	585	1166	515	282	873		186	1163			872	409
v/s Ratio Prot	c0.24	c0.40		0.07	c0.27		0.07	c0.42				
v/s Ratio Perm			0.03								0.29	0.22
v/c Ratio	1.22	1.03	0.08	0.68	0.92		1.03	1.06			0.97	0.72
Uniform Delay, d1	44.0	33.8	21.7	48.1	37.7		51.5	33.3			37.8	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	112.0	33.6	0.1	5.3	15.5		74.7	43.4			24.3	10.5
Delay (s)	156.0	67.3	21.8	53.4	53.2		126.2	76.7			62.1	44.6
Level of Service	F	E	C	D	D		F	E			E	D
Approach Delay (s)		96.2			53.2			83.3			54.8	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	75.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	126.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	93.8
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	91	682	15	0	52	118	247	0	5	11	47
Future Vol, veh/h	0	91	682	15	0	52	118	247	0	5	11	47
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	99	741	16	0	57	128	268	0	5	12	51
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	157.7	12.2	11.3
HCM LOS	F	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	12%	31%	0%	58%
Vol Thru, %	17%	87%	69%	0%	3%
Vol Right, %	75%	2%	0%	100%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	788	170	247	137
LT Vol	5	91	52	0	79
Through Vol	11	682	118	0	4
RT Vol	47	15	0	247	54
Lane Flow Rate	68	857	185	268	149
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.126	1.285	0.318	0.398	0.276
Departure Headway (Hd)	7.289	5.403	6.54	5.669	7.252
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	495	677	552	639	499
Service Time	5.289	3.426	4.24	3.369	5.252
HCM Lane V/C Ratio	0.137	1.266	0.335	0.419	0.299
HCM Control Delay	11.3	157.7	12.3	12.1	13
HCM Lane LOS	B	F	B	B	B
HCM 95th-tile Q	0.4	33.3	1.4	1.9	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	79	4	54
Future Vol, veh/h	0	79	4	54
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	86	4	59
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	764	376	47	57	35
Future Vol, veh/h	33	764	376	47	57	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	804	396	49	60	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	445	0	-	0	1295	421
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	874	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1115	-	-	-	179	632
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	408	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1115	-	-	-	169	632
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	385	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	30.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1115	-	-	-	234
HCM Lane V/C Ratio	0.031	-	-	-	0.414
HCM Control Delay (s)	8.3	0	-	-	30.8
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	560	224	233	303	130	97	398	285	116	312	27
Future Volume (veh/h)	65	560	224	233	303	130	97	398	285	116	312	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	68	589	236	245	319	137	102	419	300	122	328	28
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	538	209	180	859	730	238	551	468	162	500	43
Arrive On Green	0.55	0.54	0.54	0.90	0.90	0.90	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	82	994	386	661	1588	1350	1021	1588	1350	730	1443	123
Grp Volume(v), veh/h	893	0	0	245	319	137	102	419	300	122	0	356
Grp Sat Flow(s),veh/h/ln	1462	0	0	661	1588	1350	1021	1588	1350	730	0	1566
Q Serve(g_s), s	36.5	0.0	0.0	0.0	2.6	1.1	8.4	21.1	16.8	10.1	0.0	17.3
Cycle Q Clear(g_c), s	49.2	0.0	0.0	48.7	2.6	1.1	25.7	21.1	16.8	31.2	0.0	17.3
Prop In Lane	0.08		0.26	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	843	0	0	180	859	731	238	551	468	162	0	543
V/C Ratio(X)	1.06	0.00	0.00	1.36	0.37	0.19	0.43	0.76	0.64	0.75	0.00	0.66
Avail Cap(c_a), veh/h	843	0	0	180	859	731	238	551	468	162	0	543
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	0.00	0.00	0.73	0.73	0.73	1.00	1.00	1.00	0.58	0.00	0.58
Uniform Delay (d), s/veh	21.8	0.0	0.0	15.2	2.1	2.0	35.7	26.1	24.7	41.6	0.0	24.9
Incr Delay (d2), s/veh	48.1	0.0	0.0	187.9	0.9	0.4	1.2	6.2	2.9	10.9	0.0	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	32.0	0.0	0.0	13.8	1.2	0.5	2.5	10.1	6.6	3.5	0.0	7.7
LnGrp Delay(d),s/veh	69.9	0.0	0.0	203.1	3.0	2.5	37.0	32.2	27.6	52.5	0.0	26.5
LnGrp LOS	F			F	A	A	D	C	C	D		C
Approach Vol, veh/h		893			701			821			478	
Approach Delay, s/veh		69.9			72.8			31.2			33.2	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		50.7		27.7		51.2		33.2
Green Ext Time (p_c), s		0.0		2.1		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	667	121	181	534	245	103	827	160	125	678	54
Future Volume (veh/h)	112	667	121	181	534	245	103	827	160	125	678	54
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	118	702	127	191	562	258	108	871	168	132	714	57
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	261	1354	245	429	842	716	185	889	171	86	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	664	2554	462	659	1588	1350	696	2524	487	541	3018	1350
Grp Volume(v), veh/h	118	415	414	191	562	258	108	521	518	132	714	57
Grp Sat Flow(s),veh/h/ln	664	1509	1507	659	1588	1350	696	1509	1502	541	1509	1350
Q Serve(g_s), s	11.7	0.0	0.0	17.3	23.2	10.0	13.6	30.7	30.7	1.0	18.1	2.6
Cycle Q Clear(g_c), s	34.8	0.0	0.0	17.3	23.2	10.0	31.7	30.7	30.7	31.7	18.1	2.6
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	261	800	799	429	842	716	185	531	529	86	1063	476
V/C Ratio(X)	0.45	0.52	0.52	0.45	0.67	0.36	0.58	0.98	0.98	1.54	0.67	0.12
Avail Cap(c_a), veh/h	261	800	799	429	842	716	185	531	529	86	1063	476
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)	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	8.5	0.0	0.0	14.0	15.4	12.3	38.4	28.8	28.8	45.0	24.7	19.7
Incr Delay (d2), s/veh	1.4	0.6	0.6	3.3	4.2	1.4	3.1	33.6	33.7	290.9	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.1	0.1	3.5	11.0	4.0	2.8	17.7	17.6	9.1	7.7	1.0
LnGrp Delay(d),s/veh	9.8	0.6	0.6	17.3	19.6	13.7	41.5	62.4	62.6	335.8	26.1	19.8
LnGrp LOS	A	A	A	B	B	B	D	E	E	F	C	B
Approach Vol, veh/h		947			1011			1147			903	
Approach Delay, s/veh		1.7			17.6			60.5			71.0	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		36.8		33.7		25.2		33.7
Green Ext Time (p_c), s		7.3		0.0		11.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	1014	61	257	698	81	79	1261	298	63	915	130
Future Volume (veh/h)	178	1014	61	257	698	81	79	1261	298	63	915	130
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	187	1067	64	271	735	0	83	1327	314	66	963	137
Adj No. of Lanes	1	2	0	1	2	1	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	198	738	44	191	1172	524	201	1311	305	60	1431	203
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.54	0.54	0.54	0.54	0.54	0.53
Sat Flow, veh/h	719	2893	173	1513	3018	1350	510	2432	565	304	2653	377
Grp Volume(v), veh/h	187	556	575	271	735	0	83	814	827	66	547	553
Grp Sat Flow(s),veh/h/ln	719	1509	1558	1513	1509	1350	510	1509	1489	304	1509	1522
Q Serve(g_s), s	23.0	30.6	30.6	10.4	23.6	0.0	16.9	64.7	64.7	0.0	31.5	31.6
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	23.6	0.0	48.5	64.7	64.7	64.7	31.5	31.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.38	1.00		0.25
Lane Grp Cap(c), veh/h	198	385	397	191	1172	524	201	814	803	60	814	820
V/C Ratio(X)	0.95	1.45	1.45	1.42	0.63	0.00	0.41	1.00	1.03	1.10	0.67	0.67
Avail Cap(c_a), veh/h	198	385	397	191	1172	524	201	814	803	60	814	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	44.7	44.8	35.4	29.7	0.0	37.6	27.6	27.7	60.0	20.0	20.1
Incr Delay (d2), s/veh	46.1	212.7	212.6	216.0	2.5	0.0	6.2	31.6	39.9	146.4	4.4	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	1.6	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	35.4	36.6	16.1	10.2	0.0	2.7	34.0	35.4	4.4	14.1	14.2
LnGrp Delay(d),s/veh	97.6	257.4	257.4	251.4	32.2	0.0	43.7	59.3	67.6	208.1	24.4	24.5
LnGrp LOS	F	F	F	F	C		D	F	F	F	C	C
Approach Vol, veh/h		1318			1006			1724			1166	
Approach Delay, s/veh		234.7			91.3			62.5			34.9	
Approach LOS		F			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		25.6		66.7	12.4	32.6
Green Ext Time (p_c), s		0.0		11.1		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		105.4
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

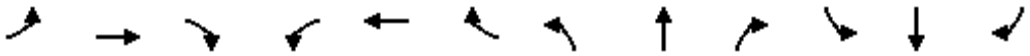
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	978	97	191	935	126	136	535	152	93	458	47
Future Volume (veh/h)	165	978	97	191	935	126	136	535	152	93	458	47
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	174	1029	102	201	984	133	143	563	160	98	482	49
Adj No. of Lanes	1	2	0	1	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	256	990	98	265	954	129	148	466	132	80	557	57
Arrive On Green	0.11	0.34	0.34	0.04	0.11	0.11	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2904	288	1587	2796	378	912	1244	353	763	1486	151
Grp Volume(v), veh/h	174	561	570	201	557	560	143	0	723	98	0	531
Grp Sat Flow(s),veh/h/ln	1587	1583	1608	1587	1583	1590	912	0	1597	763	0	1638
Q Serve(g_s), s	6.2	30.7	30.7	7.1	30.7	30.7	6.7	0.0	33.7	0.0	0.0	27.0
Cycle Q Clear(g_c), s	6.2	30.7	30.7	7.1	30.7	30.7	33.7	0.0	33.7	33.7	0.0	27.0
Prop In Lane	1.00		0.18	1.00		0.24	1.00		0.22	1.00		0.09
Lane Grp Cap(c), veh/h	256	540	548	265	540	543	148	0	598	80	0	613
V/C Ratio(X)	0.68	1.04	1.04	0.76	1.03	1.03	0.97	0.00	1.21	1.22	0.00	0.87
Avail Cap(c_a), veh/h	256	540	548	265	540	543	148	0	598	80	0	613
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	29.6	29.7	22.3	39.9	39.9	43.4	0.0	28.2	45.0	0.0	26.1
Incr Delay (d2), s/veh	13.6	49.1	49.1	18.2	47.0	47.2	66.0	0.0	109.0	173.0	0.0	15.2
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	3.7	20.7	21.0	4.4	20.5	20.6	6.2	0.0	32.9	5.8	0.0	14.7
LnGrp Delay(d),s/veh	34.2	78.7	78.7	40.5	86.9	87.1	109.4	0.0	137.2	218.0	0.0	41.2
LnGrp LOS	C	F	F	D	F	F	F		F	F		D
Approach Vol, veh/h		1305			1318			866			629	
Approach Delay, s/veh		72.8			79.9			132.6			68.8	
Approach LOS		E			E			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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	8.2	32.7		35.7	9.1	32.7		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	978	97	191	935	126	136	535	152	93	458	47
Future Volume (vph)	165	978	97	191	935	126	136	535	152	93	458	47
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3102		1583	1605		1583	1642	
Flt Permitted	0.13	1.00		0.13	1.00		0.21	1.00		0.12	1.00	
Satd. Flow (perm)	224	3117		221	3102		356	1605		198	1642	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	1029	102	201	984	133	143	563	160	98	482	49
RTOR Reduction (vph)	0	9	0	0	12	0	0	11	0	0	4	0
Lane Group Flow (vph)	174	1122	0	201	1105	0	143	712	0	98	527	0
Confl. Bikes (#/hr)			3			1			8			3
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		258	1058		133	600		74	614	
v/s Ratio Prot	0.08	c0.36		c0.09	0.36			0.44			0.32	
v/s Ratio Perm	0.23			0.26			0.40			c0.50		
v/c Ratio	0.70	1.06		0.78	1.04		1.08	1.19		1.32	0.86	
Uniform Delay, d1	19.4	29.6		19.4	29.6		28.1	28.1		28.1	25.9	
Progression Factor	1.00	1.00		0.67	1.10		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.1	43.6		5.2	26.7		99.6	99.8		213.8	14.4	
Delay (s)	34.5	73.3		18.3	59.4		127.7	128.0		241.9	40.4	
Level of Service	C	E		B	E		F	F		F	D	
Approach Delay (s)		68.1			53.1			128.0			71.8	
Approach LOS		E			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	76.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	995	67	105	984	81	90	526	173	71	439	209
Future Volume (veh/h)	116	995	67	105	984	81	90	526	173	71	439	209
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	122	1047	71	111	1036	85	95	554	182	75	462	220
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1129	77	142	1111	91	177	1160	671	460	506	241
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	525	3010	204	527	2964	243	793	2451	1417	754	1068	509
Grp Volume(v), veh/h	122	551	567	111	553	568	95	554	182	75	0	682
Grp Sat Flow(s),veh/h/ln	525	1583	1631	527	1583	1624	793	2451	1417	754	0	1577
Q Serve(g_s), s	2.0	20.0	20.0	2.5	20.5	20.5	4.3	1.3	0.6	3.6	0.0	24.1
Cycle Q Clear(g_c), s	22.5	20.0	20.0	22.5	20.5	20.5	28.4	1.3	0.6	5.0	0.0	24.1
Prop In Lane	1.00		0.13	1.00		0.15	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	137	594	611	142	594	609	177	1160	671	460	0	746
V/C Ratio(X)	0.89	0.93	0.93	0.78	0.93	0.93	0.54	0.48	0.27	0.16	0.00	0.91
Avail Cap(c_a), veh/h	137	594	611	142	594	609	177	1160	671	460	0	746
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.40	0.40	0.40	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	18.0	18.0	33.5	21.7	21.7	14.5	0.9	0.9	10.0	0.0	14.8
Incr Delay (d2), s/veh	51.4	22.8	22.4	23.9	17.3	17.0	4.7	0.6	0.4	0.8	0.0	17.6
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	4.0	12.3	12.6	2.8	11.8	12.0	1.8	0.8	0.3	0.8	0.0	13.9
LnGrp Delay(d),s/veh	81.3	40.8	40.4	57.4	39.0	38.8	19.2	1.4	1.3	10.8	0.0	32.3
LnGrp LOS	F	D	D	E	D	D	B	A	A	B		C
Approach Vol, veh/h		1240			1232			831			757	
Approach Delay, s/veh		44.6			40.6			3.4			30.2	
Approach LOS		D			D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		26.1		24.5		30.4
Green Ext Time (p_c), s		0.0		1.3		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

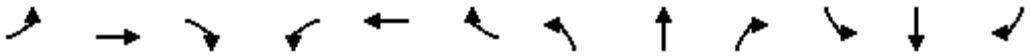
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1213	151	73	835	165	136	1013	470	239	880	131
Future Volume (veh/h)	59	1213	151	73	835	165	136	1013	470	239	880	131
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	62	1277	159	77	879	174	143	1066	495	252	926	138
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	277	1465	655	179	1219	241	195	1470	658	126	1470	658
Arrive On Green	0.93	0.93	0.93	0.93	0.93	0.93	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	560	3167	1417	389	2636	522	554	3167	1417	345	3167	1417
Grp Volume(v), veh/h	62	1277	159	77	528	525	143	1066	495	252	926	138
Grp Sat Flow(s),veh/h/ln	560	1583	1417	389	1583	1575	554	1583	1417	345	1583	1417
Q Serve(g_s), s	3.8	18.8	1.3	15.2	9.0	9.0	29.1	32.6	34.5	23.1	26.6	6.9
Cycle Q Clear(g_c), s	12.9	18.8	1.3	34.0	9.0	9.0	55.7	32.6	34.5	55.7	26.6	6.9
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1465	655	179	732	728	195	1470	658	126	1470	658
V/C Ratio(X)	0.22	0.87	0.24	0.43	0.72	0.72	0.74	0.73	0.75	2.00	0.63	0.21
Avail Cap(c_a), veh/h	277	1465	655	179	732	728	195	1470	658	126	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.2	3.1	2.5	9.7	2.8	2.8	46.3	26.0	26.5	53.9	24.3	19.1
Incr Delay (d2), s/veh	1.6	6.6	0.8	1.5	1.2	1.2	21.7	3.2	7.8	474.8	2.1	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	0.7	8.1	0.6	1.7	3.5	3.5	5.9	14.9	14.9	20.8	12.0	2.9
LnGrp Delay(d),s/veh	5.8	9.7	3.2	11.2	4.0	4.0	68.0	29.1	34.3	528.8	26.4	19.8
LnGrp LOS	A	A	A	B	A	A	E	C	C	F	C	B
Approach Vol, veh/h		1498			1130			1704			1316	
Approach Delay, s/veh		8.9			4.5			33.9			121.9	
Approach LOS		A			A			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		36.0		57.7		20.8		57.7
Green Ext Time (p_c), s		13.3		0.0		20.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1182	102	117	868	61	110	606	47	82	625	68
Future Volume (vph)	154	1182	102	117	868	61	110	606	47	82	625	68
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1309	1509	4336	1318	1509	1588	1327	1509	1563	
Flt Permitted	0.25	1.00	1.00	0.18	1.00	1.00	0.15	1.00	1.00	0.23	1.00	
Satd. Flow (perm)	397	4336	1309	289	4336	1318	246	1588	1327	370	1563	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	1244	107	123	914	64	116	638	49	86	658	72
RTOR Reduction (vph)	0	0	68	0	0	41	0	0	19	0	6	0
Lane Group Flow (vph)	162	1244	39	123	914	23	116	638	30	86	724	0
Confl. Bikes (#/hr)			10			4			10			5
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	22.0	22.0	22.0	22.0	22.0	22.0	28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	22.0	22.0	22.0	22.0	22.0	22.0	28.0	28.0	28.0	28.0	28.0	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	145	1589	479	105	1589	483	114	741	619	172	729	
v/s Ratio Prot		0.29			0.21			0.40			0.46	
v/s Ratio Perm	0.41		0.03	c0.43		0.02	c0.47		0.02	0.23		
v/c Ratio	1.12	0.78	0.08	1.17	0.58	0.05	1.02	0.86	0.05	0.50	0.99	
Uniform Delay, d1	19.0	16.9	12.4	19.0	15.2	12.3	16.0	14.3	8.7	11.1	15.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.42	1.42	
Incremental Delay, d2	109.7	3.9	0.3	141.2	1.5	0.2	89.1	10.1	0.0	1.5	25.4	
Delay (s)	128.7	20.8	12.7	160.2	16.8	12.4	105.1	24.3	8.8	17.4	48.0	
Level of Service	F	C	B	F	B	B	F	C	A	B	D	
Approach Delay (s)		31.8			32.5			35.0			44.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Robertson Blvd.	Year of Count:	2015	Ambient Growth: (%):	1	Conducted by:	KOA Corp	Date:	1/20/2017
18	East-West Street:	Burton Way	Projection Year:	2019	Peak Hour:	PM	Reviewed by:		Project:	Robertson Lane Hotel Project

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			3			3			3				3				3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0		NB-- 0	SB--	0		NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	101	1	**101**	0	101	**101**	5	110	1	**110**	0	110	1	**110**	0	110	1	**110**
	Left-Through		0							0				0				0	
	Through	502	1	502	7	509	509	77	599	1	599	7	606	1	606	0	606	1	606
	Through-Right		0							0				0				0	
	Right	45	1	0	0	45	0	0	47	1	0	0	47	1	0	0	47	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	79	1	79	0	79	79	0	82	1	82	0	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	499	0	**547**	7	506	**554**	99	618	0	**686**	7	625	0	**693**	0	625	0	**693**
	Through-Right		1							1				1				1	
	Right	48	0	0	0	48	0	18	68	0	0	0	68	0	0	0	68	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	148	1	148	0	148	148	0	154	1	154	0	154	1	154	0	154	1	154
	Left-Through		0							0				0				0	
	Through	1104	3	**368**	0	1104	**368**	33	1182	3	**394**	0	1182	3	**394**	0	1182	3	**394**
	Through-Right		0							0				0				0	
	Right	90	1	40	0	90	40	8	102	1	47	0	102	1	47	0	102	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	112	1	**112**	0	112	**112**	0	117	1	**117**	0	117	1	**117**	0	117	1	**117**
	Left-Through		0							0				0				0	
	Through	787	3	262	0	787	262	49	868	3	289	0	868	3	289	0	868	3	289
	Through-Right		0							0				0				0	
	Right	59	1	20	0	59	20	0	61	1	20	0	61	1	20	0	61	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		648	*North-South:*		655	*North-South:*			796	*North-South:*			803	*North-South:*			803
		East-West:		480	*East-West:*		480	*East-West:*			511	*East-West:*			511	*East-West:*			511
		SUM:		1128	*SUM:*		1135	*SUM:*			1307	*SUM:*			1314	*SUM:*			1314
VOLUME/CAPACITY *(V/C)* RATIO:				0.792			0.796				0.917				0.922				0.922
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.692			0.696				0.817				0.822				0.822
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: 0.004

Significant impacted? NO

PROPOSED PROJECT IMPACT

Change in *v/c* due to project: 0.005

Significant impacted? NO

$\Delta v/c$ after mitigation: 0.005

Fully mitigated? N/A

APPENDIX F
Project Driveway Delay and Queuing Worksheets

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	3	49	7	25	65
Future Vol, veh/h	8	3	49	7	25	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	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	53	8	27	71

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	182	57	0	0	61	0
Stage 1	57	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	807	1009	-	-	1542	-
Stage 1	966	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	792	1009	-	-	1542	-
Mov Cap-2 Maneuver	792	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	792	1009	1542	-
HCM Lane V/C Ratio	-	-	0.011	0.003	0.018	-
HCM Control Delay (s)	-	-	9.6	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	6	22	294	297	22
Future Vol, veh/h	34	6	22	294	297	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	7	24	320	323	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	702	335	347	0	-	0
Stage 1	335	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	404	707	1212	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	394	707	1212	-	-	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1212	-	394	707	-	-
HCM Lane V/C Ratio	0.02	-	0.094	0.009	-	-
HCM Control Delay (s)	8	0	15.1	10.1	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	5	63	11	39	85
Future Vol, veh/h	13	5	63	11	39	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	5	68	12	42	92

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	251	74	0	0	80	0
Stage 1	74	-	-	-	-	-
Stage 2	177	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	738	988	-	-	1518	-
Stage 1	949	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	717	988	-	-	1518	-
Mov Cap-2 Maneuver	717	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	829	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	717	988	1518	-
HCM Lane V/C Ratio	-	-	0.02	0.006	0.028	-
HCM Control Delay (s)	-	-	10.1	8.7	7.4	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	10	35	347	308	34
Future Vol, veh/h	55	10	35	347	308	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	11	38	377	335	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	806	353	372	0	-	0
Stage 1	353	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	351	691	1186	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	337	691	1186	-	-	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	614	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.8	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1186	-	337	691	-	-
HCM Lane V/C Ratio	0.032	-	0.177	0.016	-	-
HCM Control Delay (s)	8.1	0	18	10.3	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	4	59	7	26	76
Future Vol, veh/h	12	4	59	7	26	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	4	64	8	28	83

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	207	68	0	0	72	0
Stage 1	68	-	-	-	-	-
Stage 2	139	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	781	995	-	-	1528	-
Stage 1	955	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	766	995	-	-	1528	-
Mov Cap-2 Maneuver	766	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	871	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	766	995	1528	-
HCM Lane V/C Ratio	-	-	0.017	0.004	0.018	-
HCM Control Delay (s)	-	-	9.8	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	51	9	23	475	376	23
Future Vol, veh/h	51	9	23	475	376	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	10	25	516	409	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	987	421	434	0	-	0
Stage 1	421	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	274	632	1126	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	266	632	1126	-	-	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	550	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.4	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1126	-	266	632	-	-
HCM Lane V/C Ratio	0.022	-	0.208	0.015	-	-
HCM Control Delay (s)	8.3	0	22.1	10.8	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	3	50	7	25	67
Future Vol, veh/h	8	3	50	7	25	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	54	8	27	73

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	185	58	0	0	62	0
Stage 1	58	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	804	1008	-	-	1541	-
Stage 1	965	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	790	1008	-	-	1541	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	883	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	790	1008	1541	-
HCM Lane V/C Ratio	-	-	0.011	0.003	0.018	-
HCM Control Delay (s)	-	-	9.6	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	6	22	328	342	22
Future Vol, veh/h	34	6	22	328	342	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	7	24	357	372	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	788	384	396	0	-	0
Stage 1	384	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	360	664	1163	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	351	664	1163	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1163	-	351	664	-	-
HCM Lane V/C Ratio	0.021	-	0.105	0.01	-	-
HCM Control Delay (s)	8.2	0	16.5	10.5	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	5	65	11	39	88
Future Vol, veh/h	13	5	65	11	39	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	5	71	12	42	96

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	257	77	0	0	83	0
Stage 1	77	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	732	984	-	-	1514	-
Stage 1	946	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	711	984	-	-	1514	-
Mov Cap-2 Maneuver	711	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	711	984	1514	-
HCM Lane V/C Ratio	-	-	0.02	0.006	0.028	-
HCM Control Delay (s)	-	-	10.2	8.7	7.4	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	10	35	406	355	34
Future Vol, veh/h	55	10	35	406	355	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	11	38	441	386	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	921	404	423	0	-	0
Stage 1	404	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	300	647	1136	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	287	647	1136	-	-	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	572	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.2	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1136	-	287	647	-	-
HCM Lane V/C Ratio	0.033	-	0.208	0.017	-	-
HCM Control Delay (s)	8.3	0	20.8	10.7	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	4	61	7	26	79
Future Vol, veh/h	12	4	61	7	26	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	4	66	8	28	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	212	70	0	0	74	0
Stage 1	70	-	-	-	-	-
Stage 2	142	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	776	993	-	-	1526	-
Stage 1	953	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	761	993	-	-	1526	-
Mov Cap-2 Maneuver	761	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	761	993	1526	-
HCM Lane V/C Ratio	-	-	0.017	0.004	0.019	-
HCM Control Delay (s)	-	-	9.8	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0.1	-

Intersection	
Int Delay, s/veh	1.8

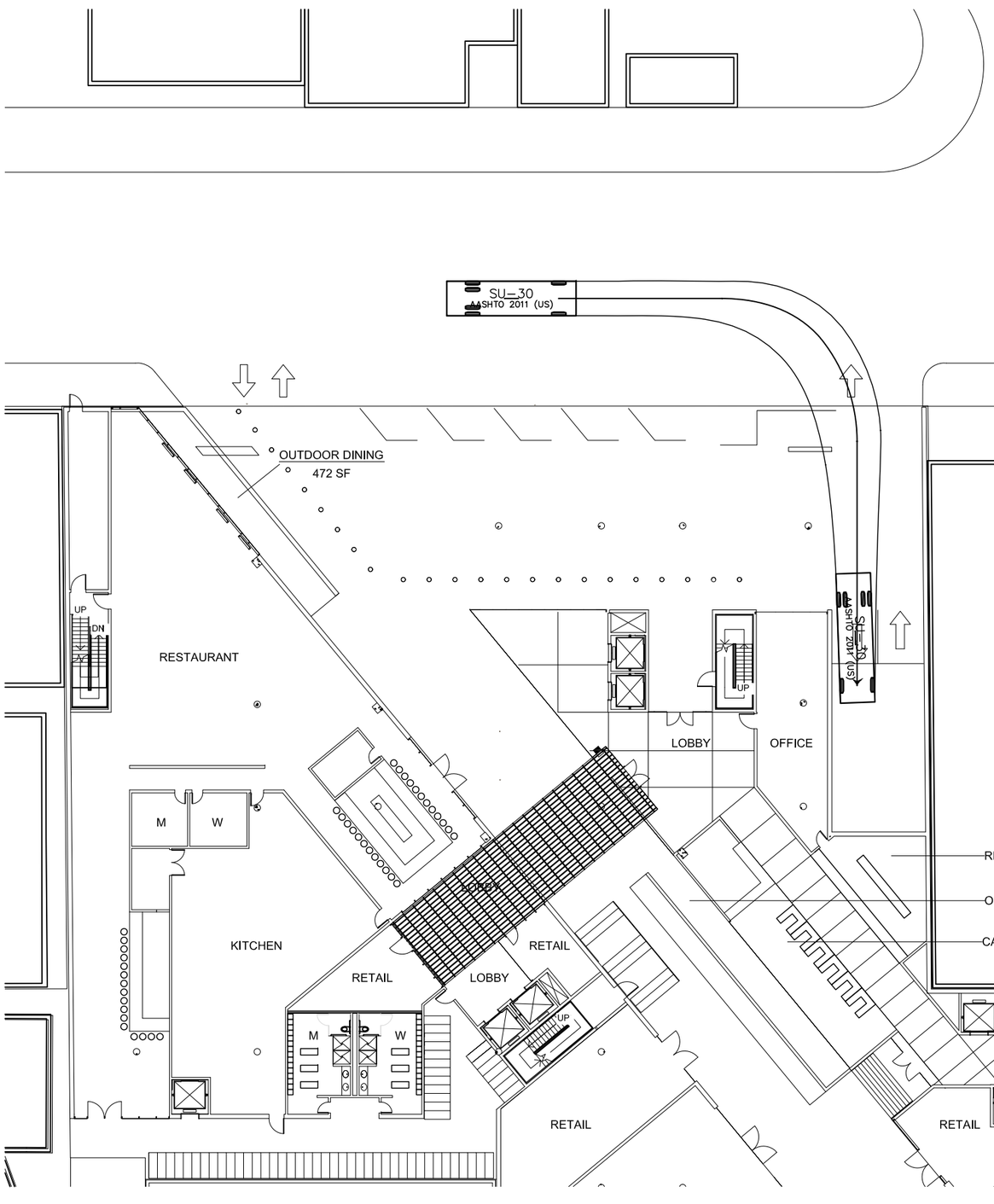
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	51	9	23	541	422	23
Future Vol, veh/h	51	9	23	541	422	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	10	25	588	459	25

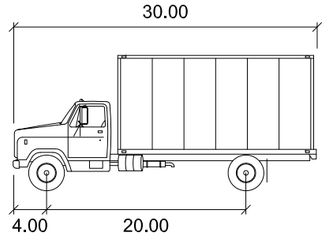
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1109	471	484	0	-	0
Stage 1	471	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Critical Hdwy	7.12	6.22	4.12	-	-	-
Critical Hdwy Stg 1	6.12	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	187	593	1079	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	182	593	1079	-	-	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	449	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.9	0.3	0
HCM LOS	D		

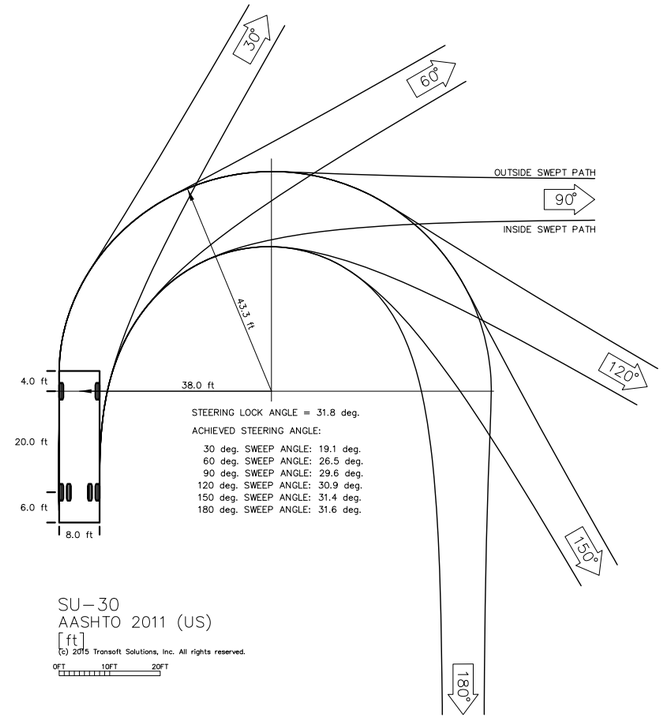
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1079	-	182	593	-	-
HCM Lane V/C Ratio	0.023	-	0.305	0.016	-	-
HCM Control Delay (s)	8.4	0	33.2	11.2	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0.1	-	-

APPENDIX G
Turning Templates for Delivery Trucks and Passenger Vehicles





SU-30	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



Source:

Not to Scale

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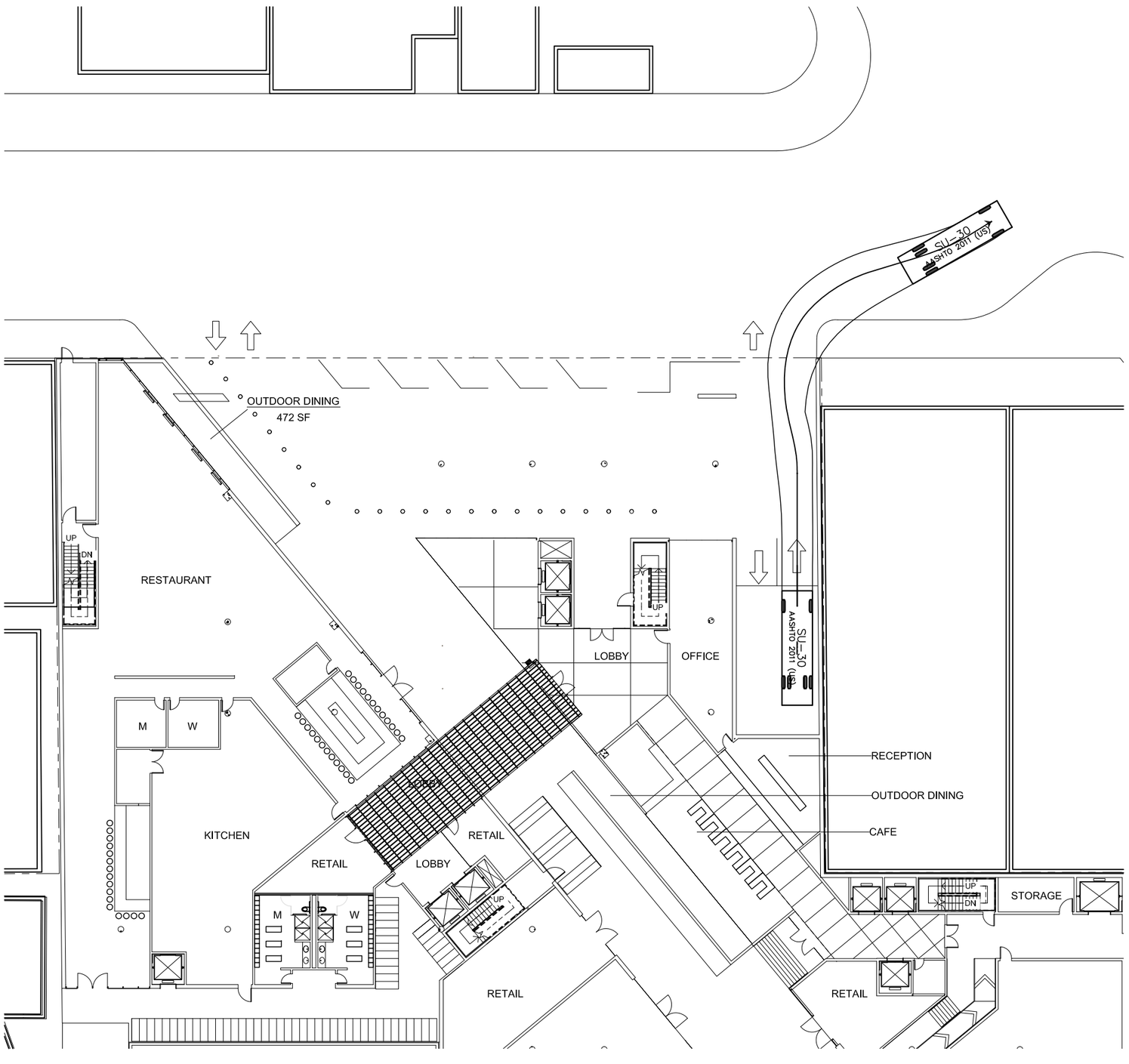
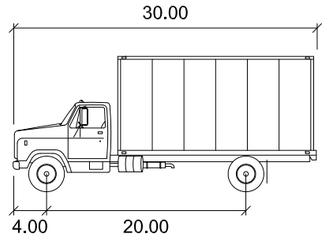
Figure 1

