APPENDIX F

Traffic

Traffic Study

Traffic Study for the California Department of Water Resources Lake Perris Emergency Release Facility (ERF) Project

Perris, California

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DRAFT

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1. Introduction

This report documents the traffic analysis prepared by KOA Corporation, as a sub-consultant to Environmental Science Associates, to assess the traffic impact of the Lake Perris Emergency Release Facility (ERF) Project. The project is proposed by the California Department of Water Resource (CA DWR) and is located in unincorporated western Riverside County and the City of Perris. A majority of the proposed project is located within the boundaries of the Lake Perris State Recreation Area (SRA).

KOA Corporation prepared a construction-period traffic study and conceptual engineering for intersection closures. The roadways of Evans Road and Lake Perris Drive would be closed immediately to the north of Ramona Expressway to construct replacement bridge structures as part of the proposed project. This traffic study assumed that Perris Boulevard would be the primary detour route, with east-west connections to the north along Krameria Avenue and Iris Avenue. Traffic would join existing routes on Ramona Expressway at Perris Boulevard and at the Krameria Avenue and Iris Avenue intersections of Lasselle Street.

The traffic study area included seven intersections on the proposed detour route, two intersections adjacent to the bridge closures on Ramona Expressway, four intersections at nearby I-215 interchange, and three intersections south of Ramona Expressway. The separate engineering analysis focused on partial closures of the intersections of Evans Road/Ramona Expressway and Lake Perris Drive/Ramona Expressway, and optimized the configuration to allow for the least reduction in approach lanes and/or turn pocket lengths. The resulting intersection geometries were incorporated into the impact analysis

1.1 Project Location

Figure 1 illustrates the proposed ERF project site. The ERF is composed of three segments: Western Segment, Fairground Segment and Lake Perris SRA Segment. The replacement bridge structures are located in the western Segment.

The intersections and roadway segments to be evaluated by this study are located in the City of Perris and the City of Moreno Valley, both located within Riverside County.

1.2 Project Description

The proposed Emergency Release Facility (ERF) would direct emergency release water from the dam into an improved system of levees and channels. That system would run parallel to Ramona Expressway and directly to the Perris Valley Channel, a flood control facility operated and maintained by the Riverside County Flood Control District.

<u>Bridge Construction</u>

The project includes two options for the construction of the bridge crossings. Option A would require partial lane closures and Option B would require full roadway closures. The construction of bridges, regardless of option, will consist of similar activities.

Under Option A, the bridge crossings on Evans Road and Lake Perris Drive would be constructed in two phases with a partial road closure, allowing a reduced number of lanes of traffic to pass north and south through the construction zones while the bridges are under construction. With the two-phase approach, the bridge is constructed in two separate parts (halves). An additional three-part construction scenario with two phases would also be possible for the bridge construction at Evans Road.

Under Option B, a full roadway closure would occur at Lake Perris Drive and Evans Road, immediately north of Ramona Expressway. For the Lake Perris Drive closure, this option would include the construction of a short, temporary five-lane paved road just to the east of Lake Perris Drive within the Lake Perris Fairgrounds property (currently a dirt lot used for overflow event parking). The full roadway closure option at Evans Road would require the implementation of a detour route.

Construction details under both options are discussed further in Section 2 of this report.

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Figure 1

Project Site

1.3 Traffic Analysis Methodology

The focus of this traffic impact study is on the construction period of the proposed Project. The post-construction operations period will not generate significant levels of daily traffic, and only routine maintenance activities will be required.

Perris Boulevard would be the primary detour route for the Evans Road construction closure, with east-west connections to the north provided along the Krameria Avenue and Iris Avenue roadways. A total of 16 intersections were analyzed for traffic impact conditions along the detour route.

Table 1 defines the 16 study intersections and Figure 2 illustrates each intersection location.

Table 1 – List of Study Intersections

Intersections	
1	Perris Boulevard & Iris Avenue
2	Lasselle Street & Iris Avenue
3	Perris Boulevard & Krameria Avenue
4	Lasselle Street & Krameria Avenue
5	I-215 SB Ramps & Harley Knox Boulevard
6	I-215 NB Ramps & Harley Knox Boulevard
7	Perris Boulevard & Harley Knox Boulevard
8	I-215 SB Ramps & Ramona Expressway
9	I-215 NB Ramps & Ramona Expressway
10	Perris Boulevard & Ramona Expressway
11	Redlands Avenue & Ramona Expressway
12	Evans Road & Ramona Expressway
13	Lake Perris Drive & Ramona Expressway
14	Perris Boulevard & Rider Street
15	Evans Road & Rider Street
16	Ramona Expressway & Rider Street

Traffic was primarily diverted to Perris Boulevard using the east-west connecting routes of Iris Avenue and Krameria Street. Study roadway intersections adjacent to the construction areas and along the detour route were examined for approach lane reductions and vehicle volume shifts due to establishment of project construction work areas and detours.

The steps involved in the analysis included internal scoping of the work with the project team; collection of baseline traffic data; analysis of existing, existing-with-construction, future baseline, and future with-construction scenarios; identification of significant traffic impacts and circulation issues; and development of recommendations for mitigation. Further details of the methodology applied to this effort are summarized below.

Study Area and Orientation

A major detour route is planned related to the construction work zones in the vicinity of the construction work areas. The route of this detour would be as follows, and is illustrated in Figure 2.

The primary detour route was assumed for the traffic diversion and construction-period impact analysis. Other local traffic deviation routes were included in the analysis, due to the likelihood of vehicles finding other routes of diversion outside of the signed detour route.

Data Collection

Peak-period (7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.) weekday turn movement traffic counts were conducted at eight of the ten signalized study intersections on Thursday, May 7, 2015 and on Monday, September 21, 2015 by National Data and Surveying Services, Inc. Traffic counts for the intersection of Perris Boulevard / Ramona Expressway and Evans Road / Ramona Expressway were based on the Optimus Logistic Center traffic impact study conducted by RBF Consulting, November 2014. The remaining intersection counts were based on the Stratford Ranch Industrial traffic impact study conducted by Urban Crossroads, April 2012. All non-2015 counts were rounded up by assumed growth rate of one percent per year.

1.4 Level of Service Definition

The concept of level of service (LOS) for the roadway network is typically defined in terms of average travel speed of all vehicles on the facility. The number of vehicles using the roadway, as compared to the capacity of the roadway, greatly affects travel speed. Roadway operations are influenced by the density of signalized intersections per mile, average intersection delay, the number of driveways per segment and the presence of on-street parking. At intersections, where flow is interrupted, level of service is generally defined by average delay per approaching vehicle, which is influenced by signal timing, conflicts with other traffic, and queuing within the various approach lanes of each leg of the intersection.

Table 2 provides descriptions of general roadway operations for each LOS value, as defined within the *Highway Capacity Manual* (published by the Transportation Research Board).

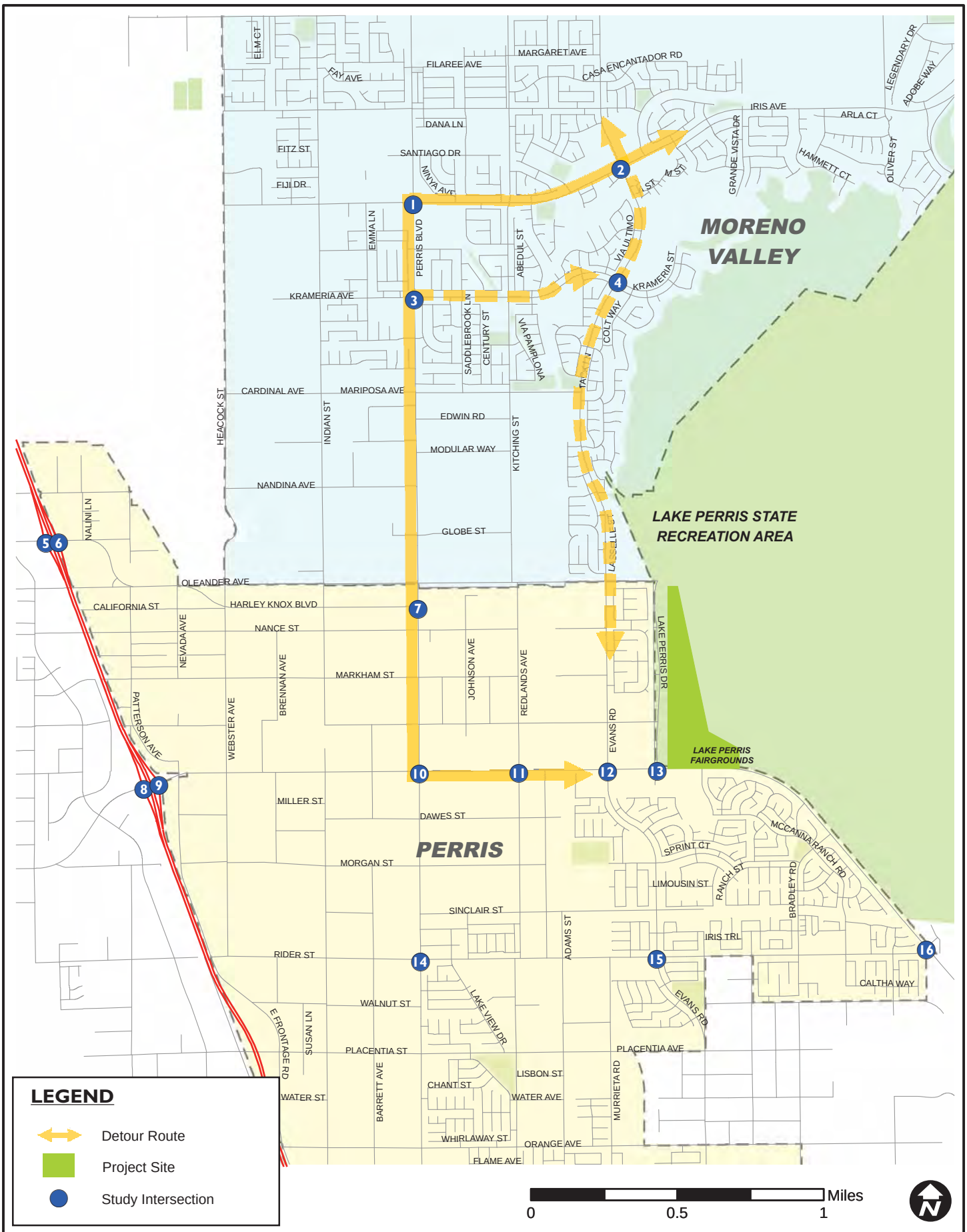

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Figure 2

Study Intersections

Table 2 – Level of Service Definitions by Average Delay

LOS	Definition	Average Stop Delay Per Vehicle (Sec/Veh) (HCM)
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.	≤10
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.	>10 - 20
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.	>20 - 35
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.	>35 - 55
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.	>55 - 80
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.	>80

1.5 Significant Traffic Impacts

Traffic impacts are identified if the proposed project will result in a significant change in traffic conditions at a study intersection. 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 acceptable level of service values and project traffic will cause a further decline below a threshold.

LOS D or better is generally considered acceptable on City of Perris, Caltrans, and County of Riverside impact criteria, with some exceptions based on arterial/minor road locations.

As this analysis focuses on construction-period traffic operations, causing or worsening at LOS E was used as the standard at most of the study intersections. LOS F was used as the standard at Ramona Expressway intersections.

The subsequent sections of this report are laid out as follows:

- Section 2 provides a detailed overview of Project construction.
- Section 3 provides a review of existing LOS values at the study intersections and roadway segments.
- Section 4 summarizes the construction trip generation and diversion during the construction period.
- Section 5 provides a review of existing plus-Project construction conditions and impacts
- Section 6 provides a review of pre-Project (pre-construction and pre-operations) conditions.
- Section 7 provides a review of future with-Project construction period conditions and significant impact determinations.

2. Project Construction Summary

This section of the report identifies the construction activity that would occur along the proposed emergency release facility.

The Emergency Relief Facility is composed of three segments: Western Segment, Fairground Segment and Lake Perris SRA Segment. The planned bridge replacement structures are located in the Western Segment.

2.1 Project Construction Details

Bridge Construction

The project includes two options for the construction of the bridge crossings. Option A would require partial lane closures and Option B would require full roadway closures.

The bridge crossings at Evans Road and Lake Perris Drive will be constructed as separate, independent activities which may or may not occur simultaneously. Furthermore, each bridge may be constructed by either Option A or Option B methods, independently of the method used to construct the other bridge.

The construction of bridges, regardless of option, will consist of similar activities. The existing roadway and soil will be removed to design depth to construct the new channel using excavators and haul trucks. Foundation piles may be driven into the soil at each end of the bridge and at mid-channel to support the bridge structure. The concrete portions of the bridge structure would then be constructed independently, including abutments, intermediate piers, bridge deck, and barriers. Each portion would consist of a cycle of setting formwork, placing steel reinforcement and concrete, and removal of formwork, involving laborers, cranes, concrete pumps, forklifts, and generators to complete the work.

Option A

The bridges on Evans Road and Lake Perris Drive would be constructed in two phases with a partial road closure, allowing a reduced number of lanes of traffic to pass north and south through the construction zones while the bridges are under construction. With the two-phase option, the bridge is constructed in two separate parts (halves) with a joint running lengthwise down the middle of the bridge, connecting the two halves to form a single structure when completed. In this scenario, half of the existing roadway is initially closed down for construction of the first half of the new bridge, and all traffic is routed through the construction zone in a reduced number of lanes on the other half of the road. When the first half of the bridge is completed, the traffic lanes are then shifted over to the newly constructed half of the bridge, with traffic continuing to pass through the construction zone in a reduced number of lanes. The remaining half of the roadway is then closed and the second half of the bridge is constructed.

An additional three-part construction scenario with two phases would also be possible for the bridge construction at Evans Road. In this scenario, the bridge is constructed in thirds, with two joints running lengthwise, joining all three parts to form a single structure upon completion. The outer lanes of the roadway are initially closed and all traffic is routed down the middle of the existing roadway through the construction zone in a reduced number of lanes. The outer two thirds of the bridge are then constructed. When the outer two thirds of the bridge are completed, the traffic lanes are shifted onto the newly-constructed parts and traffic is carried through the construction zone in a reduced number of lanes on the new parts of the bridge. The remaining roadway down the center is then closed and the last, middle third of the bridge is constructed.

Construction of the partial road closure option would take approximately 24 months, requiring traffic diversion measures during 12-18 months of that time.

Option B

The second bridge construction option includes a full roadway closure at Lake Perris Drive and Evans Road immediately north of Ramona Expressway. For the Lake Perris Drive closure, this option would include the temporary construction of a short, temporary 5-lane paved road just to the east of Lake Perris Drive within the Lake Perris Fairgrounds property (currently a dirt lot used for overflow event parking). This temporary road would serve as a detour route around the construction zone during the closure period. The temporary detour would include a new, temporary signalized intersection at Ramona Expressway, and would run northward from Ramona Expressway and veering slightly to the west just south of the Lake Perris Fairgrounds entrance and connect back to Lake Perris Drive. The temporary road would maintain the full current capacity of Lake Perris Drive, with no change in the traffic conditions and would maintain full access to the Lake Perris SRA and the Lake Perris Fairgrounds.

The full roadway closure option at Evans Road would require the implementation of a detour route. It was determined by KOA traffic engineers (see Appendix F) that the best detour option for the proposed project would be to utilize Perris Boulevard as the primary detour route, with east-west connections to the north along Krameria Avenue and Iris Avenue. Traffic would join existing routes on Ramona Expressway at Perris Boulevard and at the Krameria Avenue and Iris Avenue intersections of Lasselle Street.

Bridges under option B would be constructed in one phase. Construction of the full roadway closure option would take approximately 12 months, requiring traffic diversion measures during 6-9 months of that time. Lane configurations at the construction work areas are discussed below.

Option A – Partial Road Closure Lane Conditions

For the partial road closure, the bridge crossings on Evans Road and Lake Perris Drive would need to be constructed in two phases to allow traffic to pass through the segment immediately to the north of the Ramona Expressway.

- Phase I: Either the east or west side of the roadway would need to be removed to construct half of the bridge in its place. Both northbound and southbound traffic lanes would have to be reduced and constricted on the remaining side of the roadway.

- Phase II: Once the first side of the bridge is completed, both the northbound and southbound lanes would be rerouted over the completed bridge while the second half of the bridge is constructed on the other side.

Option B – Full Road Closure Lane Conditions

For the full road closure, the bridge on Evans Road would be constructed in one phase. Therefore, the southbound approaches and adjacent receiving lanes at the intersection of Evans Road & Ramona Expressway would be fully closed to traffic.

2.2 Project Schedule

Construction of the ERF project is scheduled to begin in early 2018 or later. The construction of the two bridge structures could begin as early as 2018 and would be completed by no later than 2023.

In general, construction activities would occur between 7:00 a.m. and 7:00 p.m., Monday through Friday, with occasional weekend and nighttime work.

3. Existing Area Traffic Conditions

This report section describes the characteristics of roadways within the study area. A review of the collected traffic volumes is provided, along with a level of service analysis for these facilities.

3.1 Study Intersections

The following are the sixteen signalized study intersections:

1 Perris Boulevard & Iris Avenue
2 Lasselle Street & Iris Avenue
3 Perris Boulevard & Krameria Avenue
4 Lasselle Street & Krameria Avenue
5 I-215 SB Ramps & Harley Knox Boulevard
6 I-215 NB Ramps & Harley Knox Boulevard
7 Perris Boulevard & Harley Knox Boulevard
8 I-215 SB Ramps & Ramona Expressway
9 I-215 NB Ramps & Ramona Expressway
10 Perris Boulevard & Ramona Expressway
11 Redlands Avenue & Ramona Expressway
12 Evans Road & Ramona Expressway
13 Perris Lake Drive & Ramona Expressway
14 Perris Boulevard & Rider Street
15 Evans Road & Rider Street
16 Ramona Expressway & Rider Street

Peak-period (7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.) weekday turn movement traffic counts were conducted at eight of the study intersections on Thursday, May 7, 2015 and on Monday, September 21, 2015 by National Data and Surveying Services, Inc. Traffic counts for the intersection of Perris Boulevard / Ramona Expressway and Evans Road / Ramona Expressway were based on the Optimus Logistic Center traffic impact study conducted by RBF Consulting, November 2014.

The remaining intersection counts were based on the Stratford Ranch Industrial traffic impact study conducted by Urban Crossroads, April 2012. All non-2015 counts were rounded up by assumed growth rate of one percent per year.

Figure 3 illustrates the study intersection approach lanes and control configurations. The intersection traffic count summaries are provided in Appendix A of this report.

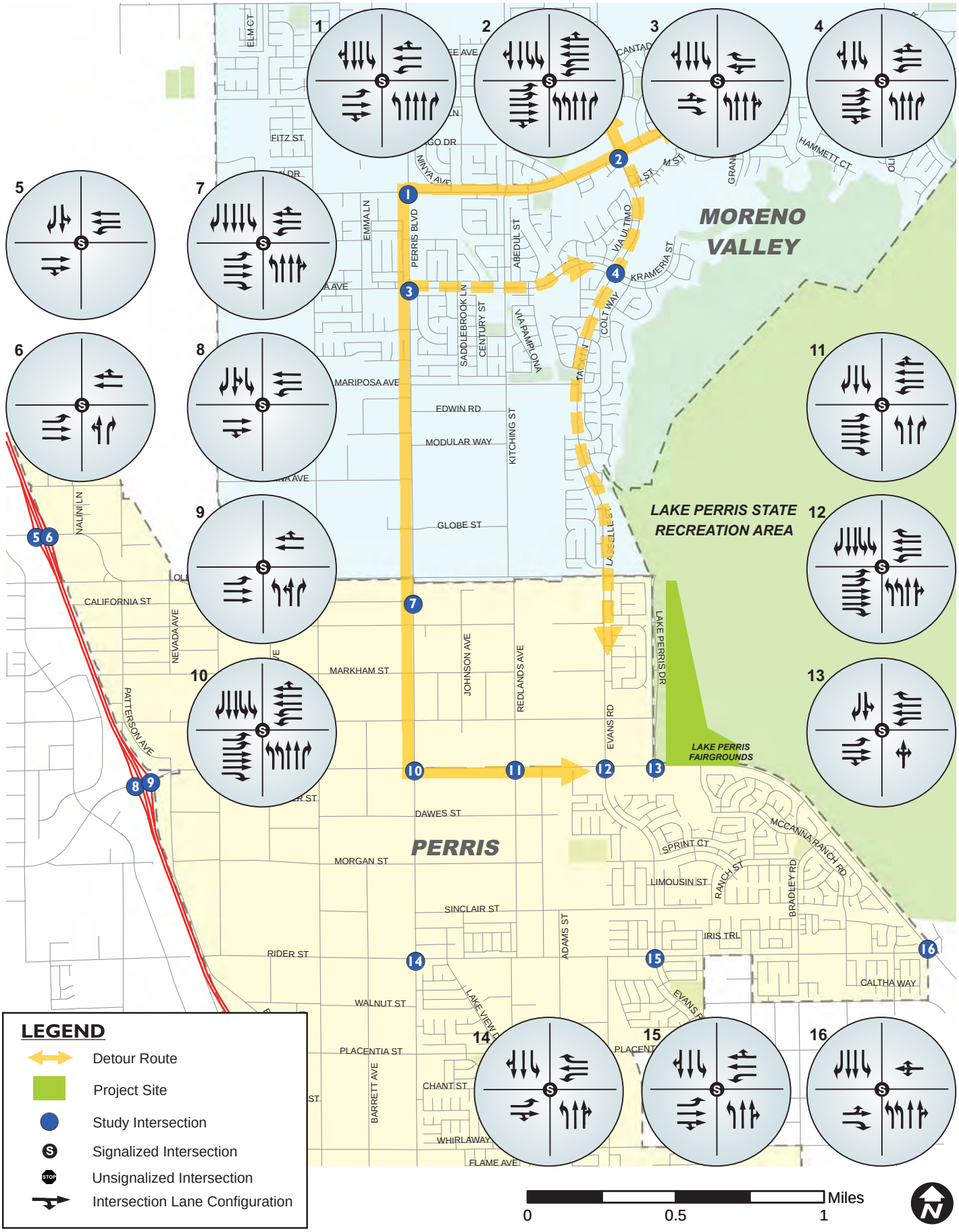

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Figure 3

Intersection Lane Configuration

3.2 Local Roadway Characteristics

Ramona Expressway has three travel lanes in each direction and a center one-way left turn lane along the segment between Perris Boulevard and Lake Perris Drive. The major north-south detour would be on Perris Boulevard, which has three travel lanes in each direction and a center one-way left turn lane. On-street parking is generally permitted along the segment between Ramona Expressway and Iris Avenue.

Table 3 summarizes the major roadway segments that will be impacted by the construction closure by number of lanes, median type, parking restrictions, adjacent land uses, speed limits, and curb-to-curb physical width.

Table 3 – Project Corridor Roadway Characteristics

Roadway	From	To	Functional Classification	Lane		Median Type	Parking Restrictions		Land Use	Speed Limit	Roadway Width (feet)
Ramona Expressway	Perris Blvd.	Lake Perris Dr.	Expressway	EB:3	WB:3	MB	EB:NPAT	WB:NPAT	Residential/ Empty Lots	55	84' - 110'
Perris Blvd.	Ramona Expressway	Iris Ave.	Primary Arterial	NB:3	SB:3	MB	NB:PA	SB:PA	Residential/ Commercial/ Industrial	45	82'-110'
Evans Rd.	Ramona Expressway	Oleander Ave.	Arterial	NB:2	SB:2	DY	NB:PA	SB:PA	Residential	55	56'-91'
Lake Perris Rd.	Ramona Expressway	City Boundary	Collector	NB:1	SB:1	DY	NB:PA	NB:PA	Residential/ Commercial/ Open Space	45	33'- 48'
Krameria Ave.	Perris Blvd.	Lasselle St.	Major Collector	EB:2	WB:2	DY	EB: NPAT	WB: NPAT	Residential	40	60'
Iris Ave.	Perris Blvd.	Lasselle St.	Arterial	EB:2/3	WB:2/3	DY/MB	EB:PA/NPAT	WB:PA/NPAT	Residential	45/50	74'-110'

DY – Double Yellow

MB – Median Barrier

PA – Parking Anytime

NSAT – No Stopping Anytime

NPAT – No Parking Anytime

3.3 Existing Area Transit Service

The project study area is served by public transit bus lines operated by the Riverside Transit Agency (RTA). Table 4 provides a description of the transit lines that serve the study area. Route 41, which bypasses the intersection of Ramona Expressway and Evans Road, will be directly impacted by the construction closure. Figure 4 demonstrates the alignment of these routes and the location of the bus stops.

Table 4 – Transit Service Summary

Agency	Line	From	To	Via	Approx. Peak Frequency
Riverside Transit Agency	41	Mead Valley Community Center	Riverside County Regional Medical Center	Ramona Expressway/Perris Blvd. /Evans Rd./Lasselle St.	60 minutes
Riverside Transit Agency	19	Moreno Valley Mall	Perris Station Transit Center	Perris Blvd./Iris Ave./ Lasselle St./Krameria Ave./Sunnymead Blvd.	30 minutes
Riverside Transit Agency	18	Sunnymead Ranch	Moreno Valley College	Perris Blvd/Iris Ave./ Lasselle St./ Cottonwood Ave.	60 minutes
Riverside Transit Agency	20	Moreno Valley College	Magnolia Center	Iris Ave./Lasselle St./Krameria Ave./Alessandro Blvd.	45 minutes

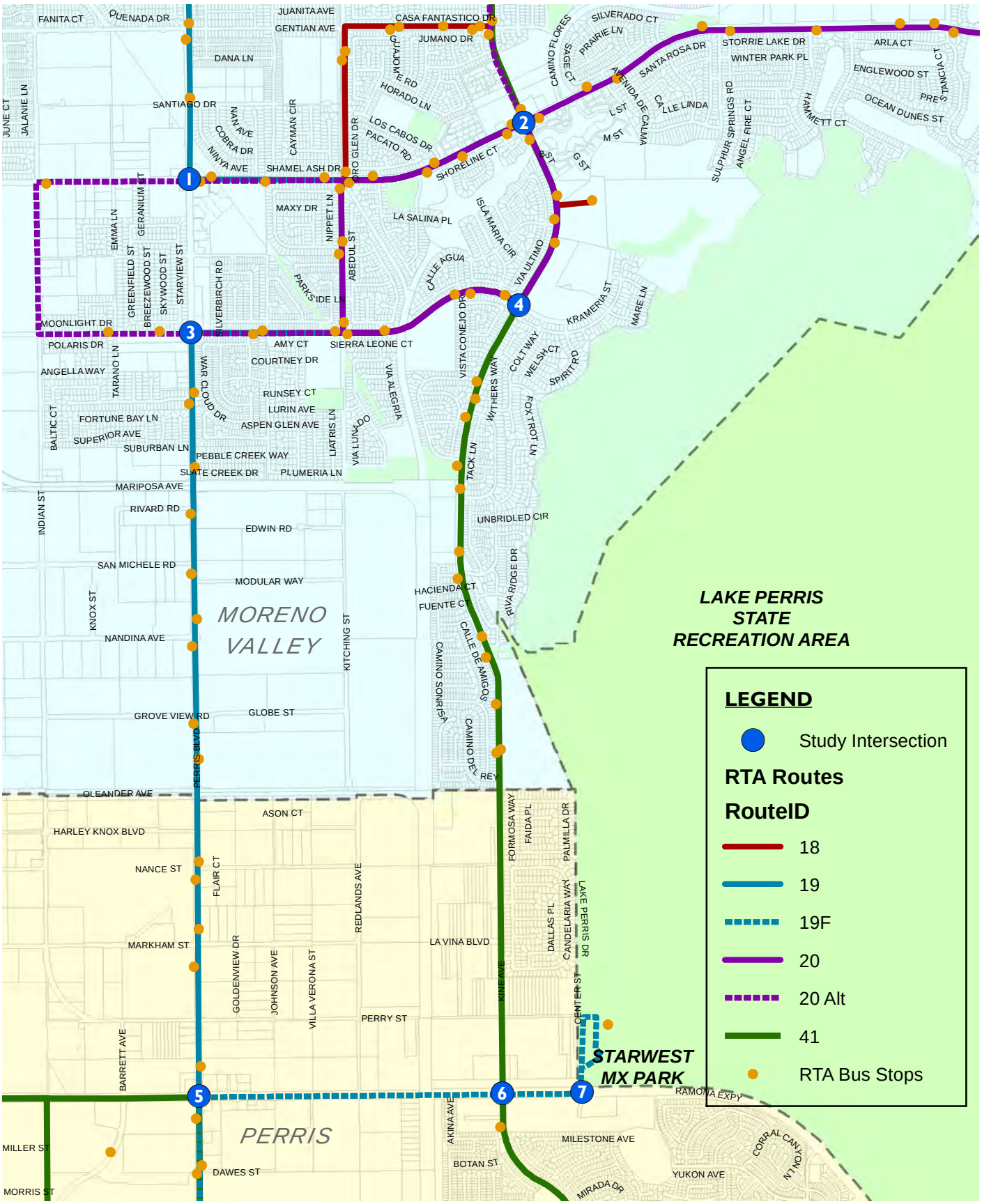

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Figure 4

Existing Transit

3.4 Existing Intersection Levels of Service

This report section documents existing weekday a.m. and p.m. peak-hour traffic conditions within the study area. Based on the traffic counts conducted at the study intersections, a level of service (LOS) value and a corresponding delay value in seconds was determined for each study intersection. Input volumes were factored upward by 1.03 for intersections 5 and 6, to account for the year of growth between the count year 2013 and the current year 2015.

Table 5 provides the V/C and LOS values under existing conditions, for the a.m. and p.m. peak hours. The special event traffic volumes for the p.m. peak hour at the Lake Perris Drive / Ramona Expressway intersection were included in the existing conditions. The added volumes were analyzed to simulate the existing conditions when activities would occur at the intersection.