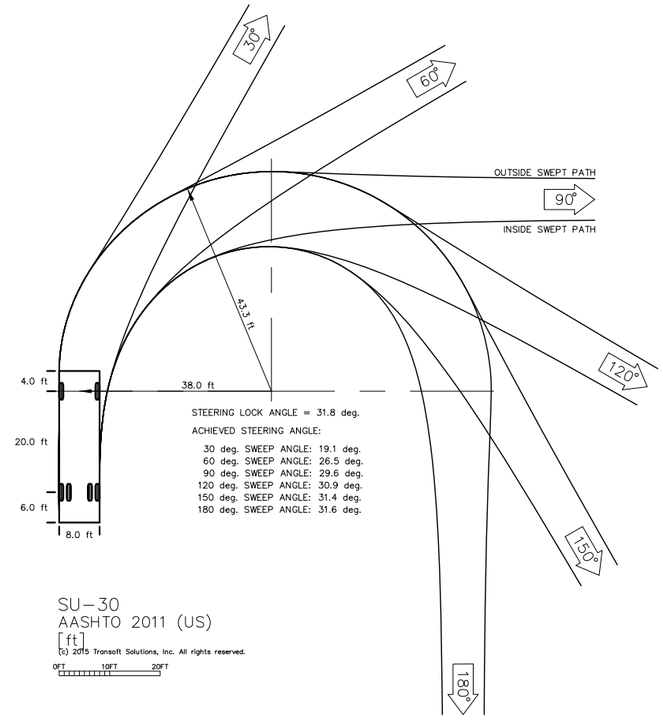
SU-30 Turn Template





SU-30 feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



Source:

Not to Scale

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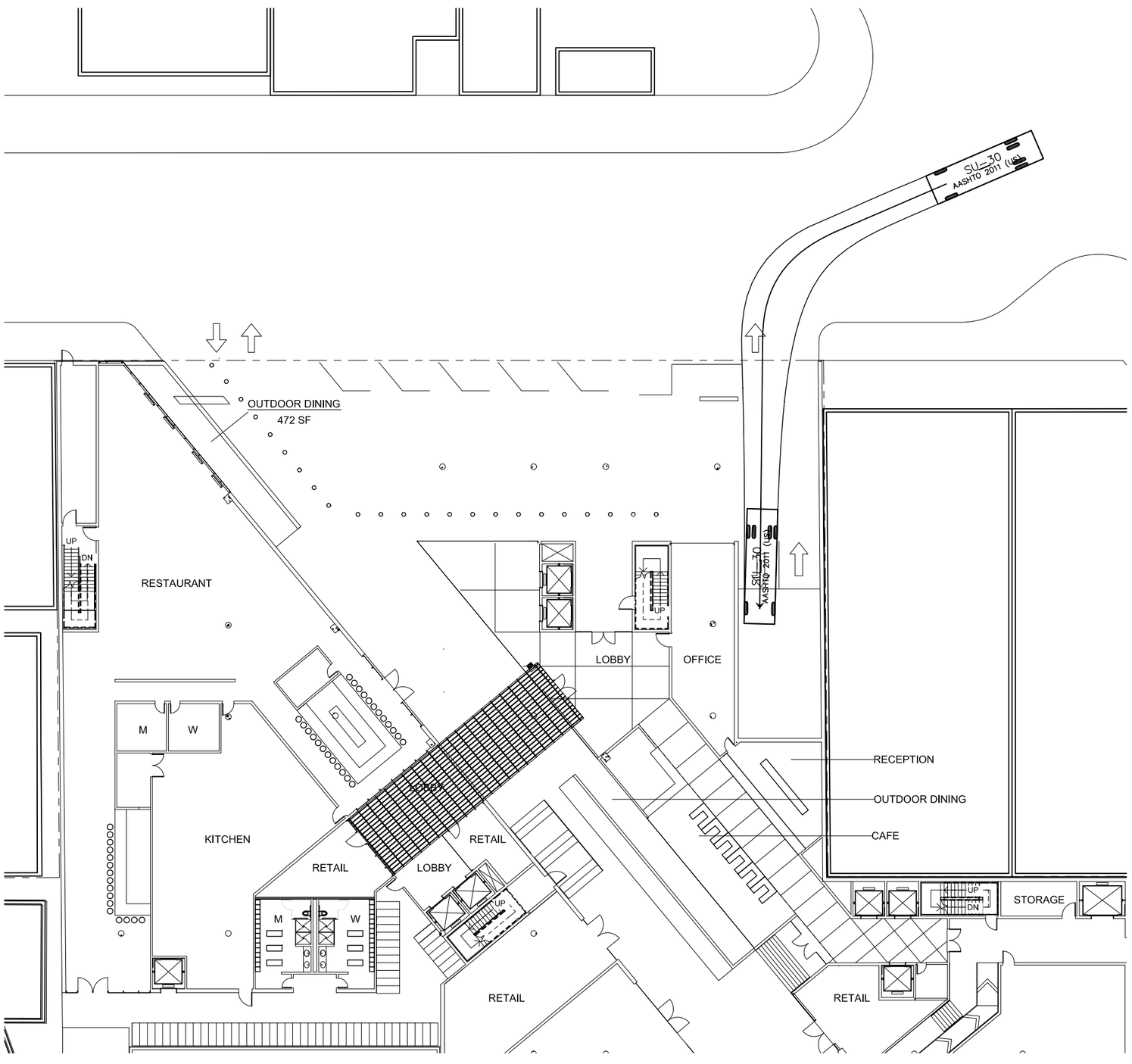
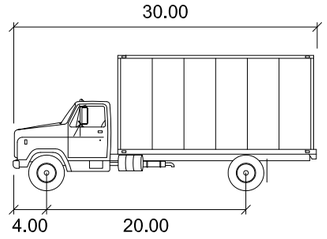
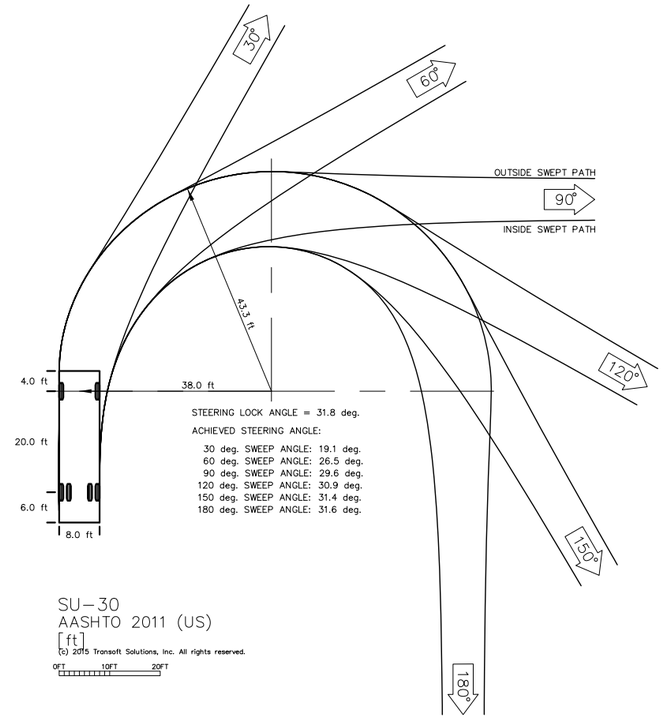
Figure 2
SU-30 Turn Template





SU-30 feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



Source:

Not to Scale

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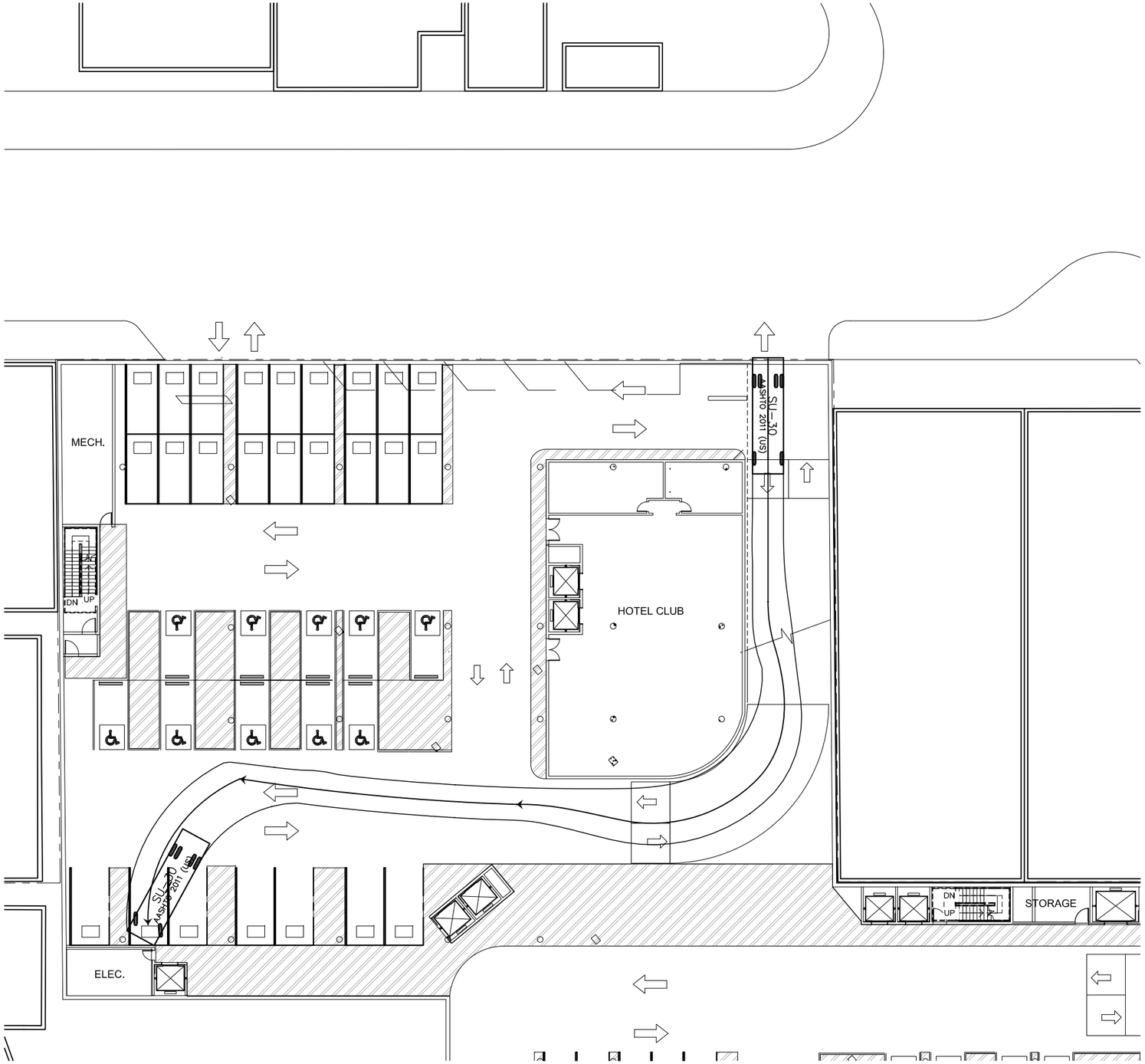
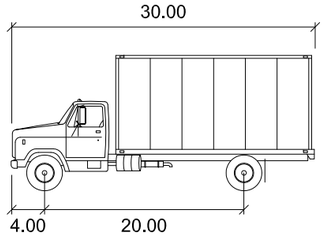
Figure 3
SU-30 Turn Template





SU-30 feet

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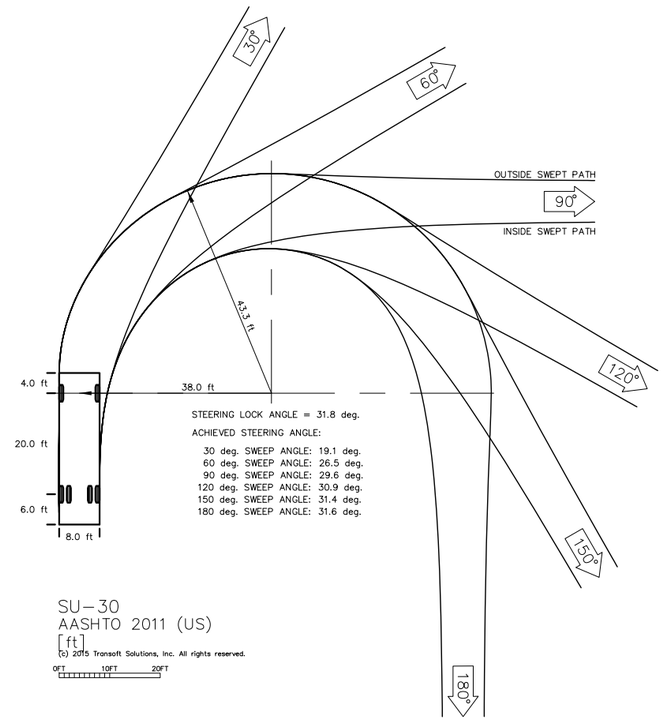
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



Source:

Not to Scale

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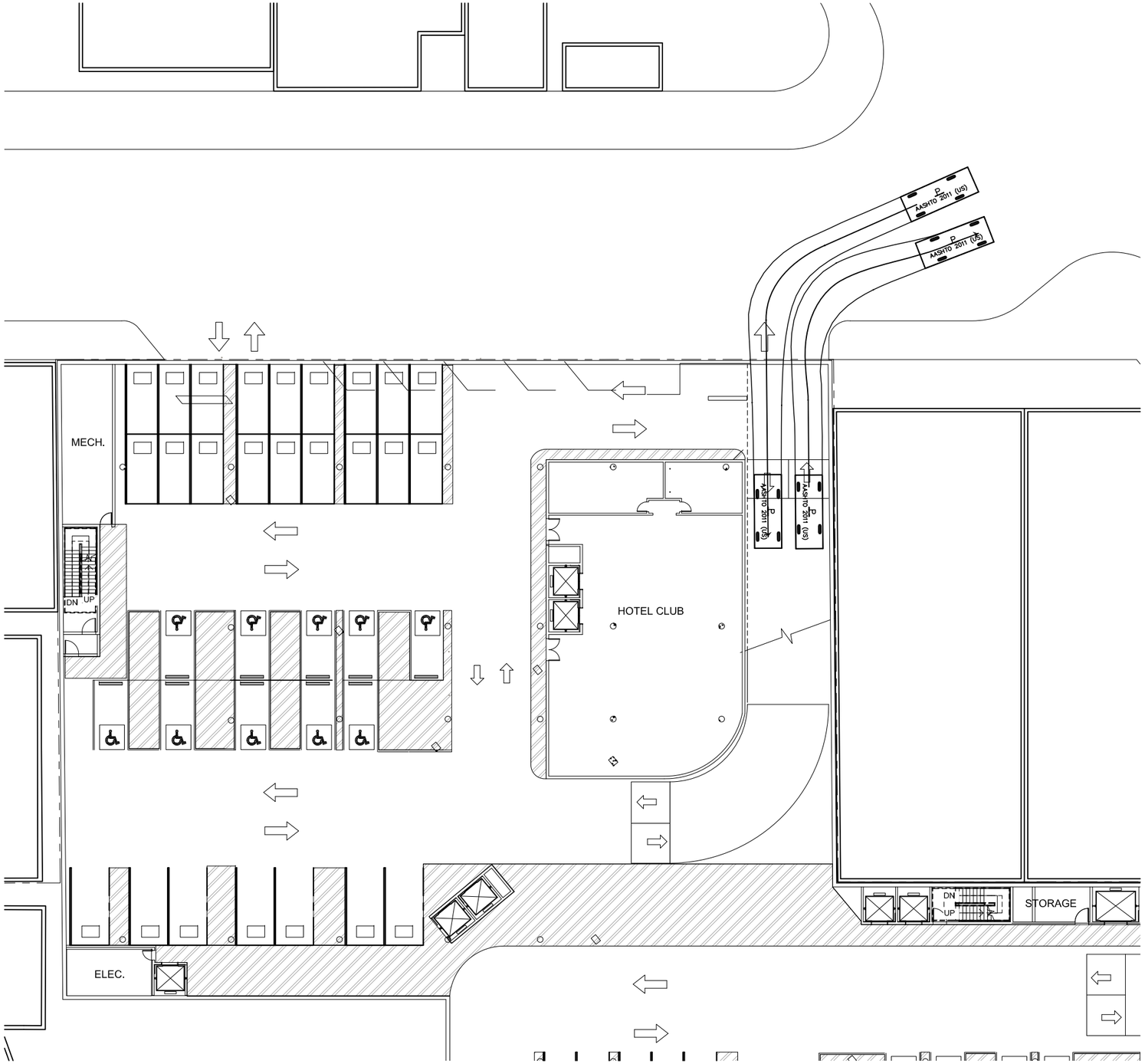
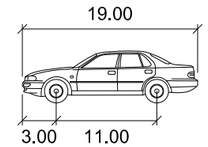
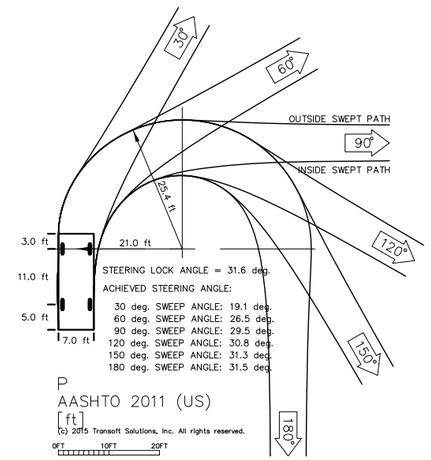
Figure 4
SU-30 Turn Template





P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



Source:

Not to Scale

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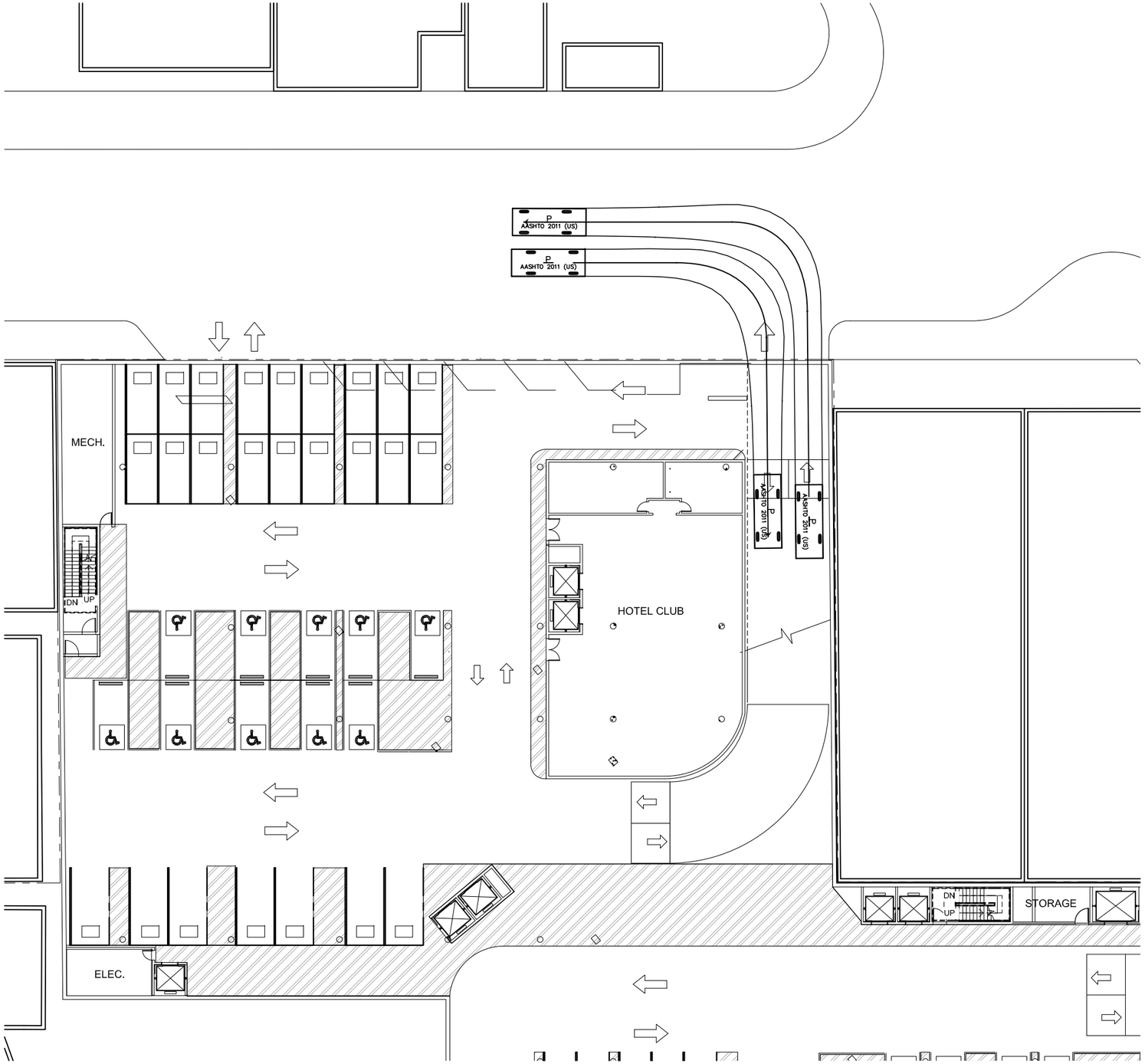
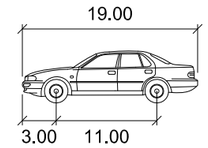
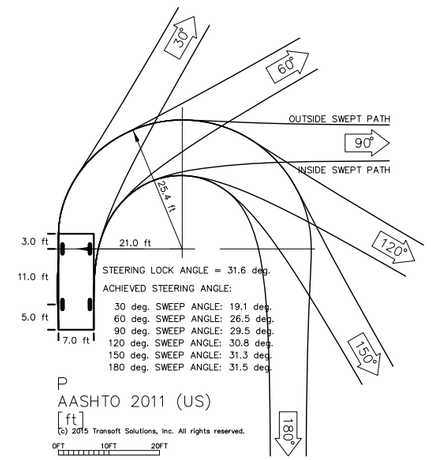
Figure 5
Passenger Car Turn Template





P feet

Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



Source:

Not to Scale

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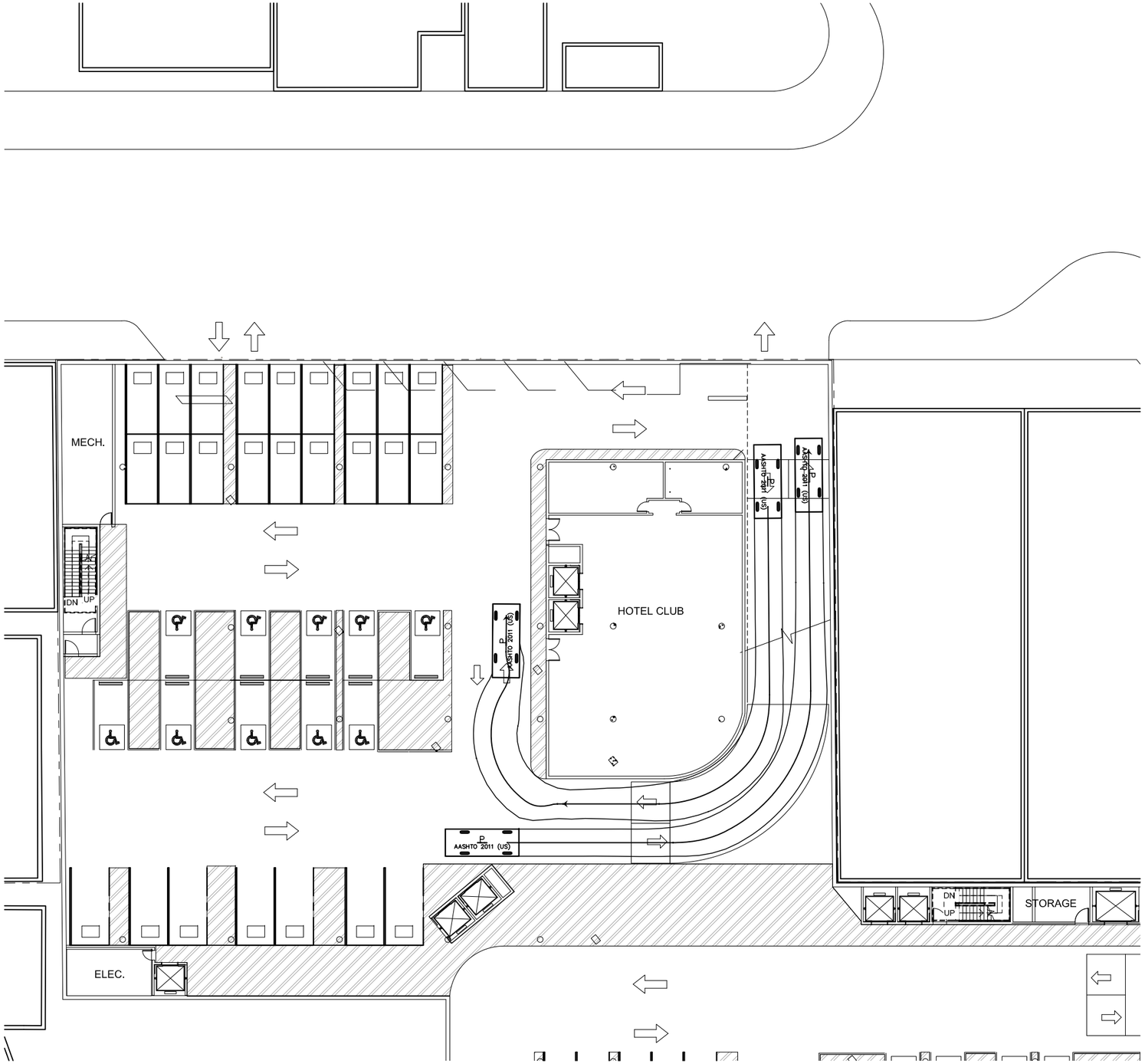
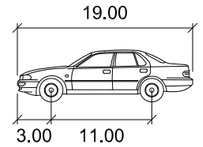
Figure 6

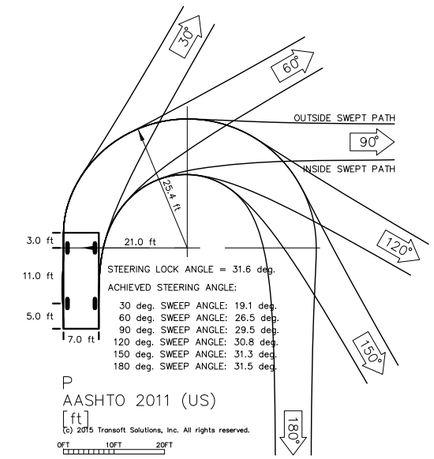
Passenger Car Turn Template





P feet

Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



Source:

Not to Scale

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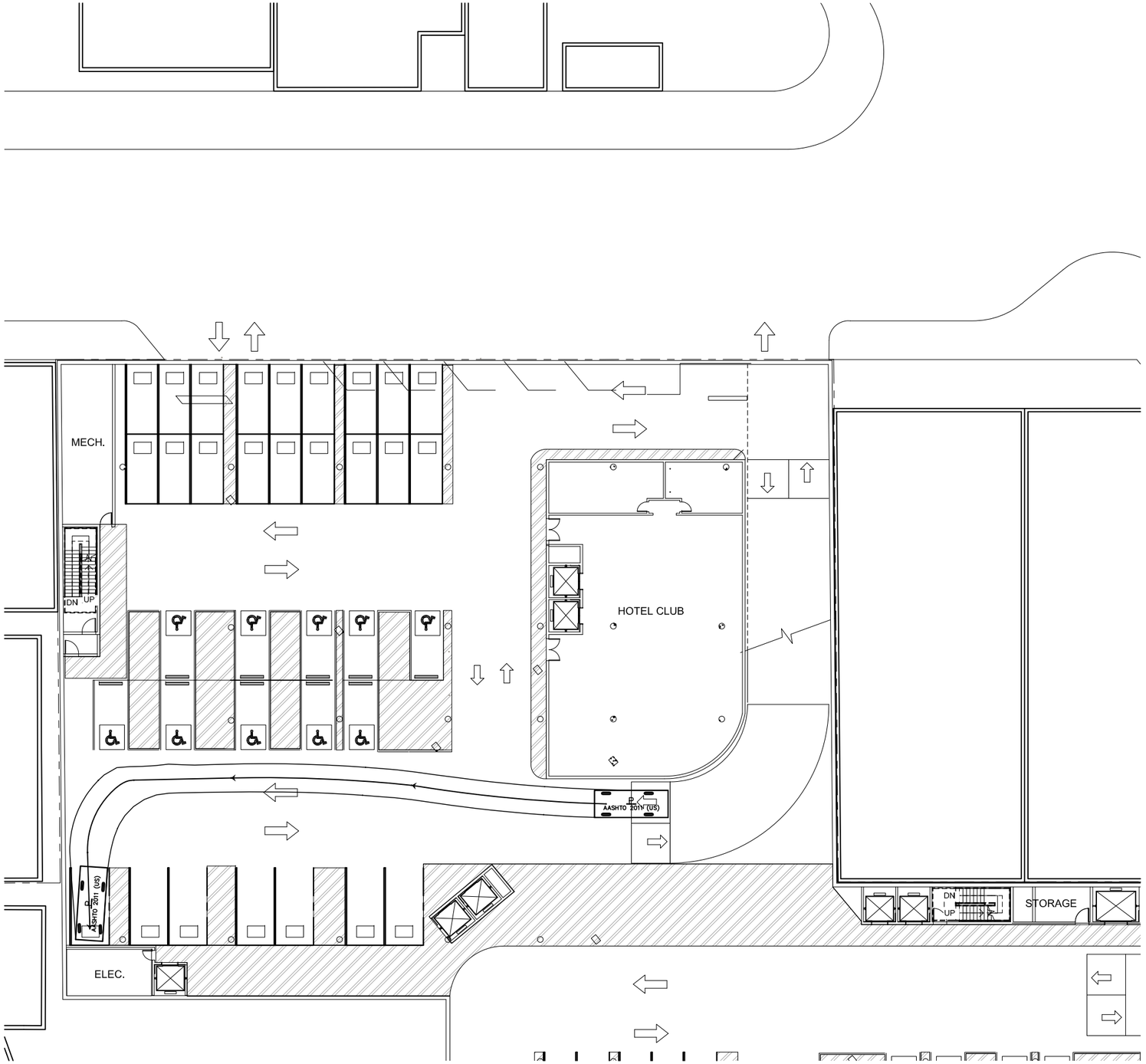
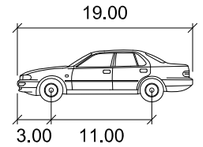
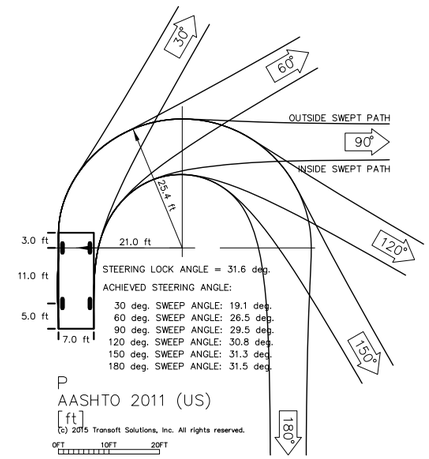
Figure 7
Passenger Car Turn Template





P feet

Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



Source:

Not to Scale

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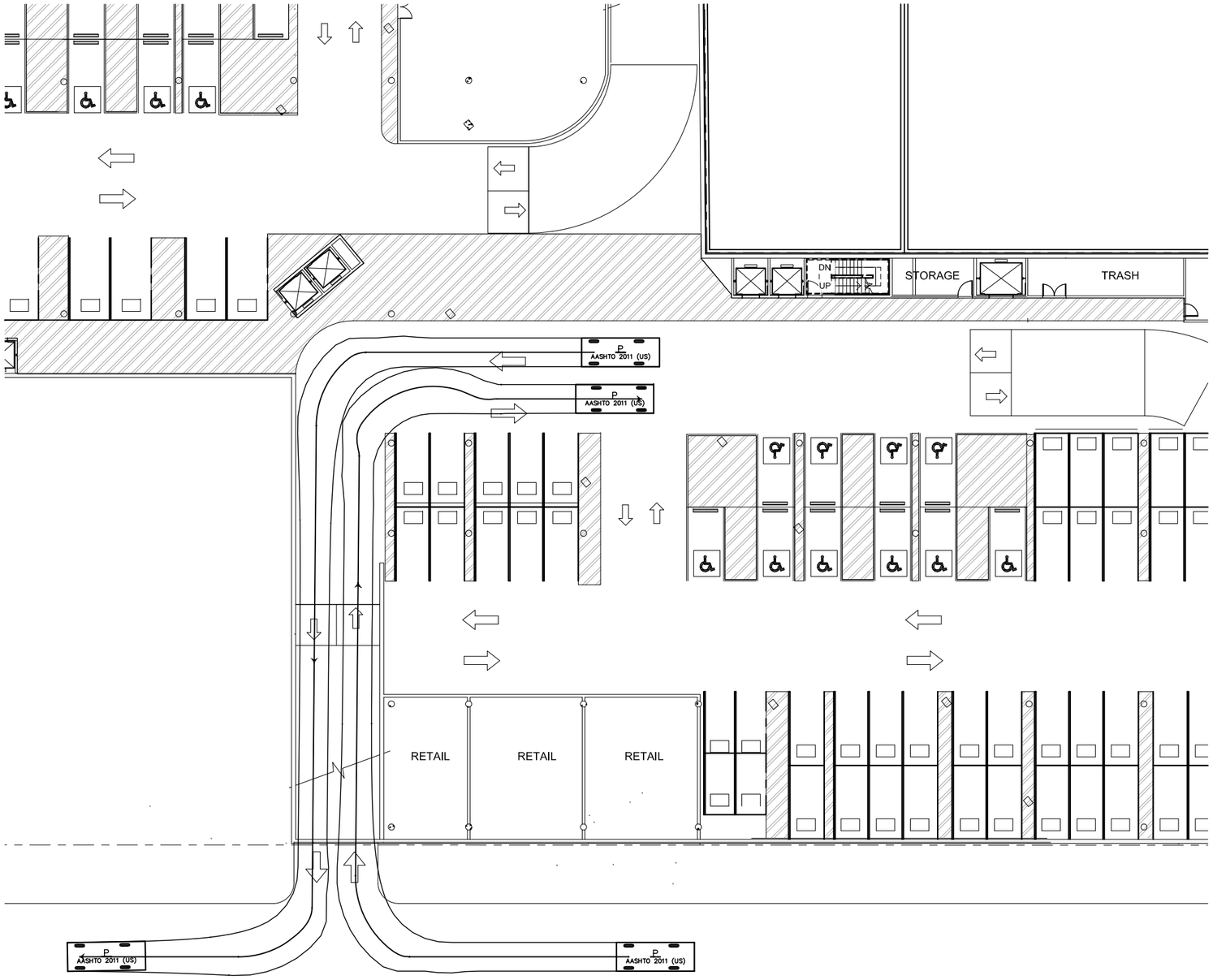
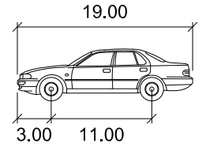
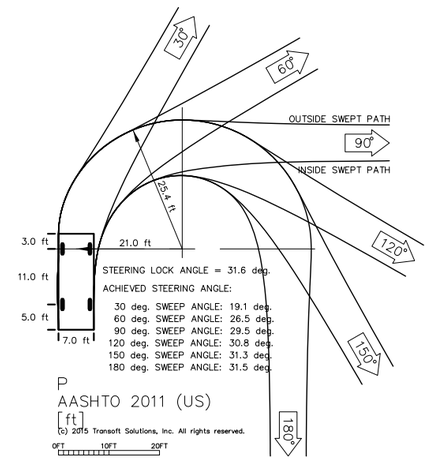
Figure 8

Passenger Car Turn Template





P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



Source:

Not to Scale

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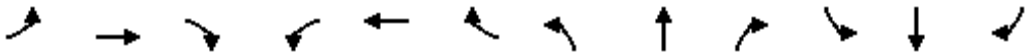
Figure 9

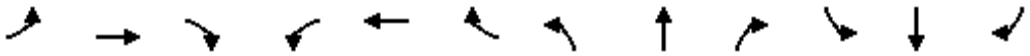
Passenger Car Turn Template

APPENDIX H
Construction Analysis Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	820	95	126	1487	87	165	82	108	86	44	15
Future Volume (vph)	23	820	95	126	1487	87	165	82	108	86	44	15
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (prot)	1509	3018	1350	1509	2993		1433	1483	1350		1723	
Flt Permitted	0.09	1.00	1.00	0.24	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (perm)	148	3018	1350	386	2993		1433	1483	1350		1723	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	863	100	133	1565	92	174	86	114	91	46	16
RTOR Reduction (vph)	0	0	41	0	3	0	0	0	95	0	4	0
Lane Group Flow (vph)	24	863	59	133	1654	0	129	131	19	0	149	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	66.1	66.1	66.1	77.1	77.1		15.3	15.3	22.3		13.6	
Effective Green, g (s)	66.1	66.1	66.1	76.1	77.1		14.8	14.8	20.3		13.1	
Actuated g/C Ratio	0.55	0.55	0.55	0.63	0.64		0.12	0.12	0.17		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	81	1662	743	300	1923		176	182	228		188	
v/s Ratio Prot		0.29		0.02	c0.55		c0.09	0.09	0.00		c0.09	
v/s Ratio Perm	0.16		0.04	0.26					0.01			
v/c Ratio	0.30	0.52	0.08	0.44	0.86		0.73	0.72	0.08		0.79	
Uniform Delay, d1	14.5	17.0	12.7	10.7	17.1		50.7	50.6	42.0		52.1	
Progression Factor	1.00	1.00	1.00	1.18	1.22		1.00	1.00	1.00		1.00	
Incremental Delay, d2	9.1	1.2	0.2	0.5	2.7		14.6	12.8	0.2		22.3	
Delay (s)	23.6	18.1	12.9	13.1	23.5		65.3	63.4	42.2		74.4	
Level of Service	C	B	B	B	C		E	E	D		E	
Approach Delay (s)		17.7			22.7			57.6			74.4	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	836	185	135	1553	19	189	13	198	32	34	24
Future Volume (vph)	9	836	185	135	1553	19	189	13	198	32	34	24
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1307	1282	1509	1491	
Flt Permitted	0.13	1.00	1.00	0.26	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	202	3018	1350	409	3018	1350	1433	1307	1282	1509	1491	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	880	195	142	1635	20	199	14	208	34	36	25
RTOR Reduction (vph)	0	0	74	0	0	5	0	33	115	0	23	0
Lane Group Flow (vph)	9	880	121	142	1635	15	145	110	18	34	38	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	74.4	74.4	74.4	87.4	87.4	87.4	9.0	9.0	18.0	9.6	9.6	
Effective Green, g (s)	74.4	74.4	74.4	86.4	87.4	87.4	9.0	9.0	16.0	8.6	8.6	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.73	0.73	0.08	0.08	0.13	0.07	0.07	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	125	1871	837	367	2198	983	107	98	170	108	106	
v/s Ratio Prot		0.29		0.03	c0.54		c0.10	0.08	0.01	0.02	c0.03	
v/s Ratio Perm	0.04		0.09	0.25		0.01			0.01			
v/c Ratio	0.07	0.47	0.14	0.39	0.74	0.01	1.36	1.12	0.10	0.31	0.36	
Uniform Delay, d1	9.1	12.2	9.5	6.6	9.7	4.5	55.5	55.5	45.7	52.9	53.1	
Progression Factor	0.69	1.15	2.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.7	0.3	0.2	2.3	0.0	208.9	126.7	0.1	1.7	2.1	
Delay (s)	7.3	14.8	25.3	6.9	12.0	4.5	264.4	182.2	45.8	54.6	55.1	
Level of Service	A	B	C	A	B	A	F	F	D	D	E	
Approach Delay (s)		16.6			11.5			167.4			54.9	
Approach LOS		B			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	688	127	23	50	307	3	0	908	526	59	1407	9
Future Volume (vph)	688	127	23	50	307	3	0	908	526	59	1407	9
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2932			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.18	1.00	
Satd. Flow (perm)	2927	1350	1350		2932			3018	1350	289	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	724	134	24	53	323	3	0	956	554	62	1481	9
RTOR Reduction (vph)	0	0	18	0	56	0	0	0	0	0	1	0
Lane Group Flow (vph)	724	134	6	0	323	0	0	956	554	62	1489	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.4	25.4	25.4		15.2			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.4	25.4	25.4		15.2			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	782	360	360		469			1315	588	125	1313	
v/s Ratio Prot	c0.25	0.10	0.00		c0.11			0.32			c0.49	
v/s Ratio Perm									0.41	0.21		
v/c Ratio	0.93	0.37	0.02		0.69			0.73	0.94	0.50	1.13	
Uniform Delay, d1	33.9	28.3	25.6		37.7			22.1	25.7	19.3	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.5	0.2	0.0		4.2			3.5	25.3	13.4	70.4	
Delay (s)	50.4	28.6	25.6		41.8			25.7	50.9	32.7	97.2	
Level of Service	D	C	C		D			C	D	C	F	
Approach Delay (s)	46.4				41.8			34.9			94.6	
Approach LOS	D				D			C			F	

Intersection Summary			
HCM 2000 Control Delay	59.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

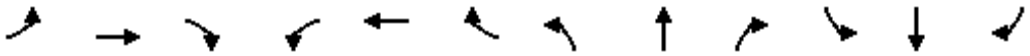
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	64	541	283	32	121	1445	48	38	283	59	24	27
Future Volume (vph)	64	541	283	32	121	1445	48	38	283	59	24	27
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0	4.0	5.3			5.3	5.3		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.95			1.00	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00			1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt	1.00	1.00	0.85	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (prot)	1509	3018	1350	1333	1509	2999			1579	1350		
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (perm)	1509	3018	1350	1333	1509	2999			1579	1350		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	569	298	34	127	1521	51	40	298	62	25	28
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	69	0	0
Lane Group Flow (vph)	67	569	298	34	127	1571	0	0	338	18	0	0
Confl. Bikes (#/hr)				2			19			3		
Turn Type	Prot	NA	Perm	Free	Prot	NA		Split	NA	custom		Split
Protected Phases	5	2			1	6		4	4	4		3
Permitted Phases			2	Free						4		
Actuated Green, G (s)	9.2	40.7	40.7	148.5	28.9	60.4			30.1	30.1		
Effective Green, g (s)	9.2	40.7	40.7	148.5	28.9	60.4			30.1	30.1		
Actuated g/C Ratio	0.06	0.27	0.27	1.00	0.19	0.41			0.20	0.20		
Clearance Time (s)	4.0	5.3	5.3		4.0	5.3			5.3	5.3		
Vehicle Extension (s)	2.0	3.5	3.5		2.0	3.5			2.0	2.0		
Lane Grp Cap (vph)	93	827	370	1333	293	1219			320	273		
v/s Ratio Prot	0.04	0.19			0.08	c0.52			c0.21	0.01		
v/s Ratio Perm			c0.22	0.03								
v/c Ratio	0.72	0.69	0.81	0.03	0.43	1.29			1.06	0.06		
Uniform Delay, d1	68.4	48.2	50.2	0.0	52.6	44.0			59.2	47.8		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	20.6	2.5	12.4	0.0	0.4	136.2			65.9	0.0		
Delay (s)	89.0	50.7	62.6	0.0	53.0	180.2			125.1	47.9		
Level of Service	F	D	E	A	D	F			F	D		
Approach Delay (s)		55.2				170.7			109.3			
Approach LOS		E				F			F			

Intersection Summary			
HCM 2000 Control Delay	115.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	148.5	Sum of lost time (s)	23.9
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWR2
Lane Configurations				
Traffic Volume (vph)	90	224	120	25
Future Volume (vph)	90	224	120	25
Ideal Flow (vphpl)	1620	1620	1620	1620
Total Lost time (s)		5.3	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	0.85	0.86
Flt Protected		0.98	1.00	1.00
Satd. Flow (prot)		2967	1350	1374
Flt Permitted		0.98	1.00	1.00
Satd. Flow (perm)		2967	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	236	126	26
RTOR Reduction (vph)	0	0	0	26
Lane Group Flow (vph)	0	359	126	0
Confl. Bikes (#/hr)				
Turn Type	Split	NA	Free	Prot
Protected Phases	3	3		7
Permitted Phases			Free	
Actuated Green, G (s)		22.1	148.5	2.8
Effective Green, g (s)		22.1	148.5	2.8
Actuated g/C Ratio		0.15	1.00	0.02
Clearance Time (s)		5.3		4.0
Vehicle Extension (s)		2.0		2.0
Lane Grp Cap (vph)		441	1350	25
v/s Ratio Prot		c0.12		0.00
v/s Ratio Perm			c0.09	
v/c Ratio		0.81	0.09	0.02
Uniform Delay, d1		61.2	0.0	71.5
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		10.5	0.1	0.1
Delay (s)		71.7	0.1	71.6
Level of Service		E	A	E
Approach Delay (s)		53.1		
Approach LOS		D		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	620	15	10	1545	1	258	0	7	0	0	0
Future Volume (vph)	14	620	15	10	1545	1	258	0	7	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.99				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95				
Satd. Flow (prot)	1509	3007		1509	3017		1433	1429				
Flt Permitted	0.09	1.00		0.37	1.00		0.95	0.95				
Satd. Flow (perm)	139	3007		587	3017		1433	1429				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	15	674	16	11	1679	1	280	0	8	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	15	689	0	11	1680	0	146	83	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	74.3	74.3		74.3	74.3		15.4	15.4				
Effective Green, g (s)	74.3	74.3		74.3	74.3		15.4	15.4				
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.14	0.14				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	93	2031		396	2037		200	200				
v/s Ratio Prot		0.23			c0.56							
v/s Ratio Perm	0.11			0.02			c0.10	0.06				
v/c Ratio	0.16	0.34		0.03	0.82		0.73	0.41				
Uniform Delay, d1	6.5	7.5		5.9	13.1		45.3	43.2				
Progression Factor	1.00	1.00		0.27	0.25		1.00	1.00				
Incremental Delay, d2	3.7	0.5		0.1	2.3		12.5	1.4				
Delay (s)	10.2	8.0		1.6	5.5		57.8	44.6				
Level of Service	B	A		A	A		E	D				
Approach Delay (s)		8.0			5.5			51.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	629	13	46	1564	0	46
Future Vol, veh/h	629	13	46	1564	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	662	14	48	1646	0	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	676	0	1589	338
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	920	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	911	-	98	658
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	349	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	911	-	93	658
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	331	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	658	-	-	911	-
HCM Lane V/C Ratio	0.074	-	-	0.053	-
HCM Control Delay (s)	10.9	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	602	32	161	1552	44	55	100	143	41	128	13
Future Volume (veh/h)	46	602	32	161	1552	44	55	100	143	41	128	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	48	634	34	169	1634	46	58	105	151	43	135	14
Adj No. of Lanes	1	2	0	1	2	0	0	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	131	1593	85	478	1735	49	86	130	164	184	372	39
Arrive On Green	0.03	0.55	0.55	0.06	0.58	0.58	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1513	2913	156	1513	2998	84	181	494	625	1119	1416	147
Grp Volume(v), veh/h	48	328	340	169	820	860	314	0	0	43	0	149
Grp Sat Flow(s),veh/h/ln	1513	1509	1561	1513	1509	1573	1300	0	0	1119	0	1562
Q Serve(g_s), s	1.5	13.9	13.9	5.3	55.2	55.8	17.5	0.0	0.0	0.0	0.0	8.6
Cycle Q Clear(g_c), s	1.5	13.9	13.9	5.3	55.2	55.8	26.1	0.0	0.0	10.4	0.0	8.6
Prop In Lane	1.00		0.10	1.00		0.05	0.18		0.48	1.00		0.09
Lane Grp Cap(c), veh/h	131	825	853	478	873	911	380	0	0	184	0	410
V/C Ratio(X)	0.37	0.40	0.40	0.35	0.94	0.94	0.83	0.00	0.00	0.23	0.00	0.36
Avail Cap(c_a), veh/h	257	825	853	556	873	911	391	0	0	192	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)	1.00	1.00	1.00	0.28	0.28	0.28	0.86	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	14.4	14.4	10.5	21.4	21.5	39.9	0.0	0.0	33.7	0.0	33.1
Incr Delay (d2), s/veh	0.6	1.4	1.4	0.0	7.0	7.2	11.6	0.0	0.0	0.6	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	0.8	6.1	6.3	2.2	24.5	25.9	10.6	0.0	0.0	1.1	0.0	3.7
LnGrp Delay(d),s/veh	25.7	15.9	15.8	10.6	28.4	28.7	51.6	0.0	0.0	34.4	0.0	33.6
LnGrp LOS	C	B	B	B	C	C	D			C		C
Approach Vol, veh/h		716			1849			314			192	
Approach Delay, s/veh		16.5			26.9			51.6			33.8	
Approach LOS		B			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	11.4	65.4		33.2	7.8	69.0		33.2
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	7.3	15.9		12.4	3.5	57.8		28.1
Green Ext Time (p_c), s	0.1	31.6		2.1	0.0	0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

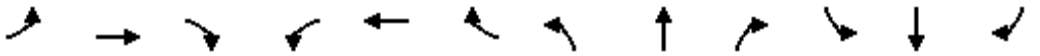
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	671	20	107	1505	101	46	423	61	43	456	79
Future Volume (veh/h)	68	671	20	107	1505	101	46	423	61	43	456	79
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	72	706	21	113	1584	106	48	445	64	45	480	83
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1753	52	552	1702	113	113	705	315	155	600	103
Arrive On Green	0.08	1.00	1.00	0.04	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2991	89	1513	2868	191	844	3018	1350	887	2570	442
Grp Volume(v), veh/h	72	356	371	113	828	862	48	445	64	45	281	282
Grp Sat Flow(s),veh/h/ln	1513	1509	1571	1513	1509	1550	844	1509	1350	887	1509	1503
Q Serve(g_s), s	2.1	0.0	0.0	3.3	54.4	56.0	6.2	14.6	4.2	5.3	19.3	19.5
Cycle Q Clear(g_c), s	2.1	0.0	0.0	3.3	54.4	56.0	25.7	14.6	4.2	19.9	19.3	19.5
Prop In Lane	1.00		0.06	1.00		0.12	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	151	884	921	552	895	920	113	705	315	155	353	351
V/C Ratio(X)	0.48	0.40	0.40	0.20	0.93	0.94	0.42	0.63	0.20	0.29	0.80	0.80
Avail Cap(c_a), veh/h	282	884	921	673	895	920	113	705	315	155	353	351
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	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	0.0	8.4	20.2	20.5	51.9	37.9	33.9	46.8	39.7	39.8
Incr Delay (d2), s/veh	0.8	1.3	1.2	0.1	16.6	17.9	3.5	2.1	0.4	1.5	12.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.3	0.3	1.4	26.7	28.3	1.6	6.3	1.6	1.4	9.3	9.4
LnGrp Delay(d),s/veh	25.1	1.3	1.2	8.4	36.8	38.4	55.4	40.0	34.3	48.3	52.3	53.1
LnGrp LOS	C	A	A	A	D	D	E	D	C	D	D	D
Approach Vol, veh/h		799			1803			557			608	
Approach Delay, s/veh		3.4			35.8			40.7			52.4	
Approach LOS		A			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	9.2	69.8		31.0	8.4	70.6		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 14	* 56		* 26	* 14	* 56		* 26
Max Q Clear Time (g_c+I1), s	5.3	2.0		21.9	4.1	58.0		27.7
Green Ext Time (p_c), s	0.1	43.2		2.5	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	463	45	188	1122	2	171	434	81	0	738	537
Future Volume (vph)	176	463	45	188	1122	2	171	434	81	0	738	537
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3017		2927	2947			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3017		2927	2947			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	487	47	198	1181	2	180	457	85	0	777	565
RTOR Reduction (vph)	0	0	30	0	0	0	0	14	0	0	0	139
Lane Group Flow (vph)	185	487	17	198	1183	0	180	528	0	0	777	426
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	9.2	40.3	40.3	10.9	43.0		7.0	43.8			32.8	32.8
Effective Green, g (s)	9.2	40.8	40.3	10.9	43.5		8.0	44.8			33.8	33.8
Actuated g/C Ratio	0.08	0.37	0.37	0.10	0.40		0.07	0.41			0.31	0.31
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	244	1119	494	290	1193		212	1200			927	414
v/s Ratio Prot	c0.06	0.16		0.07	c0.39		c0.06	0.18			0.26	
v/s Ratio Perm			0.01									c0.32
v/c Ratio	0.76	0.44	0.03	0.68	0.99		0.85	0.44			0.84	1.03
Uniform Delay, d1	49.3	26.0	22.4	47.9	33.1		50.4	23.5			35.5	38.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	11.3	0.6	0.1	5.2	24.0		24.9	1.2			9.0	52.2
Delay (s)	60.6	26.5	22.4	53.1	57.1		75.3	24.7			44.5	90.3
Level of Service	E	C	C	D	E		E	C			D	F
Approach Delay (s)		35.0			56.5			37.3			63.8	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	51.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	10	366	4	0	16	131	278	0	2	3	4
Future Vol, veh/h	0	10	366	4	0	16	131	278	0	2	3	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	398	4	0	17	142	302	0	2	3	4
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	12.4	9.2	8.6
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	3%	11%	0%	55%
Vol Thru, %	33%	96%	89%	0%	15%
Vol Right, %	44%	1%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	380	147	278	20
LT Vol	2	10	16	0	11
Through Vol	3	366	131	0	3
RT Vol	4	4	0	278	6
Lane Flow Rate	10	413	160	302	22
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.015	0.52	0.22	0.353	0.034
Departure Headway (Hd)	5.514	4.531	4.968	4.21	5.642
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	797	725	855	633
Service Time	3.56	2.547	2.684	1.925	3.686
HCM Lane V/C Ratio	0.015	0.518	0.221	0.353	0.035
HCM Control Delay	8.6	12.4	9.1	9.2	8.9
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0	3.1	0.8	1.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	11	3	6
Future Vol, veh/h	0	11	3	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	3	7
Number of Lanes	0	0	1	0

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

Lane

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	10	384	398	41	34	36
Future Vol, veh/h	10	384	398	41	34	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	404	419	43	36	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	462	0	-	0	866	441
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	425	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1099	-	-	-	324	616
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	320	616
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1099	-	-	-	425
HCM Lane V/C Ratio	0.01	-	-	-	0.173
HCM Control Delay (s)	8.3	0	-	-	15.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	350	52	473	386	82	34	219	180	45	242	8
Future Volume (veh/h)	12	350	52	473	386	82	34	219	180	45	242	8
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	13	368	55	498	406	86	36	231	189	47	255	8
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	865	127	641	1034	879	174	376	320	183	363	11
Arrive On Green	0.66	0.65	0.65	0.65	0.65	0.65	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	17	1329	194	960	1588	1350	1112	1588	1350	963	1532	48
Grp Volume(v), veh/h	436	0	0	498	406	86	36	231	189	47	0	263
Grp Sat Flow(s),veh/h/ln	1541	0	0	960	1588	1350	1112	1588	1350	963	0	1580
Q Serve(g_s), s	0.0	0.0	0.0	34.2	10.8	2.1	2.8	11.7	11.2	4.1	0.0	13.7
Cycle Q Clear(g_c), s	12.2	0.0	0.0	46.4	10.8	2.1	16.5	11.7	11.2	15.8	0.0	13.7
Prop In Lane	0.03		0.13	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	1053	0	0	641	1034	879	174	376	320	183	0	374
V/C Ratio(X)	0.41	0.00	0.00	0.78	0.39	0.10	0.21	0.61	0.59	0.26	0.00	0.70
Avail Cap(c_a), veh/h	1053	0	0	641	1034	879	296	551	468	289	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.38	0.38	0.38	1.00	1.00	1.00	0.90	0.00	0.90
Uniform Delay (d), s/veh	7.6	0.0	0.0	15.8	7.4	5.9	39.0	30.7	30.5	37.7	0.0	31.4
Incr Delay (d2), s/veh	1.2	0.0	0.0	3.6	0.4	0.1	0.6	1.6	1.7	0.7	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	5.4	0.0	0.0	11.2	4.7	0.8	0.9	5.3	4.3	1.1	0.0	6.2
LnGrp Delay(d),s/veh	8.8	0.0	0.0	19.4	7.8	5.9	39.6	32.3	32.2	38.4	0.0	33.6
LnGrp LOS	A			B	A	A	D	C	C	D		C
Approach Vol, veh/h		436			990			456			310	
Approach Delay, s/veh		8.8			13.5			32.8			34.4	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.9		26.1		63.9		26.1
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		48.4		18.5		14.2		17.8
Green Ext Time (p_c), s		0.3		2.8		14.5		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	488	43	176	825	122	84	544	141	120	494	48
Future Volume (veh/h)	28	488	43	176	825	122	84	544	141	120	494	48
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	29	514	45	185	868	128	88	573	148	126	520	51
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	110	1621	141	480	916	779	218	753	194	144	957	428
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	563	2809	245	847	1588	1350	838	2377	612	729	3018	1350
Grp Volume(v), veh/h	29	276	283	185	868	128	88	363	358	126	520	51
Grp Sat Flow(s),veh/h/ln	563	1509	1545	847	1588	1350	838	1509	1480	729	1509	1350
Q Serve(g_s), s	5.1	9.4	9.5	14.5	51.0	4.4	9.7	21.6	21.8	9.9	14.2	2.7
Cycle Q Clear(g_c), s	56.0	9.4	9.5	24.0	51.0	4.4	23.9	21.6	21.8	31.7	14.2	2.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	110	871	891	480	916	779	218	478	469	144	957	428
V/C Ratio(X)	0.26	0.32	0.32	0.39	0.95	0.16	0.40	0.76	0.76	0.87	0.54	0.12
Avail Cap(c_a), veh/h	110	871	891	480	916	779	218	478	469	144	957	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	45.9	10.9	11.0	17.2	19.7	9.9	38.0	30.7	30.8	47.2	28.2	24.2
Incr Delay (d2), s/veh	5.3	0.9	0.9	2.3	19.4	0.5	0.4	6.2	6.5	38.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.1	4.2	3.7	27.1	1.7	2.3	9.8	9.7	5.0	6.0	1.0
LnGrp Delay(d),s/veh	51.1	11.8	11.8	19.5	39.1	10.3	38.5	37.0	37.3	85.9	28.5	24.3
LnGrp LOS	D	B	B	B	D	B	D	D	D	F	C	C
Approach Vol, veh/h		588			1181			809			697	
Approach Delay, s/veh		13.8			32.9			37.3			38.6	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 58		* 32		* 58		* 32
Max Q Clear Time (g_c+I1), s		58.0		33.7		53.0		25.9
Green Ext Time (p_c), s		0.0		0.0		3.4		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	443	46	467	904	39	94	615	181	72	848	149
Future Volume (veh/h)	49	443	46	467	904	39	94	615	181	72	848	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	52	466	48	492	952	0	99	647	191	76	893	157
Adj No. of Lanes	1	2	0	1	2	1	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	705	72	267	1172	524	217	1240	366	245	1384	243
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	587	2763	284	1513	3018	1350	535	2299	678	653	2566	451
Grp Volume(v), veh/h	52	254	260	492	952	0	99	424	414	76	525	525
Grp Sat Flow(s),veh/h/ln	587	1509	1538	1513	1509	1350	535	1509	1469	653	1509	1509
Q Serve(g_s), s	10.4	18.1	18.2	10.4	33.8	0.0	21.4	30.6	30.6	11.3	29.5	29.6
Cycle Q Clear(g_c), s	28.3	18.1	18.2	10.4	33.8	0.0	51.0	30.6	30.6	41.9	29.5	29.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.46	1.00		0.30
Lane Grp Cap(c), veh/h	122	385	392	267	1172	524	217	814	792	245	814	813
V/C Ratio(X)	0.42	0.66	0.66	1.84	0.81	0.00	0.46	0.52	0.52	0.31	0.65	0.65
Avail Cap(c_a), veh/h	122	385	392	267	1172	524	217	814	792	245	814	813
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	40.0	40.2	41.0	32.8	0.0	57.9	35.3	35.3	34.8	19.5	19.7
Incr Delay (d2), s/veh	8.8	7.2	7.2	392.3	6.2	0.0	6.8	2.4	2.5	3.3	3.9	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	2.0	8.3	8.5	35.7	15.0	0.0	3.6	13.3	13.0	2.3	13.1	13.2
LnGrp Delay(d),s/veh	61.3	47.3	47.4	433.2	39.0	0.0	64.7	37.7	37.8	38.1	23.5	23.6
LnGrp LOS	E	D	D	F	D		E	D	D	D	C	C
Approach Vol, veh/h		566			1444			937			1126	
Approach Delay, s/veh		48.6			173.3			40.6			24.5	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		43.9		35.8		53.0	12.4	30.3
Green Ext Time (p_c), s		11.1		5.3		7.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

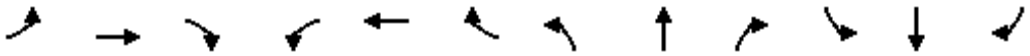
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	733	69	222	1073	43	95	327	81	39	377	165
Future Volume (veh/h)	47	733	69	222	1073	43	95	327	81	39	377	165
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	49	772	73	234	1129	45	100	344	85	41	397	174
Adj No. of Lanes	1	2	0	1	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	256	995	94	332	1059	42	96	482	119	227	410	180
Arrive On Green	0.11	0.34	0.34	0.23	0.68	0.68	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2918	276	1587	3104	124	879	1287	318	1002	1095	480
Grp Volume(v), veh/h	49	419	426	234	576	598	100	0	429	41	0	571
Grp Sat Flow(s),veh/h/ln	1587	1583	1610	1587	1583	1645	879	0	1605	1002	0	1575
Q Serve(g_s), s	1.6	21.3	21.3	8.9	30.7	30.7	1.7	0.0	20.5	3.3	0.0	32.0
Cycle Q Clear(g_c), s	1.6	21.3	21.3	8.9	30.7	30.7	33.7	0.0	20.5	23.8	0.0	32.0
Prop In Lane	1.00		0.17	1.00		0.08	1.00		0.20	1.00		0.30
Lane Grp Cap(c), veh/h	256	540	549	332	540	561	96	0	601	227	0	590
V/C Ratio(X)	0.19	0.78	0.78	0.70	1.07	1.07	1.04	0.00	0.71	0.18	0.00	0.97
Avail Cap(c_a), veh/h	256	540	549	332	540	561	96	0	601	227	0	590
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	26.6	26.6	17.0	14.3	14.3	44.9	0.0	24.0	34.2	0.0	27.6
Incr Delay (d2), s/veh	1.7	10.4	10.3	11.9	57.5	56.9	102.3	0.0	7.1	1.7	0.0	30.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	10.9	11.0	4.8	21.2	22.0	5.1	0.0	10.2	1.0	0.0	18.7
LnGrp Delay(d),s/veh	21.1	37.0	36.9	28.8	71.8	71.2	147.9	0.0	31.1	35.9	0.0	57.7
LnGrp LOS	C	D	D	C	F	F	F		C	D		E
Approach Vol, veh/h		894			1408			529			612	
Approach Delay, s/veh		36.1			64.4			53.2			56.2	
Approach LOS		D			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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	3.6	32.7		34.0	10.9	23.3		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	733	69	222	1073	43	95	327	81	39	377	165
Future Volume (vph)	47	733	69	222	1073	43	95	327	81	39	377	165
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3119		1583	3148		1583	1613		1583	1584	
Flt Permitted	0.13	1.00		0.16	1.00		0.17	1.00		0.33	1.00	
Satd. Flow (perm)	219	3119		267	3148		286	1613		542	1584	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	49	772	73	234	1129	45	100	344	85	41	397	174
RTOR Reduction (vph)	0	8	0	0	3	0	0	10	0	0	18	0
Lane Group Flow (vph)	49	837	0	234	1171	0	100	419	0	41	553	0
Confl. Bikes (#/hr)			3						3			1
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	34.8	31.4		45.7	38.3		33.7	33.7		33.7	33.7	
Effective Green, g (s)	32.8	31.4		45.2	38.3		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.36	0.35		0.50	0.43		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Vehicle Extension (s)	1.0	5.0		1.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	1088		277	1339		107	603		202	593	
v/s Ratio Prot	0.01	0.27		c0.09	c0.37			0.26			0.35	
v/s Ratio Perm	0.14			0.33			c0.35			0.08		
v/c Ratio	0.42	0.77		0.84	0.87		0.93	0.69		0.20	0.93	
Uniform Delay, d1	20.1	26.1		16.3	23.7		27.1	23.8		19.1	27.1	
Progression Factor	1.00	1.00		2.10	0.37		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	5.3		5.2	2.0		70.7	6.5		2.3	23.7	
Delay (s)	21.0	31.3		39.6	10.9		97.8	30.3		21.3	50.8	
Level of Service	C	C		D	B		F	C		C	D	
Approach Delay (s)		30.8			15.7			43.0			48.8	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	777	97	87	1020	39	60	324	109	32	427	337
Future Volume (veh/h)	50	777	97	87	1020	39	60	324	109	32	427	337
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	53	818	102	92	1074	41	63	341	115	34	449	355
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	1063	133	197	1166	45	120	1160	671	573	409	323
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	528	2834	353	635	3110	119	708	2451	1417	977	863	683
Grp Volume(v), veh/h	53	457	463	92	547	568	63	341	115	34	0	804
Grp Sat Flow(s),veh/h/ln	528	1583	1604	635	1583	1646	708	2451	1417	977	0	1546
Q Serve(g_s), s	2.3	15.2	15.2	7.3	20.2	20.2	0.0	0.6	0.3	1.2	0.0	28.4
Cycle Q Clear(g_c), s	22.5	15.2	15.2	22.5	20.2	20.2	28.4	0.6	0.3	1.8	0.0	28.4
Prop In Lane	1.00		0.22	1.00		0.07	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	140	594	602	197	594	617	120	1160	671	573	0	732
V/C Ratio(X)	0.38	0.77	0.77	0.47	0.92	0.92	0.52	0.29	0.17	0.06	0.00	1.10
Avail Cap(c_a), veh/h	140	594	602	197	594	617	120	1160	671	573	0	732
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.58	0.58	0.58	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	16.5	16.5	30.7	21.6	21.6	15.8	0.9	0.9	9.0	0.0	15.9
Incr Delay (d2), s/veh	7.6	9.3	9.2	5.1	15.9	15.4	9.3	0.4	0.3	0.2	0.0	63.5
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	8.1	8.2	1.8	11.4	11.8	1.3	0.5	0.2	0.3	0.0	24.9
LnGrp Delay(d),s/veh	37.1	25.8	25.7	35.8	37.5	37.1	25.1	1.2	1.2	9.2	0.0	79.4
LnGrp LOS	D	C	C	D	D	D	C	A	A	A		F
Approach Vol, veh/h		973			1207			519			838	
Approach Delay, s/veh		26.3			37.1			4.1			76.6	
Approach LOS		C			D			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		30.4		24.5		30.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

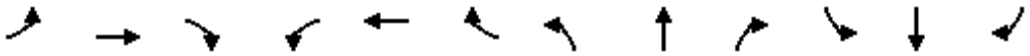
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	718	124	113	1217	113	125	686	88	123	584	158
Future Volume (veh/h)	44	718	124	113	1217	113	125	686	88	123	584	158
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	46	756	131	119	1281	119	132	722	93	129	615	166
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	107	1649	738	401	1526	141	250	1285	575	221	1285	575
Arrive On Green	1.00	1.00	1.00	0.35	0.35	0.35	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	403	3167	1417	655	2931	271	723	3167	1417	700	3167	1417
Grp Volume(v), veh/h	46	756	131	119	690	710	132	722	93	129	615	166
Grp Sat Flow(s),veh/h/ln	403	1583	1417	655	1583	1619	723	1583	1417	700	1583	1417
Q Serve(g_s), s	13.6	0.0	0.0	16.2	48.1	48.5	19.8	21.1	5.0	20.8	17.2	9.5
Cycle Q Clear(g_c), s	62.1	0.0	0.0	16.2	48.1	48.5	36.9	21.1	5.0	41.9	17.2	9.5
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	1649	738	401	825	843	250	1285	575	221	1285	575
V/C Ratio(X)	0.43	0.46	0.18	0.30	0.84	0.84	0.53	0.56	0.16	0.58	0.48	0.29
Avail Cap(c_a), veh/h	107	1649	738	401	825	843	250	1285	575	221	1285	575
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	0.0	24.0	34.4	34.5	39.9	27.4	22.7	43.6	26.3	24.0
Incr Delay (d2), s/veh	10.7	0.8	0.5	0.4	2.2	2.2	7.8	1.8	0.6	10.7	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	1.8	0.2	0.1	3.0	21.6	22.2	4.5	9.5	2.1	4.7	7.7	3.9
LnGrp Delay(d),s/veh	34.8	0.8	0.5	24.4	36.5	36.7	47.7	29.2	23.3	54.3	27.6	25.3
LnGrp LOS	C	A	A	C	D	D	D	C	C	D	C	C
Approach Vol, veh/h		933			1519			947			910	
Approach Delay, s/veh		2.4			35.6			31.2			30.9	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 61		* 47		* 61		* 47
Max Q Clear Time (g_c+I1), s		50.5		43.9		64.1		38.9
Green Ext Time (p_c), s		8.0		2.6		0.0		5.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

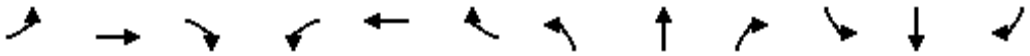


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	514	93	161	1318	98	64	534	21	41	532	45
Future Volume (vph)	95	514	93	161	1318	98	64	534	21	41	532	45
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1322	1509	4336	1313	1509	1588	1332	1509	1568	
Flt Permitted	0.17	1.00	1.00	0.44	1.00	1.00	0.23	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	266	4336	1322	699	4336	1313	367	1588	1332	433	1568	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	541	98	169	1387	103	67	562	22	43	560	47
RTOR Reduction (vph)	0	0	59	0	0	62	0	0	12	0	3	0
Lane Group Flow (vph)	100	541	39	169	1387	41	67	562	10	43	604	0
Confl. Bikes (#/hr)			1			8			2			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	23.9	23.9	23.9	23.9	23.9	23.9	26.1	26.1	26.1	26.1	26.1	
Effective Green, g (s)	23.9	23.9	23.9	23.9	23.9	23.9	26.1	26.1	26.1	26.1	26.1	
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	105	1727	526	278	1727	523	159	690	579	188	682	
v/s Ratio Prot		0.12			0.32			0.35			c0.38	
v/s Ratio Perm	c0.38		0.03	0.24		0.03	0.18		0.01	0.10		
v/c Ratio	0.95	0.31	0.07	0.61	0.80	0.08	0.42	0.81	0.02	0.23	0.89	
Uniform Delay, d1	17.5	12.4	11.2	14.3	16.0	11.2	11.7	14.8	9.6	10.6	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.30	1.29	
Incremental Delay, d2	75.7	0.5	0.3	9.5	4.1	0.3	1.8	7.3	0.0	0.2	4.2	
Delay (s)	93.2	12.9	11.5	23.9	20.0	11.5	13.5	22.2	9.7	14.0	24.3	
Level of Service	F	B	B	C	C	B	B	C	A	B	C	
Approach Delay (s)		23.6			19.9			20.8			23.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