Table 5 – Intersection Level of Service Calculations – Existing Conditions

Intersections		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Perris Blvd & Iris Ave	25.5	C	30.8	C
2	Lasselle St & Iris Ave	35.9	D	32.4	C
3	Perris Blvd & Krameria Ave	24.6	C	19.2	B
4	Lasselle St & Krameria Ave	24.8	C	17.7	B
5	I-215 SB Ramps & Harley Knox Blvd	22.2	C	29.1	C
6	I-215 NB Ramps & Harley Knox Blvd	13.8	B	18.5	B
7	Perris Blvd & Harley Knox Blvd	30.6	C	28.5	C
8	I-215 SB Ramps & Ramona Expwy	18.4	B	27.8	C
9	I-215 NB Ramps & Ramona Expwy	97.1	**F**	32.8	C
10	Perris Blvd & Ramona Expwy	55.8	E	46.5	D
11	Redlands Ave & Ramona Expwy	5.0	A	3.4	A
12	Evans Rd & Ramona Expwy	76.6	E	45.9	D
13	Lake Perris Dr & Ramona Expwy	3.2	A	119.2	**F**
14	Perris Blvd & Rider St	20.4	C	17.7	B
15	Evans Rd & Rider St	36.7	D	28.4	C
16	Ramona Expwy & Rider St	14.4	B	10.1	B

The data in Table 5 indicates that 12 of the 16 study intersections are currently operating at LOS D or better during the a.m. and p.m. peak hours. The following intersections are operating at poor operation conditions (LOS E or F), near capacity:

- I-215 NB Ramps & Ramona Expressway – operates at LOS F during the a.m. peak hour
- Perris Boulevard & Ramona Expressway – operates at LOS E during the a.m. peak hour
- Evans Road & Ramona Expressway – operates at LOS E during a.m. peak hour
- Lake Perris Drive & Ramona Expressway – operate at LOS F during the p.m. peak hour

The existing peak-hour turn movement volumes at the study intersections are provided on Figure 5 (a.m. peak) and Figure 6 (p.m. peak).

The intersection level of service worksheets for the existing conditions scenario are provided in Appendix B of this report.

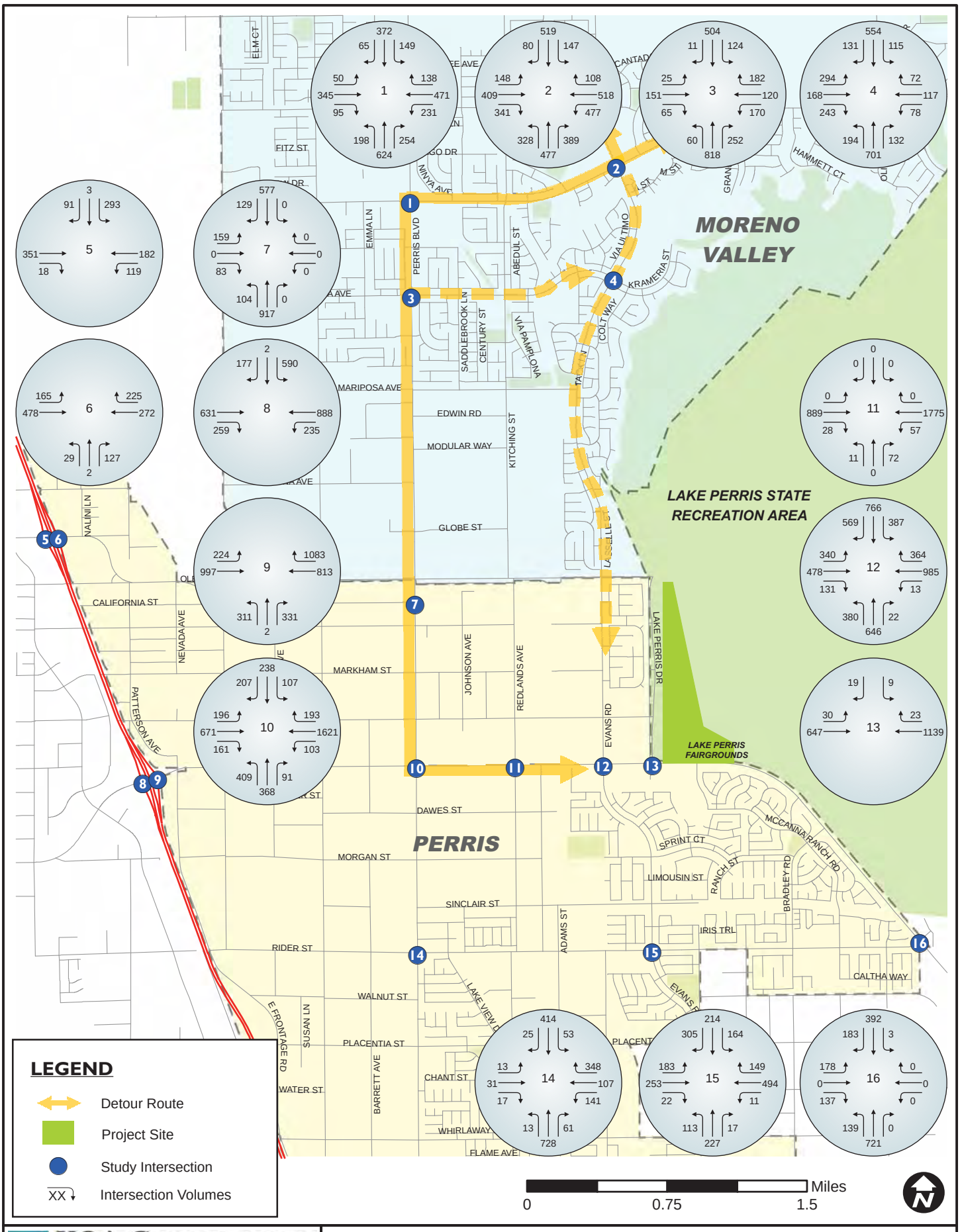

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Figure 5

Existing AM Peak Hour Traffic Volumes

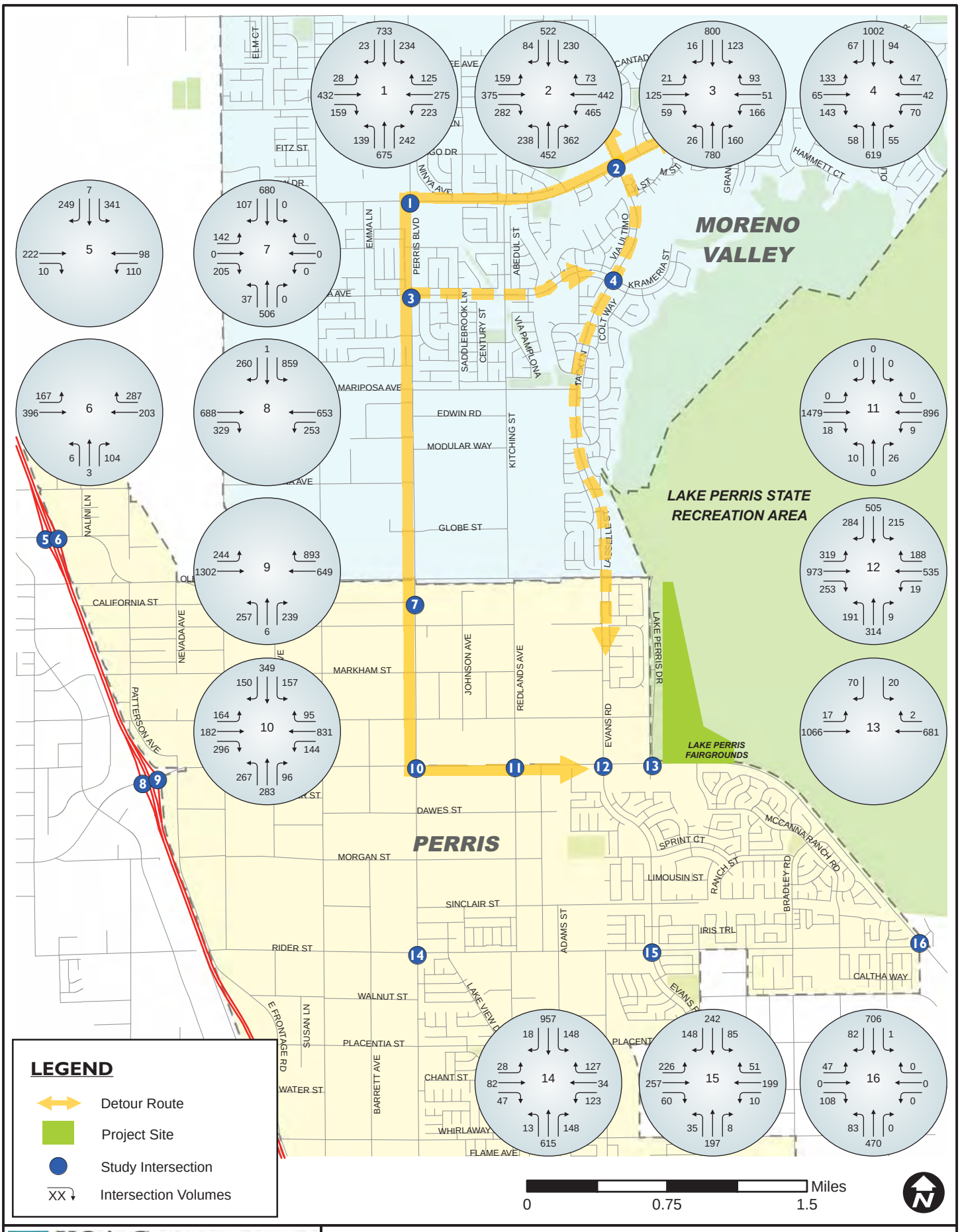

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Figure 6

Existing PM Peak Hour Traffic Volumes

4. Construction Period Trip Generation and Diversion

This section provides definitions for truck and employee vehicle trip generation during the peak period of project construction, along with the distribution and assignment of those trips to the study area roadway network. To be conservative for construction trip generation of the proposed Project, it is assumed that half of the employees would arrive and leave the work area early.

This is a planning-level analysis of construction activity, used for the purposes of determining traffic impacts during the project construction period. Prior to initiating construction, a detailed construction plan will be developed by the construction manager to identify necessary resources and to define the construction supervisory and technical field organization and staffing levels required for the project. The methods and procedures for sequencing and implementing construction operations will also be detailed in the construction plan. In addition, a project safety program will be developed by the operator, consistent with federal and state requirements. This is a standard DWR procedural requirement.

Therefore, basic construction details defined for the project planning process have been used to analyze potential construction-period impacts.

4.1 Project Trip Generation Methodology

Project trip generation calculations included construction employee vehicle trips and construction truck trip estimates. The trip generation totals were determined based on the most intense period of construction activity for the project.

The project construction efforts would require approximately 120 truck deliveries for excavation activities, 50 truck deliveries for building work and four truck deliveries for rip-rap activities. A maximum total of approximately 174 truck deliveries would be required.

In converting trucks to passenger car equivalents, a Passenger Car Equivalent (PCE) factor of 2.5 was assumed. This factoring was used to increase truck volumes due to the additional roadway space and design capacity utilized by larger and slower trucks. The applied value matches typical factors used in area studies that include trips generated by trucking activities. The factor is based on conservative factors defined by the Southern California Association of Governments (SCAG) Heavy Duty Truck Model. For the 174 required truck deliveries, each will generate 2.5 inbound trips and 2.5 outbound trips. The total number of truck trips is approximately 870.

The project construction efforts would require approximately 40 workers for excavation activities, five workers for utility work, 70 workers for building work and three workers for rip-rap activities. A maximum total of approximately 118 construction workers would be required. Each worker will generate one inbound trip and one outbound trip. The total number of worker trips is approximately 236.

4.2 Project Trip Generation Calculations

In calculating peak-hour trips for the project, it is assumed that a majority of the construction employees will arrive and depart the construction work areas by personal vehicles. The morning arrival by employees is assumed to overlap the a.m. peak hour by 50 percent, with the remaining 50 percent of employees assumed to be at the sites before 7:00 a.m. The same would occur during the p.m. peak hour, with 50 percent of employees assumed to depart the site before 4:00 p.m. Therefore, the same reduction was taken for both peak periods.

During project construction activity, daily truck haul activities will occur over an eight-hour period that begins during the a.m. peak period, and is complete during the p.m. peak period. End-of-workday trips were assumed to overlap the traditional peak of street traffic during the 4:00 p.m. to 6:00 p.m. time period. All of the inbound and outbound truck trips were assumed to occur evenly during the regular eight hours of construction.

As indicated by Table 6, project construction would generate a daily total of 1106 passenger car equivalent trips, with 167 (113 inbound and 54 outbound) trips occurring during the a.m. peak hour and 167 (54 inbound and 113 outbound) trips occurring during the p.m. peak hour.

Table 6 – Project Trip Generation

PHASE I TRIP GENERATION	PEAK MONTH DAILY TRIPS			AM PEAK HOUR						PM PEAK HOUR					
				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**
Field Personnel	-	236	236	0	0	59	0	**59**	**0**	0	0	0	59	**0**	**59**
Truck Delivery	870	-	870	54	54	0	0	**54**	**54**	54	54	0	0	**54**	**54**
TOTAL TRIPS	**870**	**236**	**1,106**	54	54	59	0	**113**	**54**	54	54	0	59	**54**	**113**

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

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

4.3 Construction Project Trip Distribution/Assignment

The distribution of construction truck trips was assumed to be primarily freeway-oriented. All truck trips were assigned to Interstate 215 (Escondido Freeway) via Ramona Expressway.

The distribution pattern analyzed for employee trips assumed that employees would arrive on-site primarily from the 215 freeway, but also from major area roadways. A total of 90 percent was distributed to and from the 215 freeway, and the remainder of trips was distributed to regional arterial routes.

The trip assignment with the 50 percent traffic diversion that was assumed for Option A is illustrated in Figure 7 (a.m. peak) and Figure 8 (p.m. peak). The trip assignment with the full closure and diversion of the traffic under Option B is illustrated in Figure 9 (a.m. peak) and Figure 10 (p.m. peak).