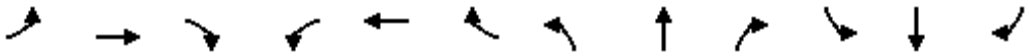
HCM Signalized Intersection Capacity Analysis
1: Doheny Dr & Sunset Blvd

12/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	923	99	165	996	81	177	71	147	113	63	52
Future Volume (vph)	33	923	99	165	996	81	177	71	147	113	63	52
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2984		1433	1477	1350		1702	
Flt Permitted	0.23	1.00	1.00	0.17	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	358	3018	1350	275	2984		1433	1477	1350		1702	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	972	104	174	1048	85	186	75	155	119	66	55
RTOR Reduction (vph)	0	0	55	0	5	0	0	0	100	0	10	0
Lane Group Flow (vph)	35	972	49	174	1128	0	128	133	55	0	230	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	47.0	47.0	47.0	58.0	58.0		14.0	14.0	21.0		14.0	
Effective Green, g (s)	47.0	47.0	47.0	57.0	58.0		13.5	13.5	19.0		13.5	
Actuated g/C Ratio	0.47	0.47	0.47	0.57	0.58		0.14	0.14	0.19		0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	168	1418	634	230	1730		193	199	256		229	
v/s Ratio Prot		0.32		0.05	c0.38		0.09	c0.09	0.01		c0.13	
v/s Ratio Perm	0.10		0.04	c0.38					0.03			
v/c Ratio	0.21	0.69	0.08	0.76	0.65		0.66	0.67	0.22		1.00	
Uniform Delay, d1	15.6	20.7	14.6	14.0	14.2		41.1	41.1	34.2		43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.8	2.7	0.2	13.2	1.9		8.3	8.2	0.4		60.2	
Delay (s)	18.4	23.4	14.8	27.2	16.1		49.4	49.3	34.6		103.4	
Level of Service	B	C	B	C	B		D	D	C		F	
Approach Delay (s)		22.5			17.6			43.9			103.4	
Approach LOS		C			B			D			F	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



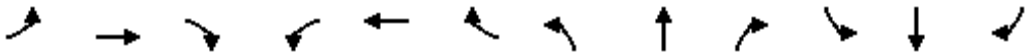
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1061	156	165	1176	22	134	14	211	30	16	22
Future Volume (vph)	11	1061	156	165	1176	22	134	14	211	30	16	22
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88	0.85	1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1271	1282	1509	1451	
Flt Permitted	0.23	1.00	1.00	0.16	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	359	3018	1350	250	3018	1350	1433	1271	1282	1509	1451	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	1117	164	174	1238	23	141	15	222	32	17	23
RTOR Reduction (vph)	0	0	75	0	0	7	0	89	104	0	21	0
Lane Group Flow (vph)	12	1117	89	174	1238	16	127	38	20	32	19	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	54.1	54.1	54.1	67.6	67.6	67.6	9.0	9.0	18.5	9.4	9.4	
Effective Green, g (s)	54.1	54.1	54.1	66.6	67.6	67.6	9.0	9.0	16.5	8.4	8.4	
Actuated g/C Ratio	0.54	0.54	0.54	0.67	0.68	0.68	0.09	0.09	0.16	0.08	0.08	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	194	1632	730	273	2040	912	128	114	211	126	121	
v/s Ratio Prot		c0.37		0.05	c0.41		c0.09	0.03	0.01	c0.02	0.01	
v/s Ratio Perm	0.03		0.07	0.37		0.01			0.01			
v/c Ratio	0.06	0.68	0.12	0.64	0.61	0.02	0.99	0.33	0.10	0.25	0.16	
Uniform Delay, d1	10.9	16.7	11.3	10.6	8.9	5.3	45.5	42.7	35.4	42.9	42.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	2.4	0.3	3.6	1.4	0.0	76.9	1.7	0.1	1.1	0.6	
Delay (s)	11.5	19.1	11.6	14.2	10.3	5.3	122.3	44.4	35.5	43.9	43.1	
Level of Service	B	B	B	B	B	A	F	D	D	D	D	
Approach Delay (s)		18.1			10.7			67.7			43.5	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	86	796	269	81	3	132	1028	50	38	296	98	60
Future Volume (vph)	86	796	269	81	3	132	1028	50	38	296	98	60
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (prot)	1509	3018	1350	1333		1509	2993			1579	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (perm)	1509	3018	1350	1333		1509	2993			1579	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	838	283	85	3	139	1082	53	40	312	103	63
RTOR Reduction (vph)	0	0	0	0	0	0	2	0	0	0	112	0
Lane Group Flow (vph)	91	838	283	85	0	142	1133	0	0	352	54	0
Confl. Bikes (#/hr)				4				7			4	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	12.8	52.4	52.4	159.2		20.2	59.8			29.8	29.8	
Effective Green, g (s)	12.8	52.4	52.4	159.2		20.2	59.8			29.8	29.8	
Actuated g/C Ratio	0.08	0.33	0.33	1.00		0.13	0.38			0.19	0.19	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	121	993	444	1333		191	1124			295	252	
v/s Ratio Prot	0.06	c0.28				0.09	c0.38			c0.22	0.04	
v/s Ratio Perm			0.21	0.06								
v/c Ratio	0.75	0.84	0.64	0.06		0.74	1.01			1.19	0.21	
Uniform Delay, d1	71.6	49.6	45.3	0.0		67.0	49.7			64.7	54.8	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	20.6	6.8	3.1	0.1		12.8	28.8			115.4	0.2	
Delay (s)	92.2	56.4	48.5	0.1		79.8	78.5			180.1	54.9	
Level of Service	F	E	D	A		E	E			F	D	
Approach Delay (s)		53.5					78.7			140.0		
Approach LOS		D					E			F		

Intersection Summary			
HCM 2000 Control Delay	77.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	159.2	Sum of lost time (s)	23.9
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	961	29	25	1091	5	176	1	41	0	0	0
Future Volume (vph)	23	961	29	25	1091	5	176	1	41	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.94				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.97				
Satd. Flow (prot)	1509	3004		1509	3016		1433	1380				
Flt Permitted	0.19	1.00		0.22	1.00		0.95	0.97				
Satd. Flow (perm)	298	3004		352	3016		1433	1380				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	24	1045	32	27	1186	5	191	1	45	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	24	1076	0	27	1191	0	120	91	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	57.7	57.7		57.7	57.7		12.0	12.0				
Effective Green, g (s)	57.7	57.7		57.7	57.7		12.0	12.0				
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.13	0.13				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	191	1925		225	1933		191	184				
v/s Ratio Prot		0.36			c0.39							
v/s Ratio Perm	0.08			0.08			c0.08	0.07				
v/c Ratio	0.13	0.56		0.12	0.62		0.63	0.49				
Uniform Delay, d1	6.3	9.0		6.3	9.6		36.9	36.2				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	1.3	1.2		1.1	1.5		6.3	2.1				
Delay (s)	7.7	10.2		7.4	11.1		43.2	38.3				
Level of Service	A	B		A	B		D	D				
Approach Delay (s)		10.2			11.0			40.8			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	947	12	62	1170	0	72
Future Vol, veh/h	947	12	62	1170	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	997	13	65	1232	0	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1009	0	1749	505
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	746	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	683	-	77	512
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	430	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	683	-	70	512
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	389	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	512	-	-	683	-
HCM Lane V/C Ratio	0.148	-	-	0.096	-
HCM Control Delay (s)	13.2	-	-	10.8	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	938	61	191	1099	65	64	76	212	106	84	18
Future Volume (veh/h)	86	938	61	191	1099	65	64	76	212	106	84	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	91	987	64	201	1157	68	67	80	223	112	88	19
Adj No. of Lanes	1	2	0	1	2	0	0	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	231	1417	92	311	1537	90	100	102	241	201	363	78
Arrive On Green	0.04	0.49	0.49	0.08	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.28
Sat Flow, veh/h	1513	2878	187	1513	2897	170	199	355	839	1072	1267	273
Grp Volume(v), veh/h	91	517	534	201	602	623	370	0	0	112	0	107
Grp Sat Flow(s),veh/h/ln	1513	1509	1555	1513	1509	1558	1393	0	0	1072	0	1540
Q Serve(g_s), s	3.0	26.5	26.5	6.4	31.2	31.3	19.9	0.0	0.0	1.2	0.0	5.3
Cycle Q Clear(g_c), s	3.0	26.5	26.5	6.4	31.2	31.3	25.8	0.0	0.0	26.9	0.0	5.3
Prop In Lane	1.00		0.12	1.00		0.11	0.18		0.60	1.00		0.18
Lane Grp Cap(c), veh/h	231	743	766	311	801	827	442	0	0	201	0	442
V/C Ratio(X)	0.39	0.70	0.70	0.65	0.75	0.75	0.84	0.00	0.00	0.56	0.00	0.24
Avail Cap(c_a), veh/h	327	743	766	350	801	827	442	0	0	201	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.52	0.52	0.52	0.80	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	19.6	19.6	16.4	18.3	18.4	34.5	0.0	0.0	36.0	0.0	27.4
Incr Delay (d2), s/veh	0.4	5.3	5.2	1.2	3.4	3.3	10.8	0.0	0.0	3.4	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	1.3	12.0	12.4	2.7	13.6	14.1	11.2	0.0	0.0	3.2	0.0	2.3
LnGrp Delay(d),s/veh	16.9	25.0	24.8	17.5	21.8	21.7	45.3	0.0	0.0	39.4	0.0	27.6
LnGrp LOS	B	C	C	B	C	C	D			D		C
Approach Vol, veh/h		1142			1426			370			219	
Approach Delay, s/veh		24.2			21.1			45.3			33.6	
Approach LOS		C			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	12.5	54.5		33.0	8.6	58.4		33.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	8.4	28.5		28.9	5.0	33.3		27.8
Green Ext Time (p_c), s	0.1	16.0		0.0	0.0	12.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

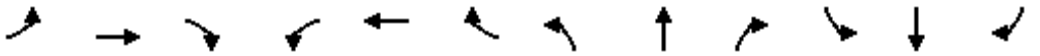
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1085	96	203	1185	76	117	340	177	69	335	82
Future Volume (veh/h)	91	1085	96	203	1185	76	117	340	177	69	335	82
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	96	1142	101	214	1247	80	123	358	186	73	353	86
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	1352	119	377	1503	96	221	852	381	232	680	163
Arrive On Green	0.10	0.96	0.96	0.08	0.52	0.52	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1513	2802	247	1513	2877	184	946	3018	1350	859	2407	579
Grp Volume(v), veh/h	96	614	629	214	653	674	123	358	186	73	220	219
Grp Sat Flow(s),veh/h/ln	1513	1509	1540	1513	1509	1552	946	1509	1350	859	1509	1477
Q Serve(g_s), s	3.2	7.7	7.8	6.9	36.4	36.6	12.6	9.7	11.5	7.6	12.2	12.5
Cycle Q Clear(g_c), s	3.2	7.7	7.8	6.9	36.4	36.6	25.1	9.7	11.5	17.2	12.2	12.5
Prop In Lane	1.00		0.16	1.00		0.12	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	210	728	743	377	789	811	221	852	381	232	426	417
V/C Ratio(X)	0.46	0.84	0.85	0.57	0.83	0.83	0.56	0.42	0.49	0.32	0.52	0.53
Avail Cap(c_a), veh/h	303	728	743	409	789	811	225	866	387	236	433	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)	0.78	0.78	0.78	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	1.0	1.0	11.1	20.1	20.1	40.8	29.2	29.9	36.2	30.1	30.2
Incr Delay (d2), s/veh	0.4	9.2	9.1	0.8	9.8	9.7	3.7	0.5	1.4	1.1	1.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.6	3.6	2.9	17.2	17.7	3.5	4.1	4.4	1.9	5.2	5.3
LnGrp Delay(d),s/veh	18.1	10.2	10.2	11.9	29.9	29.8	44.5	29.7	31.2	37.3	31.5	31.8
LnGrp LOS	B	B	B	B	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1339			1541			667			512	
Approach Delay, s/veh		10.8			27.3			32.8			32.5	
Approach LOS		B			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	12.9	53.5		33.5	8.9	57.6		33.5
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 46		* 29	* 11	* 46		* 29
Max Q Clear Time (g_c+I1), s	8.9	9.8		19.2	5.2	38.6		27.1
Green Ext Time (p_c), s	0.0	31.3		5.3	0.0	6.8		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	816	100	168	739	21	198	576	127	0	691	450
Future Volume (vph)	330	816	100	168	739	21	198	576	127	0	691	450
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3005		2927	2936			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3005		2927	2936			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	859	105	177	778	22	208	606	134	0	727	474
RTOR Reduction (vph)	0	0	72	0	2	0	0	19	0	0	0	217
Lane Group Flow (vph)	347	859	33	177	798	0	208	721	0	0	727	257
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	12.9	31.6	31.6	8.3	28.0		8.8	45.1			32.3	32.3
Effective Green, g (s)	12.9	32.1	31.6	8.3	28.5		9.8	46.1			33.3	33.3
Actuated g/C Ratio	0.13	0.32	0.32	0.08	0.28		0.10	0.46			0.33	0.33
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	377	968	426	242	856		286	1353			1004	449
v/s Ratio Prot	0.12	c0.28		0.06	c0.27		c0.07	0.25			c0.24	
v/s Ratio Perm			0.02									0.19
v/c Ratio	0.92	0.89	0.08	0.73	0.93		0.73	0.53			0.72	0.57
Uniform Delay, d1	43.0	32.2	24.0	44.8	34.8		43.8	19.3			29.3	27.5
Progression Factor	1.00	1.00	1.00	1.30	0.89		1.00	1.00			1.00	1.00
Incremental Delay, d2	27.0	10.6	0.2	7.0	13.6		7.6	1.5			4.5	5.2
Delay (s)	70.0	42.8	24.1	65.3	44.7		51.4	20.8			33.9	32.7
Level of Service	E	D	C	E	D		D	C			C	C
Approach Delay (s)		48.5			48.4			27.5			33.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	29	403	3	0	19	86	202	0	5	8	10
Future Vol, veh/h	0	29	403	3	0	19	86	202	0	5	8	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	438	3	0	21	93	220	0	5	9	11
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	15	9	8.9
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	7%	18%	0%	67%
Vol Thru, %	35%	93%	82%	0%	5%
Vol Right, %	43%	1%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	435	105	202	75
LT Vol	5	29	19	0	50
Through Vol	8	403	86	0	4
RT Vol	10	3	0	202	21
Lane Flow Rate	25	473	114	220	82
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.039	0.615	0.168	0.275	0.129
Departure Headway (Hd)	5.615	4.681	5.307	4.51	5.678
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	631	771	673	793	626
Service Time	3.711	2.729	3.061	2.263	3.76
HCM Lane V/C Ratio	0.04	0.613	0.169	0.277	0.131
HCM Control Delay	8.9	15	9.1	9	9.6
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.1	4.3	0.6	1.1	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	50	4	21
Future Vol, veh/h	0	50	4	21
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	54	4	23
Number of Lanes	0	0	1	0

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

Lane

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	14	464	269	39	55	39
Future Vol, veh/h	14	464	269	39	55	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	488	283	41	58	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	324	0	-	0	822	304
Stage 1	-	-	-	-	304	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1236	-	-	-	344	736
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1236	-	-	-	338	736
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	436
HCM Lane V/C Ratio	0.012	-	-	-	0.227
HCM Control Delay (s)	7.9	0	-	-	15.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	387	84	218	234	84	41	255	228	73	203	26
Future Volume (veh/h)	25	387	84	218	234	84	41	255	228	73	203	26
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	26	407	88	229	246	88	43	268	240	77	214	27
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	744	156	516	964	819	249	446	379	200	388	49
Arrive On Green	0.61	0.61	0.61	1.00	1.00	1.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	39	1226	257	899	1588	1350	1134	1588	1350	888	1383	174
Grp Volume(v), veh/h	521	0	0	229	246	88	43	268	240	77	0	241
Grp Sat Flow(s),veh/h/ln	1522	0	0	899	1588	1350	1134	1588	1350	888	0	1557
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	0.0	3.0	13.1	14.0	7.4	0.0	11.8
Cycle Q Clear(g_c), s	18.0	0.0	0.0	18.8	0.0	0.0	14.9	13.1	14.0	20.5	0.0	11.8
Prop In Lane	0.05		0.17	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	974	0	0	516	964	819	249	446	379	200	0	437
V/C Ratio(X)	0.53	0.00	0.00	0.44	0.26	0.11	0.17	0.60	0.63	0.39	0.00	0.55
Avail Cap(c_a), veh/h	974	0	0	516	964	819	324	551	468	258	0	540
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	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00	0.84	0.00	0.84
Uniform Delay (d), s/veh	10.5	0.0	0.0	0.2	0.0	0.0	33.9	28.0	28.3	36.9	0.0	27.5
Incr Delay (d2), s/veh	2.1	0.0	0.0	2.5	0.6	0.2	0.3	1.3	1.9	1.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	0.0	0.7	0.2	0.1	1.0	5.9	5.4	1.9	0.0	5.2
LnGrp Delay(d),s/veh	12.6	0.0	0.0	2.7	0.6	0.2	34.2	29.3	30.2	37.9	0.0	28.4
LnGrp LOS	B			A	A	A	C	C	C	D		C
Approach Vol, veh/h		521			563			551			318	
Approach Delay, s/veh		12.6			1.4			30.1			30.7	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.9		30.1		59.9		30.1
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		20.8		16.9		20.0		22.5
Green Ext Time (p_c), s		9.2		3.5		9.3		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	567	57	123	440	194	75	427	129	130	453	68
Future Volume (veh/h)	40	567	57	123	440	194	75	427	129	130	453	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	42	597	60	129	463	204	79	449	136	137	477	72
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	342	1478	148	493	847	720	274	798	240	235	1052	471
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	766	2770	278	773	1588	1350	855	2288	688	827	3018	1350
Grp Volume(v), veh/h	42	325	332	129	463	204	79	295	290	137	477	72
Grp Sat Flow(s),veh/h/ln	766	1509	1539	773	1588	1350	855	1509	1467	827	1509	1350
Q Serve(g_s), s	2.0	0.0	0.0	8.4	17.3	7.5	7.1	14.2	14.5	14.5	11.0	3.3
Cycle Q Clear(g_c), s	19.3	0.0	0.0	8.4	17.3	7.5	18.1	14.2	14.5	29.0	11.0	3.3
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	342	805	821	493	847	720	274	526	511	235	1052	471
V/C Ratio(X)	0.12	0.40	0.40	0.26	0.55	0.28	0.29	0.56	0.57	0.58	0.45	0.15
Avail Cap(c_a), veh/h	342	805	821	493	847	720	277	531	517	238	1063	476
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	3.5	0.0	0.0	11.8	13.8	11.5	29.7	23.7	23.8	35.6	22.7	20.2
Incr Delay (d2), s/veh	0.6	1.3	1.2	1.3	2.5	1.0	0.2	0.8	0.9	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	0.5	0.3	0.3	2.0	8.1	3.0	1.7	6.0	5.9	3.5	4.6	1.2
LnGrp Delay(d),s/veh	4.1	1.3	1.2	13.0	16.3	12.5	29.9	24.5	24.7	37.8	22.8	20.2
LnGrp LOS	A	A	A	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h		699			796			664			686	
Approach Delay, s/veh		1.4			14.8			25.2			25.5	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.3		36.7		53.3		36.7
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		21.3		31.0		19.3		20.1
Green Ext Time (p_c), s		8.3		0.4		8.4		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	550	110	231	630	81	72	813	230	84	822	140
Future Volume (veh/h)	114	550	110	231	630	81	72	813	230	84	822	140
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	120	579	116	243	663	0	76	856	242	88	865	147
Adj No. of Lanes	1	2	0	1	2	1	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	226	639	128	201	1172	524	230	1253	354	159	1392	236
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	769	2508	501	1513	3018	1350	555	2325	657	511	2581	439
Grp Volume(v), veh/h	120	348	347	243	663	0	76	555	543	88	506	506
Grp Sat Flow(s),veh/h/ln	769	1509	1500	1513	1509	1350	555	1509	1472	511	1509	1511
Q Serve(g_s), s	17.4	26.8	26.9	10.4	20.7	0.0	15.5	41.3	41.4	20.1	27.9	28.0
Cycle Q Clear(g_c), s	22.1	26.8	26.9	10.4	20.7	0.0	43.4	41.3	41.4	61.5	27.9	28.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.45	1.00		0.29
Lane Grp Cap(c), veh/h	226	385	382	201	1172	524	230	814	794	159	814	815
V/C Ratio(X)	0.53	0.90	0.91	1.21	0.57	0.00	0.33	0.68	0.68	0.55	0.62	0.62
Avail Cap(c_a), veh/h	226	385	382	201	1172	524	230	814	794	159	814	815
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	43.3	43.5	36.7	28.8	0.0	53.7	39.7	39.7	47.0	19.2	19.3
Incr Delay (d2), s/veh	7.3	23.7	24.4	130.3	2.0	0.0	3.8	4.6	4.7	13.1	3.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	13.6	13.8	12.2	8.9	0.0	2.6	18.4	18.0	3.4	12.3	12.4
LnGrp Delay(d),s/veh	50.9	67.0	67.9	166.9	30.8	0.0	57.6	44.3	44.5	60.1	22.7	22.8
LnGrp LOS	D	E	E	F	C		E	D	D	E	C	C
Approach Vol, veh/h		815			906			1174			1100	
Approach Delay, s/veh		65.0			67.3			45.3			25.8	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		63.5		22.7		45.4	12.4	28.9
Green Ext Time (p_c), s		0.2		7.9		11.7	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	48.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	749	87	197	720	88	97	379	130	78	337	74
Future Volume (veh/h)	81	749	87	197	720	88	97	379	130	78	337	74
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	85	788	92	207	758	93	102	399	137	82	355	78
Adj No. of Lanes	1	2	0	1	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	313	987	115	318	980	120	214	424	146	119	475	104
Arrive On Green	0.10	0.35	0.35	0.11	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2850	333	1587	2832	347	998	1182	406	908	1324	291
Grp Volume(v), veh/h	85	438	442	207	424	427	102	0	536	82	0	433
Grp Sat Flow(s),veh/h/ln	1587	1583	1599	1587	1583	1596	998	0	1588	908	0	1615
Q Serve(g_s), s	2.6	20.0	20.0	6.6	19.1	19.1	8.0	0.0	26.1	2.6	0.0	18.8
Cycle Q Clear(g_c), s	2.6	20.0	20.0	6.6	19.1	19.1	26.8	0.0	26.1	28.7	0.0	18.8
Prop In Lane	1.00		0.21	1.00		0.22	1.00		0.26	1.00		0.18
Lane Grp Cap(c), veh/h	313	548	554	318	548	553	214	0	570	119	0	579
V/C Ratio(X)	0.27	0.80	0.80	0.65	0.77	0.77	0.48	0.00	0.94	0.69	0.00	0.75
Avail Cap(c_a), veh/h	313	548	554	318	548	553	214	0	570	119	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.2	23.6	23.6	17.7	23.3	23.3	34.2	0.0	24.8	39.5	0.0	22.5
Incr Delay (d2), s/veh	2.1	11.5	11.5	9.9	10.2	10.1	7.5	0.0	25.6	27.8	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.4	10.5	3.7	9.9	10.0	2.6	0.0	15.4	2.7	0.0	9.7
LnGrp Delay(d),s/veh	18.3	35.2	35.1	27.6	33.5	33.5	41.7	0.0	50.4	67.4	0.0	31.0
LnGrp LOS	B	D	D	C	C	C	D		D	E		C
Approach Vol, veh/h		965			1058			638			515	
Approach Delay, s/veh		33.6			32.3			49.0			36.8	
Approach LOS		C			C			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	13.0	33.0		34.0	13.0	33.0		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 9	* 28		* 29	* 9	* 28		* 29
Max Q Clear Time (g_c+I1), s	4.6	21.1		30.7	8.6	22.0		28.8
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0	4.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	875	108	109	812	86	89	323	162	81	300	157
Future Volume (veh/h)	96	875	108	109	812	86	89	323	162	81	300	157
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	101	921	114	115	855	91	94	340	171	85	316	165
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1064	132	162	1083	115	350	1160	671	446	489	255
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.16	0.16	0.16	0.47	0.47	0.46
Sat Flow, veh/h	619	2837	351	570	2888	307	955	2451	1417	929	1032	539
Grp Volume(v), veh/h	101	514	521	115	469	477	94	340	171	85	0	481
Grp Sat Flow(s),veh/h/ln	619	1583	1605	570	1583	1612	955	2451	1417	929	0	1572
Q Serve(g_s), s	5.9	18.0	18.0	4.5	16.6	16.6	5.6	7.4	6.4	3.9	0.0	14.0
Cycle Q Clear(g_c), s	22.5	18.0	18.0	22.5	16.6	16.6	19.6	7.4	6.4	11.3	0.0	14.0
Prop In Lane	1.00		0.22	1.00		0.19	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	181	594	602	162	594	605	350	1160	671	446	0	744
V/C Ratio(X)	0.56	0.87	0.87	0.71	0.79	0.79	0.27	0.29	0.26	0.19	0.00	0.65
Avail Cap(c_a), veh/h	181	594	602	162	594	605	350	1160	671	446	0	744
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.68	0.68	0.68	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	17.4	17.4	32.9	20.2	20.3	28.3	16.4	16.0	13.9	0.0	12.1
Incr Delay (d2), s/veh	11.9	15.5	15.4	15.7	6.9	6.8	1.3	0.4	0.6	0.9	0.0	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	2.3	10.4	10.5	2.6	8.3	8.5	1.6	5.1	2.6	1.1	0.0	6.9
LnGrp Delay(d),s/veh	40.1	32.9	32.8	48.6	27.2	27.1	29.5	16.9	16.6	14.9	0.0	16.4
LnGrp LOS	D	C	C	D	C	C	C	B	B	B		B
Approach Vol, veh/h		1136			1061			605			566	
Approach Delay, s/veh		33.5			29.4			18.8			16.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		16.0		24.5		21.6
Green Ext Time (p_c), s		0.0		4.6		0.0		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	900	175	96	886	117	129	454	169	188	495	124
Future Volume (veh/h)	65	900	175	96	886	117	129	454	169	188	495	124
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	68	947	184	101	933	123	136	478	178	198	521	131
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	142	1465	655	272	1301	172	352	1470	658	360	1470	658
Arrive On Green	0.93	0.93	0.93	0.15	0.15	0.15	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	558	3167	1417	520	2814	371	815	3167	1417	812	3167	1417
Grp Volume(v), veh/h	68	947	184	101	525	531	136	478	178	198	521	131
Grp Sat Flow(s),veh/h/ln	558	1583	1417	520	1583	1601	815	1583	1417	812	1583	1417
Q Serve(g_s), s	13.6	6.7	1.6	21.6	37.9	37.9	15.4	11.4	9.2	24.4	12.7	6.6
Cycle Q Clear(g_c), s	51.5	6.7	1.6	28.3	37.9	37.9	28.1	11.4	9.2	35.8	12.7	6.6
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	1465	655	272	732	741	352	1470	658	360	1470	658
V/C Ratio(X)	0.48	0.65	0.28	0.37	0.72	0.72	0.39	0.33	0.27	0.55	0.35	0.20
Avail Cap(c_a), veh/h	142	1465	655	272	732	741	352	1470	658	360	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	2.7	2.5	42.4	43.4	43.4	29.6	20.3	19.7	31.6	20.6	19.0
Incr Delay (d2), s/veh	9.8	1.9	0.9	0.8	1.2	1.2	3.2	0.6	1.0	6.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.8	0.7	3.2	16.9	17.1	3.8	5.1	3.8	6.0	5.6	2.7
LnGrp Delay(d),s/veh	31.8	4.6	3.4	43.2	44.6	44.6	32.8	20.9	20.7	37.6	21.3	19.7
LnGrp LOS	C	A	A	D	D	D	C	C	C	D	C	B
Approach Vol, veh/h		1199			1157			792			850	
Approach Delay, s/veh		6.0			44.5			22.9			24.8	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		39.9		37.8		53.5		30.1
Green Ext Time (p_c), s		10.0		8.3		0.1		10.1

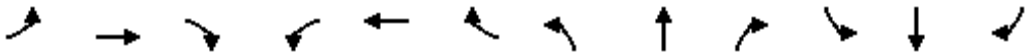
Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

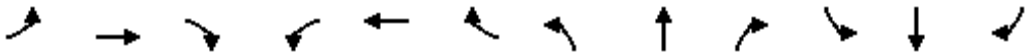
HCM Signalized Intersection Capacity Analysis
1: Doheny Dr & Sunset Blvd

12/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	1040	52	156	940	83	169	63	234	131	86	38
Future Volume (vph)	18	1040	52	156	940	83	169	63	234	131	86	38
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (prot)	1509	3018	1350	1509	2981		1433	1475	1350		1720	
Flt Permitted	0.25	1.00	1.00	0.17	1.00		0.95	0.98	1.00		0.97	
Satd. Flow (perm)	399	3018	1350	265	2981		1433	1475	1350		1720	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	1095	55	164	989	87	178	66	246	138	91	40
RTOR Reduction (vph)	0	0	25	0	5	0	0	0	78	0	5	0
Lane Group Flow (vph)	19	1095	30	164	1071	0	121	123	168	0	264	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	66.2	66.2	66.2	77.2	77.2		14.8	14.8	21.8		14.0	
Effective Green, g (s)	66.2	66.2	66.2	76.2	77.2		14.3	14.3	19.8		13.5	
Actuated g/C Ratio	0.55	0.55	0.55	0.64	0.64		0.12	0.12	0.17		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	220	1664	744	230	1917		170	175	222		193	
v/s Ratio Prot		0.36		0.04	c0.36		0.08	0.08	c0.04		c0.15	
v/s Ratio Perm	0.05		0.02	c0.42					0.09			
v/c Ratio	0.09	0.66	0.04	0.71	0.56		0.71	0.70	0.76		1.37	
Uniform Delay, d1	12.7	18.9	12.3	13.4	11.9		50.9	50.8	47.8		53.2	
Progression Factor	1.00	1.00	1.00	1.85	1.53		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.8	2.1	0.1	5.0	0.6		13.2	12.1	13.8		194.3	
Delay (s)	13.4	21.0	12.4	29.7	18.8		64.0	62.9	61.6		247.5	
Level of Service	B	C	B	C	B		E	E	E		F	
Approach Delay (s)		20.5			20.2			62.5			247.5	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1312	111	160	1080	25	230	41	356	26	17	15
Future Volume (vph)	9	1312	111	160	1080	25	230	41	356	26	17	15
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.91	0.95	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1286	1282	1509	1476	
Flt Permitted	0.25	1.00	1.00	0.12	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	397	3018	1350	189	3018	1350	1433	1286	1282	1509	1476	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	1381	117	168	1137	26	242	43	375	27	18	16
RTOR Reduction (vph)	0	0	43	0	0	7	0	70	188	0	15	0
Lane Group Flow (vph)	9	1381	74	168	1137	19	218	155	29	27	19	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	74.6	74.6	74.6	87.6	87.6	87.6	9.0	9.0	18.0	9.4	9.4	
Effective Green, g (s)	74.6	74.6	74.6	86.6	87.6	87.6	9.0	9.0	16.0	8.4	8.4	
Actuated g/C Ratio	0.62	0.62	0.62	0.72	0.73	0.73	0.08	0.08	0.13	0.07	0.07	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	246	1876	839	224	2203	985	107	96	170	105	103	
v/s Ratio Prot		0.46		c0.05	0.38		c0.15	0.12	0.01	c0.02	0.01	
v/s Ratio Perm	0.02		0.05	c0.49		0.01			0.01			
v/c Ratio	0.04	0.74	0.09	0.75	0.52	0.02	2.04	1.61	0.17	0.26	0.19	
Uniform Delay, d1	8.8	15.8	9.1	13.8	7.0	4.4	55.5	55.5	46.1	52.8	52.6	
Progression Factor	0.90	0.68	0.92	1.01	1.00	1.01	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	2.4	0.2	11.8	0.9	0.0	497.8	317.9	0.2	1.3	0.9	
Delay (s)	8.1	13.1	8.6	25.7	7.9	4.5	553.3	373.4	46.3	54.1	53.5	
Level of Service	A	B	A	C	A	A	F	F	D	D	D	
Approach Delay (s)		12.7			10.1			325.3			53.8	
Approach LOS		B			B			F			D	

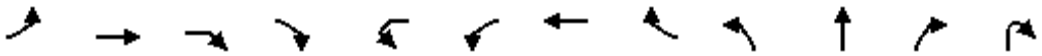
Intersection Summary			
HCM 2000 Control Delay	70.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	708	138	53	22	298	11	0	1225	611	56	1073	8
Future Volume (vph)	708	138	53	22	298	11	0	1225	611	56	1073	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		0.99			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2924			3018	1350	1509	3014	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2924			3018	1350	153	3014	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	745	145	56	23	314	12	0	1289	643	59	1129	8
RTOR Reduction (vph)	0	0	41	0	57	0	0	0	0	0	1	0
Lane Group Flow (vph)	745	145	15	0	292	0	0	1289	643	59	1136	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	26.1	26.1	26.1		14.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	26.1	26.1	26.1		14.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.15			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	804	370	370		446			1315	588	66	1313	
v/s Ratio Prot	c0.25	0.11	0.01		c0.10			0.43			0.38	
v/s Ratio Perm									c0.48	0.38		
v/c Ratio	0.93	0.39	0.04		0.66			0.98	1.09	0.89	0.87	
Uniform Delay, d1	33.5	28.0	25.3		37.9			26.4	26.8	24.8	24.3	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.2	0.3	0.0		3.5			20.5	65.2	83.6	7.8	
Delay (s)	49.7	28.3	25.3		41.3			46.9	92.0	108.3	32.1	
Level of Service	D	C	C		D			D	F	F	C	
Approach Delay (s)	45.0				41.3			61.9			35.9	
Approach LOS	D				D			E			D	

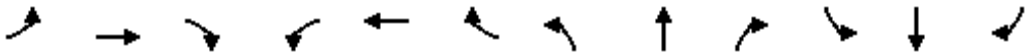
Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	83	834	353	131	8	135	945	67	34	294	100	72
Future Volume (vph)	83	834	353	131	8	135	945	67	34	294	100	72
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (prot)	1509	3018	1350	1331		1509	2983			1580	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			0.99	1.00	
Satd. Flow (perm)	1509	3018	1350	1331		1509	2983			1580	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	878	372	138	8	142	995	71	36	309	105	76
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	112	0
Lane Group Flow (vph)	87	878	372	138	0	150	1063	0	0	345	69	0
Confl. Bikes (#/hr)				8				5			1	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	12.4	54.1	54.1	158.9		17.4	59.1			29.8	29.8	
Effective Green, g (s)	12.4	54.1	54.1	158.9		17.4	59.1			29.8	29.8	
Actuated g/C Ratio	0.08	0.34	0.34	1.00		0.11	0.37			0.19	0.19	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	117	1027	459	1331		165	1109			296	253	
v/s Ratio Prot	0.06	c0.29				0.10	c0.36			c0.22	0.05	
v/s Ratio Perm			0.28	c0.10								
v/c Ratio	0.74	0.85	0.81	0.10		0.91	0.96			1.17	0.27	
Uniform Delay, d1	71.7	48.7	47.7	0.0		70.0	48.7			64.5	55.3	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	19.8	7.3	10.7	0.2		43.4	17.8			104.9	0.2	
Delay (s)	91.5	56.0	58.4	0.2		113.4	66.5			169.4	55.5	
Level of Service	F	E	E	A		F	E			F	E	
Approach Delay (s)		53.5					72.3			130.2		
Approach LOS		D					E			F		