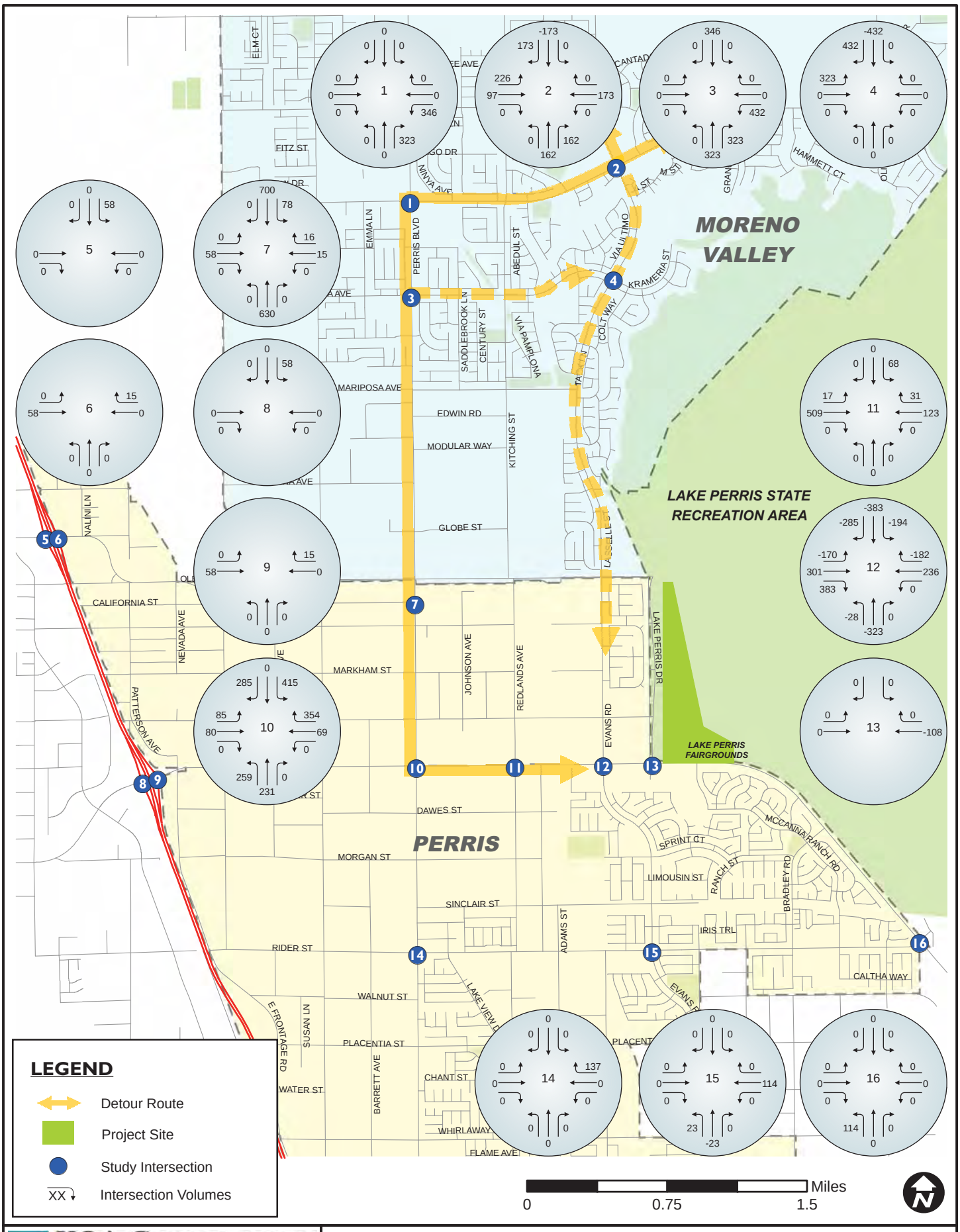

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Figure 7

Construction Trip Assignment with Traffic Diversion (50% Closure) - AM Peak Hour

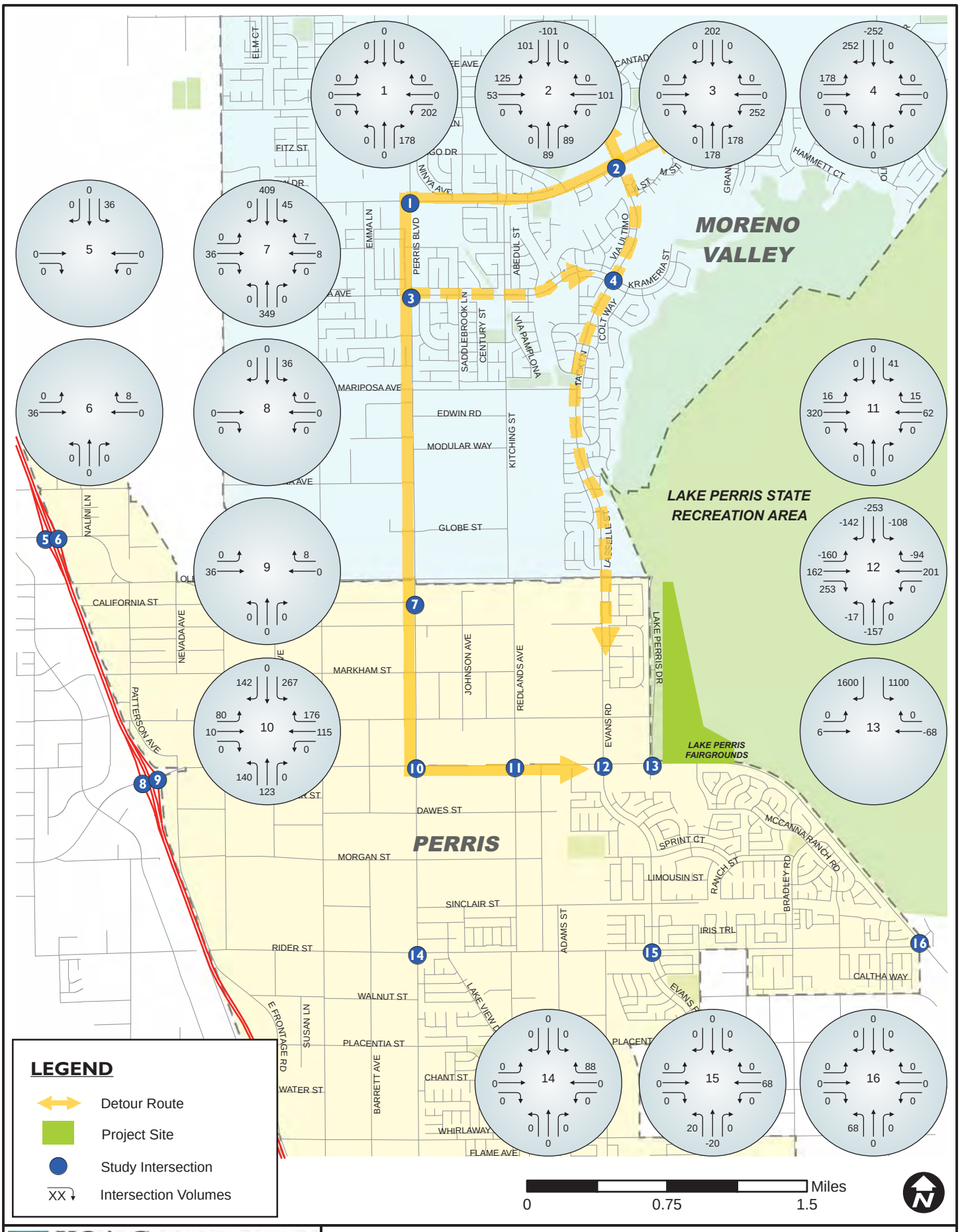

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Figure 8

Construction Trip Assignment with Traffic Diversion (50% Closure) - PM Peak Hour

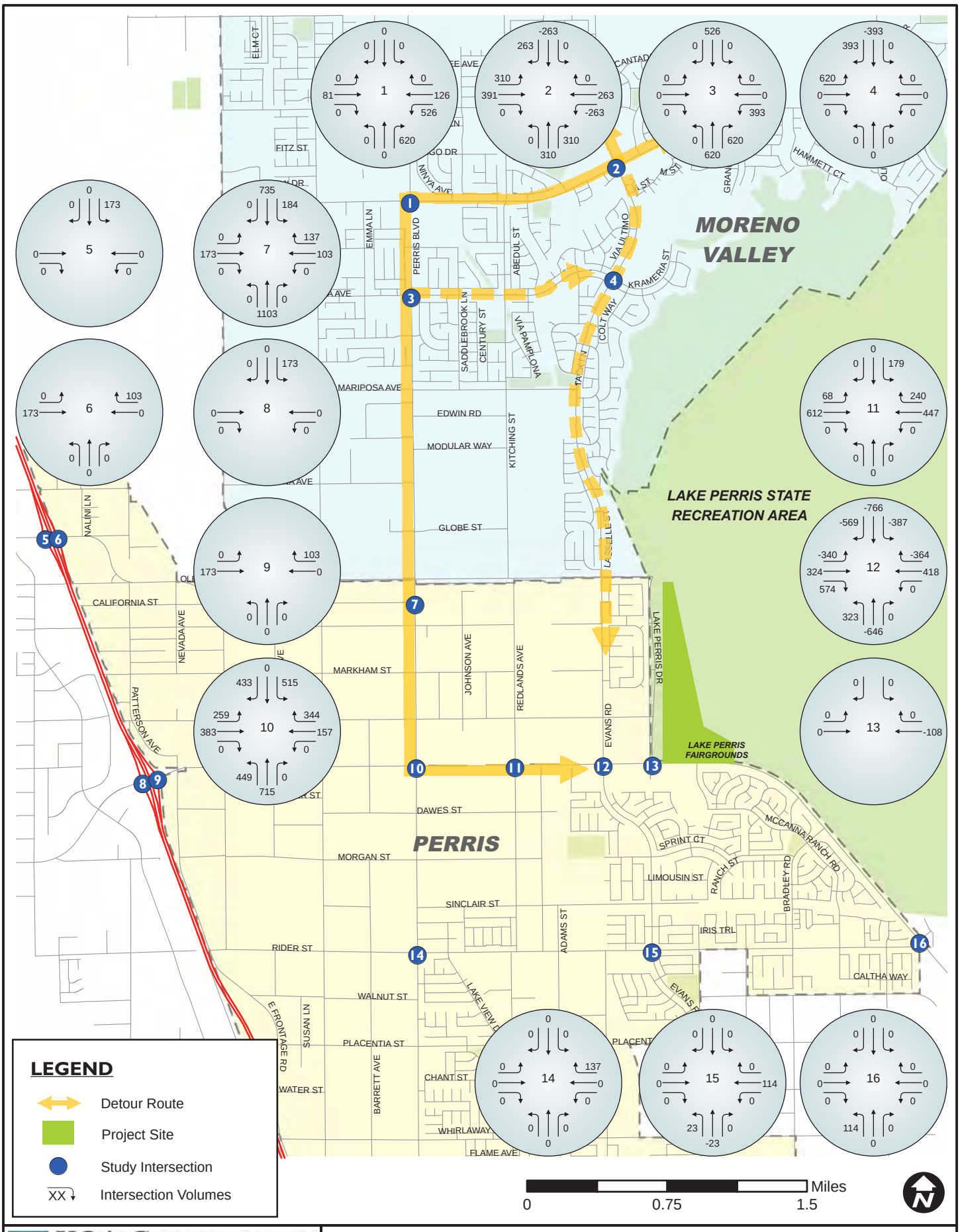

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Figure 9

Construction Trip Assignment with Traffic Diversion (Full Closure) - AM Peak Hour

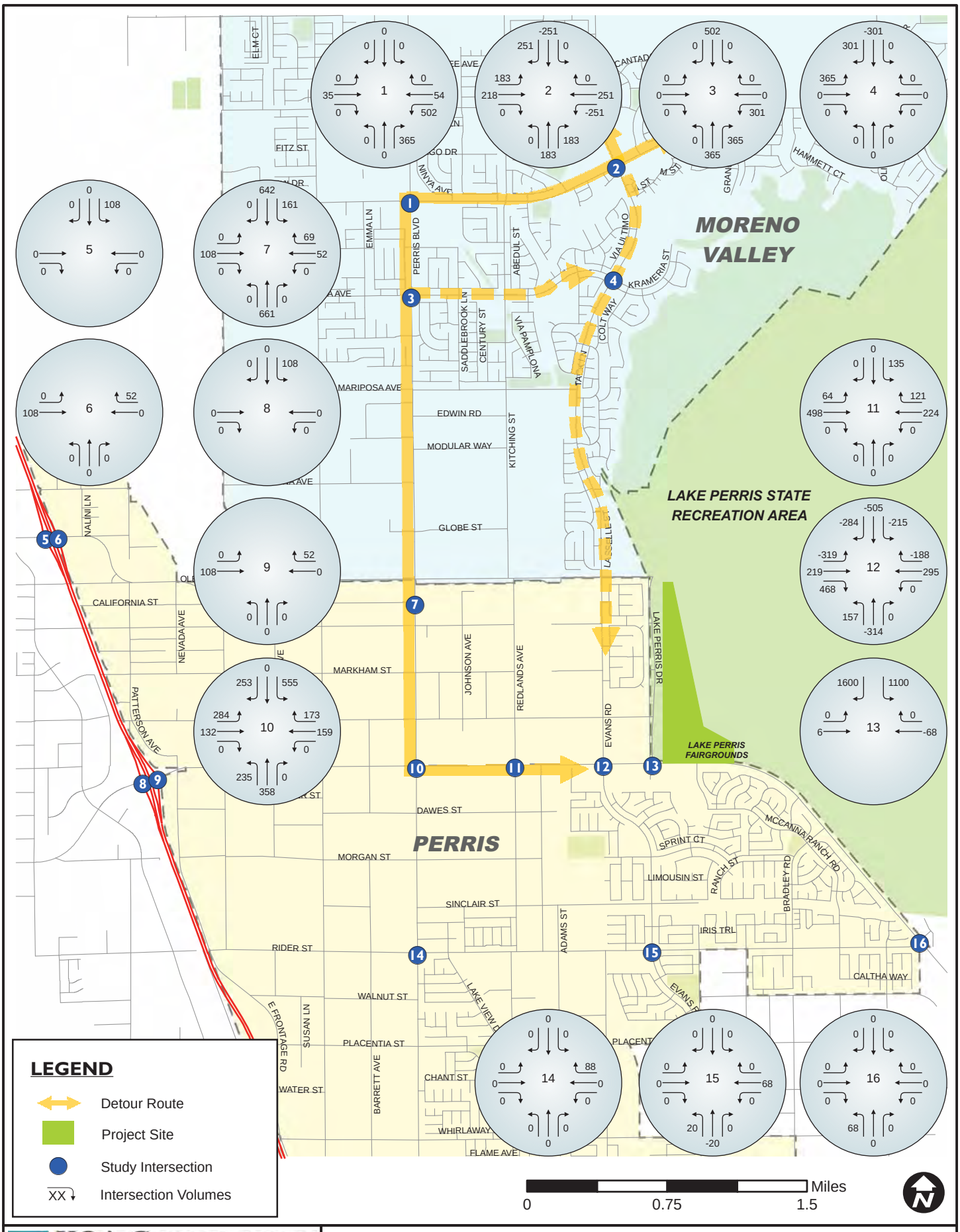

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Figure 10

Construction Trip Assignment with Traffic Diversion (Full Closure) - PM Peak Hour

4.4 Construction Period Detour and Traffic Diversion

Evans Road – Option A (Partial Road Closure)

The construction work on Evans Road under the Option A partial closure would consist of two alternatives: two-part construction or three-part construction. There are two phases of work in each alternative:

Two-Part Alternative

- Evans Road – Construction (Phase 1)

Evans Road – Construction (Phase 2)

Three-Part Alternative

- Evans Road – Construction (Phase 1)
- Evans Road – Construction (Phase 2)

The channel excavation at Evans Road would proceed in two phases, in coordination with the bridge construction. This would require a temporary lane capacity reduction at the intersection.

The effects of the proposed Project construction work on study intersection lane configurations are illustrated in Figure 11. The existing lane configurations are also shown, along with the construction-period configurations.

Evans Road – Option B (Full Road Closure)

For the full road closure under Option B, the bridge crossings on Evans Road would be constructed in one phase. Therefore, the southbound approaches and adjacent receiving lanes at the intersection of Evans Road & Ramona Expressway would be fully closed to traffic.

The effects of the proposed Project construction work areas on study intersection lane configurations are illustrated in Figure 11.

Construction Detour

The construction site for the Evans Road bridge replacement is located immediately to the north of Ramona Expressway. Selected intersections were analyzed along the construction detour route. The detour route was chosen based on specific roadway segments that would become inaccessible due to Project construction in the study area.

The analyzed detour route was defined as a route along Ramona Expressway to Perris Boulevard, with east-west connecting roadways via Krameria Avenue and Iris Avenue. Traffic patterns were diverted to the proposed detour route. The related traffic volume diversion was calculated by adjusting turn movement volumes at intersections along the defined detour route in the analysis.

The construction detour route was assumed to be necessary as a traffic alternate (with half of the affected traffic diverted) under Option A and as a full detour (with all affected traffic diverted) under Option B.

Traffic Diversion

In addition to the construction-period trip generation, traffic would be diverted to adjacent major arterials along the proposed detour route. The detour route would be necessary due to the establishment of the construction work area at the Evans Road bridge location. The intensity of the traffic diversion was estimated based on both the partial construction closure and the full construction closure at Evans Road.

For the partial construction closure (Option A), it is assumed that 50 percent of the north-south traffic patterns would be diverted to the detour route. During the construction phases, the southbound approach at the Evans Road/Ramona Expressway intersection would be reduced from four lanes to two lanes, and the dual left-turn capacity in the eastbound approach would be reduced to one left-turn lane.

For full closure (Option B), all existing traffic would be re-routed to the detour route and other diversion routes.

During the construction period, vehicles were assumed to follow the proposed detour route, for both the partial and full closure options. However, approximately 20 percent of the diversion trips would detour to use freeway access points to the west.

The analyzed traffic shifts for the 50 percent closure are illustrated in Figure 7 (a.m. peak) and Figure 8 (p.m. peak). The full closure traffic shifts are also illustrated in Figure 9 (a.m. peak) and Figure 10 (p.m. peak).

Figure 11 illustrates the study intersection lane changes due to the Project construction.

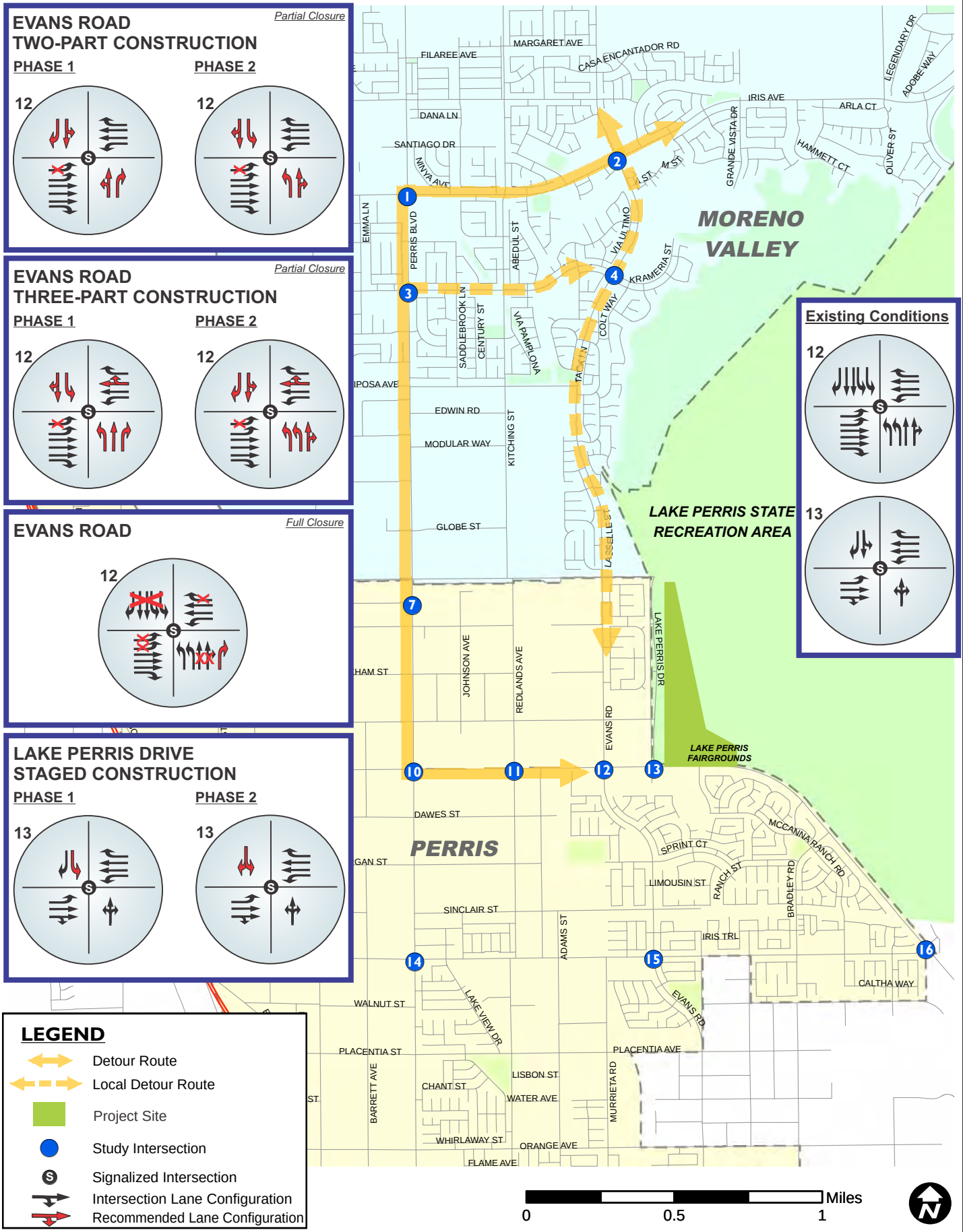

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Figure 11

Project Construction Intersection Lane Configuration

Lake Perris Drive Construction Closure

The other project bridge construction activity would take place adjacent to the Lake Perris Drive/Ramona Expressway intersection, which serves as the main entrance to the Lake Perris Fairgrounds and the Lake Perris State Recreation Area. Construction activity at this location would be completely separate from the Evans Road construction activity.

Traffic volumes on Lake Perris Drive are generated by recreational activity at the Recreation Area, and special events and other activity at the Fairgrounds including the Starwest Motorcross, the Perris Auto Speedway, and the Southern California Fair. Any Project construction-related impacts to Lake Perris Drive do not affect daily commute traffic patterns.

Lake Perris Drive – Option A (Partial Closure)

The construction work on Lake Perris Drive under the Option A partial closure would consist of two phases:

- Lake Perris Drive – Construction (Phase 1)
- Lake Perris Drive – Construction (Phase 2)

The channel excavation at Lake Perris Drive would proceed in two phases, in coordination with the bridge construction. This would require a temporary lane capacity reduction at the intersection.

Lake Perris Drive – Option B (Full Closure)

For the full road closure under Option B, the bridge on Lake Perris Drive would be constructed in one phase.

This option would require complete closure of the north segment (on Lake Perris Drive) and temporarily relocate the roadway to the east within the area that is currently vacant. This would require temporary relocation of the existing intersection. The relocated intersection to the east would provide full access. Full capacity would be maintained through the temporary provision of the replacement intersection.

Upon completion, all temporary roadway modifications would be restored back to existing conditions.

5. Existing Plus-Project Construction Conditions and Impacts

An additional existing plus-Project scenario was included in the analysis, to comply with rulings on existing conditions baseline analysis from the *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* and *Neighbors for Smart Rail v. Exposition Metro Rail Construction Authority* California Environmental Quality Act (CEQA) court cases. This additional analysis scenario provides analysis of Project environmental documentation.

5.1 Option A (Partial Closure at Evans Road) Construction Analysis

For partial lane closures during construction at the Evans Road intersection under Option A, north-south traffic would be diverted to take Perris Boulevard, however, some traffic was assumed to remain on Evans Road. Traffic conditions at Evans Road and Ramona Expressway would be affected due to the partial closure. Traffic volumes were assumed to be reduced by approximately 50 percent due to the reduction in capacity during construction, with this traffic diverting to other areas including the Project detour routes.

Traffic Diversion Analysis

The study intersection operations for the existing and existing plus-Project scenarios are summarized in Table 7. This table summarizes the traffic impacts under the partial closure section scenario. A separate impact table provided in the next subsection summarizes the impacts at the work area study intersections by construction phases.

The acceptable level of service is LOS D or better. At the diversion corridor analysis, however, the following significant level of service and operational changes would occur:

- Perris Boulevard/Iris Avenue – Operations would worsen to LOS F during the a.m. peak hour and LOS E during the p.m. peak hour.
- Perris Boulevard/Krameria Avenue – Operations would worsen to LOS F during the a.m. peak hour.
- I-215 NB Ramps/Ramona Expressway – Operations would worsen within LOS F during the a.m. peak hour.
- Perris Boulevard/Ramona Expressway – Operations would worsen to LOS F during the a.m. peak hour.

**Table 7 – Study Intersection Impacts –
Existing plus-Project Partial Closure Construction Conditions**

	Intersection	Peak Hour	Existing (2015) Conditions		Existing with Project Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS		
1	Perris Blvd & Iris Ave	AM	25.5	C	81.4	**F**	55.9	**YES**
		PM	30.8	C	53.1	D	22.3	No
2	Lasselle St & Iris Ave	AM	35.9	D	43.6	D	7.7	No
		PM	32.4	C	34.3	C	1.9	No
3	Perris Blvd & Krameria Ave	AM	24.6	C	100.2	**F**	75.6	**YES**
		PM	19.2	B	32.9	C	13.7	No
4	Lasselle St & Krameria Ave	AM	24.8	C	42.8	D	18.0	No
		PM	17.7	B	19.2	B	1.5	No
5	I-215 SB Ramps & Harley Knox Blvd	AM	22.2	C	25.6	D	3.4	No
		PM	29.1	D	29.6	D	0.5	No
6	I-215 NB Ramps & Harley Knox Blvd	AM	13.8	B	13.2	B	-0.6	No
		PM	18.5	B	14.5	B	-4.0	No
7	Perris Blvd & Harley Knox Blvd	AM	30.6	C	53.0	D	22.4	No
		PM	28.5	C	30.3	C	1.8	No
8	I-215 SB Ramps & Ramona Expwy	AM	18.4	C	19.3	C	0.9	No
		PM	27.8	D	30.9	D	3.1	No
9	I-215 NB Ramps & Ramona Expwy	AM	97.1	**F**	89.8	**F**	-7.3	**YES**
		PM	32.8	C	33.1	C	0.3	No
10	Perris Blvd & Ramona Expwy	AM	55.8	E	115.7	**F**	59.9	**YES**
		PM	46.5	D	54.6	D	8.1	No
11	Redlands Ave & Ramona Expwy	AM	5.0	A	11.1	B	6.1	No
		PM	3.4	A	7.9	A	4.5	No
14	Perris Blvd & Rider St	AM	20.4	C	24.6	C	4.2	No
		PM	17.7	C	18.6	C	0.9	No
15	Evans Rd & Rider St	AM	36.7	D	37.9	D	1.2	No
		PM	28.4	C	29.9	C	1.5	No
16	Ramona Expwy & Rider St	AM	14.4	B	17.2	C	2.8	No
		PM	10.1	B	12.0	B	1.9	No

Impacts at LOS D or higher/better values are considered to be moderate but not significant impacts under this analysis. For all analyzed intersections, the pre-project roadway conditions will be restored once construction activities within the related work areas are completed.

The analyzed construction period traffic volumes for the existing plus-Project scenario at the study intersections are provided on Figure 12 (a.m. peak) and Figure 13 (p.m. peak).

The delay calculation worksheets for this analysis scenario are provided in Appendix C.

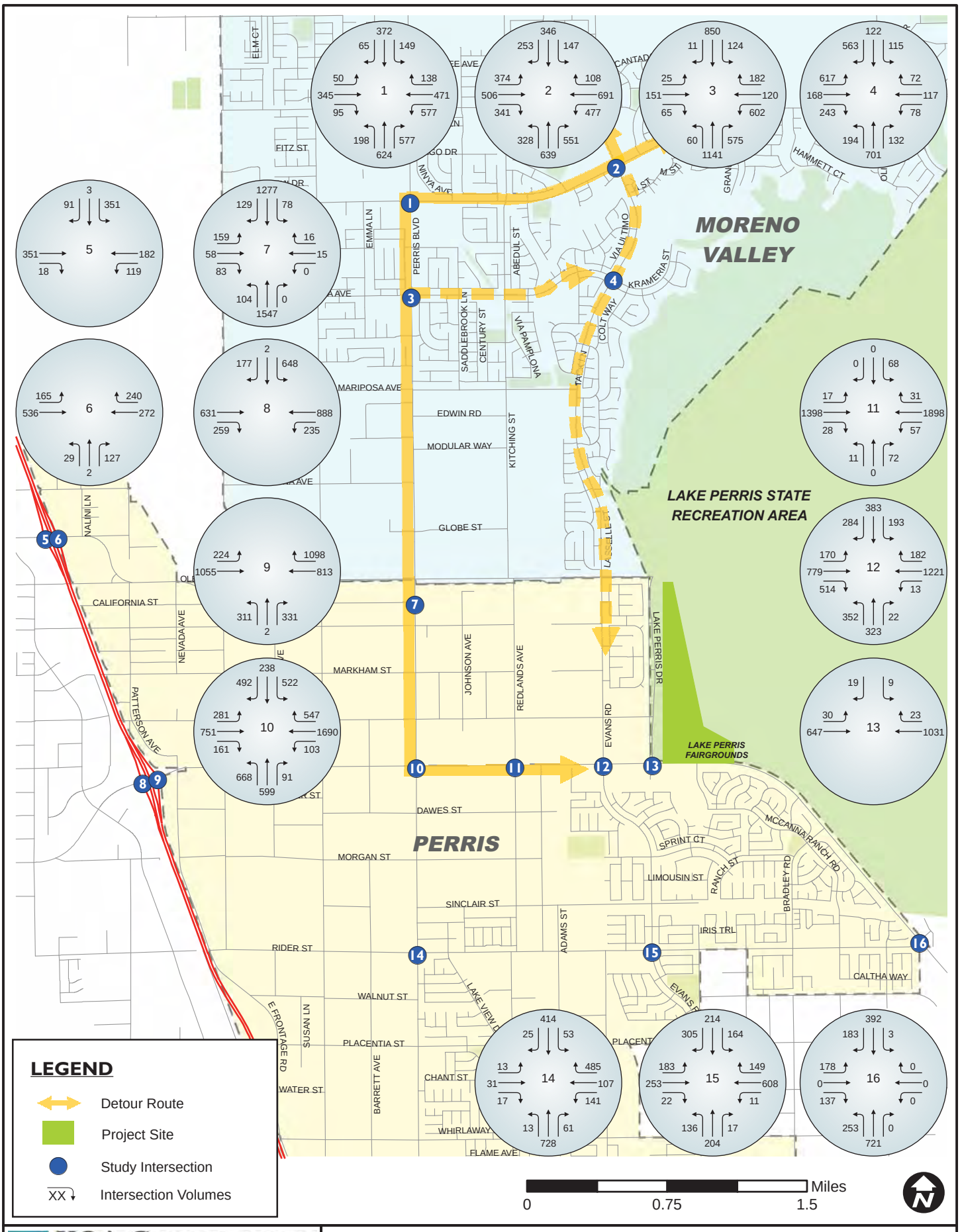

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Figure 12

Existing with Project Construction (50% Closure) - AM Peak Hour Intersection Volumes