Intersection Summary			
HCM 2000 Control Delay	78.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	158.9	Sum of lost time (s)	23.9
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1070	27	19	1036	1	188	1	33	0	0	2
Future Volume (vph)	24	1070	27	19	1036	1	188	1	33	0	0	2
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.95			0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.97			1.00	
Satd. Flow (prot)	1509	3007		1509	3017		1433	1392			0	
Flt Permitted	0.21	1.00		0.20	1.00		0.95	0.97			1.00	
Satd. Flow (perm)	340	3007		312	3017		1433	1392			0	
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	25	1163	29	21	1126	1	204	1	36	0	0	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	2	0
Lane Group Flow (vph)	25	1191	0	21	1127	0	122	104	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	75.9	75.9		75.9	75.9		13.8	13.8			0.0	
Effective Green, g (s)	75.9	75.9		75.9	75.9		13.8	13.8			0.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.13	0.13			0.00	
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	234	2074		215	2081		179	174			0	
v/s Ratio Prot		c0.40			0.37							
v/s Ratio Perm	0.07			0.07			c0.09	0.07				
v/c Ratio	0.11	0.57		0.10	0.54		0.68	0.60			0.00	
Uniform Delay, d1	5.7	8.8		5.7	8.4		46.0	45.5			55.0	
Progression Factor	1.00	1.00		1.36	1.44		1.00	1.00			1.00	
Incremental Delay, d2	0.9	1.2		0.8	0.9		10.2	5.4			0.0	
Delay (s)	6.6	9.9		8.5	13.0		56.2	50.9			55.0	
Level of Service	A	A		A	B		E	D			D	
Approach Delay (s)		9.9			13.0			53.6			55.0	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	1075	14	61	1050	0	47
Future Vol, veh/h	1075	14	61	1050	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1132	15	64	1105	0	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1146	0	1820	573
Stage 1	-	-	-	-	1139	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	605	-	69	463
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	605	-	62	463
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	415	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	463	-	-	605	-
HCM Lane V/C Ratio	0.107	-	-	0.106	-
HCM Control Delay (s)	13.7	-	-	11.7	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	943	36	199	997	33	74	107	290	143	140	18
Future Volume (veh/h)	62	943	36	199	997	33	74	107	290	143	140	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	65	993	38	209	1049	35	78	113	305	151	147	19
Adj No. of Lanes	1	2	0	1	2	0	0	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	288	1559	60	334	1690	56	77	80	191	155	372	48
Arrive On Green	0.03	0.53	0.53	0.08	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2964	113	1513	2980	99	146	297	708	965	1379	178
Grp Volume(v), veh/h	65	506	525	209	531	553	496	0	0	151	0	166
Grp Sat Flow(s),veh/h/ln	1513	1509	1568	1513	1509	1571	1152	0	0	965	0	1557
Q Serve(g_s), s	2.2	26.3	26.3	6.8	25.9	25.9	20.1	0.0	0.0	0.0	0.0	9.6
Cycle Q Clear(g_c), s	2.2	26.3	26.3	6.8	25.9	25.9	29.7	0.0	0.0	29.7	0.0	9.6
Prop In Lane	1.00		0.07	1.00		0.06	0.16		0.61	1.00		0.11
Lane Grp Cap(c), veh/h	288	793	825	334	856	891	349	0	0	155	0	420
V/C Ratio(X)	0.23	0.64	0.64	0.63	0.62	0.62	1.42	0.00	0.00	0.98	0.00	0.39
Avail Cap(c_a), veh/h	407	793	825	391	856	891	349	0	0	155	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.62	0.62	0.62	0.75	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	18.6	18.6	15.3	15.9	15.9	43.1	0.0	0.0	46.2	0.0	32.8
Incr Delay (d2), s/veh	0.1	3.9	3.7	0.8	2.1	2.0	201.8	0.0	0.0	65.1	0.0	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	0.9	11.7	12.2	2.9	11.3	11.7	30.1	0.0	0.0	7.4	0.0	4.2
LnGrp Delay(d),s/veh	13.8	22.5	22.3	16.1	18.0	17.9	244.9	0.0	0.0	111.3	0.0	33.4
LnGrp LOS	B	C	C	B	B	B	F			F		C
Approach Vol, veh/h		1096			1293			496			317	
Approach Delay, s/veh		21.9			17.7			244.9			70.5	
Approach LOS		C			B			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	12.9	63.1		34.0	8.3	67.7		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	8.8	28.3		31.7	4.2	27.9		31.7
Green Ext Time (p_c), s	0.1	20.4		0.0	0.0	20.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

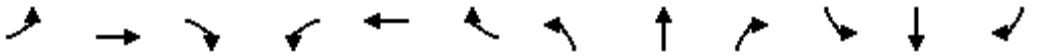
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1268	52	161	1038	73	114	641	257	78	426	68
Future Volume (veh/h)	99	1268	52	161	1038	73	114	641	257	78	426	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	104	1335	55	169	1093	77	120	675	271	82	448	72
Adj No. of Lanes	1	2	0	1	2	0	1	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	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	1676	69	376	1679	118	130	705	308	73	608	97
Arrive On Green	0.09	1.00	1.00	0.06	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2950	121	1513	2857	201	878	3018	1317	590	2601	415
Grp Volume(v), veh/h	104	682	708	169	577	593	120	675	271	82	259	261
Grp Sat Flow(s),veh/h/ln	1513	1509	1563	1513	1509	1549	878	1509	1317	590	1509	1508
Q Serve(g_s), s	3.2	0.0	0.0	5.2	28.1	28.1	8.0	24.3	21.8	1.4	17.4	17.7
Cycle Q Clear(g_c), s	3.2	0.0	0.0	5.2	28.1	28.1	25.7	24.3	21.8	25.7	17.4	17.7
Prop In Lane	1.00		0.08	1.00		0.13	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	293	857	888	376	887	911	130	705	308	73	353	352
V/C Ratio(X)	0.35	0.80	0.80	0.45	0.65	0.65	0.93	0.96	0.88	1.12	0.73	0.74
Avail Cap(c_a), veh/h	375	857	888	428	887	911	130	705	308	73	353	352
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)	0.73	0.73	0.73	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	0.0	8.7	15.1	15.1	52.9	41.6	40.7	54.9	39.0	39.1
Incr Delay (d2), s/veh	0.2	5.6	5.5	0.3	3.7	3.6	56.9	23.7	24.5	142.6	8.3	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.3	1.4	2.1	12.4	12.8	5.7	12.4	10.0	5.1	8.1	8.2
LnGrp Delay(d),s/veh	12.3	5.6	5.5	9.0	18.8	18.7	109.8	65.4	65.1	197.7	47.3	47.8
LnGrp LOS	B	A	A	A	B	B	F	E	E	F	D	D
Approach Vol, veh/h		1494			1339			1066			602	
Approach Delay, s/veh		6.0			17.6			70.3			68.0	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	67.8		31.0	9.0	70.0		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 59		* 26	* 11	* 59		* 26
Max Q Clear Time (g_c+I1), s	7.2	2.0		27.7	5.2	30.1		27.7
Green Ext Time (p_c), s	0.1	46.1		0.0	0.0	25.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	532	1048	81	145	647	14	154	808	135	2	666	459
Future Volume (vph)	532	1048	81	145	647	14	154	808	135	2	666	459
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3008		2927	2953			3017	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3008		2927	2953			2876	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	560	1103	85	153	681	15	162	851	142	2	701	483
RTOR Reduction (vph)	0	0	53	0	1	0	0	12	0	0	0	308
Lane Group Flow (vph)	560	1103	32	153	695	0	162	981	0	0	703	175
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2							4		4
Actuated Green, G (s)	21.8	41.6	41.6	9.2	30.0		6.0	44.2			34.2	34.2
Effective Green, g (s)	21.8	42.1	41.6	9.2	30.5		7.0	45.2			35.2	35.2
Actuated g/C Ratio	0.20	0.38	0.38	0.08	0.28		0.06	0.41			0.32	0.32
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	580	1155	510	244	834		186	1213			920	432
v/s Ratio Prot	0.19	c0.37		0.05	c0.23		c0.06	c0.33				
v/s Ratio Perm			0.02								0.24	0.13
v/c Ratio	0.97	0.95	0.06	0.63	0.83		0.87	0.81			0.76	0.41
Uniform Delay, d1	43.7	33.0	21.8	48.7	37.4		51.1	28.6			33.7	29.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	28.5	17.1	0.1	3.6	7.9		32.2	5.9			6.0	2.8
Delay (s)	72.2	50.1	21.9	52.3	45.3		83.2	34.5			39.7	32.0
Level of Service	E	D	C	D	D		F	C			D	C
Approach Delay (s)		55.8			46.6			41.3			36.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	21.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	29	527	6	0	50	78	236	0	5	11	45
Future Vol, veh/h	0	29	527	6	0	50	78	236	0	5	11	45
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	573	7	0	54	85	257	0	5	12	49
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	32.1	10.6	10.1
HCM LOS	D	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	5%	39%	0%	75%
Vol Thru, %	18%	94%	61%	0%	4%
Vol Right, %	74%	1%	0%	100%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	562	128	236	102
LT Vol	5	29	50	0	76
Through Vol	11	527	78	0	4
RT Vol	45	6	0	236	22
Lane Flow Rate	66	611	139	257	111
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.114	0.867	0.231	0.36	0.2
Departure Headway (Hd)	6.187	5.11	5.967	5.059	6.489
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	577	709	601	711	552
Service Time	4.25	3.142	3.707	2.798	4.545
HCM Lane V/C Ratio	0.114	0.862	0.231	0.361	0.201
HCM Control Delay	10.1	32.1	10.5	10.6	11.2
HCM Lane LOS	B	D	B	B	B
HCM 95th-tile Q	0.4	10.4	0.9	1.6	0.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	76	4	22
Future Vol, veh/h	0	76	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	83	4	24
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.2
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	28	609	325	42	43	34
Future Vol, veh/h	28	609	325	42	43	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	641	342	44	45	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	386	0	-	0	1064	364
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1172	-	-	-	247	681
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	493	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1172	-	-	-	238	681
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	474	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1172	-	-	-	334
HCM Lane V/C Ratio	0.025	-	-	-	0.243
HCM Control Delay (s)	8.2	0	-	-	19.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	497	120	206	275	112	69	328	265	101	272	26
Future Volume (veh/h)	62	497	120	206	275	112	69	328	265	101	272	26
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	65	523	126	217	289	118	73	345	279	106	286	27
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	613	143	278	868	738	268	542	461	207	488	46
Arrive On Green	0.55	0.55	0.55	0.91	0.91	0.91	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	97	1122	261	779	1588	1350	1062	1588	1350	797	1429	135
Grp Volume(v), veh/h	714	0	0	217	289	118	73	345	279	106	0	313
Grp Sat Flow(s),veh/h/ln	1481	0	0	779	1588	1350	1062	1588	1350	797	0	1564
Q Serve(g_s), s	24.0	0.0	0.0	11.9	2.1	0.8	5.5	16.4	15.4	11.6	0.0	14.8
Cycle Q Clear(g_c), s	37.3	0.0	0.0	49.2	2.1	0.8	20.3	16.4	15.4	28.1	0.0	14.8
Prop In Lane	0.09		0.18	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	861	0	0	278	868	738	268	542	461	207	0	534
V/C Ratio(X)	0.83	0.00	0.00	0.78	0.33	0.16	0.27	0.64	0.61	0.51	0.00	0.59
Avail Cap(c_a), veh/h	861	0	0	278	868	738	273	551	468	211	0	542
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	0.00	0.00	0.82	0.82	0.82	1.00	1.00	1.00	0.80	0.00	0.80
Uniform Delay (d), s/veh	17.5	0.0	0.0	12.3	1.9	1.8	32.8	24.9	24.6	36.7	0.0	24.4
Incr Delay (d2), s/veh	9.1	0.0	0.0	16.2	0.8	0.4	0.5	2.4	2.2	1.6	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	0.0	0.0	6.6	1.0	0.3	1.6	7.5	6.0	2.7	0.0	6.5
LnGrp Delay(d),s/veh	26.6	0.0	0.0	28.4	2.7	2.2	33.3	27.3	26.8	38.3	0.0	25.7
LnGrp LOS	C			C	A	A	C	C	C	D		C
Approach Vol, veh/h		714			624			697			419	
Approach Delay, s/veh		26.6			11.6			27.7			28.9	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.5		35.5		54.5		35.5
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		51.2		22.3		39.3		30.1
Green Ext Time (p_c), s		0.0		3.7		6.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	587	110	229	474	247	94	684	139	111	563	45
Future Volume (veh/h)	100	587	110	229	474	247	94	684	139	111	563	45
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	105	618	116	241	499	260	99	720	146	117	593	47
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	301	1345	252	462	842	716	232	881	179	137	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	703	2538	475	720	1588	1350	786	2501	507	636	3018	1350
Grp Volume(v), veh/h	105	367	367	241	499	260	99	434	432	117	593	47
Grp Sat Flow(s),veh/h/ln	703	1509	1504	720	1588	1350	786	1509	1499	636	1509	1350
Q Serve(g_s), s	7.6	0.0	0.0	21.3	19.4	10.1	10.5	23.6	23.6	8.1	14.3	2.1
Cycle Q Clear(g_c), s	27.0	0.0	0.0	21.3	19.4	10.1	24.7	23.6	23.6	31.7	14.3	2.1
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	301	800	797	462	842	716	232	531	528	137	1063	476
V/C Ratio(X)	0.35	0.46	0.46	0.52	0.59	0.36	0.43	0.82	0.82	0.85	0.56	0.10
Avail Cap(c_a), veh/h	301	800	797	462	842	716	232	531	528	137	1063	476
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)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	5.5	0.0	0.0	14.9	14.5	12.3	33.5	26.5	26.5	43.0	23.5	19.6
Incr Delay (d2), s/veh	1.9	1.2	1.2	4.2	3.1	1.4	0.5	9.1	9.2	35.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.3	0.3	4.8	9.2	4.0	2.3	11.1	11.1	4.2	6.0	0.8
LnGrp Delay(d),s/veh	7.4	1.2	1.2	19.1	17.6	13.7	33.9	35.6	35.7	78.4	23.9	19.6
LnGrp LOS	A	A	A	B	B	B	C	D	D	E	C	B
Approach Vol, veh/h		839			1000			965			757	
Approach Delay, s/veh		1.9			16.9			35.4			32.0	
Approach LOS		A			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		29.0		33.7		23.3		26.7
Green Ext Time (p_c), s		10.0		0.0		11.5		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	934	40	241	639	76	61	1015	278	59	743	111
Future Volume (veh/h)	156	934	40	241	639	76	61	1015	278	59	743	111
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	164	983	42	254	673	0	64	1068	293	62	782	117
Adj No. of Lanes	1	2	0	1	2	1	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	222	752	32	191	1172	524	272	1265	344	106	1420	212
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.36	0.36	0.36	0.54	0.54	0.53
Sat Flow, veh/h	762	2949	126	1513	3018	1350	617	2346	639	398	2634	394
Grp Volume(v), veh/h	164	503	522	254	673	0	64	684	677	62	448	451
Grp Sat Flow(s),veh/h/ln	762	1509	1566	1513	1509	1350	617	1509	1476	398	1509	1519
Q Serve(g_s), s	25.5	30.6	30.6	10.4	21.1	0.0	10.3	49.9	50.8	13.9	23.4	23.4
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	21.1	0.0	33.7	49.9	50.8	64.7	23.4	23.4
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.43	1.00		0.26
Lane Grp Cap(c), veh/h	222	385	399	191	1172	524	272	814	796	106	814	819
V/C Ratio(X)	0.74	1.31	1.31	1.33	0.57	0.00	0.24	0.84	0.85	0.58	0.55	0.55
Avail Cap(c_a), veh/h	222	385	399	191	1172	524	272	814	796	106	814	819
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	44.7	44.7	35.4	28.9	0.0	38.1	33.6	33.9	54.8	18.1	18.2
Incr Delay (d2), s/veh	16.7	153.3	152.8	179.5	2.1	0.0	2.0	10.2	11.1	21.3	2.7	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	6.5	29.1	30.1	14.2	9.1	0.0	1.9	23.1	23.1	2.7	10.3	10.4
LnGrp Delay(d),s/veh	64.1	198.0	197.5	215.0	30.9	0.0	40.1	43.9	44.9	76.1	20.8	20.9
LnGrp LOS	E	F	F	F	C		D	D	D	E	C	C
Approach Vol, veh/h		1189			927			1425			961	
Approach Delay, s/veh		179.3			81.4			44.2			24.4	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		23.1		52.8	12.4	32.6
Green Ext Time (p_c), s		0.0		10.4		8.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	83.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

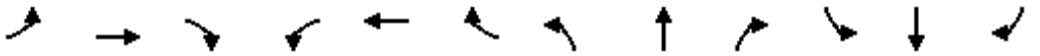
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	924	90	169	849	108	126	387	125	85	350	44
Future Volume (veh/h)	158	924	90	169	849	108	126	387	125	85	350	44
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	166	973	95	178	894	114	133	407	132	89	368	46
Adj No. of Lanes	1	2	0	1	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	255	1121	109	251	1087	139	229	436	141	113	527	66
Arrive On Green	0.08	0.39	0.39	0.08	0.39	0.39	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2908	284	1587	2818	359	1016	1201	389	905	1450	181
Grp Volume(v), veh/h	166	530	538	178	502	506	133	0	539	89	0	414
Grp Sat Flow(s),veh/h/ln	1587	1583	1609	1587	1583	1594	1016	0	1590	905	0	1632
Q Serve(g_s), s	5.8	27.8	27.8	6.1	25.7	25.7	11.6	0.0	29.4	3.3	0.0	19.5
Cycle Q Clear(g_c), s	5.8	27.8	27.8	6.1	25.7	25.7	31.0	0.0	29.4	32.7	0.0	19.5
Prop In Lane	1.00		0.18	1.00		0.23	1.00		0.24	1.00		0.11
Lane Grp Cap(c), veh/h	255	610	620	251	610	615	229	0	578	113	0	593
V/C Ratio(X)	0.65	0.87	0.87	0.71	0.82	0.82	0.58	0.00	0.93	0.79	0.00	0.70
Avail Cap(c_a), veh/h	255	610	620	251	610	615	229	0	578	113	0	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.1	25.5	25.5	20.4	24.9	24.9	37.7	0.0	27.6	44.4	0.0	24.4
Incr Delay (d2), s/veh	12.1	15.4	15.2	15.5	11.9	11.8	10.3	0.0	24.1	40.8	0.0	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	3.4	14.7	14.9	3.7	13.2	13.3	3.9	0.0	16.7	3.5	0.0	9.8
LnGrp Delay(d),s/veh	32.3	40.9	40.7	35.9	36.8	36.7	48.0	0.0	51.7	85.2	0.0	31.1
LnGrp LOS	C	D	D	D	D	D	D		D	F		C
Approach Vol, veh/h		1234			1186			672			503	
Approach Delay, s/veh		39.7			36.6			51.0			40.7	
Approach LOS		D			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	12.0	40.0		38.0	12.0	40.0		38.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 8	* 35		* 33	* 8	* 35		* 33
Max Q Clear Time (g_c+I1), s	7.8	27.7		34.7	8.1	29.8		33.0
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	4.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	924	90	169	849	108	126	387	125	85	350	44
Future Volume (vph)	158	924	90	169	849	108	126	387	125	85	350	44
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3118		1583	3106		1583	1599		1583	1636	
Flt Permitted	0.14	1.00		0.12	1.00		0.33	1.00		0.19	1.00	
Satd. Flow (perm)	229	3118		193	3106		553	1599		319	1636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	166	973	95	178	894	114	133	407	132	89	368	46
RTOR Reduction (vph)	0	8	0	0	11	0	0	13	0	0	5	0
Lane Group Flow (vph)	166	1060	0	178	997	0	133	526	0	89	409	0
Confl. Bikes (#/hr)			3			1			8			3
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	42.5	34.8		42.9	35.0		32.7	32.7		32.7	32.7	
Effective Green, g (s)	40.5	34.8		41.9	35.0		32.7	32.7		32.7	32.7	
Actuated g/C Ratio	0.45	0.39		0.47	0.39		0.36	0.36		0.36	0.36	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Vehicle Extension (s)	1.0	5.0		1.0	5.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	203	1205		204	1207		200	580		115	594	
v/s Ratio Prot	0.06	c0.34		c0.07	0.32			c0.33			0.25	
v/s Ratio Perm	0.31			0.33			0.24			0.28		
v/c Ratio	0.82	0.88		0.87	0.83		0.67	0.91		0.77	0.69	
Uniform Delay, d1	17.8	25.7		18.1	24.8		24.1	27.2		25.4	24.3	
Progression Factor	1.00	1.00		0.79	1.09		1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.9	9.3		9.0	1.6		16.1	20.4		38.8	6.4	
Delay (s)	38.7	35.0		23.3	28.6		40.2	47.6		64.2	30.7	
Level of Service	D	C		C	C		D	D		E	C	
Approach Delay (s)		35.5			27.8			46.1			36.6	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	921	56	99	920	78	80	434	163	68	313	167
Future Volume (veh/h)	95	921	56	99	920	78	80	434	163	68	313	167
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	100	969	59	104	968	82	84	457	172	72	329	176
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	1137	69	167	1108	94	328	1160	671	501	484	259
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	562	3033	185	573	2955	250	934	2451	1417	833	1023	547
Grp Volume(v), veh/h	100	506	522	104	519	531	84	457	172	72	0	505
Grp Sat Flow(s),veh/h/ln	562	1583	1634	573	1583	1622	934	2451	1417	833	0	1570
Q Serve(g_s), s	3.6	17.6	17.6	4.9	18.8	18.9	3.6	1.0	0.5	3.1	0.0	15.0
Cycle Q Clear(g_c), s	22.5	17.6	17.6	22.5	18.8	18.9	18.7	1.0	0.5	4.0	0.0	15.0
Prop In Lane	1.00		0.11	1.00		0.15	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	154	594	613	167	594	608	328	1160	671	501	0	743
V/C Ratio(X)	0.65	0.85	0.85	0.62	0.87	0.87	0.26	0.39	0.26	0.14	0.00	0.68
Avail Cap(c_a), veh/h	154	594	613	167	594	608	328	1160	671	501	0	743
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.61	0.61	0.61	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	17.2	17.2	32.6	21.1	21.1	6.4	0.9	0.9	9.7	0.0	12.4
Incr Delay (d2), s/veh	19.2	14.4	14.0	11.0	11.4	11.1	1.1	0.6	0.6	0.6	0.0	5.0
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	2.5	10.0	10.2	2.2	10.1	10.3	1.0	0.7	0.3	0.8	0.0	7.5
LnGrp Delay(d),s/veh	48.6	31.6	31.2	43.6	32.5	32.3	7.6	1.5	1.4	10.3	0.0	17.3
LnGrp LOS	D	C	C	D	C	C	A	A	A	B		B
Approach Vol, veh/h		1128			1154			713			577	
Approach Delay, s/veh		32.9			33.4			2.2			16.4	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		17.0		24.5		20.7
Green Ext Time (p_c), s		0.0		4.8		0.0		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

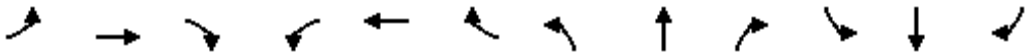
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1134	138	66	778	155	125	847	446	254	780	127
Future Volume (veh/h)	57	1134	138	66	778	155	125	847	446	254	780	127
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	60	1194	145	69	819	163	132	892	469	267	821	134
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	300	1465	655	208	1218	242	230	1470	658	166	1470	658
Arrive On Green	0.93	0.93	0.93	0.93	0.93	0.93	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	599	3167	1417	427	2633	524	614	3167	1417	418	3167	1417
Grp Volume(v), veh/h	60	1194	145	69	492	490	132	892	469	267	821	134
Grp Sat Flow(s),veh/h/ln	599	1583	1417	427	1583	1574	614	1583	1417	418	1583	1417
Q Serve(g_s), s	3.0	13.8	1.2	8.7	7.4	7.4	23.8	25.2	31.8	30.5	22.5	6.7
Cycle Q Clear(g_c), s	10.4	13.8	1.2	22.5	7.4	7.4	46.3	25.2	31.8	55.7	22.5	6.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	1465	655	208	732	728	230	1470	658	166	1470	658
V/C Ratio(X)	0.20	0.82	0.22	0.33	0.67	0.67	0.57	0.61	0.71	1.61	0.56	0.20
Avail Cap(c_a), veh/h	300	1465	655	208	732	728	230	1470	658	166	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	2.9	2.5	6.4	2.7	2.7	40.0	24.0	25.8	50.3	23.3	19.0
Incr Delay (d2), s/veh	1.3	4.5	0.7	0.8	1.0	1.0	10.0	1.9	6.5	299.3	1.5	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	0.6	5.9	0.5	1.0	2.9	2.9	4.7	11.4	13.6	19.3	10.1	2.7
LnGrp Delay(d),s/veh	5.0	7.4	3.1	7.2	3.7	3.7	50.0	25.9	32.2	349.5	24.8	19.7
LnGrp LOS	A	A	A	A	A	A	D	C	C	F	C	B
Approach Vol, veh/h		1399			1051			1493			1222	
Approach Delay, s/veh		6.9			3.9			30.0			95.2	
Approach LOS		A			A			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		24.5		57.7		15.8		48.3
Green Ext Time (p_c), s		17.4		0.0		20.1		5.5

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

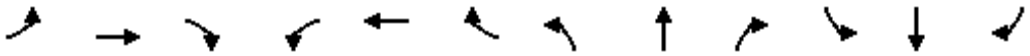
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



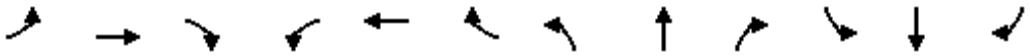
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1104	90	112	787	59	101	502	45	79	499	48
Future Volume (vph)	148	1104	90	112	787	59	101	502	45	79	499	48
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1311	1509	4336	1318	1509	1588	1327	1509	1565	
Flt Permitted	0.30	1.00	1.00	0.17	1.00	1.00	0.25	1.00	1.00	0.30	1.00	
Satd. Flow (perm)	474	4336	1311	278	4336	1318	398	1588	1327	472	1565	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	1162	95	118	828	62	106	528	47	83	525	51
RTOR Reduction (vph)	0	0	56	0	0	37	0	0	21	0	6	0
Lane Group Flow (vph)	156	1162	39	118	828	25	106	528	26	83	570	0
Confl. Bikes (#/hr)			10			4			10			5
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	24.5	24.5	24.5	24.5	24.5	24.5	25.5	25.5	25.5	25.5	25.5	
Effective Green, g (s)	24.5	24.5	24.5	24.5	24.5	24.5	25.5	25.5	25.5	25.5	25.5	
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	193	1770	535	113	1770	538	169	674	563	200	665	
v/s Ratio Prot		0.27			0.19			0.33			c0.36	
v/s Ratio Perm	0.33		0.03	c0.42		0.02	0.27		0.02	0.18		
v/c Ratio	0.81	0.66	0.07	1.04	0.47	0.05	0.63	0.78	0.05	0.41	0.86	
Uniform Delay, d1	15.7	14.3	10.8	17.8	13.0	10.7	13.5	14.9	10.1	12.0	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.29	
Incremental Delay, d2	29.3	1.9	0.3	97.0	0.9	0.2	7.1	5.9	0.0	1.2	9.1	
Delay (s)	45.0	16.3	11.1	114.8	13.9	10.9	20.6	20.8	10.2	17.3	29.1	
Level of Service	D	B	B	F	B	B	C	C	B	B	C	
Approach Delay (s)		19.1			25.5			20.0			27.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	909	101	151	1623	101	171	112	141	100	97	16
Future Volume (vph)	24	909	101	151	1623	101	171	112	141	100	97	16
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2991		1433	1492	1350		1741	
Flt Permitted	0.06	1.00	1.00	0.21	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	98	3018	1350	327	2991		1433	1492	1350		1741	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	957	106	159	1708	106	180	118	148	105	102	17
RTOR Reduction (vph)	0	0	42	0	4	0	0	0	112	0	3	0
Lane Group Flow (vph)	25	957	64	159	1810	0	146	152	36	0	221	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	64.8	64.8	64.8	75.8	75.8		16.2	16.2	23.2		14.0	
Effective Green, g (s)	64.8	64.8	64.8	74.8	75.8		15.7	15.7	21.2		13.5	
Actuated g/C Ratio	0.54	0.54	0.54	0.62	0.63		0.13	0.13	0.18		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	52	1629	729	262	1889		187	195	238		195	
v/s Ratio Prot		0.32		0.03	c0.61		c0.10	0.10	0.01		c0.13	
v/s Ratio Perm	0.26		0.05	0.35					0.02			
v/c Ratio	0.48	0.59	0.09	0.61	0.96		0.78	0.78	0.15		1.14	
Uniform Delay, d1	17.1	18.6	13.3	12.4	20.6		50.5	50.5	41.8		53.2	
Progression Factor	1.00	1.00	1.00	1.30	1.07		1.00	1.00	1.00		1.00	
Incremental Delay, d2	28.6	1.6	0.2	1.9	7.5		18.8	17.7	0.3		105.5	
Delay (s)	45.7	20.2	13.6	18.0	29.7		69.3	68.1	42.1		158.7	
Level of Service	D	C	B	B	C		E	E	D		F	
Approach Delay (s)		20.1			28.7			59.9			158.7	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	925	232	142	1704	20	247	92	207	33	166	41
Future Volume (vph)	21	925	232	142	1704	20	247	92	207	33	166	41
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1475	2376	1509	1541	
Flt Permitted	0.07	1.00	1.00	0.20	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	115	3018	1350	318	3018	1350	1433	1475	2376	1509	1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	974	244	149	1794	21	260	97	218	35	175	43
RTOR Reduction (vph)	0	0	112	0	0	7	0	0	145	0	8	0
Lane Group Flow (vph)	22	974	132	149	1794	14	177	180	73	35	210	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	64.9	64.9	64.9	77.9	77.9	77.9	9.0	9.0	18.0	19.1	19.1	
Effective Green, g (s)	64.9	64.9	64.9	76.9	77.9	77.9	9.0	9.0	16.0	18.1	18.1	
Actuated g/C Ratio	0.54	0.54	0.54	0.64	0.65	0.65	0.08	0.08	0.13	0.15	0.15	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	62	1632	730	283	1959	876	107	110	316	227	232	
v/s Ratio Prot		0.32		0.04	c0.59		c0.12	0.12	0.02	0.02	c0.14	
v/s Ratio Perm	0.19		0.10	0.30		0.01			0.02			
v/c Ratio	0.35	0.60	0.18	0.53	0.92	0.02	1.65	1.64	0.23	0.15	0.91	
Uniform Delay, d1	15.7	18.7	14.0	11.5	18.2	7.5	55.5	55.5	46.5	44.3	50.1	
Progression Factor	1.13	1.51	5.06	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.2	1.4	0.5	0.8	8.2	0.0	332.1	323.6	0.1	0.3	34.7	
Delay (s)	30.9	29.6	71.5	12.2	26.4	7.5	387.6	379.1	46.6	44.6	84.8	
Level of Service	C	C	E	B	C	A	F	F	D	D	F	
Approach Delay (s)		37.8			25.1			255.7			79.2	
Approach LOS		D			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	65.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	751	132	25	52	319	3	0	1040	563	64	1545	9
Future Volume (vph)	751	132	25	52	319	3	0	1040	563	64	1545	9
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2932			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.13	1.00	
Satd. Flow (perm)	2927	1350	1350		2932			3018	1350	208	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	791	139	26	55	336	3	0	1095	593	67	1626	9
RTOR Reduction (vph)	0	0	19	0	56	0	0	0	0	0	1	0
Lane Group Flow (vph)	791	139	7	0	338	0	0	1095	593	67	1634	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.1	25.1	25.1		15.5			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.1	25.1	25.1		15.5			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.26	0.26	0.26		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	773	356	356		478			1315	588	90	1313	
v/s Ratio Prot	c0.27	0.10	0.01		c0.12			0.36			c0.54	
v/s Ratio Perm									0.44	0.32		
v/c Ratio	1.02	0.39	0.02		0.71			0.83	1.01	0.74	1.24	
Uniform Delay, d1	35.0	28.7	25.8		37.6			23.7	26.8	22.4	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	38.4	0.3	0.0		4.7			6.3	39.2	42.5	116.7	
Delay (s)	73.4	28.9	25.9		42.3			30.0	66.0	64.9	143.5	
Level of Service	E	C	C		D			C	E	E	F	
Approach Delay (s)	65.6				42.3			42.7			140.4	
Approach LOS	E				D			D			F	

Intersection Summary			
HCM 2000 Control Delay	82.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

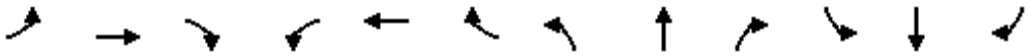
c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	84	605	335	35	167	1570	54	40	331	84	64	32
Future Volume (vph)	84	605	335	35	167	1570	54	40	331	84	64	32
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0	4.0	5.3			5.3	5.3		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.95			1.00	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00			1.00	1.00		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt	1.00	1.00	0.85	0.85	1.00	0.99			1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (prot)	1509	3018	1350	1333	1509	2999			1580	1350		
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00			0.99	1.00		
Satd. Flow (perm)	1509	3018	1350	1333	1509	2999			1580	1350		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	637	353	37	176	1653	57	42	348	88	67	34
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	112	0	0
Lane Group Flow (vph)	88	637	353	37	176	1709	0	0	390	43	0	0
Confl. Bikes (#/hr)				2			19			3		
Turn Type	Prot	NA	Perm	Free	Prot	NA		Split	NA	custom		Split
Protected Phases	5	2			1	6		4	4	4		3
Permitted Phases			2	Free						4		
Actuated Green, G (s)	12.4	47.9	47.9	155.8	24.5	60.0			29.8	29.8		
Effective Green, g (s)	12.4	47.9	47.9	155.8	24.5	60.0			29.8	29.8		
Actuated g/C Ratio	0.08	0.31	0.31	1.00	0.16	0.39			0.19	0.19		
Clearance Time (s)	4.0	5.3	5.3		4.0	5.3			5.3	5.3		
Vehicle Extension (s)	2.0	3.5	3.5		2.0	3.5			2.0	2.0		
Lane Grp Cap (vph)	120	927	415	1333	237	1154			302	258		
v/s Ratio Prot	0.06	0.21			0.12	c0.57			c0.25	0.03		
v/s Ratio Perm			c0.26	0.03								
v/c Ratio	0.73	0.69	0.85	0.03	0.74	1.48			1.29	0.17		
Uniform Delay, d1	70.1	47.4	50.6	0.0	62.6	47.9			63.0	52.6		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	17.9	2.2	15.6	0.0	10.5	221.0			153.7	0.1		
Delay (s)	88.0	49.6	66.2	0.0	73.1	268.9			216.7	52.8		
Level of Service	F	D	E	A	E	F			F	D		
Approach Delay (s)		56.2				250.7			170.0			
Approach LOS		E				F			F			