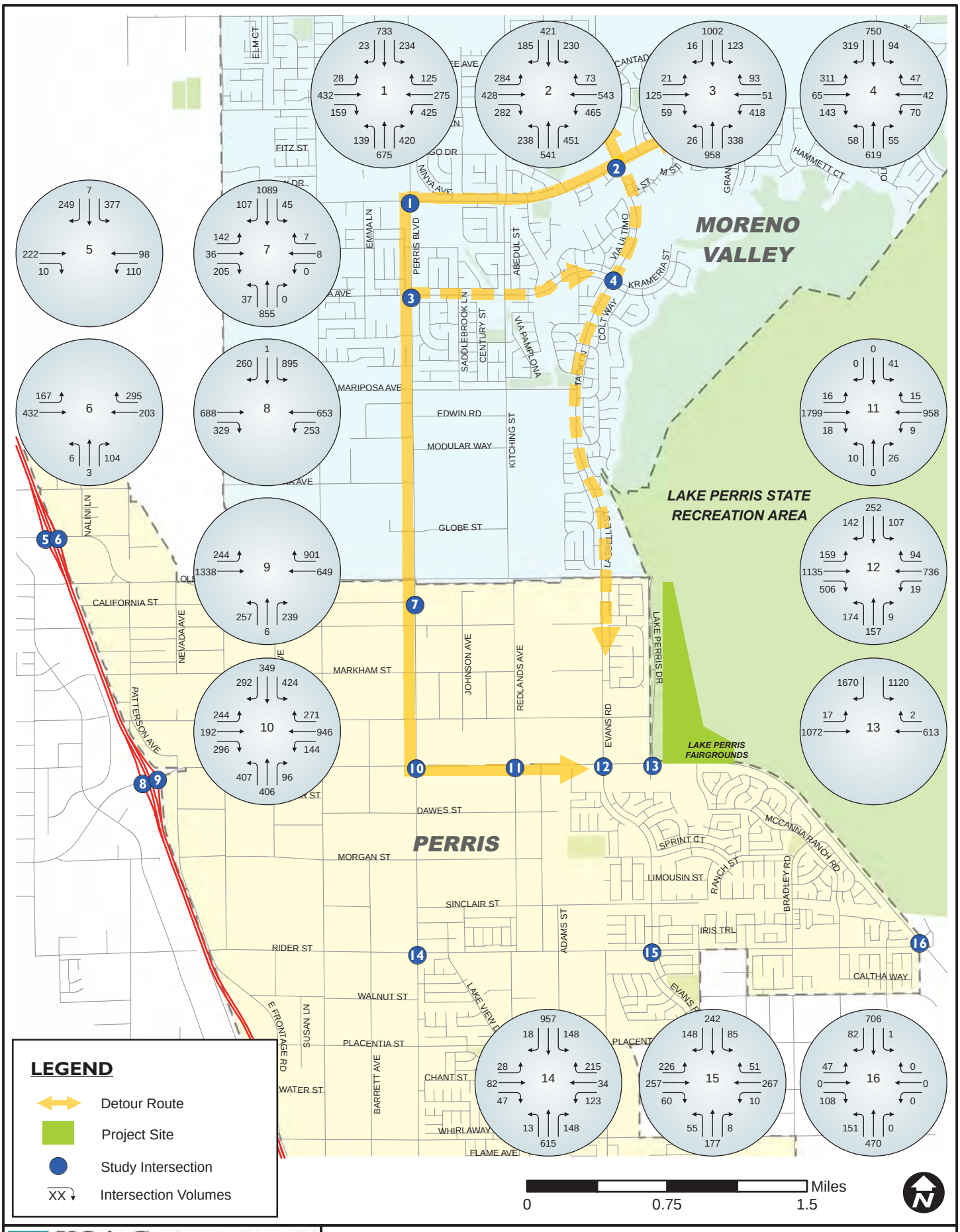

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Figure 13

Existing with Project Construction (50% Closure) - PM Peak Hour Intersection Volumes

Evans Road – Traffic Diversion Analysis

The construction work area would be located at Evans Road and Lake Perris Drive on Ramona Expressway. All construction activities between the two intersections would occur at different timeframes.

The construction work area operations for the existing and existing plus-Project construction scenarios at the Evans Road intersection are summarized in Table 8. This table summarizes the traffic conditions that would occur at different staging phases for the Evans Road/Ramona Expressway intersection.

Table 8 – Evans Road Work Area Impacts –
Existing plus-Project Partial Closure Construction Conditions

Intersection	Peak Hour	Existing (2015) Conditions		Existing with Construction		Change in Delay Value
		Delay	LOS	Delay	LOS	
Two-Part Construction - Phase 1						
Evans Rd & Ramona Expwy	AM	76.6	E	181.2	**F**	104.60
	PM	45.9	D	66.8	E	20.90
Two-Part Construction - Phase 2						
Evans Rd & Ramona Expwy	AM	76.6	E	139.3	**F**	62.70
	PM	45.9	D	64.0	E	18.10
Three-Part Construction - Phase 1						
Evans Rd & Ramona Expwy	AM	76.6	E	139.1	**F**	62.50
	PM	45.9	D	64.0	E	18.10
Three-Part Construction - Phase 2						
Evans Rd & Ramona Expwy	AM	76.6	E	115.5	**F**	38.90
	PM	45.9	D	65.7	E	19.80

Table 8 summarizes the traffic impacts under Option A of the two alternatives and the two phases, respectively. The two-part construction alternative for Phase 1 and Phase 2 would operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour, with generally worsened conditions occurring under the two-part construction scenario.

The three-part construction alternative for Phase 1 and Phase 2 would operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour, with generally worsened conditions occurring under the three-part construction scenario.

As operation would worsen to or within LOS F, traffic impact at the Evans Road/Ramona Expressway intersection would be significant during the a.m. peak hour.

5.2 Option B (Full Closure at Evans Road) Construction Analysis

In addition to the construction-period trip generation, shifts in traffic to the detour route and to other diversion routes were analyzed, under the Option B full closure scenario at Evans Road. Major anticipated shifts in traffic were applied along the signed detour route. The north leg of the Evans Road intersection would be fully closed under this analysis of the construction option.

During the full closure at the Evans Road intersection, all vehicles from the north would be diverted to Perris Boulevard. Traffic from Ramona Expressway to Evans Road (north) and from the southern area would be diverted to Perris Boulevard. All traffic to/from Evans Road would be diverted to adjacent major roadway corridors due to the full closure of Evans Road.

Traffic Diversion – Full Closure

The construction work area would be located at the Evans Road intersection on Ramona Expressway. The study intersection operations for the existing and existing plus-Project scenarios are summarized in Table 9. This table summarizes the traffic impacts with full closures due to the work area at the Evans Road/ Ramona Expressway intersection.

At the study intersections, the following significant level of service and operational changes would occur due to the full construction closure:

- Perris Boulevard/Iris Avenue – Operations would worsen to LOS F during both the a.m. and p.m. peak hours.
- Perris Boulevard/Krameria Avenue – Operations would worsen to LOS F during the a.m. peak hour.
- Lasselle Street/Krameria Avenue – Operations would worsen to LOS F during the a.m. peak hour.
- Perris Boulevard/Harley Knox Boulevard – Operations would worsen to LOS F during the a.m. peak hour.
- I-215 NB Ramps/Ramona Expressway – Operations would worsen within LOS F during the a.m. peak hour.
- Perris Boulevard/Ramona Expressway – Operations would worsen to LOS F during the a.m. peak hour and worsen to LOS E during the p.m. peak hour.

Table 9 – Study Intersection Impacts –
Existing plus-Project Construction Conditions (Full Closure)

	Intersection	Peak Hour	Existing (2015) Conditions		Existing with Project Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS		
1	Perris Blvd & Iris Ave	AM	25.5	C	176.1	**F**	150.6	**YES**
		PM	30.8	C	132.8	**F**	102.0	**YES**
2	Lasselle St & Iris Ave	AM	35.9	D	56.0	**E**	20.1	No
		PM	32.4	C	34.5	C	2.1	No
3	Perris Blvd & Krameria Ave	AM	24.6	C	173.4	**F**	148.8	**YES**
		PM	19.2	B	52.5	D	33.3	No
4	Lasselle St & Krameria Ave	AM	24.8	C	97.4	**F**	72.6	**YES**
		PM	17.7	B	23.1	C	5.4	No
5	I-215 SB Ramps & Harley Knox Blvd	AM	22.2	C	26.9	D	4.7	No
		PM	29.1	D	27.5	D	-1.6	No
6	I-215 NB Ramps & Harley Knox Blvd	AM	13.8	B	12.1	B	-1.7	No
		PM	18.5	B	12.5	B	-6.0	No
7	Perris Blvd & Harley Knox Blvd	AM	30.6	C	130.1	**F**	99.5	**YES**
		PM	28.5	C	41.3	D	12.8	No
8	I-215 SB Ramps & Ramona Expwy	AM	18.4	C	20.9	C	2.5	No
		PM	27.8	D	29.5	D	1.7	No
9	I-215 NB Ramps & Ramona Expwy	AM	97.1	**F**	106.0	**F**	8.9	**YES**
		PM	32.8	C	39.0	D	6.2	No
10	Perris Blvd & Ramona Expwy	AM	55.8	**E**	174.1	**F**	118.3	**YES**
		PM	46.5	D	76.4	**E**	29.9	No
11	Redlands Ave & Ramona Expwy	AM	5.0	A	31.2	D	26.2	No
		PM	3.4	A	19.0	C	15.6	No
14	Perris Blvd & Rider St	AM	20.4	C	24.6	C	4.2	No
		PM	17.7	C	18.6	C	0.9	No
15	Evans Rd & Rider St	AM	36.7	D	37.9	D	1.2	No
		PM	28.4	C	31.2	C	2.8	No
16	Ramona Expwy & Rider St	AM	14.4	B	17.2	C	2.8	No
		PM	10.1	B	12.0	B	1.9	No

The construction period analyzed traffic volumes for the existing plus-Project scenario at the study intersections are provided on Figure 14 (a.m. peak) and Figure 15 (p.m. peak).

The level of service calculation worksheets for this scenario are provided in Appendix D.

Evans Road Traffic Diversion – Full Closure

The construction work area study intersection operations for the existing and existing plus-Project construction scenarios are summarized in Table 10. Multiple phasing would not apply to the full closure scenario as the southbound approach would be completely closed.

Table 10 – Evans Road Work Area Impacts – Existing plus-Project Construction Conditions (Full Closure)

Intersection	Peak Hour	Existing (2015) Conditions		Existing with Construction		Change in Delay Value
		Delay	LOS	Delay	LOS	
Evans Rd & Ramona Expwy	AM	76.6	E	36.2	D	-40.40
	PM	45.9	D	29.8	C	-16.10

Under existing conditions, the intersection operates at LOS E. However, the north leg closure would potentially improve the level of service operation to LOS D or better during both the a.m. and p.m. peak hours.

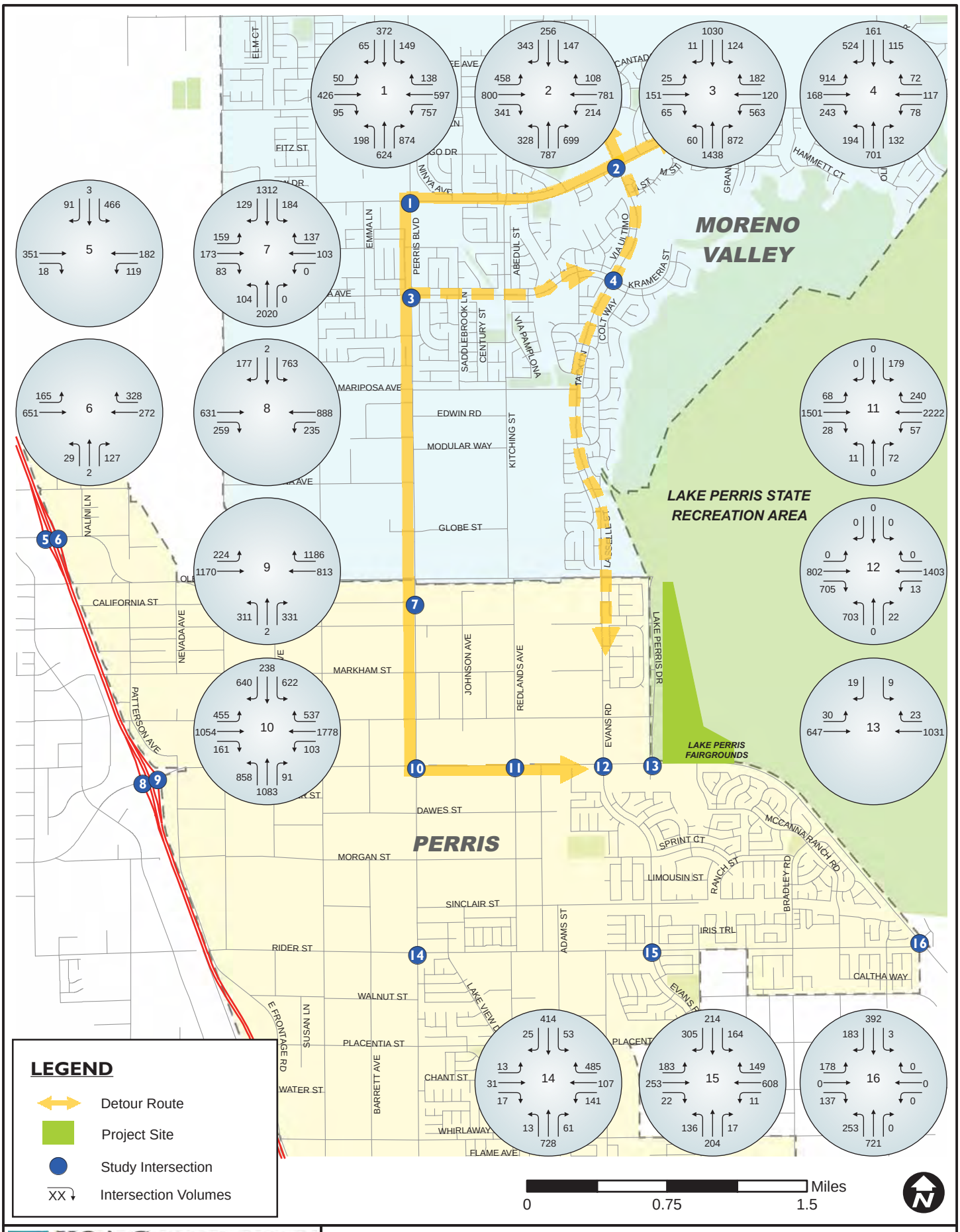

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Figure 14

Existing with Project Construction (Full Closure) - AM Peak Hour Intersection Volumes

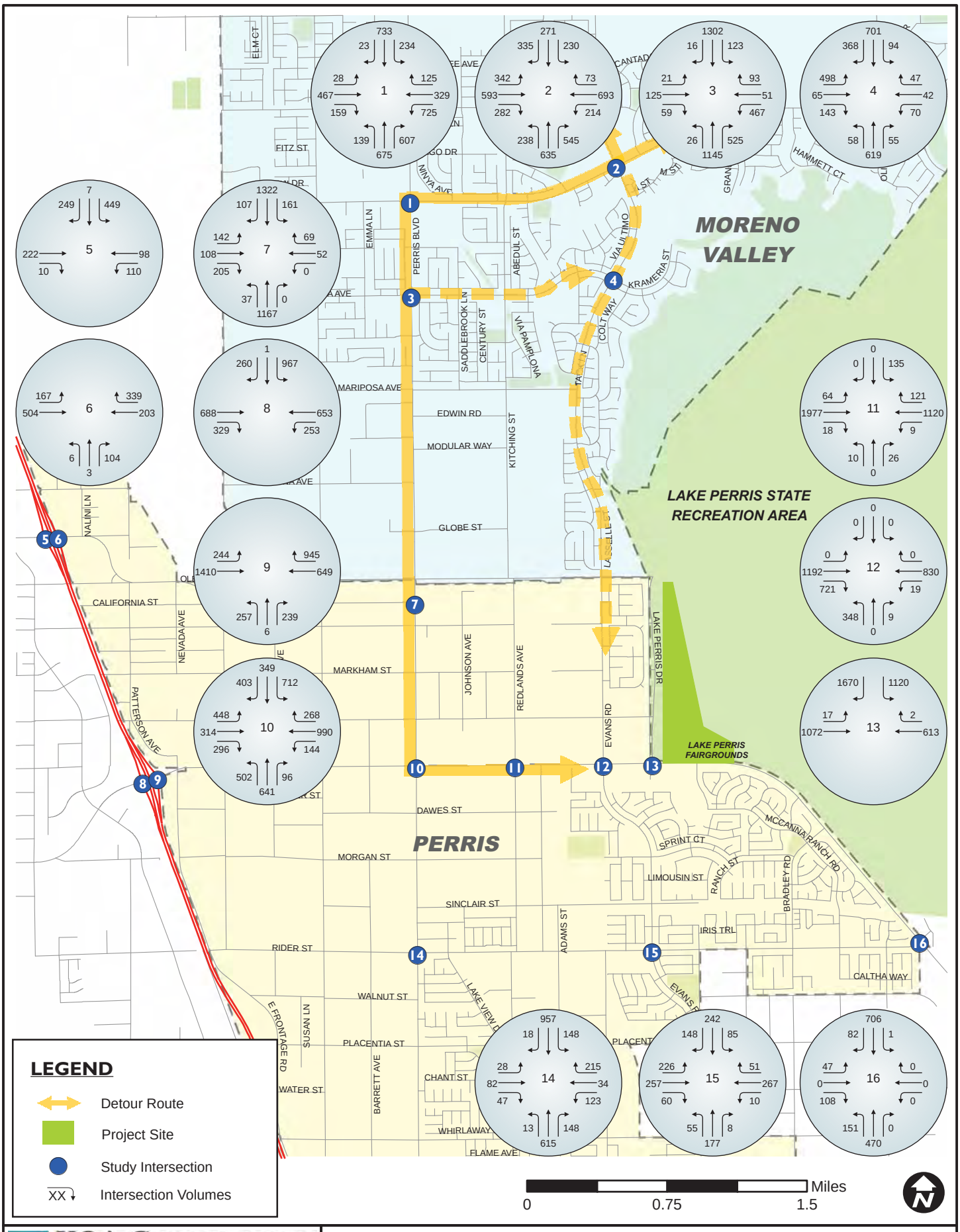

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Figure 15

Existing with Project Construction (Full Closure) - PM Peak Hour Intersection Volumes

5.3 Lake Perris Drive Closure Construction Analysis

Construction of a replacement for the Lake Perris Drive bridge is a separate Project construction element. The construction work area at the Lake Perris Drive intersection would affect the existing lane configuration during the second phase of construction. Lane capacity would be reduced from three travel lanes to two at the southbound approach.

Table 11 summarizes the traffic conditions for the Lake Perris Drive work area. This intersection serves as the main entrance to the Perris Fairgrounds and the Lake Perris State Recreation Area. Special events hosted at the Perris Fairgrounds were analyzed during the p.m. peak hour only.

The p.m. period analysis was conducted to simulate a period of high traffic congestion, using weekday counts, as traffic counts for a major weekend event or period of high recreational activity were not available. Trip generation numbers for the Lake Perris Drive intersection approach were simulated, to create saturated flow conditions.

The existing conditions during the worst-case peak hour, during high traffic conditions at the Lake Perris Drive approach, are at LOS F. For high delay values, the difference in the right-most column is not shown, as the delay cannot be quantified.

Table 11 – Lake Perris Drive Work Area Impacts – Existing plus-Project Conditions

Intersection	Peak Hour	Existing (2015) Conditions		Existing with Construction		Change in Delay Value
		Delay	LOS	Delay	LOS	
Construction - Phase 2 *						
Lake Perris DR & Ramona Expwy	AM	3.2	A	3.8	A	0.60
	PM	119.2	**F**	>300	**F**	-

* DWR drawings titled "Phase 1" and "Temporary Local Detour" were not analyzed, as the intersection configurations under those scenarios do not affect capacity.

The lane modifications at the Lake Perris Drive / Ramona Expressway intersection would create a significant traffic impact. This impact would occur when events occur at the Perris Fairgrounds, or when major weekend activity occurs at the Lake.

6. Future without-Construction Conditions

This section provides an analysis of "without-Construction" Conditions in the study area with ambient growth and area project trips. Construction of the proposed Project is scheduled to be completed by year 2023. Construction would progress along the corridor over the course of the multi-year construction period.

The peak construction activity period within the overall construction timeframe was analyzed to determine potential Project construction-period impacts. The without-Construction analysis was defined and analyzed through an application of an annual ambient growth rate to the existing traffic volumes, plus addition of volumes generated by area projects.

6.1 Ambient Growth

In order to forecast baseline traffic volumes for the analysis year of 2023, analyzed year-2015 peak-hour existing volumes from the existing conditions scenario were increased by a compounded ambient growth rate of 26.7 percent. This rate was applied as a compounded factor of 1.267.

The application of the 3 percent annual growth rate is consistent with sub-regional traffic growth data defined by the Riverside County Center for Demographic Research.

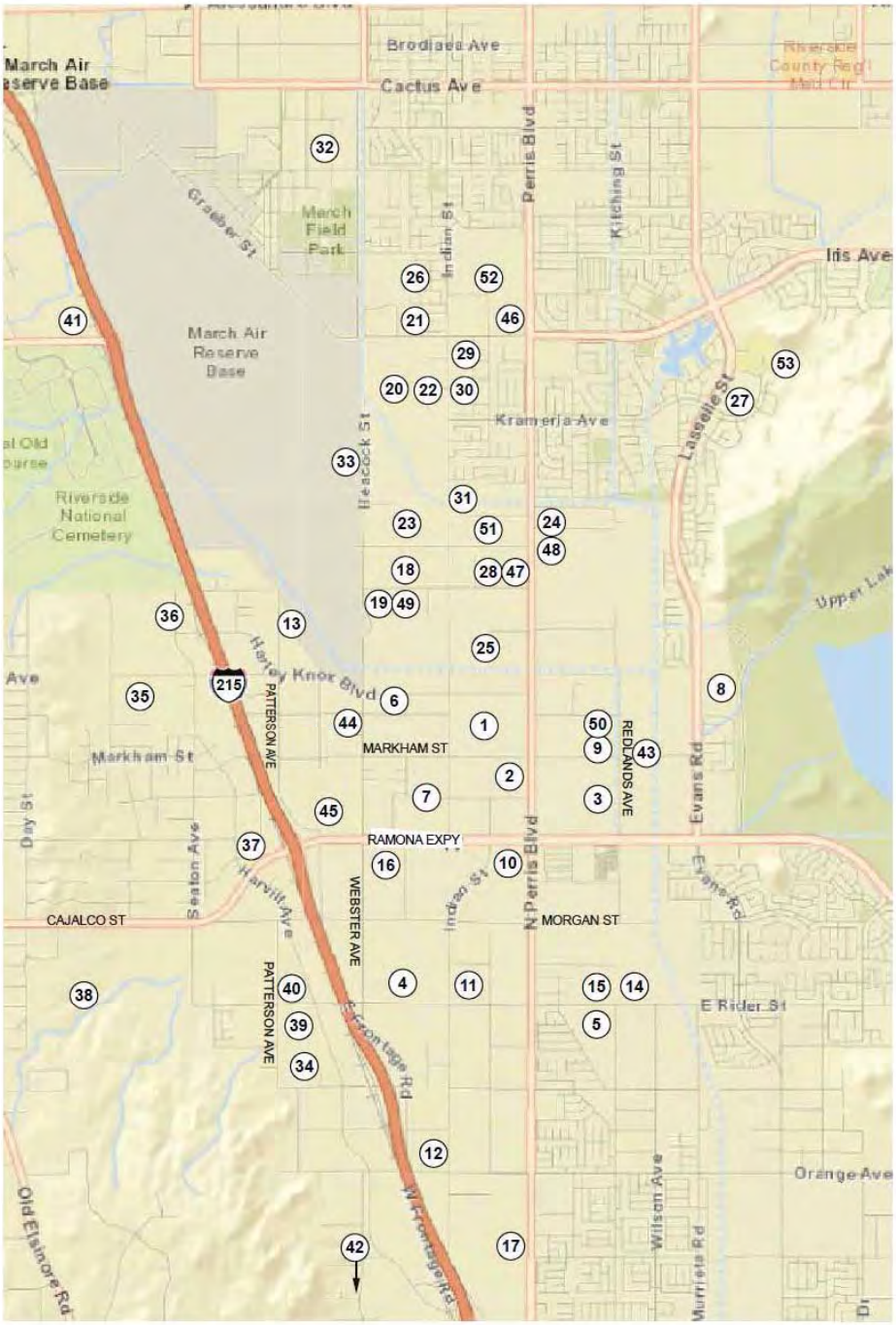
6.2 Area Projects

The list of area approved and pending (cumulative) projects defined for the construction project study area were based on the recent Stratford Ranch Industrial traffic impact study conducted by Urban Crossroads, April 2012, and Optimus Logistics Center 2 environmental impact report conducted by Keefer Consulting and Matthew Fagan Consulting Services, July 2015.

The projects included in the list would potentially contribute measurable traffic volumes to the study area during the future analysis period. Majority of the compiled area project peak-hour trips were based on the Stratford Ranch Industrial traffic impact study. The trip generation ratios applied to the area projects were based on rates within *Trip Generation*, published by the Institute of Transportation Engineers.

The area projects included in this study for the future period analysis, and the trip generation of each, are provided in Appendix E.

Figure 16 illustrates the locations of the included area projects.



Source: "Traffic Study for Optimus Logistics Center 2", prepared by Crown City Engineers, July 2015.

6.3 Future Intersection Levels of Service

To analyze future conditions in the year 2023 without the proposed construction, intersection turn volumes with ambient growth and trips generated by area projects were analyzed using the same methodology applied to the existing conditions analysis.

Table 12 provides the a.m. and p.m. peak-hour results of this analysis for the study intersections.

Table 12 – Level of Service Calculations – Future Without-Construction Conditions

Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Perris Blvd & Iris Ave	50.4	D	75.8	**E**
2	Lasselle St & Iris Ave	52.3	D	45.4	D
3	Perris Blvd & Krameria Ave	54.0	D	40.6	D
4	Lasselle St & Krameria Ave	33.8	C	22.5	C
5	I-215 SB Ramps & Harley Knox Blvd	152.5	**F**	160.4	**F**
6	I-215 NB Ramps & Harley Knox Blvd	66.8	**E**	145.2	**F**
7	Perris Blvd & Harley Knox Blvd	88.8	**F**	44.0	D
8	I-215 SB Ramps & Ramona Expwy	79.2	**E**	173.1	**F**
9	I-215 NB Ramps & Ramona Expwy	216.2	**F**	230.0	**F**
10	Perris Blvd & Ramona Expwy	113.5	**F**	72.6	**E**
11	Redlands Avenue & Ramona Expwy	16.3	B	13.5	B
12	Evans Rd & Ramona Expwy	141.9	**F**	58.7	**E**
13	Perris Lake Dr & Ramona Expwy	3.2	A	152.5	**F**
14	Perris Blvd & Rider St	25.5	C	23.6	C
15	Perris Blvd & Rider St	46.7	D	29.2	C
16	Evans Rd & Rider St	14.4	B	10.1	B

Under this scenario, seven of the 16 study intersections would continue to operate at LOS D or better during the weekday a.m. and p.m. peak hours. At the diversion analysis corridor intersections, however, the following level of service would operate at LOS E or worse:

- Perris Boulevard & Iris Avenue – Operates at LOS E during the p.m. peak hour.
- I-215 SB Ramps & Harley Knox Boulevard – Operates at LOS F during both the a.m. and p.m. peak hours
- I-215 NB Ramps & Harley Knox Boulevard – Operates at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- Perris Boulevard & Harley Knox Boulevard – Operate at LOS F during the a.m. peak
- I-215 SB Ramps & Ramona Expressway – Operate at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- I-215 NB Ramps & Ramona Expressway – Operate at LOS F during both a.m. and p.m. peak hour
- Perris Blvd & Ramona Expressway – Operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour
- Evans Rd & Ramona Expressway – Operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour
- Perris Lake Drive & Ramona Expressway – Operate at LOS F during the p.m. peak

The construction period analyzed traffic volumes for the future without construction scenario at the study intersections are provided on Figure 17 (a.m. peak) and Figure 18 (p.m. peak).

The level of service calculation worksheets for this analysis scenario are provided in Appendix F.