Intersection Summary			
HCM 2000 Control Delay	159.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	155.8	Sum of lost time (s)	23.9
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWR2
Lane Configurations				
Traffic Volume (vph)	117	291	137	26
Future Volume (vph)	117	291	137	26
Ideal Flow (vphpl)	1620	1620	1620	1620
Total Lost time (s)		5.3	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	0.85	0.86
Flt Protected		0.98	1.00	1.00
Satd. Flow (prot)		2967	1350	1374
Flt Permitted		0.98	1.00	1.00
Satd. Flow (perm)		2967	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	306	144	27
RTOR Reduction (vph)	0	0	0	27
Lane Group Flow (vph)	0	463	144	0
Confl. Bikes (#/hr)				
Turn Type	Split	NA	Free	Prot
Protected Phases	3	3		7
Permitted Phases			Free	
Actuated Green, G (s)		26.9	155.8	2.8
Effective Green, g (s)		26.9	155.8	2.8
Actuated g/C Ratio		0.17	1.00	0.02
Clearance Time (s)		5.3		4.0
Vehicle Extension (s)		2.0		2.0
Lane Grp Cap (vph)		512	1350	24
v/s Ratio Prot		c0.16		0.00
v/s Ratio Perm			c0.11	
v/c Ratio		0.90	0.11	0.02
Uniform Delay, d1		63.2	0.0	75.2
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		18.9	0.2	0.1
Delay (s)		82.1	0.2	75.3
Level of Service		F	A	E
Approach Delay (s)		62.7		
Approach LOS		E		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	714	16	58	1712	1	274	0	24	0	0	0
Future Volume (vph)	15	714	16	58	1712	1	274	0	24	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.98				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96				
Satd. Flow (prot)	1509	3008		1509	3017		1433	1413				
Flt Permitted	0.06	1.00		0.32	1.00		0.95	0.96				
Satd. Flow (perm)	88	3008		513	3017		1433	1413				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	16	776	17	63	1861	1	298	0	26	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	58	0	0	0	0
Lane Group Flow (vph)	16	792	0	63	1862	0	164	102	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	72.9	72.9		72.9	72.9		16.8	16.8				
Effective Green, g (s)	72.9	72.9		72.9	72.9		16.8	16.8				
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.15	0.15				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	58	1993		339	1999		218	215				
v/s Ratio Prot		0.26			c0.62							
v/s Ratio Perm	0.18			0.12			c0.11	0.07				
v/c Ratio	0.28	0.40		0.19	0.93		0.75	0.47				
Uniform Delay, d1	7.7	8.5		7.1	16.3		44.6	42.6				
Progression Factor	1.00	1.00		0.22	0.39		1.00	1.00				
Incremental Delay, d2	11.4	0.6		0.1	1.1		13.6	1.6				
Delay (s)	19.1	9.1		1.7	7.5		58.2	44.2				
Level of Service	B	A		A	A		E	D				
Approach Delay (s)		9.3			7.3			51.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	730	14	48	1792	0	48
Future Vol, veh/h	730	14	48	1792	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	768	15	51	1886	0	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	783	0	1820	392
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	1044	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	831	-	69	607
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	300	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	831	-	65	607
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	282	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	607	-	-	831	-
HCM Lane V/C Ratio	0.083	-	-	0.061	-
HCM Control Delay (s)	11.5	-	-	9.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	701	33	200	1776	46	61	104	166	43	133	14
Future Volume (veh/h)	48	701	33	200	1776	46	61	104	166	43	133	14
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	51	738	35	211	1869	48	64	109	175	45	140	15
Adj No. of Lanes	1	2	0	1	2	0	0	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	113	1541	73	432	1715	44	87	121	172	162	381	41
Arrive On Green	0.03	0.53	0.53	0.08	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2933	139	1513	3007	77	179	449	635	1091	1410	151
Grp Volume(v), veh/h	51	379	394	211	934	983	348	0	0	45	0	155
Grp Sat Flow(s),veh/h/ln	1513	1509	1564	1513	1509	1575	1264	0	0	1091	0	1562
Q Serve(g_s), s	1.7	17.5	17.6	6.9	62.8	62.8	20.8	0.0	0.0	0.0	0.0	8.9
Cycle Q Clear(g_c), s	1.7	17.5	17.6	6.9	62.8	62.8	29.7	0.0	0.0	11.5	0.0	8.9
Prop In Lane	1.00		0.09	1.00		0.05	0.18		0.50	1.00		0.10
Lane Grp Cap(c), veh/h	113	792	821	432	861	898	380	0	0	162	0	422
V/C Ratio(X)	0.45	0.48	0.48	0.49	1.09	1.09	0.92	0.00	0.00	0.28	0.00	0.37
Avail Cap(c_a), veh/h	237	792	821	488	861	898	380	0	0	162	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)	1.00	1.00	1.00	0.09	0.09	0.09	0.85	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	16.6	16.6	12.0	23.6	23.6	41.1	0.0	0.0	33.5	0.0	32.6
Incr Delay (d2), s/veh	1.0	2.1	2.0	0.0	40.6	44.3	23.5	0.0	0.0	0.9	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	0.8	7.7	8.0	2.8	35.5	38.0	13.0	0.0	0.0	1.2	0.0	3.9
LnGrp Delay(d),s/veh	27.4	18.6	18.6	12.0	64.3	68.0	64.6	0.0	0.0	34.4	0.0	33.1
LnGrp LOS	C	B	B	B	F	F	E			C		C
Approach Vol, veh/h		824			2128			348			200	
Approach Delay, s/veh		19.1			60.8			64.6			33.4	
Approach LOS		B			E			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	12.9	63.1		34.0	7.9	68.1		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	8.9	19.6		13.5	3.7	64.8		31.7
Green Ext Time (p_c), s	0.1	31.4		2.2	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

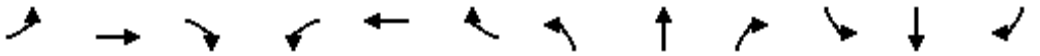
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	754	21	122	1678	128	51	509	71	61	551	160
Future Volume (veh/h)	107	754	21	122	1678	128	51	509	71	61	551	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	113	794	22	128	1766	135	54	536	75	64	580	168
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1742	48	522	1663	125	65	705	315	120	538	155
Arrive On Green	0.10	1.00	1.00	0.05	0.59	0.59	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2998	83	1513	2840	214	711	3018	1350	807	2303	665
Grp Volume(v), veh/h	113	400	416	128	927	974	54	536	75	64	379	369
Grp Sat Flow(s),veh/h/ln	1513	1509	1572	1513	1509	1545	711	1509	1350	807	1509	1460
Q Serve(g_s), s	3.4	0.0	0.0	3.8	64.4	64.4	0.0	18.2	5.0	7.5	25.7	25.7
Cycle Q Clear(g_c), s	3.4	0.0	0.0	3.8	64.4	64.4	25.7	18.2	5.0	25.7	25.7	25.7
Prop In Lane	1.00		0.05	1.00		0.14	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	138	877	914	522	884	905	65	705	315	120	353	341
V/C Ratio(X)	0.82	0.46	0.46	0.25	1.05	1.08	0.82	0.76	0.24	0.53	1.08	1.08
Avail Cap(c_a), veh/h	258	877	914	636	884	905	65	705	315	120	353	341
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)	0.91	0.91	0.91	1.00	1.00	1.00	0.98	0.98	0.98	0.96	0.96	0.96
Uniform Delay (d), s/veh	25.4	0.0	0.0	8.5	22.8	22.8	55.0	39.3	34.2	51.8	42.2	42.2
Incr Delay (d2), s/veh	4.1	1.6	1.5	0.1	44.1	52.5	56.4	5.1	0.5	5.6	68.9	71.2
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	0.4	0.4	1.6	37.3	40.3	2.7	8.1	1.9	2.1	17.4	17.1
LnGrp Delay(d),s/veh	29.5	1.6	1.5	8.6	66.9	75.3	111.4	44.4	34.7	57.4	111.0	113.3
LnGrp LOS	C	A	A	A	F	F	F	D	C	E	F	F
Approach Vol, veh/h		929			2029			665			812	
Approach Delay, s/veh		4.9			67.2			48.7			107.8	
Approach LOS		A			E			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	9.8	69.2		31.0	9.3	69.7		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 14	* 56		* 26	* 14	* 56		* 26
Max Q Clear Time (g_c+I1), s	5.8	2.0		27.7	5.4	66.4		27.7
Green Ext Time (p_c), s	0.1	47.6		0.0	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.8
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	513	61	219	1224	17	188	508	97	0	853	617
Future Volume (vph)	224	513	61	219	1224	17	188	508	97	0	853	617
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	3011		2927	2945			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	3011		2927	2945			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	236	540	64	231	1288	18	198	535	102	0	898	649
RTOR Reduction (vph)	0	0	41	0	1	0	0	14	0	0	0	136
Lane Group Flow (vph)	236	540	23	231	1305	0	198	623	0	0	898	513
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	9.9	39.7	39.7	12.2	43.0		7.0	43.1			32.1	32.1
Effective Green, g (s)	9.9	40.2	39.7	12.2	43.5		8.0	44.1			33.1	33.1
Actuated g/C Ratio	0.09	0.37	0.36	0.11	0.40		0.07	0.40			0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	263	1102	487	324	1190		212	1180			908	406
v/s Ratio Prot	c0.08	0.18		0.08	c0.43		c0.07	0.21			0.30	
v/s Ratio Perm			0.02									c0.38
v/c Ratio	0.90	0.49	0.05	0.71	1.10		0.93	0.53			0.99	1.26
Uniform Delay, d1	49.5	27.0	22.9	47.2	33.2		50.7	25.0			38.3	38.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	29.3	0.7	0.1	6.1	56.8		42.9	1.7			27.3	137.4
Delay (s)	78.9	27.7	22.9	53.3	90.0		93.7	26.7			65.6	175.8
Level of Service	E	C	C	D	F		F	C			E	F
Approach Delay (s)		41.7			84.5			42.6			111.8	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	78.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	33	417	28	0	18	194	290	0	2	3	4
Future Vol, veh/h	0	33	417	28	0	18	194	290	0	2	3	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	453	30	0	20	211	315	0	2	3	4
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	17.6	10.3	9.2
HCM LOS	C	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	7%	8%	0%	16%
Vol Thru, %	33%	87%	92%	0%	4%
Vol Right, %	44%	6%	0%	100%	79%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	478	212	290	68
LT Vol	2	33	18	0	11
Through Vol	3	417	194	0	3
RT Vol	4	28	0	290	54
Lane Flow Rate	10	520	230	315	74
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.017	0.686	0.334	0.392	0.116
Departure Headway (Hd)	6.133	4.75	5.222	4.473	5.64
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	587	759	687	801	630
Service Time	4.133	2.799	2.975	2.226	3.729
HCM Lane V/C Ratio	0.017	0.685	0.335	0.393	0.117
HCM Control Delay	9.2	17.6	10.6	10.1	9.5
HCM Lane LOS	A	C	B	B	A
HCM 95th-tile Q	0.1	5.5	1.5	1.9	0.4

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	11	3	54
Future Vol, veh/h	0	11	3	54
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	3	59
Number of Lanes	0	0	1	0

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

Lane

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	10	436	474	43	35	37
Future Vol, veh/h	10	436	474	43	35	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	459	499	45	37	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	544	0	-	0	1002	522
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	480	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1025	-	-	-	269	555
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1025	-	-	-	265	555
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1025	-	-	-	362
HCM Lane V/C Ratio	0.01	-	-	-	0.209
HCM Control Delay (s)	8.5	0	-	-	17.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	386	88	502	422	87	74	248	194	48	284	8
Future Volume (veh/h)	12	386	88	502	422	87	74	248	194	48	284	8
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	13	406	93	528	444	92	78	261	204	51	299	8
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	737	165	502	948	806	208	462	393	220	448	12
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	15	1235	277	895	1588	1350	1068	1588	1350	924	1540	41
Grp Volume(v), veh/h	512	0	0	528	444	92	78	261	204	51	0	307
Grp Sat Flow(s),veh/h/ln	1527	0	0	895	1588	1350	1068	1588	1350	924	0	1581
Q Serve(g_s), s	0.0	0.0	0.0	35.7	14.1	2.7	6.2	12.5	11.4	4.5	0.0	15.4
Cycle Q Clear(g_c), s	18.0	0.0	0.0	53.7	14.1	2.7	21.6	12.5	11.4	17.0	0.0	15.4
Prop In Lane	0.03		0.18	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	961	0	0	502	948	806	208	462	393	220	0	460
V/C Ratio(X)	0.53	0.00	0.00	1.05	0.47	0.11	0.37	0.56	0.52	0.23	0.00	0.67
Avail Cap(c_a), veh/h	961	0	0	502	948	806	268	551	468	271	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.22	0.22	0.22	1.00	1.00	1.00	0.87	0.00	0.87
Uniform Delay (d), s/veh	10.9	0.0	0.0	26.4	10.2	7.9	37.6	27.1	26.6	34.3	0.0	28.1
Incr Delay (d2), s/veh	2.1	0.0	0.0	34.4	0.4	0.1	1.1	1.1	1.1	0.5	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	8.1	0.0	0.0	17.2	6.1	1.0	1.9	5.6	4.4	1.2	0.0	7.0
LnGrp Delay(d),s/veh	13.1	0.0	0.0	60.9	10.5	7.9	38.7	28.1	27.7	34.7	0.0	30.2
LnGrp LOS	B			F	B	A	D	C	C	C		C
Approach Vol, veh/h		512			1064			543			358	
Approach Delay, s/veh		13.1			35.3			29.5			30.8	
Approach LOS		B			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.0		31.0		59.0		31.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		55.7		23.6		20.0		19.0
Green Ext Time (p_c), s		0.0		2.6		15.5		3.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	535	45	194	890	133	87	636	156	130	591	56
Future Volume (veh/h)	34	535	45	194	890	133	87	636	156	130	591	56
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	36	563	47	204	937	140	92	669	164	137	622	59
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	72	1627	136	453	916	779	178	762	187	107	957	428
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	522	2821	235	808	1588	1350	756	2404	589	656	3018	1350
Grp Volume(v), veh/h	36	301	309	204	937	140	92	420	413	137	622	59
Grp Sat Flow(s),veh/h/ln	522	1509	1547	808	1588	1350	756	1509	1484	656	1509	1350
Q Serve(g_s), s	0.0	10.5	10.6	17.9	57.7	4.9	11.9	26.3	26.4	5.3	17.7	3.1
Cycle Q Clear(g_c), s	57.7	10.5	10.6	28.4	57.7	4.9	29.6	26.3	26.4	31.7	17.7	3.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	72	871	892	453	916	779	178	478	471	107	957	428
V/C Ratio(X)	0.50	0.35	0.35	0.45	1.02	0.18	0.52	0.88	0.88	1.28	0.65	0.14
Avail Cap(c_a), veh/h	72	871	892	453	916	779	178	478	471	107	957	428
HCM Platoon Ratio	1.00	1.00	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	0.99	0.99	0.99
Uniform Delay (d), s/veh	50.0	11.2	11.2	18.7	21.1	10.0	42.1	32.3	32.3	49.1	29.4	24.4
Incr Delay (d2), s/veh	20.2	1.0	0.9	3.2	35.5	0.5	1.2	16.1	16.5	179.4	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.6	4.7	4.4	34.0	1.9	2.5	13.1	13.0	8.3	7.5	1.2
LnGrp Delay(d),s/veh	70.2	12.1	12.1	21.9	56.7	10.5	43.4	48.4	48.8	228.5	30.6	24.4
LnGrp LOS	E	B	B	C	F	B	D	D	D	F	C	C
Approach Vol, veh/h		646			1281			925			818	
Approach Delay, s/veh		15.4			46.1			48.1			63.3	
Approach LOS		B			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 58		* 32		* 58		* 32
Max Q Clear Time (g_c+I1), s		59.7		33.7		59.7		31.6
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	479	57	498	970	44	108	709	196	77	993	163
Future Volume (veh/h)	58	479	57	498	970	44	108	709	196	77	993	163
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	61	504	60	524	1021	0	114	746	206	81	1045	172
Adj No. of Lanes	1	2	0	1	2	1	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	102	693	82	248	1172	524	164	1260	348	204	1399	230
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	550	2718	322	1513	3018	1350	457	2338	646	587	2595	426
Grp Volume(v), veh/h	61	279	285	524	1021	0	114	481	471	81	607	610
Grp Sat Flow(s),veh/h/ln	550	1509	1531	1513	1509	1350	457	1509	1474	587	1509	1513
Q Serve(g_s), s	9.1	20.3	20.5	10.4	37.5	0.0	27.2	35.2	35.2	14.5	37.2	37.5
Cycle Q Clear(g_c), s	30.6	20.3	20.5	10.4	37.5	0.0	64.7	35.2	35.2	49.7	37.2	37.5
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.44	1.00		0.28
Lane Grp Cap(c), veh/h	102	385	390	248	1172	524	164	814	795	204	814	816
V/C Ratio(X)	0.60	0.73	0.73	2.11	0.87	0.00	0.70	0.59	0.59	0.40	0.75	0.75
Avail Cap(c_a), veh/h	102	385	390	248	1172	524	164	814	795	204	814	816
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	40.9	41.0	40.2	33.9	0.0	69.3	37.2	37.2	39.6	21.3	21.5
Incr Delay (d2), s/veh	20.0	9.6	9.6	513.1	9.0	0.0	21.8	3.2	3.2	5.7	6.2	6.2
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	9.5	9.7	39.3	17.1	0.0	4.8	15.5	15.1	2.7	16.7	17.0
LnGrp Delay(d),s/veh	77.0	50.4	50.7	553.2	42.9	0.0	91.0	40.3	40.4	45.2	27.5	27.7
LnGrp LOS	E	D	D	F	D		F	D	D	D	C	C
Approach Vol, veh/h		625			1545			1066			1298	
Approach Delay, s/veh		53.1			216.0			45.8			28.7	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		51.7		39.5		66.7	12.4	32.6
Green Ext Time (p_c), s		9.0		4.0		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		99.9
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

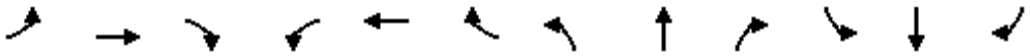
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	784	77	246	1149	53	100	429	97	46	465	172
Future Volume (veh/h)	50	784	77	246	1149	53	100	429	97	46	465	172
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	53	825	81	259	1209	56	105	452	102	48	489	181
Adj No. of Lanes	1	2	0	1	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	256	991	97	313	1051	49	80	492	111	121	433	160
Arrive On Green	0.11	0.34	0.34	0.23	0.68	0.68	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2906	285	1587	3082	143	802	1313	296	893	1157	428
Grp Volume(v), veh/h	53	449	457	259	621	644	105	0	554	48	0	670
Grp Sat Flow(s),veh/h/ln	1587	1583	1608	1587	1583	1641	802	0	1610	893	0	1585
Q Serve(g_s), s	1.7	23.5	23.5	10.4	30.7	30.7	0.0	0.0	29.6	4.1	0.0	33.7
Cycle Q Clear(g_c), s	1.7	23.5	23.5	10.4	30.7	30.7	33.7	0.0	29.6	33.7	0.0	33.7
Prop In Lane	1.00		0.18	1.00		0.09	1.00		0.18	1.00		0.27
Lane Grp Cap(c), veh/h	256	540	549	313	540	560	80	0	603	121	0	593
V/C Ratio(X)	0.21	0.83	0.83	0.83	1.15	1.15	1.31	0.00	0.92	0.40	0.00	1.13
Avail Cap(c_a), veh/h	256	540	549	313	540	560	80	0	603	121	0	593
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	27.3	27.3	18.0	14.3	14.3	45.0	0.0	26.9	43.2	0.0	28.2
Incr Delay (d2), s/veh	1.8	13.9	13.8	21.6	87.0	87.0	205.3	0.0	21.4	9.4	0.0	77.9
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	12.3	12.5	6.3	25.6	26.6	6.5	0.0	16.7	1.5	0.0	27.5
LnGrp Delay(d),s/veh	21.3	41.2	41.0	39.5	101.3	101.3	250.3	0.0	48.3	52.6	0.0	106.0
LnGrp LOS	C	D	D	D	F	F	F		D	D		F
Approach Vol, veh/h		959			1524			659			718	
Approach Delay, s/veh		40.0			90.8			80.4			102.5	
Approach LOS		D			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	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	3.7	32.7		35.7	12.4	25.5		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	78.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	784	77	246	1149	53	100	429	97	46	465	172
Future Volume (vph)	50	784	77	246	1149	53	100	429	97	46	465	172
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3118		1583	3146		1583	1617		1583	1594	
Flt Permitted	0.13	1.00		0.15	1.00		0.12	1.00		0.19	1.00	
Satd. Flow (perm)	224	3118		245	3146		198	1617		316	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	825	81	259	1209	56	105	452	102	48	489	181
RTOR Reduction (vph)	0	8	0	0	4	0	0	9	0	0	15	0
Lane Group Flow (vph)	53	898	0	259	1261	0	105	545	0	48	655	0
Confl. Bikes (#/hr)			3						3			1
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		266	1073		74	605		118	596	
v/s Ratio Prot	0.02	0.29		c0.11	c0.40			0.34			0.41	
v/s Ratio Perm	0.07			0.33			c0.53			0.15		
v/c Ratio	0.21	0.84		0.97	1.18		1.42	0.90		0.41	1.10	
Uniform Delay, d1	18.3	27.4		20.0	29.6		28.1	26.6		20.8	28.1	
Progression Factor	1.00	1.00		2.03	0.43		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	8.2		20.5	81.3		250.5	19.0		10.1	66.9	
Delay (s)	20.3	35.7		61.1	94.2		278.7	45.6		30.9	95.0	
Level of Service	C	D		E	F		F	D		C	F	
Approach Delay (s)		34.8			88.6			82.7			90.7	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	74.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	831	106	95	1105	41	70	399	115	33	499	372
Future Volume (veh/h)	56	831	106	95	1105	41	70	399	115	33	499	372
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	59	875	112	100	1163	43	74	420	121	35	525	392
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1059	136	176	1168	43	120	1160	671	535	420	314
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	484	2825	362	596	3115	115	637	2451	1417	904	887	662
Grp Volume(v), veh/h	59	490	497	100	591	615	74	420	121	35	0	917
Grp Sat Flow(s),veh/h/ln	484	1583	1603	596	1583	1646	637	2451	1417	904	0	1550
Q Serve(g_s), s	0.1	16.8	16.8	5.7	22.4	22.4	0.0	0.8	0.3	1.3	0.0	28.4
Cycle Q Clear(g_c), s	22.5	16.8	16.8	22.5	22.4	22.4	28.4	0.8	0.3	2.1	0.0	28.4
Prop In Lane	1.00		0.23	1.00		0.07	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	121	594	601	176	594	617	120	1160	671	535	0	734
V/C Ratio(X)	0.49	0.83	0.83	0.57	1.00	1.00	0.62	0.36	0.18	0.07	0.00	1.25
Avail Cap(c_a), veh/h	121	594	601	176	594	617	120	1160	671	535	0	734
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.46	0.46	0.46	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	17.0	17.0	32.1	22.4	22.4	15.8	0.9	0.9	9.1	0.0	15.9
Incr Delay (d2), s/veh	13.4	12.4	12.3	8.4	28.7	28.3	10.4	0.4	0.3	0.2	0.0	123.7
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	1.4	9.3	9.4	2.1	14.5	15.0	1.5	0.6	0.2	0.4	0.0	37.2
LnGrp Delay(d),s/veh	43.4	29.4	29.3	40.5	51.2	50.8	26.2	1.3	1.1	9.4	0.0	139.6
LnGrp LOS	D	C	C	D	D	D	C	A	A	A		F
Approach Vol, veh/h		1046			1306			615			952	
Approach Delay, s/veh		30.1			50.2			4.2			134.8	
Approach LOS		C			D			A			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		30.4		24.5		30.4
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

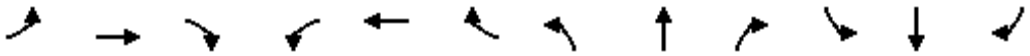
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	768	133	126	1305	126	135	785	97	133	688	167
Future Volume (veh/h)	45	768	133	126	1305	126	135	785	97	133	688	167
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	47	808	140	133	1374	133	142	826	102	140	724	176
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	85	1649	738	382	1520	146	209	1285	575	184	1285	575
Arrive On Green	1.00	1.00	1.00	0.35	0.35	0.35	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	363	3167	1417	618	2919	281	647	3167	1417	630	3167	1417
Grp Volume(v), veh/h	47	808	140	133	742	765	142	826	102	140	724	176
Grp Sat Flow(s),veh/h/ln	363	1583	1417	618	1583	1617	647	1583	1417	630	1583	1417
Q Serve(g_s), s	8.4	0.0	0.0	19.6	53.4	54.1	26.0	25.2	5.5	23.5	21.1	10.1
Cycle Q Clear(g_c), s	62.5	0.0	0.0	19.6	53.4	54.1	47.1	25.2	5.5	48.7	21.1	10.1
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	1649	738	382	825	842	209	1285	575	184	1285	575
V/C Ratio(X)	0.55	0.49	0.19	0.35	0.90	0.91	0.68	0.64	0.18	0.76	0.56	0.31
Avail Cap(c_a), veh/h	85	1649	738	382	825	842	209	1285	575	184	1285	575
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	0.0	25.1	36.1	36.3	45.6	28.7	22.8	49.6	27.5	24.2
Incr Delay (d2), s/veh	20.5	0.9	0.5	0.5	3.6	3.8	16.5	2.5	0.7	25.4	1.8	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	2.0	0.2	0.1	3.4	24.2	25.1	5.6	11.5	2.3	5.9	9.6	4.2
LnGrp Delay(d),s/veh	49.5	0.9	0.5	25.6	39.7	40.1	62.1	31.1	23.5	75.0	29.3	25.6
LnGrp LOS	D	A	A	C	D	D	E	C	C	E	C	C
Approach Vol, veh/h		995			1640			1070			1040	
Approach Delay, s/veh		3.2			38.8			34.5			34.8	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 61		* 47		* 61		* 47
Max Q Clear Time (g_c+I1), s		56.1		50.7		64.5		49.1
Green Ext Time (p_c), s		4.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

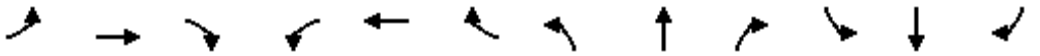
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	572	101	168	1399	102	75	628	22	43	612	54
Future Volume (vph)	99	572	101	168	1399	102	75	628	22	43	612	54
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1322	1509	4336	1312	1509	1588	1333	1509	1567	
Flt Permitted	0.18	1.00	1.00	0.41	1.00	1.00	0.18	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	286	4336	1322	648	4336	1312	279	1588	1333	334	1567	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	104	602	106	177	1473	107	79	661	23	45	644	57
RTOR Reduction (vph)	0	0	67	0	0	67	0	0	12	0	2	0
Lane Group Flow (vph)	104	602	39	177	1473	40	79	661	11	45	699	0
Confl. Bikes (#/hr)			1			8			2			2
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	22.2	22.2	22.2	22.2	22.2	22.2	27.8	27.8	27.8	27.8	27.8	
Effective Green, g (s)	22.2	22.2	22.2	22.2	22.2	22.2	27.8	27.8	27.8	27.8	27.8	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	105	1604	489	239	1604	485	129	735	617	154	726	
v/s Ratio Prot		0.14			0.34			0.42			c0.45	
v/s Ratio Perm	c0.36		0.03	0.27		0.03	0.28		0.01	0.13		
v/c Ratio	0.99	0.38	0.08	0.74	0.92	0.08	0.61	0.90	0.02	0.29	0.96	
Uniform Delay, d1	18.8	13.8	12.3	16.4	18.0	12.3	12.1	14.8	8.7	10.0	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.30	1.24	
Incremental Delay, d2	85.3	0.7	0.3	18.6	9.9	0.3	8.3	13.8	0.0	0.1	4.3	
Delay (s)	104.1	14.5	12.6	35.0	28.0	12.6	20.4	28.6	8.7	13.1	23.6	
Level of Service	F	B	B	C	C	B	C	C	A	B	C	
Approach Delay (s)		25.7			27.7			27.2			22.9	
Approach LOS		C			C			C			C	

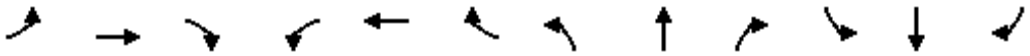
Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1135	108	196	1207	101	185	147	184	135	146	54
Future Volume (vph)	34	1135	108	196	1207	101	185	147	184	135	146	54
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2983		1433	1499	1350		1726	
Flt Permitted	0.14	1.00	1.00	0.09	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	217	3018	1350	149	2983		1433	1499	1350		1726	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	36	1195	114	206	1271	106	195	155	194	142	154	57
RTOR Reduction (vph)	0	0	60	0	6	0	0	0	68	0	7	0
Lane Group Flow (vph)	36	1195	54	206	1371	0	172	178	126	0	346	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	45.0	45.0	45.0	56.0	56.0		16.0	16.0	23.0		14.0	
Effective Green, g (s)	45.0	45.0	45.0	55.0	56.0		15.5	15.5	21.0		13.5	
Actuated g/C Ratio	0.45	0.45	0.45	0.55	0.56		0.16	0.16	0.21		0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	97	1358	607	163	1670		222	232	283		233	
v/s Ratio Prot		0.40		c0.08	0.46		c0.12	0.12	0.03		c0.20	
v/s Ratio Perm	0.17		0.04	c0.62					0.07			
v/c Ratio	0.37	0.88	0.09	1.26	0.82		0.77	0.77	0.45		1.49	
Uniform Delay, d1	18.2	25.0	15.8	21.2	17.9		40.6	40.5	34.4		43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	10.6	8.4	0.3	158.4	4.7		15.4	14.1	1.1		239.9	
Delay (s)	28.7	33.4	16.0	179.5	22.6		56.0	54.6	35.5		283.2	
Level of Service	C	C	B	F	C		E	D	D		F	
Approach Delay (s)		31.8			43.0			48.2			283.2	
Approach LOS		C			D			D			F	

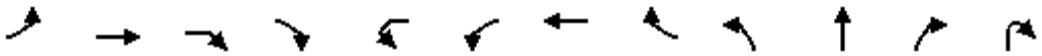
Intersection Summary			
HCM 2000 Control Delay	62.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1271	225	174	1393	23	209	216	221	31	218	40
Future Volume (vph)	25	1271	225	174	1393	23	209	216	221	31	218	40
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1502	2376	1509	1551	
Flt Permitted	0.13	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	200	3018	1350	133	3018	1350	1433	1502	2376	1509	1551	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	1338	237	183	1466	24	220	227	233	33	229	42
RTOR Reduction (vph)	0	0	132	0	0	10	0	0	136	0	7	0
Lane Group Flow (vph)	26	1338	105	183	1466	14	198	249	97	33	264	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	43.8	43.8	43.8	57.6	57.6	57.6	9.0	9.0	18.8	19.4	19.4	
Effective Green, g (s)	43.8	43.8	43.8	56.6	57.6	57.6	9.0	9.0	16.8	18.4	18.4	
Actuated g/C Ratio	0.44	0.44	0.44	0.57	0.58	0.58	0.09	0.09	0.17	0.18	0.18	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	87	1321	591	196	1738	777	128	135	399	277	285	
v/s Ratio Prot		c0.44		0.08	c0.49		0.14	c0.17	0.02	0.02	c0.17	
v/s Ratio Perm	0.13		0.08	0.45		0.01			0.02			
v/c Ratio	0.30	1.01	0.18	0.93	0.84	0.02	1.55	1.84	0.24	0.12	0.93	
Uniform Delay, d1	18.2	28.1	17.1	26.7	17.5	9.1	45.5	45.5	36.1	34.0	40.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.6	28.0	0.7	45.0	5.2	0.0	280.9	407.2	0.1	0.2	34.4	
Delay (s)	26.8	56.1	17.8	71.7	22.7	9.1	326.4	452.7	36.2	34.2	74.6	
Level of Service	C	E	B	E	C	A	F	F	D	C	E	
Approach Delay (s)		49.9			27.9			273.2			70.2	
Approach LOS		D			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	78.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

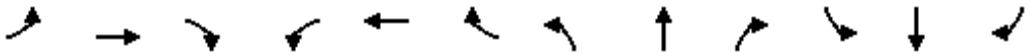


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	106	997	351	84	3	222	1243	75	40	375	178	106
Future Volume (vph)	106	997	351	84	3	222	1243	75	40	375	178	106
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (prot)	1509	3018	1350	1333		1509	2987			1581	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (perm)	1509	3018	1350	1333		1509	2987			1581	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	1049	369	88	3	234	1308	79	42	395	187	112
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	0	113	0
Lane Group Flow (vph)	112	1049	369	88	0	237	1384	0	0	437	186	0
Confl. Bikes (#/hr)				4				7			4	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	14.1	58.9	58.9	161.1		15.0	59.8			29.7	29.7	
Effective Green, g (s)	14.1	58.9	58.9	161.1		15.0	59.8			29.7	29.7	
Actuated g/C Ratio	0.09	0.37	0.37	1.00		0.09	0.37			0.18	0.18	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	132	1103	493	1333		140	1108			291	248	
v/s Ratio Prot	0.07	c0.35				c0.16	c0.46			c0.28	0.14	
v/s Ratio Perm			0.27	0.07								
v/c Ratio	0.85	0.95	0.75	0.07		1.69	1.25			1.50	0.75	
Uniform Delay, d1	72.4	49.7	44.6	0.0		73.0	50.6			65.7	62.2	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	35.7	16.7	6.3	0.1		340.5	119.9			243.0	10.8	
Delay (s)	108.1	66.4	51.0	0.1		413.6	170.6			308.7	73.0	
Level of Service	F	E	D	A		F	F			F	E	
Approach Delay (s)		62.2					206.0			212.9		
Approach LOS		E					F			F		

Intersection Summary			
HCM 2000 Control Delay	146.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	161.1	Sum of lost time (s)	23.9
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	96	128	407	160	55
Future Volume (vph)	96	128	407	160	55
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	1.00	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2965	1350	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2965	1350	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	135	428	168	58
RTOR Reduction (vph)	0	0	0	0	57
Lane Group Flow (vph)	0	0	664	168	1
Confl. Bikes (#/hr)					
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	161.1	3.9
Effective Green, g (s)			29.7	161.1	3.9
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			546	1350	33
v/s Ratio Prot			c0.22		0.00
v/s Ratio Perm				c0.12	
v/c Ratio			1.22	0.12	0.04
Uniform Delay, d1			65.7	0.0	76.8
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			113.2	0.2	0.2
Delay (s)			178.9	0.2	77.0
Level of Service			F	A	E
Approach Delay (s)			142.8		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1259	30	81	1395	5	205	1	96	0	0	0
Future Volume (vph)	24	1259	30	81	1395	5	205	1	96	0	0	0
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95				
Frt	1.00	1.00		1.00	1.00		1.00	0.90				
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98				
Satd. Flow (prot)	1509	3007		1509	3016		1433	1338				
Flt Permitted	0.10	1.00		0.13	1.00		0.95	0.98				
Satd. Flow (perm)	158	3007		199	3016		1433	1338				
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	25	1368	33	88	1516	5	223	1	104	0	0	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	75	0	0	0	0
Lane Group Flow (vph)	25	1400	0	88	1521	0	169	84	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	54.9	54.9		54.9	54.9		14.8	14.8				
Effective Green, g (s)	54.9	54.9		54.9	54.9		14.8	14.8				
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.16	0.16				
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	96	1834		121	1839		235	220				
v/s Ratio Prot		0.47			c0.50							
v/s Ratio Perm	0.16			0.44			c0.12	0.06				
v/c Ratio	0.26	0.76		0.73	0.83		0.72	0.38				
Uniform Delay, d1	8.1	12.8		12.3	13.8		35.6	33.5				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	6.5	3.1		31.6	4.4		10.1	1.1				
Delay (s)	14.6	15.9		43.9	18.2		45.7	34.6				
Level of Service	B	B		D	B		D	C				
Approach Delay (s)		15.9			19.6			40.3			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	1283	12	65	1557	0	75
Future Vol, veh/h	1283	12	65	1557	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1351	13	68	1639	0	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1363	0	2313	682
Stage 1	-	-	-	-	1357	-
Stage 2	-	-	-	-	956	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	500	-	32	392
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	334	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	500	-	28	392
Mov Cap-2 Maneuver	-	-	-	-	28	-
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	392	-	-	500	-
HCM Lane V/C Ratio	0.201	-	-	0.137	-
HCM Control Delay (s)	16.5	-	-	13.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0.5	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1269	69	227	1468	68	82	79	250	110	87	19
Future Volume (veh/h)	89	1269	69	227	1468	68	82	79	250	110	87	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	94	1336	73	239	1545	72	86	83	263	116	92	20
Adj No. of Lanes	1	2	0	1	2	0	0	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	139	1359	74	234	1550	72	106	86	231	181	363	79
Arrive On Green	0.04	0.47	0.47	0.10	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.28
Sat Flow, veh/h	1513	2910	159	1513	2937	136	220	298	806	1031	1265	275
Grp Volume(v), veh/h	94	691	718	239	791	826	432	0	0	116	0	112
Grp Sat Flow(s),veh/h/ln	1513	1509	1560	1513	1509	1564	1324	0	0	1031	0	1540
Q Serve(g_s), s	3.3	45.1	45.4	10.5	52.1	52.8	23.1	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	3.3	45.1	45.4	10.5	52.1	52.8	28.7	0.0	0.0	28.7	0.0	5.6
Prop In Lane	1.00		0.10	1.00		0.09	0.20		0.61	1.00		0.18
Lane Grp Cap(c), veh/h	139	705	729	234	796	826	423	0	0	181	0	442
V/C Ratio(X)	0.68	0.98	0.98	1.02	0.99	1.00	1.02	0.00	0.00	0.64	0.00	0.25
Avail Cap(c_a), veh/h	231	705	729	234	796	826	423	0	0	181	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.76	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	26.2	26.3	29.8	23.4	23.6	37.4	0.0	0.0	36.5	0.0	27.4
Incr Delay (d2), s/veh	2.1	29.6	29.8	23.4	8.2	9.4	43.5	0.0	0.0	7.3	0.0	0.3
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	1.4	24.4	25.4	8.0	23.3	24.9	16.8	0.0	0.0	3.6	0.0	2.4
LnGrp Delay(d),s/veh	25.8	55.9	56.1	53.3	31.6	33.0	81.0	0.0	0.0	43.8	0.0	27.7
LnGrp LOS	C	E	E	F	C	F	F			D		C
Approach Vol, veh/h		1503			1856			432			228	
Approach Delay, s/veh		54.1			35.0			81.0			35.9	
Approach LOS		D			D			F			D	

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	52.0		33.0	8.9	58.1		33.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	12.5	47.4		30.7	5.3	54.8		30.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

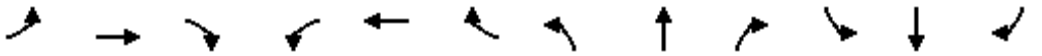
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	1351	100	241	1474	131	127	475	212	118	461	192
Future Volume (veh/h)	194	1351	100	241	1474	131	127	475	212	118	461	192
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	204	1422	105	254	1552	138	134	500	223	124	485	202
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1301	96	231	1303	115	123	866	387	178	595	246
Arrive On Green	0.20	0.91	0.91	0.10	0.47	0.47	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1513	2847	209	1513	2802	247	752	3018	1350	727	2074	858
Grp Volume(v), veh/h	204	751	776	254	829	861	134	500	223	124	352	335
Grp Sat Flow(s),veh/h/ln	1513	1509	1548	1513	1509	1540	752	1509	1350	727	1509	1423
Q Serve(g_s), s	8.2	45.7	45.7	10.5	46.5	46.5	6.7	14.2	14.1	14.5	21.7	22.0
Cycle Q Clear(g_c), s	8.2	45.7	45.7	10.5	46.5	46.5	28.7	14.2	14.1	28.7	21.7	22.0
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	226	690	707	231	702	716	123	866	387	178	433	408
V/C Ratio(X)	0.90	1.09	1.10	1.10	1.18	1.20	1.09	0.58	0.58	0.70	0.81	0.82
Avail Cap(c_a), veh/h	238	690	707	231	702	716	123	866	387	178	433	408
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)	0.12	0.12	0.12	1.00	1.00	1.00	0.98	0.98	0.98	0.86	0.86	0.86
Uniform Delay (d), s/veh	22.0	4.3	4.3	29.3	26.7	26.7	48.6	30.5	30.4	43.8	33.2	33.2
Incr Delay (d2), s/veh	5.6	43.3	47.1	88.7	95.9	103.7	107.3	1.2	2.5	10.8	10.3	11.4
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	5.7	23.2	24.6	12.0	38.0	40.3	7.0	6.0	5.5	3.9	10.2	9.9
LnGrp Delay(d),s/veh	27.7	47.6	51.4	118.0	122.6	130.5	155.9	31.6	33.0	54.6	43.4	44.6
LnGrp LOS	C	F	F	F	F	F	F	C	C	D	D	D
Approach Vol, veh/h		1731			1944			857			811	
Approach Delay, s/veh		47.0			125.5			51.4			45.6	
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	15.0	51.0		34.0	14.2	51.8		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 46		* 29	* 11	* 46		* 29
Max Q Clear Time (g_c+I1), s	12.5	47.7		30.7	10.2	48.5		30.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	514	936	135	218	872	47	233	825	167	0	930	628
Future Volume (vph)	514	936	135	218	872	47	233	825	167	0	930	628
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	2995		2927	2941			3018	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	2927	3018	1350	2927	2995		2927	2941			3018	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	541	985	142	229	918	49	245	868	176	0	979	661
RTOR Reduction (vph)	0	0	98	0	4	0	0	17	0	0	0	210
Lane Group Flow (vph)	541	985	44	229	963	0	245	1027	0	0	979	451
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA			NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2									4
Actuated Green, G (s)	13.0	31.1	31.1	8.9	28.0		9.0	45.0			32.0	32.0
Effective Green, g (s)	13.0	31.6	31.1	8.9	28.5		10.0	46.0			33.0	33.0
Actuated g/C Ratio	0.13	0.32	0.31	0.09	0.28		0.10	0.46			0.33	0.33
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	380	953	419	260	853		292	1352			995	445
v/s Ratio Prot	c0.18	0.33		0.08	c0.32		c0.08	0.35			0.32	
v/s Ratio Perm			0.03									c0.33
v/c Ratio	1.42	1.03	0.11	0.88	1.13		0.84	0.76			0.98	1.01
Uniform Delay, d1	43.5	34.2	24.5	45.0	35.8		44.2	22.4			33.2	33.5
Progression Factor	1.00	1.00	1.00	1.28	0.89		1.00	1.00			1.00	1.00
Incremental Delay, d2	205.4	38.1	0.2	21.0	69.5		17.9	4.1			24.9	46.3
Delay (s)	248.9	72.3	24.8	78.7	101.3		62.1	26.5			58.2	79.8
Level of Service	F	E	C	E	F		E	C			E	E
Approach Delay (s)		125.6			97.0			33.2			66.9	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	82.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	54.3
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	102	594	14	0	20	154	213	0	5	8	10
Future Vol, veh/h	0	102	594	14	0	20	154	213	0	5	8	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	646	15	0	22	167	232	0	5	9	11
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	87.3	10.9	10.4
HCM LOS	F	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	14%	11%	0%	39%
Vol Thru, %	35%	84%	89%	0%	3%
Vol Right, %	43%	2%	0%	100%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	710	174	213	133
LT Vol	5	102	20	0	52
Through Vol	8	594	154	0	4
RT Vol	10	14	0	213	77
Lane Flow Rate	25	772	189	232	145
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.047	1.104	0.306	0.326	0.253
Departure Headway (Hd)	7.038	5.15	6.017	5.247	6.547
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	512	710	601	690	552
Service Time	5.038	3.15	3.717	2.947	4.547
HCM Lane V/C Ratio	0.049	1.087	0.314	0.336	0.263
HCM Control Delay	10.4	87.3	11.3	10.5	11.7
HCM Lane LOS	B	F	B	B	B
HCM 95th-tile Q	0.1	22.2	1.3	1.4	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	52	4	77
Future Vol, veh/h	0	52	4	77
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	57	4	84
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	658	348	41	57	41
Future Vol, veh/h	15	658	348	41	57	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	693	366	43	60	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	409	0	-	0	1112	388
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	724	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1150	-	-	-	231	660
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	480	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1150	-	-	-	226	660
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1150	-	-	-	312
HCM Lane V/C Ratio	0.014	-	-	-	0.331
HCM Control Delay (s)	8.2	0	-	-	22.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	469	196	278	269	95	87	302	263	80	241	27
Future Volume (veh/h)	26	469	196	278	269	95	87	302	263	80	241	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	27	494	206	293	283	100	92	318	277	84	254	28
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	596	242	283	907	771	261	503	427	199	445	49
Arrive On Green	0.58	0.57	0.57	0.95	0.95	0.95	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	29	1043	424	743	1588	1350	1093	1588	1350	819	1406	155
Grp Volume(v), veh/h	727	0	0	293	283	100	92	318	277	84	0	282
Grp Sat Flow(s),veh/h/ln	1496	0	0	743	1588	1350	1093	1588	1350	819	0	1561
Q Serve(g_s), s	11.6	0.0	0.0	15.6	1.1	0.4	6.9	15.4	15.9	8.8	0.0	13.6
Cycle Q Clear(g_c), s	35.9	0.0	0.0	51.4	1.1	0.4	20.5	15.4	15.9	24.2	0.0	13.6
Prop In Lane	0.04		0.28	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	904	0	0	283	907	771	261	503	427	199	0	494
V/C Ratio(X)	0.80	0.00	0.00	1.03	0.31	0.13	0.35	0.63	0.65	0.42	0.00	0.57
Avail Cap(c_a), veh/h	904	0	0	283	907	771	294	551	468	224	0	541
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	0.00	0.00	0.79	0.79	0.79	1.00	1.00	1.00	0.48	0.00	0.48
Uniform Delay (d), s/veh	15.9	0.0	0.0	15.4	0.9	0.9	34.2	26.3	26.4	36.6	0.0	25.7
Incr Delay (d2), s/veh	7.5	0.0	0.0	56.6	0.7	0.3	0.8	2.1	2.7	0.7	0.0	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	16.4	0.0	0.0	11.4	0.6	0.2	2.1	7.0	6.3	2.0	0.0	5.9
LnGrp Delay(d),s/veh	23.4	0.0	0.0	72.1	1.6	1.2	35.0	28.3	29.2	37.3	0.0	26.2
LnGrp LOS	C			F	A	A	C	C	C	D		C
Approach Vol, veh/h		727			676			687			366	
Approach Delay, s/veh		23.4			32.1			29.6			28.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.7		33.3		56.7		33.3
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		53.4		22.5		37.9		26.2
Green Ext Time (p_c), s		0.0		3.4		7.4		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	684	59	183	533	220	78	556	169	152	575	93
Future Volume (veh/h)	66	684	59	183	533	220	78	556	169	152	575	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	69	720	62	193	561	232	82	585	178	160	605	98
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	1491	128	445	842	716	221	804	244	170	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	681	2812	242	688	1588	1350	741	2282	693	701	3018	1350
Grp Volume(v), veh/h	69	386	396	193	561	232	82	386	377	160	605	98
Grp Sat Flow(s),veh/h/ln	681	1509	1546	688	1588	1350	741	1509	1466	701	1509	1350
Q Serve(g_s), s	5.5	0.0	0.0	16.5	23.1	8.8	9.1	20.1	20.2	11.5	14.6	4.6
Cycle Q Clear(g_c), s	28.6	0.0	0.0	16.5	23.1	8.8	23.7	20.1	20.2	31.7	14.6	4.6
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	266	800	819	445	842	716	221	531	516	170	1063	476
V/C Ratio(X)	0.26	0.48	0.48	0.43	0.67	0.32	0.37	0.73	0.73	0.94	0.57	0.21
Avail Cap(c_a), veh/h	266	800	819	445	842	716	221	531	516	170	1063	476
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)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	6.9	0.0	0.0	13.8	15.4	12.0	33.2	25.4	25.4	41.8	23.6	20.4
Incr Delay (d2), s/veh	1.5	1.4	1.3	3.1	4.2	1.2	0.4	4.3	4.6	51.3	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	0.3	3.5	10.9	3.5	1.9	9.0	8.8	6.4	6.1	1.7
LnGrp Delay(d),s/veh	8.4	1.4	1.3	16.9	19.5	13.2	33.6	29.7	30.0	93.0	24.1	20.4
LnGrp LOS	A	A	A	B	B	B	C	C	C	F	C	C
Approach Vol, veh/h		851			986			845			863	
Approach Delay, s/veh		1.9			17.5			30.2			36.4	
Approach LOS		A			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		30.6		33.7		25.1		25.7
Green Ext Time (p_c), s		9.2		0.0		10.7		3.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	626	159	244	708	85	117	1098	240	87	1107	179
Future Volume (veh/h)	154	626	159	244	708	85	117	1098	240	87	1107	179
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	162	659	167	257	745	0	123	1156	253	92	1165	188
Adj No. of Lanes	1	2	0	1	2	1	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	194	609	154	191	1172	524	125	1330	289	90	1404	226
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.18	0.18	0.18	0.54	0.54	0.53
Sat Flow, veh/h	713	2386	604	1513	3018	1350	401	2467	536	380	2605	419
Grp Volume(v), veh/h	162	416	410	257	745	0	123	704	705	92	673	680
Grp Sat Flow(s),veh/h/ln	713	1509	1482	1513	1509	1350	401	1509	1494	380	1509	1514
Q Serve(g_s), s	22.5	30.6	30.6	10.4	24.1	0.0	19.5	54.4	55.2	9.5	44.5	45.2
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	24.1	0.0	64.7	54.4	55.2	64.7	44.5	45.2
Prop In Lane	1.00		0.41	1.00		1.00	1.00		0.36	1.00		0.28
Lane Grp Cap(c), veh/h	194	385	378	191	1172	524	125	814	805	90	814	816
V/C Ratio(X)	0.84	1.08	1.08	1.34	0.64	0.00	0.98	0.87	0.88	1.02	0.83	0.83
Avail Cap(c_a), veh/h	194	385	378	191	1172	524	125	814	805	90	814	816
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)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	44.7	44.9	35.4	29.8	0.0	76.5	45.1	45.4	58.4	23.0	23.3
Incr Delay (d2), s/veh	28.5	65.9	66.9	185.9	2.6	0.0	75.5	11.9	12.8	100.3	9.4	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	19.8	19.5	11.8	10.5	0.0	6.7	25.5	25.8	5.5	20.6	20.9
LnGrp Delay(d),s/veh	79.2	110.6	111.8	221.3	32.4	0.0	152.0	57.0	58.2	158.9	32.4	33.0
LnGrp LOS	E	F	F	F	C		F	E	E	F	C	C
Approach Vol, veh/h		988			1002			1532			1445	
Approach Delay, s/veh		105.9			80.9			65.2			40.8	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		26.1		66.7	12.4	32.6
Green Ext Time (p_c), s		0.0		9.2		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		69.3
HCM 2010 LOS		E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	794	94	224	832	107	106	565	150	87	484	78
Future Volume (veh/h)	85	794	94	224	832	107	106	565	150	87	484	78
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	89	836	99	236	876	113	112	595	158	92	509	82
Adj No. of Lanes	1	2	0	1	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	271	985	117	301	974	126	90	454	121	90	503	81
Arrive On Green	0.10	0.35	0.35	0.11	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1587	2845	337	1587	2813	363	863	1266	336	742	1401	226
Grp Volume(v), veh/h	89	465	470	236	493	496	112	0	753	92	0	591
Grp Sat Flow(s),veh/h/ln	1587	1583	1598	1587	1583	1592	863	0	1602	742	0	1627
Q Serve(g_s), s	2.7	21.8	21.8	7.7	23.7	23.7	0.0	0.0	28.7	0.0	0.0	28.7
Cycle Q Clear(g_c), s	2.7	21.8	21.8	7.7	23.7	23.7	28.7	0.0	28.7	28.7	0.0	28.7
Prop In Lane	1.00		0.21	1.00		0.23	1.00		0.21	1.00		0.14
Lane Grp Cap(c), veh/h	271	548	553	301	548	551	90	0	575	90	0	584
V/C Ratio(X)	0.33	0.85	0.85	0.78	0.90	0.90	1.24	0.00	1.31	1.02	0.00	1.01
Avail Cap(c_a), veh/h	271	548	553	301	548	551	90	0	575	90	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	24.2	24.2	18.5	24.8	24.8	40.0	0.0	25.7	40.0	0.0	25.7
Incr Delay (d2), s/veh	3.2	15.1	15.0	18.2	20.3	20.2	174.3	0.0	151.8	101.0	0.0	40.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	11.7	11.8	4.9	13.4	13.4	6.3	0.0	36.8	4.5	0.0	19.4
LnGrp Delay(d),s/veh	20.9	39.3	39.2	36.8	45.1	45.0	214.3	0.0	177.5	141.3	0.0	66.1
LnGrp LOS	C	D	D	D	D	D	F		F	F		F
Approach Vol, veh/h		1024			1225			865			683	
Approach Delay, s/veh		37.6			43.5			182.2			76.2	
Approach LOS		D			D			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	13.0	33.0		34.0	13.0	33.0		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 9	* 28		* 29	* 9	* 28		* 29
Max Q Clear Time (g_c+I1), s	4.7	25.7		30.7	9.7	23.8		30.7
Green Ext Time (p_c), s	0.0	1.9		0.0	0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	945	113	118	903	89	95	443	175	84	455	210
Future Volume (veh/h)	100	945	113	118	903	89	95	443	175	84	455	210
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	105	995	119	124	951	94	100	466	184	88	479	221
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1068	128	141	1092	108	162	1160	671	367	511	236
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.16	0.16	0.16	0.47	0.47	0.46
Sat Flow, veh/h	564	2849	341	529	2911	288	780	2451	1417	817	1080	498
Grp Volume(v), veh/h	105	553	561	124	517	528	100	466	184	88	0	700
Grp Sat Flow(s),veh/h/ln	564	1583	1607	529	1583	1616	780	2451	1417	817	0	1579
Q Serve(g_s), s	3.7	20.1	20.1	2.4	18.8	18.8	3.2	10.3	6.9	5.1	0.0	25.2
Cycle Q Clear(g_c), s	22.5	20.1	20.1	22.5	18.8	18.8	28.4	10.3	6.9	15.3	0.0	25.2
Prop In Lane	1.00		0.21	1.00		0.18	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	155	594	602	141	594	606	162	1160	671	367	0	747
V/C Ratio(X)	0.68	0.93	0.93	0.88	0.87	0.87	0.62	0.40	0.27	0.24	0.00	0.94
Avail Cap(c_a), veh/h	155	594	602	141	594	606	162	1160	671	367	0	747
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.49	0.49	0.49	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	18.0	18.0	33.5	21.1	21.1	38.8	17.7	16.2	16.4	0.0	15.0
Incr Delay (d2), s/veh	21.3	23.3	23.2	36.6	11.2	11.0	8.4	0.5	0.5	1.5	0.0	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	2.6	12.6	12.8	3.5	10.1	10.3	2.0	7.1	2.8	1.3	0.0	15.2
LnGrp Delay(d),s/veh	50.7	41.3	41.2	70.1	32.3	32.1	47.3	18.2	16.7	17.9	0.0	35.7
LnGrp LOS	D	D	D	E	C	C	D	B	B	B		D
Approach Vol, veh/h		1219			1169			750			788	
Approach Delay, s/veh		42.1			36.2			21.7			33.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		27.2		24.5		30.4
Green Ext Time (p_c), s		0.0		0.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

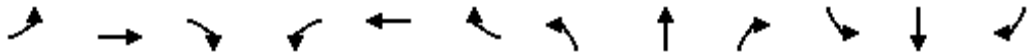
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	976	183	109	964	131	136	610	187	207	645	144
Future Volume (veh/h)	68	976	183	109	964	131	136	610	187	207	645	144
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	72	1027	193	115	1015	138	143	642	197	218	679	152
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	118	1465	655	248	1296	176	279	1470	658	285	1470	658
Arrive On Green	0.93	0.93	0.93	0.15	0.15	0.15	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	509	3167	1417	478	2802	381	690	3167	1417	685	3167	1417
Grp Volume(v), veh/h	72	1027	193	115	573	580	143	642	197	218	679	152
Grp Sat Flow(s),veh/h/ln	509	1583	1417	478	1583	1599	690	1583	1417	685	1583	1417
Q Serve(g_s), s	13.6	8.3	1.7	27.3	41.8	41.9	21.4	16.4	10.4	37.7	17.6	7.7
Cycle Q Clear(g_c), s	55.5	8.3	1.7	35.6	41.8	41.9	38.9	16.4	10.4	54.0	17.6	7.7
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1465	655	248	732	740	279	1470	658	285	1470	658
V/C Ratio(X)	0.61	0.70	0.29	0.46	0.78	0.78	0.51	0.44	0.30	0.77	0.46	0.23
Avail Cap(c_a), veh/h	118	1465	655	248	732	740	279	1470	658	285	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	2.7	2.5	46.3	45.0	45.1	35.2	21.6	20.0	39.8	21.9	19.3
Incr Delay (d2), s/veh	19.0	2.5	1.0	1.2	1.7	1.7	6.6	0.9	1.2	17.7	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	3.0	3.4	0.7	3.7	18.7	18.9	4.6	7.3	4.3	8.5	7.9	3.1
LnGrp Delay(d),s/veh	45.7	5.2	3.5	47.6	46.8	46.8	41.8	22.6	21.2	57.5	23.0	20.1
LnGrp LOS	D	A	A	D	D	D	D	C	C	E	C	C
Approach Vol, veh/h		1292			1268			982			1049	
Approach Delay, s/veh		7.2			46.8			25.1			29.7	
Approach LOS		A			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		43.9		56.0		57.5		40.9
Green Ext Time (p_c), s		8.0		0.0		0.0		9.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

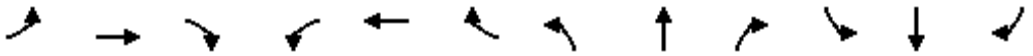
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	1236	57	195	1092	102	178	122	282	154	135	40
Future Volume (vph)	19	1236	57	195	1092	102	178	122	282	154	135	40
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Lane Width	12	12	12	12	12	12	12	12	12	16	16	16
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0		5.5	5.5	5.0		4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1509	3018	1350	1509	2979		1433	1494	1350		1730	
Flt Permitted	0.19	1.00	1.00	0.11	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	297	3018	1350	168	2979		1433	1494	1350		1730	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	1301	60	205	1149	107	187	128	297	162	142	42
RTOR Reduction (vph)	0	0	28	0	6	0	0	0	49	0	4	0
Lane Group Flow (vph)	20	1301	32	205	1250	0	155	160	248	0	342	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		7	7	5	8	8	
Permitted Phases	6		6	2					7			
Actuated Green, G (s)	64.2	64.2	64.2	75.2	75.2		16.8	16.8	23.8		14.0	
Effective Green, g (s)	64.2	64.2	64.2	74.2	75.2		16.3	16.3	21.8		13.5	
Actuated g/C Ratio	0.54	0.54	0.54	0.62	0.63		0.14	0.14	0.18		0.11	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0		5.0	5.0	4.0		4.0	
Vehicle Extension (s)	1.0	1.0	1.0	3.0	4.5		3.0	3.0	3.0		4.5	
Lane Grp Cap (vph)	158	1614	722	170	1866		194	202	245		194	
v/s Ratio Prot		0.43		c0.06	0.42		0.11	0.11	c0.05		c0.20	
v/s Ratio Perm	0.07		0.02	c0.68					0.13			
v/c Ratio	0.13	0.81	0.04	1.21	0.67		0.80	0.79	1.01		1.76	
Uniform Delay, d1	13.9	22.8	13.3	20.1	14.4		50.3	50.2	49.1		53.2	
Progression Factor	1.00	1.00	1.00	2.42	1.47		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.6	4.4	0.1	116.4	0.9		20.1	18.8	60.6		362.6	
Delay (s)	15.6	27.2	13.4	165.1	22.1		70.4	69.0	109.7		415.8	
Level of Service	B	C	B	F	C		E	E	F		F	
Approach Delay (s)		26.5			42.2			89.1			415.8	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	78.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	1521	187	167	1248	26	305	199	372	27	142	37
Future Volume (vph)	29	1521	187	167	1248	26	305	199	372	27	142	37
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	0.88	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3018	1350	1509	3018	1350	1433	1492	2376	1509	1539	
Flt Permitted	0.19	1.00	1.00	0.06	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	295	3018	1350	90	3018	1350	1433	1492	2376	1509	1539	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	1601	197	176	1314	27	321	209	392	28	149	39
RTOR Reduction (vph)	0	0	74	0	0	9	0	0	174	0	8	0
Lane Group Flow (vph)	31	1601	123	176	1314	18	260	270	218	28	180	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Split	NA	pm+ov	Split	NA	
Protected Phases		6		5	2		4	4	5	3	3	
Permitted Phases	6		6	2		2			4			
Actuated Green, G (s)	66.2	66.2	66.2	79.2	79.2	79.2	9.0	9.0	18.0	17.8	17.8	
Effective Green, g (s)	66.2	66.2	66.2	78.2	79.2	79.2	9.0	9.0	16.0	16.8	16.8	
Actuated g/C Ratio	0.55	0.55	0.55	0.65	0.66	0.66	0.08	0.08	0.13	0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	
Vehicle Extension (s)	4.5	4.5	4.5	1.0	4.5	4.5	3.0	3.0	1.0	3.0	3.0	
Lane Grp Cap (vph)	162	1664	744	153	1991	891	107	111	316	211	215	
v/s Ratio Prot		0.53		c0.08	0.44		c0.18	0.18	0.05	0.02	c0.12	
v/s Ratio Perm	0.11		0.09	c0.67		0.01			0.05			
v/c Ratio	0.19	0.96	0.17	1.15	0.66	0.02	2.43	2.43	0.69	0.13	0.84	
Uniform Delay, d1	13.5	25.7	13.3	36.2	12.3	7.0	55.5	55.5	49.6	45.2	50.3	
Progression Factor	0.78	0.83	0.75	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.5	14.1	0.4	118.9	1.7	0.0	670.9	671.0	4.9	0.3	23.8	
Delay (s)	13.0	35.6	10.3	155.3	13.9	7.1	726.4	726.5	54.6	45.5	74.1	
Level of Service	B	D	B	F	B	A	F	F	D	D	E	
Approach Delay (s)		32.5			30.2			440.8			70.4	
Approach LOS		C			C			F			E	

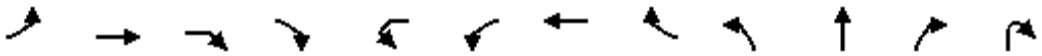
Intersection Summary			
HCM 2000 Control Delay	117.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	SBL2	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	803	144	60	23	310	11	0	1471	654	60	1239	8
Future Volume (vph)	803	144	60	23	310	11	0	1471	654	60	1239	8
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Lane Util. Factor	0.97	1.00	1.00		0.97			0.95	1.00	1.00	0.95	
Frt	1.00	0.85	0.85		1.00			1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	2927	1350	1350		2924			3018	1350	1509	3015	
Flt Permitted	0.95	1.00	1.00		0.95			1.00	1.00	0.10	1.00	
Satd. Flow (perm)	2927	1350	1350		2924			3018	1350	153	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	845	152	63	24	326	12	0	1548	688	63	1304	8
RTOR Reduction (vph)	0	0	46	0	57	0	0	0	0	0	1	0
Lane Group Flow (vph)	845	152	17	0	305	0	0	1548	688	63	1311	0
Turn Type	Prot	Prot	Prot	Prot	Prot			NA	Perm	Perm	NA	
Protected Phases	8	8	8	4	4			6			2	
Permitted Phases									6	2		
Actuated Green, G (s)	25.8	25.8	25.8		14.8			41.4	41.4	41.4	41.4	
Effective Green, g (s)	25.8	25.8	25.8		14.8			41.4	41.4	41.4	41.4	
Actuated g/C Ratio	0.27	0.27	0.27		0.16			0.44	0.44	0.44	0.44	
Clearance Time (s)	4.2	4.2	4.2		4.2			4.6	4.6	4.6	4.6	
Vehicle Extension (s)	2.0	2.0	2.0		3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	794	366	366		455			1315	588	66	1313	
v/s Ratio Prot	c0.29	0.11	0.01		c0.10			c0.51			0.43	
v/s Ratio Perm									0.51	0.41		
v/c Ratio	1.06	0.42	0.05		0.67			1.18	1.17	0.95	1.00	
Uniform Delay, d1	34.6	28.4	25.5		37.8			26.8	26.8	25.9	26.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	50.4	0.3	0.0		3.9			88.0	93.7	98.5	24.6	
Delay (s)	85.0	28.7	25.5		41.7			114.8	120.5	124.4	51.3	
Level of Service	F	C	C		D			F	F	F	D	
Approach Delay (s)	73.4				41.7			116.5			54.7	
Approach LOS	E				D			F			D	

Intersection Summary			
HCM 2000 Control Delay	85.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

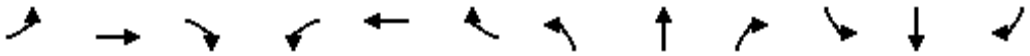


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	107	1005	401	137	8	185	1087	87	35	367	157	100
Future Volume (vph)	107	1005	401	137	8	185	1087	87	35	367	157	100
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	5.3	5.3	4.0		4.0	5.3			5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00		1.00	0.95			1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.99		1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	0.85		1.00	0.99			1.00	0.85	
Flt Protected	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (prot)	1509	3018	1350	1331		1509	2978			1581	1350	
Flt Permitted	0.95	1.00	1.00	1.00		0.95	1.00			1.00	1.00	
Satd. Flow (perm)	1509	3018	1350	1331		1509	2978			1581	1350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	1058	422	144	8	195	1144	92	37	386	165	105
RTOR Reduction (vph)	0	0	0	0	0	0	4	0	0	0	113	0
Lane Group Flow (vph)	113	1058	422	144	0	203	1232	0	0	423	157	0
Confl. Bikes (#/hr)				8				5			1	
Turn Type	Prot	NA	Perm	Free	Prot	Prot	NA		Split	NA	custom	
Protected Phases	5	2			1	1	6		4	4	4	
Permitted Phases			2	Free							4	
Actuated Green, G (s)	14.1	59.3	59.3	161.5		15.0	60.2			29.7	29.7	
Effective Green, g (s)	14.1	59.3	59.3	161.5		15.0	60.2			29.7	29.7	
Actuated g/C Ratio	0.09	0.37	0.37	1.00		0.09	0.37			0.18	0.18	
Clearance Time (s)	4.0	5.3	5.3			4.0	5.3			5.3	5.3	
Vehicle Extension (s)	2.0	3.5	3.5			2.0	3.5			2.0	2.0	
Lane Grp Cap (vph)	131	1108	495	1331		140	1110			290	248	
v/s Ratio Prot	0.07	c0.35				c0.13	c0.41			c0.27	0.12	
v/s Ratio Perm			0.31	0.11								
v/c Ratio	0.86	0.95	0.85	0.11		1.45	1.11			1.46	0.63	
Uniform Delay, d1	72.7	49.8	47.1	0.0		73.2	50.6			65.9	60.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	39.4	17.3	13.6	0.2		237.8	62.5			224.5	3.9	
Delay (s)	112.2	67.1	60.7	0.2		311.0	113.2			290.4	64.8	
Level of Service	F	E	E	A		F	F			F	E	
Approach Delay (s)		62.9					141.1			202.5		
Approach LOS		E					F			F		

Intersection Summary			
HCM 2000 Control Delay	126.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	161.5	Sum of lost time (s)	23.9
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWR2
Lane Configurations					
Traffic Volume (vph)	74	161	433	146	48
Future Volume (vph)	74	161	433	146	48
Ideal Flow (vphpl)	1620	1620	1620	1620	1620
Total Lost time (s)			5.3	4.0	4.0
Lane Util. Factor			0.95	1.00	1.00
Frpb, ped/bikes			1.00	0.99	1.00
Flpb, ped/bikes			1.00	1.00	1.00
Frt			1.00	0.85	0.86
Flt Protected			0.98	1.00	1.00
Satd. Flow (prot)			2966	1333	1374
Flt Permitted			0.98	1.00	1.00
Satd. Flow (perm)			2966	1333	1374
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	169	456	154	51
RTOR Reduction (vph)	0	0	0	0	50
Lane Group Flow (vph)	0	0	703	154	1
Confl. Bikes (#/hr)				3	
Turn Type	Split	Split	NA	Free	Prot
Protected Phases	3	3	3		7
Permitted Phases				Free	
Actuated Green, G (s)			29.7	161.5	3.9
Effective Green, g (s)			29.7	161.5	3.9
Actuated g/C Ratio			0.18	1.00	0.02
Clearance Time (s)			5.3		4.0
Vehicle Extension (s)			2.0		2.0
Lane Grp Cap (vph)			545	1333	33
v/s Ratio Prot			c0.24		0.00
v/s Ratio Perm				c0.12	
v/c Ratio			1.29	0.12	0.04
Uniform Delay, d1			65.9	0.0	77.0
Progression Factor			1.00	1.00	1.00
Incremental Delay, d2			143.8	0.2	0.2
Delay (s)			209.7	0.2	77.1
Level of Service			F	A	E
Approach Delay (s)			172.0		
Approach LOS			F		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1311	28	51	1226	1	213	1	79	0	0	2
Future Volume (vph)	25	1311	28	51	1226	1	213	1	79	0	0	2
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.3	5.3		5.3	5.3		4.7	4.7			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.92			0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98			1.00	
Satd. Flow (prot)	1509	3008		1509	3017		1433	1353			0	
Flt Permitted	0.15	1.00		0.13	1.00		0.95	0.98			1.00	
Satd. Flow (perm)	243	3008		200	3017		1433	1353			0	
Peak-hour factor, PHF	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	26	1425	30	55	1333	1	232	1	86	0	0	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	41	0	0	2	0
Lane Group Flow (vph)	26	1454	0	55	1334	0	165	113	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		2			6			4				
Permitted Phases	2			6			4					
Actuated Green, G (s)	72.8	72.8		72.8	72.8		16.9	16.9			0.0	
Effective Green, g (s)	72.8	72.8		72.8	72.8		16.9	16.9			0.0	
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.15	0.15			0.00	
Clearance Time (s)	5.3	5.3		5.3	5.3		4.7	4.7				
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	3.0				
Lane Grp Cap (vph)	160	1990		132	1996		220	207			0	
v/s Ratio Prot		c0.48			0.44							
v/s Ratio Perm	0.11			0.27			c0.12	0.08				
v/c Ratio	0.16	0.73		0.42	0.67		0.75	0.54			0.00	
Uniform Delay, d1	7.0	12.2		8.7	11.3		44.5	43.0			55.0	
Progression Factor	1.00	1.00		1.23	1.34		1.00	1.00			1.00	
Incremental Delay, d2	2.2	2.4		6.8	1.3		13.4	2.9			0.0	
Delay (s)	9.2	14.6		17.5	16.5		57.9	45.9			55.0	
Level of Service	A	B		B	B		E	D			D	
Approach Delay (s)		14.5			16.5			52.1			55.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.7
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	1359	15	63	1284	0	49
Future Vol, veh/h	1359	15	63	1284	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	-	0
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	1431	16	66	1352	0	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1446	0	2246	723
Stage 1	-	-	-	-	1438	-
Stage 2	-	-	-	-	808	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	465	-	35	369
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	399	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	465	-	30	369
Mov Cap-2 Maneuver	-	-	-	-	30	-
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	342	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	465	-
HCM Lane V/C Ratio	0.14	-	-	0.143	-
HCM Control Delay (s)	16.3	-	-	14	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.5	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1217	41	233	1220	34	85	111	340	149	146	19
Future Volume (veh/h)	65	1217	41	233	1220	34	85	111	340	149	146	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	68	1281	43	245	1284	36	89	117	358	157	154	20
Adj No. of Lanes	1	2	0	1	2	0	0	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	217	1509	51	263	1699	48	76	69	186	155	372	48
Arrive On Green	0.04	0.51	0.51	0.10	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2979	100	1513	2998	84	142	254	689	915	1378	179
Grp Volume(v), veh/h	68	648	676	245	646	674	564	0	0	157	0	174
Grp Sat Flow(s),veh/h/ln	1513	1509	1571	1513	1509	1573	1085	0	0	915	0	1557
Q Serve(g_s), s	2.4	40.9	41.0	8.9	35.7	35.7	19.6	0.0	0.0	0.0	0.0	10.1
Cycle Q Clear(g_c), s	2.4	40.9	41.0	8.9	35.7	35.7	29.7	0.0	0.0	29.7	0.0	10.1
Prop In Lane	1.00		0.06	1.00		0.05	0.16		0.63	1.00		0.11
Lane Grp Cap(c), veh/h	217	764	796	263	855	891	331	0	0	155	0	420
V/C Ratio(X)	0.31	0.85	0.85	0.93	0.76	0.76	1.70	0.00	0.00	1.01	0.00	0.41
Avail Cap(c_a), veh/h	336	764	796	291	855	891	331	0	0	155	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.12	0.12	0.12	0.68	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	23.5	23.5	24.8	18.1	18.1	43.6	0.0	0.0	46.4	0.0	33.0
Incr Delay (d2), s/veh	0.3	11.3	11.0	6.5	0.8	0.7	325.8	0.0	0.0	76.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	19.3	20.1	7.8	14.9	15.5	40.0	0.0	0.0	8.0	0.0	4.4
LnGrp Delay(d),s/veh	17.3	34.8	34.5	31.4	18.8	18.8	369.4	0.0	0.0	122.7	0.0	33.7
LnGrp LOS	B	C	C	C	B	B	F			F		C
Approach Vol, veh/h		1392			1565			564			331	
Approach Delay, s/veh		33.8			20.8			369.4			75.9	
Approach LOS		C			C			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	15.0	61.0		34.0	8.4	67.6		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	10.9	43.0		31.7	4.4	37.7		31.7
Green Ext Time (p_c), s	0.1	10.2		0.0	0.0	15.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	81.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

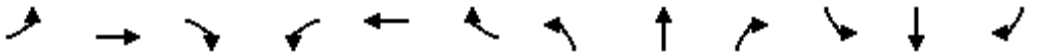
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1506	55	183	1218	106	124	774	285	118	535	137
Future Volume (veh/h)	190	1506	55	183	1218	106	124	774	285	118	535	137
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	200	1585	58	193	1282	112	131	815	300	124	563	144
Adj No. of Lanes	1	2	0	1	2	0	1	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	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	1583	58	210	1549	135	65	705	308	65	555	141
Arrive On Green	0.16	1.00	1.00	0.10	0.55	0.55	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1513	2966	108	1513	2805	244	738	3018	1317	503	2375	605
Grp Volume(v), veh/h	200	804	839	193	688	706	131	815	300	124	357	350
Grp Sat Flow(s),veh/h/ln	1513	1509	1566	1513	1509	1541	738	1509	1317	503	1509	1471
Q Serve(g_s), s	6.9	0.0	58.6	9.1	41.3	41.7	0.0	25.7	24.9	0.0	25.7	25.7
Cycle Q Clear(g_c), s	6.9	0.0	58.6	9.1	41.3	41.7	25.7	25.7	24.9	25.7	25.7	25.7
Prop In Lane	1.00		0.07	1.00		0.16	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	255	805	835	210	833	851	65	705	308	65	353	344
V/C Ratio(X)	0.78	1.00	1.00	0.92	0.83	0.83	2.00	1.16	0.98	1.89	1.01	1.02
Avail Cap(c_a), veh/h	284	805	835	210	833	851	65	705	308	65	353	344
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)	0.10	0.10	0.10	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97
Uniform Delay (d), s/veh	19.7	0.0	0.0	33.6	20.3	20.4	55.0	42.2	41.8	55.0	42.2	42.2
Incr Delay (d2), s/veh	1.1	9.4	10.8	39.8	9.2	9.2	499.4	85.5	44.2	452.6	50.4	52.4
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	0.1	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.1	2.5	8.1	19.1	19.8	11.1	19.0	12.8	10.2	15.6	15.4
LnGrp Delay(d),s/veh	20.8	9.4	10.8	73.4	29.4	29.6	554.4	127.6	86.0	507.6	92.6	94.6
LnGrp LOS	C	A	F	E	C	C	F	F	F	F	F	F
Approach Vol, veh/h		1843			1587			1246			831	
Approach Delay, s/veh		11.3			34.8			162.5			155.4	
Approach LOS		B			C			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	64.0		31.0	13.0	66.0		31.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 59		* 26	* 11	* 59		* 26
Max Q Clear Time (g_c+I1), s	11.1	60.6		27.7	8.9	43.7		27.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	14.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	675	1164	102	182	740	39	182	1004	178	2	803	573
Future Volume (vph)	675	1164	102	182	740	39	182	1004	178	2	803	573
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.0	4.5	5.0	5.0	4.5		3.0	4.0			4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	2927	3018	1350	2927	2995		2927	2950			3017	1350
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (perm)	2927	3018	1350	2927	2995		2927	2950			2874	1350
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	1225	107	192	779	41	192	1057	187	2	845	603
RTOR Reduction (vph)	0	0	66	0	4	0	0	13	0	0	0	309
Lane Group Flow (vph)	711	1225	41	192	816	0	192	1231	0	0	847	294
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2							4		4
Actuated Green, G (s)	22.0	42.2	42.2	10.6	31.8		6.0	42.2			32.2	32.2
Effective Green, g (s)	22.0	42.7	42.2	10.6	32.3		7.0	43.2			33.2	33.2
Actuated g/C Ratio	0.20	0.39	0.38	0.10	0.29		0.06	0.39			0.30	0.30
Clearance Time (s)	4.0	5.0	5.0	5.0	5.0		4.0	5.0			5.0	5.0
Vehicle Extension (s)	1.0	5.0	5.0	1.0	5.0		2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	585	1171	517	282	879		186	1158			867	407
v/s Ratio Prot	c0.24	c0.41		0.07	c0.27		0.07	c0.42				
v/s Ratio Perm			0.03								0.29	0.22
v/c Ratio	1.22	1.05	0.08	0.68	0.93		1.03	1.06			0.98	0.72
Uniform Delay, d1	44.0	33.6	21.6	48.1	37.7		51.5	33.4			38.0	34.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	112.0	39.2	0.1	5.3	16.3		74.7	45.0			25.5	10.7
Delay (s)	156.0	72.9	21.7	53.4	54.0		126.2	78.4			63.5	45.0
Level of Service	F	E	C	D	D		F	E			E	D
Approach Delay (s)		99.1			53.9			84.8			55.8	
Approach LOS		F			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	77.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	127.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	92
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	91	678	15	0	52	118	247	0	5	11	47
Future Vol, veh/h	0	91	678	15	0	52	118	247	0	5	11	47
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	99	737	16	0	57	128	268	0	5	12	51
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	154.8	12.2	11.3
HCM LOS	F	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	12%	31%	0%	58%
Vol Thru, %	17%	86%	69%	0%	3%
Vol Right, %	75%	2%	0%	100%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	784	170	247	137
LT Vol	5	91	52	0	79
Through Vol	11	678	118	0	4
RT Vol	47	15	0	247	54
Lane Flow Rate	68	852	185	268	149
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.126	1.278	0.318	0.398	0.276
Departure Headway (Hd)	7.277	5.401	6.534	5.663	7.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	496	673	554	639	499
Service Time	5.277	3.426	4.234	3.363	5.24
HCM Lane V/C Ratio	0.137	1.266	0.334	0.419	0.299
HCM Control Delay	11.3	154.8	12.3	12.1	13
HCM Lane LOS	B	F	B	B	B
HCM 95th-tile Q	0.4	32.8	1.4	1.9	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	79	4	54
Future Vol, veh/h	0	79	4	54
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	86	4	59
Number of Lanes	0	0	1	0

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	764	376	44	45	35
Future Vol, veh/h	29	764	376	44	45	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	804	396	46	47	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	442	0	-	0	1284	419
Stage 1	-	-	-	-	419	-
Stage 2	-	-	-	-	865	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1118	-	-	-	182	634
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1118	-	-	-	173	634
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	26
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1118	-	-	-	254
HCM Lane V/C Ratio	0.027	-	-	-	0.332
HCM Control Delay (s)	8.3	0	-	-	26
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	555	217	233	300	120	97	385	285	106	312	27
Future Volume (veh/h)	65	555	217	233	300	120	97	385	285	106	312	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1620	1588	1620	1588	1588	1588	1588	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	68	584	228	245	316	126	102	405	300	112	328	28
Adj No. of Lanes	0	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	542	205	180	859	730	238	551	468	171	500	43
Arrive On Green	0.55	0.54	0.54	0.90	0.90	0.90	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	83	1002	379	669	1588	1350	1021	1588	1350	740	1443	123
Grp Volume(v), veh/h	880	0	0	245	316	126	102	405	300	112	0	356
Grp Sat Flow(s),veh/h/ln	1465	0	0	669	1588	1350	1021	1588	1350	740	0	1566
Q Serve(g_s), s	36.5	0.0	0.0	0.0	2.6	1.0	8.4	20.1	16.8	11.1	0.0	17.3
Cycle Q Clear(g_c), s	49.2	0.0	0.0	48.7	2.6	1.0	25.7	20.1	16.8	31.2	0.0	17.3
Prop In Lane	0.08		0.26	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	844	0	0	180	859	731	238	551	468	171	0	543
V/C Ratio(X)	1.04	0.00	0.00	1.36	0.37	0.17	0.43	0.74	0.64	0.65	0.00	0.66
Avail Cap(c_a), veh/h	844	0	0	180	859	731	238	551	468	171	0	543
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	0.00	0.00	0.74	0.74	0.74	1.00	1.00	1.00	0.56	0.00	0.56
Uniform Delay (d), s/veh	21.8	0.0	0.0	15.1	2.1	2.0	35.7	25.8	24.7	40.5	0.0	24.9
Incr Delay (d2), s/veh	42.8	0.0	0.0	186.4	0.9	0.4	1.2	5.1	2.9	4.9	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	30.8	0.0	0.0	13.7	1.2	0.4	2.5	9.6	6.6	3.0	0.0	7.7
LnGrp Delay(d),s/veh	64.5	0.0	0.0	201.5	3.0	2.4	37.0	30.9	27.6	45.5	0.0	26.5
LnGrp LOS	F			F	A	A	D	C	C	D		C
Approach Vol, veh/h		880			687			807			468	
Approach Delay, s/veh		64.5			73.7			30.4			31.0	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0
Change Period (Y+Rc), s		* 5.3		* 4.8		* 5.3		* 4.8
Max Green Setting (Gmax), s		* 49		* 31		* 49		* 31
Max Q Clear Time (g_c+I1), s		50.7		27.7		51.2		33.2
Green Ext Time (p_c), s		0.0		2.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	659	114	260	527	265	98	825	160	125	678	54
Future Volume (veh/h)	112	659	114	260	527	265	98	825	160	125	678	54
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	118	694	120	274	555	279	103	868	168	132	714	57
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	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	262	1364	236	434	842	716	185	889	172	87	1063	476
Arrive On Green	1.00	1.00	1.00	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	656	2574	445	668	1588	1350	696	2523	488	542	3018	1350
Grp Volume(v), veh/h	118	407	407	274	555	279	103	519	517	132	714	57
Grp Sat Flow(s),veh/h/ln	656	1509	1510	668	1588	1350	696	1509	1502	542	1509	1350
Q Serve(g_s), s	11.7	0.0	0.0	29.4	22.7	11.0	13.3	30.6	30.6	1.1	18.1	2.6
Cycle Q Clear(g_c), s	34.4	0.0	0.0	29.4	22.7	11.0	31.3	30.6	30.6	31.7	18.1	2.6
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	262	800	800	434	842	716	185	531	529	87	1063	476
V/C Ratio(X)	0.45	0.51	0.51	0.63	0.66	0.39	0.56	0.98	0.98	1.52	0.67	0.12
Avail Cap(c_a), veh/h	262	800	800	434	842	716	185	531	529	87	1063	476
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)	0.40	0.40	0.40	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	8.2	0.0	0.0	16.9	15.3	12.5	38.0	28.8	28.8	45.0	24.7	19.7
Incr Delay (d2), s/veh	2.2	0.9	0.9	6.8	4.0	1.6	2.2	32.9	33.0	284.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.2	0.2	6.2	10.8	4.4	2.7	17.5	17.5	9.0	7.7	1.0
LnGrp Delay(d),s/veh	10.4	0.9	0.9	23.7	19.3	14.1	40.2	61.7	61.8	329.5	26.1	19.8
LnGrp LOS	B	A	A	C	B	B	D	E	E	F	C	B
Approach Vol, veh/h		932			1108			1139			903	
Approach Delay, s/veh		2.1			19.1			59.8			70.0	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3
Max Green Setting (Gmax), s		* 48		* 32		* 48		* 32
Max Q Clear Time (g_c+I1), s		36.4		33.7		31.4		33.3
Green Ext Time (p_c), s		8.0		0.0		10.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	1007	61	257	690	81	79	1261	298	63	915	130
Future Volume (veh/h)	178	1007	61	257	690	81	79	1261	298	63	915	130
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1588	1588	1588	1620	1588	1588	1620
Adj Flow Rate, veh/h	187	1060	64	271	726	0	83	1327	314	66	963	137
Adj No. of Lanes	1	2	0	1	2	1	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	201	737	45	191	1172	524	201	1311	305	60	1431	203
Arrive On Green	0.25	0.25	0.25	0.09	0.39	0.00	0.54	0.54	0.54	0.54	0.54	0.53
Sat Flow, veh/h	725	2892	175	1513	3018	1350	510	2432	565	304	2653	377
Grp Volume(v), veh/h	187	553	571	271	726	0	83	814	827	66	547	553
Grp Sat Flow(s),veh/h/ln	725	1509	1557	1513	1509	1350	510	1509	1489	304	1509	1522
Q Serve(g_s), s	23.3	30.6	30.6	10.4	23.3	0.0	16.9	64.7	64.7	0.0	31.5	31.6
Cycle Q Clear(g_c), s	30.6	30.6	30.6	10.4	23.3	0.0	48.5	64.7	64.7	64.7	31.5	31.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.38	1.00		0.25
Lane Grp Cap(c), veh/h	201	385	397	191	1172	524	201	814	803	60	814	820
V/C Ratio(X)	0.93	1.44	1.44	1.42	0.62	0.00	0.41	1.00	1.03	1.10	0.67	0.67
Avail Cap(c_a), veh/h	201	385	397	191	1172	524	201	814	803	60	814	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.2	44.7	44.8	35.4	29.6	0.0	37.6	27.6	27.7	60.0	20.0	20.1
Incr Delay (d2), s/veh	42.3	208.8	208.8	216.0	2.5	0.0	6.2	31.6	39.9	146.4	4.4	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	1.6	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	35.0	36.2	16.1	10.1	0.0	2.7	34.0	35.4	4.4	14.1	14.2
LnGrp Delay(d),s/veh	93.5	253.5	253.5	251.4	32.0	0.0	43.7	59.3	67.6	208.1	24.4	24.5
LnGrp LOS	F	F	F	F	C		D	F	F	F	C	C
Approach Vol, veh/h		1311			997			1724			1166	
Approach Delay, s/veh		230.7			91.7			62.5			34.9	
Approach LOS		F			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		69.0		51.0		69.0	16.0	35.0
Change Period (Y+Rc), s		* 5.3		* 5.4		* 5.3	4.6	* 5.4
Max Green Setting (Gmax), s		* 64		* 46		* 64	11.4	* 30
Max Q Clear Time (g_c+I1), s		66.7		25.3		66.7	12.4	32.6
Green Ext Time (p_c), s		0.0		11.1		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		104.3
HCM 2010 LOS		F

Notes

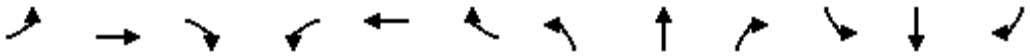
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	978	97	191	945	126	136	528	146	93	445	47
Future Volume (veh/h)	165	978	97	191	945	126	136	528	146	93	445	47
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	1667	1700	1667	1667	1700
Adj Flow Rate, veh/h	174	1029	102	201	995	133	143	556	154	98	468	49
Adj No. of Lanes	1	2	0	1	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	256	990	98	265	955	128	159	469	130	80	555	58
Arrive On Green	0.11	0.34	0.34	0.04	0.11	0.11	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	2904	288	1587	2800	374	924	1252	347	773	1482	155
Grp Volume(v), veh/h	174	561	570	201	562	566	143	0	710	98	0	517
Grp Sat Flow(s),veh/h/ln	1587	1583	1608	1587	1583	1591	924	0	1599	773	0	1637
Q Serve(g_s), s	6.2	30.7	30.7	7.1	30.7	30.7	7.7	0.0	33.7	0.0	0.0	26.0
Cycle Q Clear(g_c), s	6.2	30.7	30.7	7.1	30.7	30.7	33.7	0.0	33.7	33.7	0.0	26.0
Prop In Lane	1.00		0.18	1.00		0.24	1.00		0.22	1.00		0.09
Lane Grp Cap(c), veh/h	256	540	548	265	540	543	159	0	599	80	0	613
V/C Ratio(X)	0.68	1.04	1.04	0.76	1.04	1.04	0.90	0.00	1.19	1.22	0.00	0.84
Avail Cap(c_a), veh/h	256	540	548	265	540	543	159	0	599	80	0	613
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	29.6	29.7	22.3	39.9	39.9	42.9	0.0	28.2	45.0	0.0	25.7
Incr Delay (d2), s/veh	13.6	49.1	49.1	18.2	49.8	50.1	48.6	0.0	99.9	173.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	20.7	21.0	4.4	20.9	21.1	5.7	0.0	31.4	5.8	0.0	13.9
LnGrp Delay(d),s/veh	34.2	78.7	78.7	40.5	89.8	90.0	91.5	0.0	128.0	218.0	0.0	39.1
LnGrp LOS	C	F	F	D	F	F	F		F	F		D
Approach Vol, veh/h		1305			1329			853			615	
Approach Delay, s/veh		72.8			82.4			121.9			67.6	
Approach LOS		E			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	15.0	36.0		39.0	15.0	36.0		39.0
Change Period (Y+Rc), s	* 4	* 5.3		* 5.3	* 4	* 5.3		* 5.3
Max Green Setting (Gmax), s	* 11	* 31		* 34	* 11	* 31		* 34
Max Q Clear Time (g_c+I1), s	8.2	32.7		35.7	9.1	32.7		35.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.3
HCM 2010 LOS	F

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	978	97	191	945	126	136	528	146	93	445	47
Future Volume (vph)	165	978	97	191	945	126	136	528	146	93	445	47
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	5.0	5.3		4.5	5.3		5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3117		1583	3103		1583	1607		1583	1641	
Flt Permitted	0.13	1.00		0.13	1.00		0.23	1.00		0.12	1.00	
Satd. Flow (perm)	224	3117		221	3103		381	1607		198	1641	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	1029	102	201	995	133	143	556	154	98	468	49
RTOR Reduction (vph)	0	9	0	0	12	0	0	11	0	0	4	0
Lane Group Flow (vph)	174	1122	0	201	1116	0	143	699	0	98	513	0
Confl. Bikes (#/hr)			3			1			8			3
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	41.7	30.7		41.7	30.7		33.7	33.7		33.7	33.7	
Effective Green, g (s)	39.7	30.7		40.7	30.7		33.7	33.7		33.7	33.7	
Actuated g/C Ratio	0.44	0.34		0.45	0.34		0.37	0.37		0.37	0.37	
Clearance Time (s)	4.0	5.3		4.0	5.3		5.3	5.3		5.3	5.3	
Lane Grp Cap (vph)	249	1063		258	1058		142	601		74	614	
v/s Ratio Prot	0.08	c0.36		c0.09	0.36			0.43			0.31	
v/s Ratio Perm	0.23			0.26			0.37			c0.50		
v/c Ratio	0.70	1.06		0.78	1.05		1.01	1.16		1.32	0.83	
Uniform Delay, d1	19.5	29.6		19.4	29.6		28.1	28.1		28.1	25.6	
Progression Factor	1.00	1.00		0.67	1.10		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.1	43.6		5.2	30.6		77.4	90.5		213.8	12.7	
Delay (s)	34.6	73.3		18.3	63.3		105.5	118.6		241.9	38.3	
Level of Service	C	E		B	E		F	F		F	D	
Approach Delay (s)		68.1			56.5			116.5			70.7	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	74.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	995	67	105	994	81	90	519	173	71	432	209
Future Volume (veh/h)	110	995	67	105	994	81	90	519	173	71	432	209
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1700	1667	1667	1700	1667	2451	1667	1667	1667	1700
Adj Flow Rate, veh/h	116	1047	71	111	1046	85	95	546	182	75	455	220
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	1129	77	142	1112	90	183	1160	671	463	503	243
Arrive On Green	0.38	0.38	0.37	0.25	0.25	0.25	0.95	0.95	0.95	0.47	0.47	0.46
Sat Flow, veh/h	520	3010	204	527	2966	241	798	2451	1417	760	1062	514
Grp Volume(v), veh/h	116	551	567	111	558	573	95	546	182	75	0	675
Grp Sat Flow(s),veh/h/ln	520	1583	1631	527	1583	1624	798	2451	1417	760	0	1576
Q Serve(g_s), s	1.7	20.0	20.0	2.5	20.7	20.8	4.7	1.3	0.6	3.6	0.0	23.7
Cycle Q Clear(g_c), s	22.5	20.0	20.0	22.5	20.7	20.8	28.4	1.3	0.6	4.9	0.0	23.7
Prop In Lane	1.00		0.13	1.00		0.15	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	135	594	611	142	594	609	183	1160	671	463	0	746
V/C Ratio(X)	0.86	0.93	0.93	0.78	0.94	0.94	0.52	0.47	0.27	0.16	0.00	0.90
Avail Cap(c_a), veh/h	135	594	611	142	594	609	183	1160	671	463	0	746
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.65	0.42	0.42	0.42	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	18.0	18.0	33.5	21.8	21.8	14.3	0.9	0.9	10.0	0.0	14.7
Incr Delay (d2), s/veh	46.6	22.8	22.4	23.9	18.4	18.2	4.4	0.6	0.4	0.7	0.0	16.5
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	3.7	12.3	12.6	2.8	12.0	12.3	1.8	0.8	0.3	0.8	0.0	13.6
LnGrp Delay(d),s/veh	76.5	40.8	40.4	57.4	40.2	40.0	18.6	1.4	1.3	10.7	0.0	31.2
LnGrp LOS	E	D	D	E	D	D	B	A	A	B		C
Approach Vol, veh/h		1234			1242			823			750	
Approach Delay, s/veh		44.0			41.6			3.4			29.2	
Approach LOS		D			D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		33.0		27.0		33.0
Change Period (Y+Rc), s		* 4.8		* 5.2		* 4.8		* 5.2
Max Green Setting (Gmax), s		* 22		* 28		* 22		* 28
Max Q Clear Time (g_c+I1), s		24.5		25.7		24.5		30.4
Green Ext Time (p_c), s		0.0		1.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

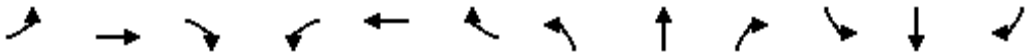
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1213	151	73	835	165	136	1005	470	269	913	140
Future Volume (veh/h)	59	1213	151	73	835	165	136	1005	470	269	913	140
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1700	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	62	1277	159	77	879	174	143	1058	495	283	961	147
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	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	277	1465	655	179	1219	241	183	1470	658	128	1470	658
Arrive On Green	0.93	0.93	0.93	0.93	0.93	0.93	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	560	3167	1417	389	2636	522	532	3167	1417	348	3167	1417
Grp Volume(v), veh/h	62	1277	159	77	528	525	143	1058	495	283	961	147
Grp Sat Flow(s),veh/h/ln	560	1583	1417	389	1583	1575	532	1583	1417	348	1583	1417
Q Serve(g_s), s	3.8	18.8	1.3	15.2	9.0	9.0	27.7	32.3	34.5	23.4	28.0	7.4
Cycle Q Clear(g_c), s	12.9	18.8	1.3	34.0	9.0	9.0	55.7	32.3	34.5	55.7	28.0	7.4
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1465	655	179	732	728	183	1470	658	128	1470	658
V/C Ratio(X)	0.22	0.87	0.24	0.43	0.72	0.72	0.78	0.72	0.75	2.21	0.65	0.22
Avail Cap(c_a), veh/h	277	1465	655	179	732	728	183	1470	658	128	1470	658
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.2	3.1	2.5	9.7	2.8	2.8	48.1	25.9	26.5	53.8	24.7	19.2
Incr Delay (d2), s/veh	1.6	6.6	0.8	1.5	1.2	1.2	27.7	3.1	7.8	570.5	2.3	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	0.7	8.1	0.6	1.7	3.5	3.5	6.1	14.7	14.9	24.5	12.6	3.0
LnGrp Delay(d),s/veh	5.8	9.7	3.2	11.2	4.0	4.0	75.8	28.9	34.3	624.3	27.0	20.0
LnGrp LOS	A	A	A	B	A	A	E	C	C	F	C	C
Approach Vol, veh/h		1498			1130			1696			1391	
Approach Delay, s/veh		8.9			4.5			34.4			147.8	
Approach LOS		A			A			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		60.0		60.0		60.0		60.0
Change Period (Y+Rc), s		* 6.4		* 5.8		* 6.4		* 5.8
Max Green Setting (Gmax), s		* 54		* 54		* 54		* 54
Max Q Clear Time (g_c+I1), s		36.0		57.7		20.8		57.7
Green Ext Time (p_c), s		13.3		0.0		20.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1182	102	117	868	61	110	599	47	82	618	68
Future Volume (vph)	154	1182	102	117	868	61	110	599	47	82	618	68
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	4336	1309	1509	4336	1318	1509	1588	1327	1509	1562	
Flt Permitted	0.25	1.00	1.00	0.18	1.00	1.00	0.16	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	397	4336	1309	289	4336	1318	255	1588	1327	379	1562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	1244	107	123	914	64	116	631	49	86	651	72
RTOR Reduction (vph)	0	0	68	0	0	41	0	0	19	0	6	0
Lane Group Flow (vph)	162	1244	39	123	914	23	116	631	30	86	717	0
Confl. Bikes (#/hr)			10			4			10			5
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Actuated Green, G (s)	22.0	22.0	22.0	22.0	22.0	22.0	28.0	28.0	28.0	28.0	28.0	
Effective Green, g (s)	22.0	22.0	22.0	22.0	22.0	22.0	28.0	28.0	28.0	28.0	28.0	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.47	0.47	0.47	0.47	0.47	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	145	1589	479	105	1589	483	119	741	619	176	728	
v/s Ratio Prot		0.29			0.21			0.40			c0.46	
v/s Ratio Perm	0.41		0.03	c0.43		0.02	0.45		0.02	0.23		
v/c Ratio	1.12	0.78	0.08	1.17	0.58	0.05	0.97	0.85	0.05	0.49	0.98	
Uniform Delay, d1	19.0	16.9	12.4	19.0	15.2	12.3	15.7	14.2	8.7	11.1	15.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.42	1.42	
Incremental Delay, d2	109.7	3.9	0.3	141.2	1.5	0.2	74.0	9.3	0.0	1.5	23.6	
Delay (s)	128.7	20.8	12.7	160.2	16.8	12.4	89.7	23.5	8.8	17.2	46.0	
Level of Service	F	C	B	F	B	B	F	C	A	B	D	
Approach Delay (s)		31.8			32.5			32.2			42.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX I
Mitigation Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	947	43	191	1002	33	111	108	280	143	141	18
Future Volume (veh/h)	62	947	43	191	1002	33	111	108	280	143	141	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	65	997	45	201	1055	35	117	114	295	151	148	19
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	1555	70	328	1691	56	176	141	364	97	373	48
Arrive On Green	0.03	0.53	0.53	0.07	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2941	133	1513	2981	99	470	524	1350	973	1380	177
Grp Volume(v), veh/h	65	511	531	201	534	556	231	0	295	151	0	167
Grp Sat Flow(s),veh/h/ln	1513	1509	1565	1513	1509	1571	993	0	1350	973	0	1557
Q Serve(g_s), s	2.2	26.6	26.6	6.5	26.1	26.1	16.5	0.0	22.5	3.6	0.0	9.7
Cycle Q Clear(g_c), s	2.2	26.6	26.6	6.5	26.1	26.1	26.1	0.0	22.5	29.7	0.0	9.7
Prop In Lane	1.00		0.08	1.00		0.06	0.51		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	286	798	827	328	856	891	318	0	365	97	0	420
V/C Ratio(X)	0.23	0.64	0.64	0.61	0.62	0.62	0.73	0.00	0.81	1.55	0.00	0.40
Avail Cap(c_a), veh/h	405	798	827	390	856	891	318	0	365	97	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.62	0.62	0.62	0.74	0.00	0.74	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	18.5	18.5	15.3	15.9	16.0	42.2	0.0	37.5	54.4	0.0	32.9
Incr Delay (d2), s/veh	0.1	3.9	3.8	0.6	2.1	2.1	6.1	0.0	9.7	293.7	0.0	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	0.9	12.0	12.4	2.7	11.3	11.8	7.3	0.0	9.4	10.9	0.0	4.2
LnGrp Delay(d),s/veh	13.8	22.4	22.3	15.9	18.1	18.0	48.2	0.0	47.2	348.1	0.0	33.5
LnGrp LOS	B	C	C	B	B	B	D		D	F		C
Approach Vol, veh/h		1107			1291			526			318	
Approach Delay, s/veh		21.9			17.7			47.7			182.9	
Approach LOS		C			B			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	12.5	63.5		34.0	8.3	67.7		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	8.5	28.6		31.7	4.2	28.1		28.1
Green Ext Time (p_c), s	0.1	20.3		0.0	0.0	20.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
7: Robertson Blvd & Santa Monica Blvd

01/25/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1273	79	226	1475	68	122	80	241	110	89	19
Future Volume (veh/h)	89	1273	79	226	1475	68	122	80	241	110	89	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	94	1340	83	238	1553	72	128	84	254	116	94	20
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	1348	83	231	1551	72	250	144	387	182	365	78
Arrive On Green	0.04	0.47	0.47	0.10	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.28
Sat Flow, veh/h	1513	2887	178	1513	2937	136	669	503	1350	1038	1270	270
Grp Volume(v), veh/h	94	699	724	238	795	830	212	0	254	116	0	114
Grp Sat Flow(s),veh/h/ln	1513	1509	1557	1513	1509	1564	1171	0	1350	1038	0	1541
Q Serve(g_s), s	3.3	46.0	46.4	10.5	52.6	52.8	12.4	0.0	16.5	10.6	0.0	5.7
Cycle Q Clear(g_c), s	3.3	46.0	46.4	10.5	52.6	52.8	18.1	0.0	16.5	28.7	0.0	5.7
Prop In Lane	1.00		0.11	1.00		0.09	0.60		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	139	705	727	231	796	826	394	0	387	182	0	442
V/C Ratio(X)	0.68	0.99	1.00	1.03	1.00	1.01	0.54	0.00	0.66	0.64	0.00	0.26
Avail Cap(c_a), veh/h	231	705	727	231	796	826	394	0	387	182	0	442
HCM Platoon Ratio	1.00	1.00	1.00	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	0.75	0.00	0.75	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	26.5	26.6	30.2	23.6	23.6	33.4	0.0	31.3	45.0	0.0	27.5
Incr Delay (d2), s/veh	2.1	32.0	32.4	26.3	9.2	10.6	1.1	0.0	3.0	7.1	0.0	0.3
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	1.4	25.3	26.3	8.0	23.7	25.1	5.4	0.0	6.5	3.6	0.0	2.4
LnGrp Delay(d),s/veh	25.8	58.4	59.0	56.6	32.7	34.3	34.5	0.0	34.3	52.1	0.0	27.8
LnGrp LOS	C	E	E	F	C	F	C		C	D		C
Approach Vol, veh/h		1517			1863			466			230	
Approach Delay, s/veh		56.7			36.5			34.4			40.1	
Approach LOS		E			D			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	15.0	52.0		33.0	8.9	58.1		33.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 11	* 47		* 28	* 11	* 47		* 28
Max Q Clear Time (g_c+I1), s	12.5	48.4		30.7	5.3	54.8		20.1
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1221	48	225	1225	34	122	112	330	149	147	19
Future Volume (veh/h)	65	1221	48	225	1225	34	122	112	330	149	147	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1588	1588	1620	1588	1588	1620	1620	1588	1588	1588	1588	1620
Adj Flow Rate, veh/h	68	1285	51	237	1289	36	128	118	347	157	155	20
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	1515	60	255	1699	47	176	128	364	72	372	48
Arrive On Green	0.04	0.51	0.51	0.09	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1513	2959	117	1513	2999	84	466	472	1350	924	1379	178
Grp Volume(v), veh/h	68	655	681	237	648	677	246	0	347	157	0	175
Grp Sat Flow(s),veh/h/ln	1513	1509	1568	1513	1509	1573	938	0	1350	924	0	1557
Q Serve(g_s), s	2.4	41.1	41.3	8.3	35.9	36.0	18.8	0.0	27.8	0.7	0.0	10.2
Cycle Q Clear(g_c), s	2.4	41.1	41.3	8.3	35.9	36.0	29.0	0.0	27.8	29.7	0.0	10.2
Prop In Lane	1.00		0.07	1.00		0.05	0.52		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	216	773	803	255	855	892	303	0	365	72	0	420
V/C Ratio(X)	0.32	0.85	0.85	0.93	0.76	0.76	0.81	0.00	0.95	2.19	0.00	0.42
Avail Cap(c_a), veh/h	334	773	803	291	855	892	303	0	365	72	0	420
HCM Platoon Ratio	1.00	1.00	1.00	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	0.15	0.15	0.15	0.67	0.00	0.67	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.9	23.1	23.2	24.3	18.1	18.1	44.0	0.0	39.4	55.0	0.0	33.0
Incr Delay (d2), s/veh	0.3	11.1	10.9	7.2	1.0	0.9	10.7	0.0	27.0	580.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	19.5	20.2	7.6	15.0	15.6	8.4	0.0	13.1	13.7	0.0	4.5
LnGrp Delay(d),s/veh	17.2	34.2	34.0	31.5	19.1	19.0	54.8	0.0	66.5	634.9	0.0	33.7
LnGrp LOS	B	C	C	C	B	B	D		E	F		C
Approach Vol, veh/h		1404			1562			593			332	
Approach Delay, s/veh		33.3			20.9			61.6			318.0	
Approach LOS		C			C			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	14.4	61.6		34.0	8.4	67.6		34.0
Change Period (Y+Rc), s	* 4	* 5.3		* 4.8	* 4	* 5.3		* 4.8
Max Green Setting (Gmax), s	* 13	* 54		* 29	* 13	* 54		* 29
Max Q Clear Time (g_c+I1), s	10.3	43.3		31.7	4.4	38.0		31.0
Green Ext Time (p_c), s	0.1	10.0		0.0	0.0	14.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.