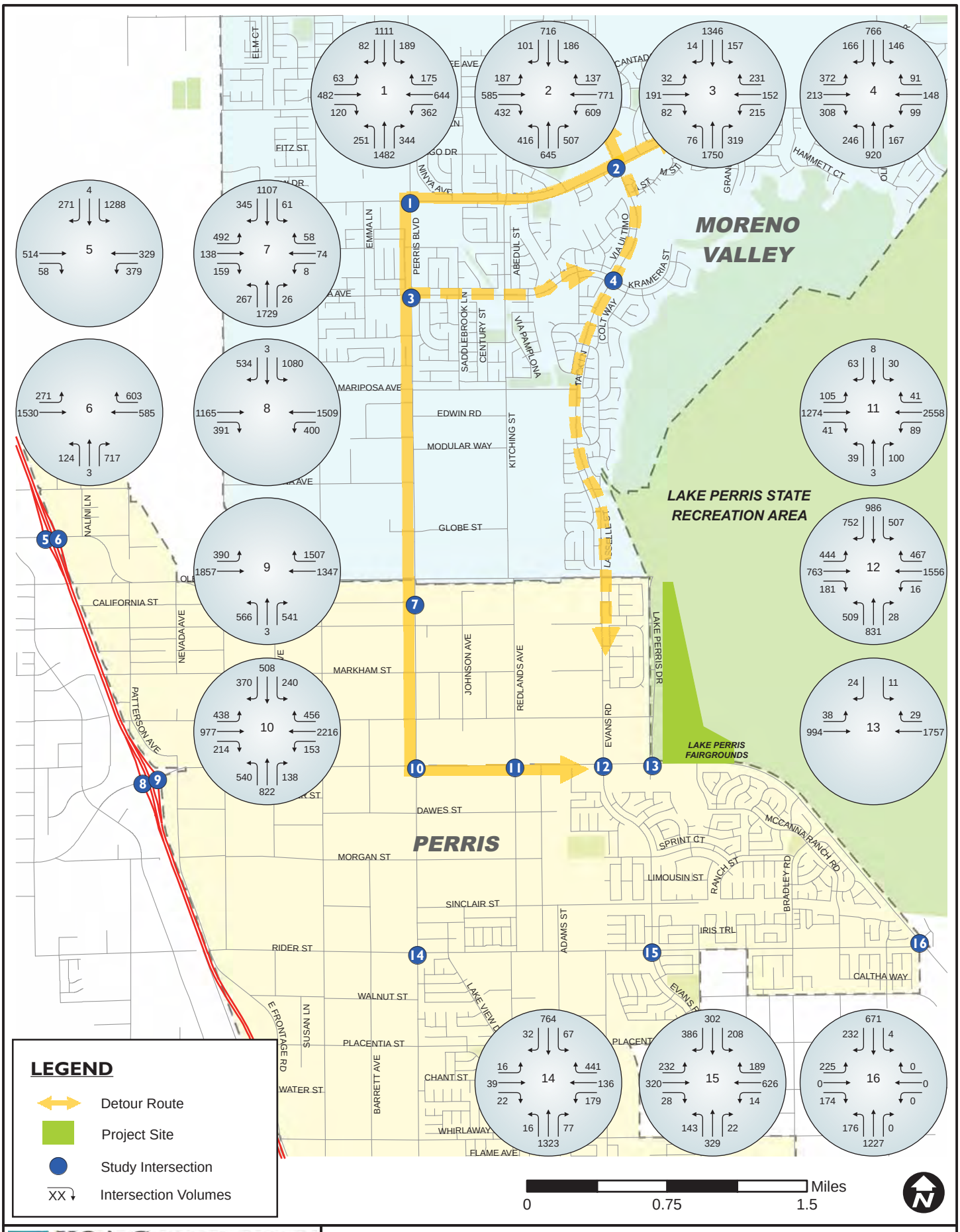


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Figure 17

Future without Construction - AM Peak Hour Intersection Volumes

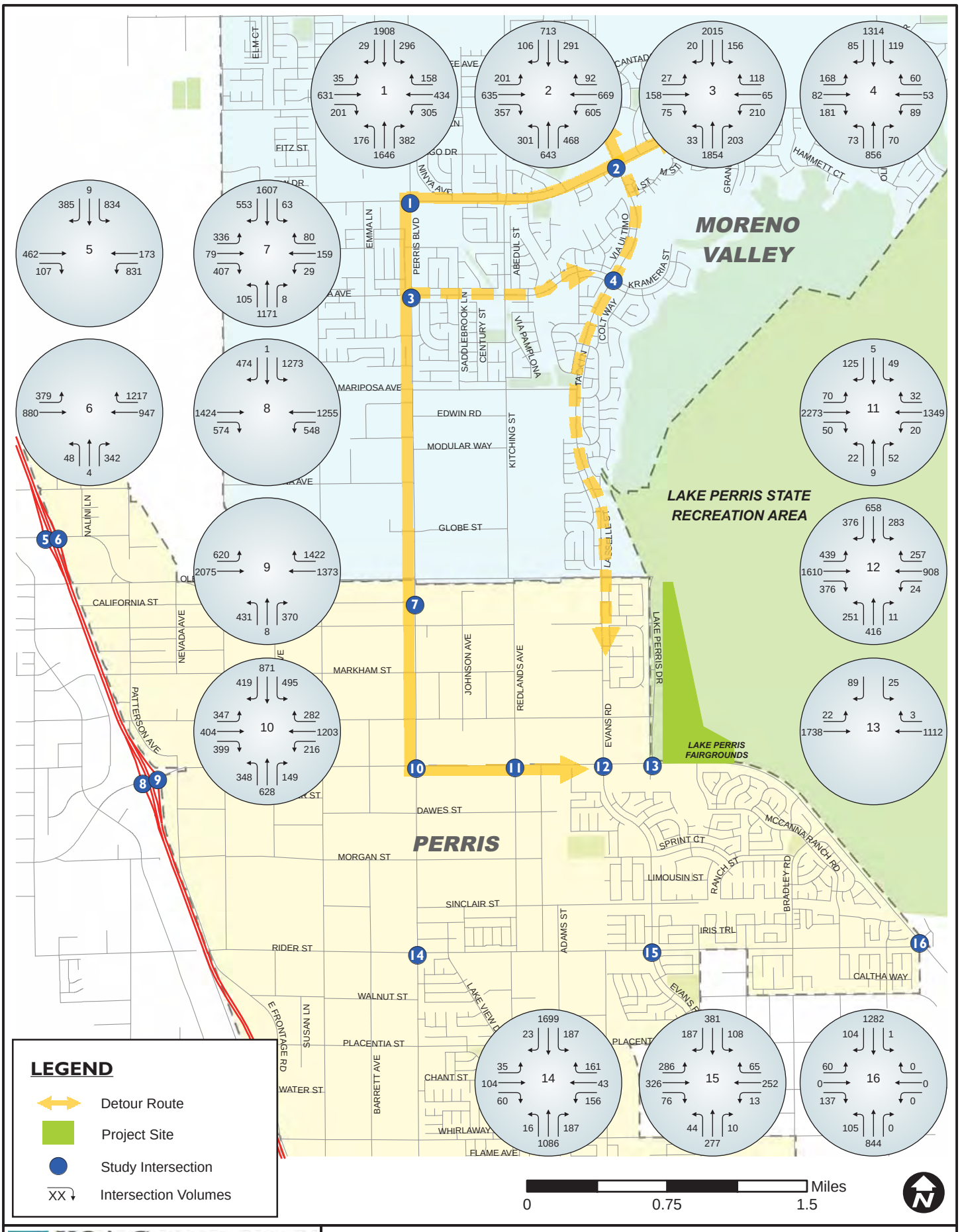

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Figure 18

Future without Construction - PM Peak Hour Intersection Volumes

7. Project Construction-Period Conditions and Impacts

7.1 Significant Impact Guidelines

Traffic impacts are identified if a proposed development will result in a significant change in traffic conditions at a study intersection or roadway 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.

Traffic impacts are identified if the proposed development will result in a significant change in traffic conditions at a study intersection. 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 acceptable level of service values and project traffic will cause a further decline below a threshold.

LOS D or better is generally considered to be acceptable by City of Perris, Caltrans, and County of Riverside impact criteria, except the intersections on Ramona Expressway, for which LOS E or better is generally considered acceptable based on the City of Perris General Plan Circulation Element Policy II.A.

> Policy II.A – Maintain the following target Levels of Service:
>
> - LOS "D" along all City maintained roads (including intersections) and LOS "D" along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS "E", at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway or at the I-215 freeway ramps.

Traditional incremental thresholds were not applied for this analysis, because as those are developed for and only useful for the analysis of development projects. The threshold of significance applied here is the change in level of service to LOS F, which represents at-capacity or over-capacity conditions.

Study area traffic operations for the construction period are discussed below, along with significant impact determinations.

7.2 Option A (Partial Closure at Evans Road) Project Construction Analysis

In addition to the construction-period trip generation, shifts in traffic to other turning movements were assumed where turning movements would be restricted, and major anticipated shifts in traffic were applied through the corridor to the next signalized intersection.

During partial lane closures on Evans Road, traffic coming from the northern area would be diverted to take Perris Boulevard, however, some traffic would remain on Evans Road. Traffic conditions at Evans Road and Ramona Expressway would be affected due to the partial closure. Traffic volumes were assumed to be reduced by approximately 50 percent due to the reduction in capacity during construction.

Option A Traffic Diversion Analysis

The study intersections operation and traffic impacts for the future with-Project construction scenario are summarized in Table 13. This scenario included the area project generated trips, traffic diversions, and construction project generated peak hour trips as part of construction analysis.

Table 13 summarizes the traffic impacts with 50 percent of the travel pattern that would utilize the proposed detour route for the Option A construction closure. A separate impact table provided in the next subsection summarizes the impacts at the work area study intersections by construction phases.

Table 13 – Study Intersection Impacts –
Future with-Project Partial Closure Construction Conditions

	Intersection	Peak Hour	Future 2023 No Construction Conditions		Future 2023 with Consruction Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS		
1	Perris Blvd & Iris Ave	AM	50.4	D	158.3	**F**	107.9	**YES**
		PM	75.8	**E**	135.2	**F**	59.4	**YES**
2	Lasselle St & Iris Ave	AM	52.3	D	73.4	**E**	21.1	No
		PM	45.4	D	58.9	**E**	13.5	No
3	Perris Blvd & Krameria Ave	AM	54.0	D	283.0	**F**	229.0	**YES**
		PM	40.6	D	164.9	**F**	124.3	**YES**
4	Lasselle St & Krameria Ave	AM	33.8	C	103.1	**F**	69.3	**YES**
		PM	22.5	C	25.6	C	3.1	No
5	I-215 SB Ramps & Harley Knox Blvd	AM	152.5	**F**	178.4	**F**	25.9	**YES**
		PM	160.4	**F**	173.3	**F**	12.9	**YES**
6	I-215 NB Ramps & Harley Knox Blvd	AM	66.8	**E**	69.3	**E**	2.5	No
		PM	145.2	**F**	146.0	**F**	0.8	**YES**
7	Perris Blvd & Harley Knox Blvd	AM	88.8	**F**	197.2	**F**	108.4	**YES**
		PM	44.0	D	71.1	**E**	27.1	No
8	I-215 SB Ramps & Ramona Expwy	AM	79.2	**F**	82.5	**F**	3.3	**YES**
		PM	173.1	**F**	177.7	**F**	4.6	**YES**
9	I-215 NB Ramps & Ramona Expwy	AM	216.2	**F**	217.0	**F**	0.8	**YES**
		PM	230.0	**F**	230.2	**F**	0.2	**YES**
10	Perris Blvd & Ramona Expwy	AM	113.5	**F**	273.6	**F**	160.1	**YES**
		PM	72.6	**E**	125.6	**F**	53.0	**YES**
11	Redlands Ave & Ramona Expwy	AM	16.3	C	22.3	C	6.0	No
		PM	13.5	B	16.4	C	2.9	No
14	Perris Blvd & Rider St	AM	25.5	D	40.8	**E**	15.3	No
		PM	23.6	C	25.2	D	1.6	No
15	Evans Rd & Rider St	AM	46.7	D	64.6	**E**	17.9	No
		PM	29.2	C	32.6	C	3.4	No
16	Ramona Expwy & Rider St	AM	14.4	B	17.9	C	3.5	No
		PM	10.1	B	12.7	B	2.6	No

The acceptable level of service is LOS D or better. At the diversion corridor analysis, however, the following significant level of service and operational changes would occur:

- Perris Boulevard/Iris Avenue – operations would worsen to LOS F during both the a.m. and p.m. peak hours.
- Lasselle Street/Iris Avenue – operations would worsen to LOS E during both the a.m. and p.m. peak hours.
- Perris Boulevard/Krameria Avenue – operations would worsen to LOS F during both the a.m. and p.m. peak hours.
- Lasselle Street/Krameria Avenue – operations would worsen to LOS F during the a.m. peak hour.
- I-215 SB Ramps/Harley Knox Boulevard – operations would worsen within LOS F during both the a.m. and p.m. peak hours.
- I-215 NB Ramps/Harley Knox Boulevard – operations would worsen within LOS E the a.m. peak hour and worsen within LOS F during the p.m. peak hour.
- Perris Boulevard/Harley Knox Boulevard – operations would worsen within LOS F the a.m. peak hour and worsen to LOS E during the p.m. peak hour.
- I-215 SB Ramps/Ramona Expressway – operations would worsen within LOS F during both the a.m. and p.m. peak hours.
- I-215 NB Ramps/Ramona Expressway – operations would worsen within LOS F during both the a.m. and p.m. peak hours.
- Perris Boulevard/Ramona Expressway – operations would worsen within LOS F during the a.m. peak hour and worsen to LOS F during the p.m. peak hour.
- Perris Boulevard/Rider Street – Operations would worsen to LOS E during the a.m. peak hour.
- Evan Road/Rider Street – Operations would worsen to LOS E during the a.m. peak hour.

Impacts at LOS D or higher/better values are considered to be moderate but not significant impacts under this analysis. For all analyzed intersections, the pre-project roadway conditions will be restored once construction activities within the related work areas are completed.

During the Option A construction period, a total of 10 study intersections would create significant impacts. Recommended mitigation measures are discussed in the next subsection of the report.

The construction period analyzed traffic volumes for the future with-Project partial closure construction scenario at the study intersections are provided on Figure 19 (a.m. peak) and Figure 20 (p.m. peak).

The delay calculation worksheets for this analysis scenario are provided in Appendix G.

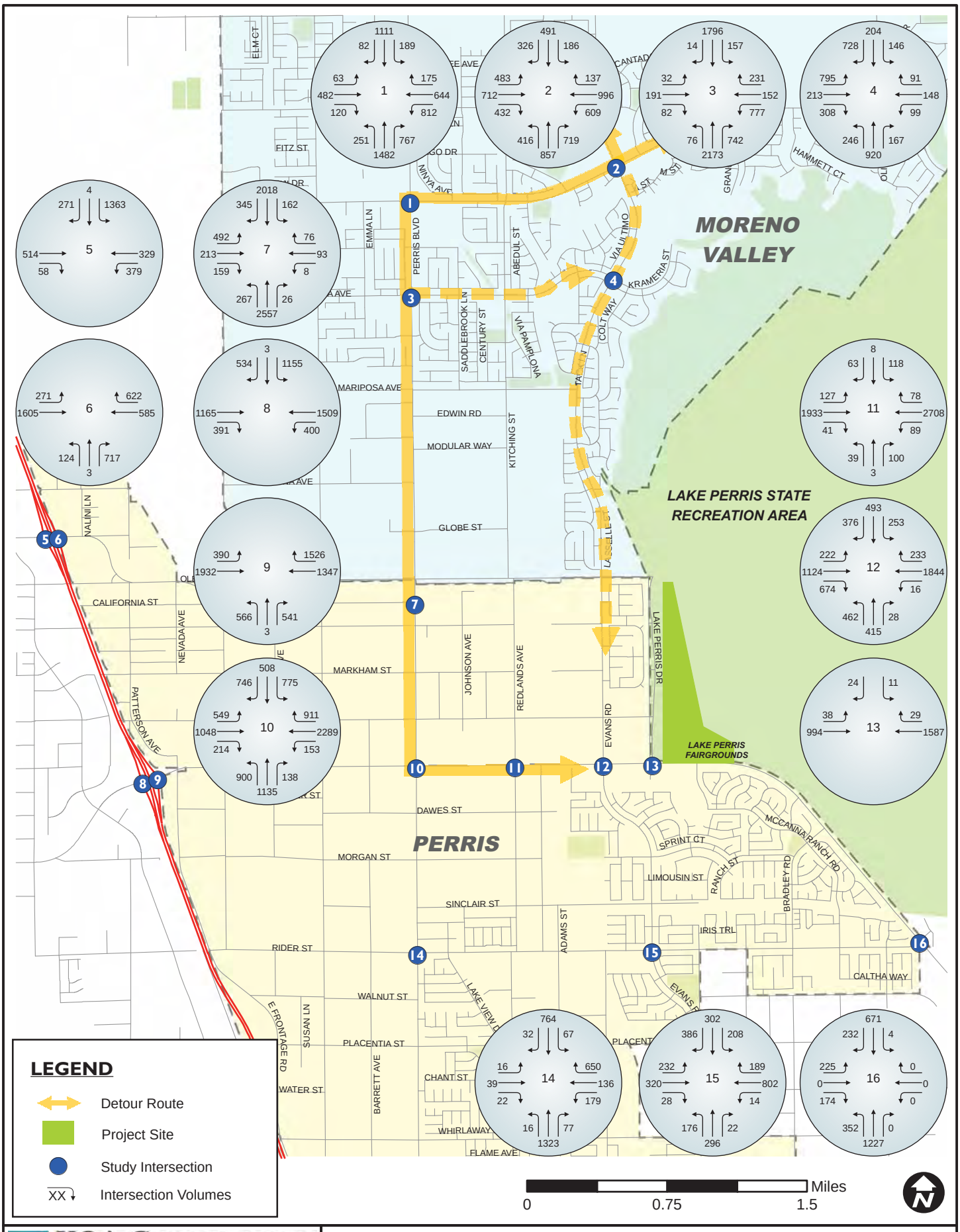

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Figure 19

Future with Project Construction (50% Closure) - AM Peak Hour Intersection Volumes

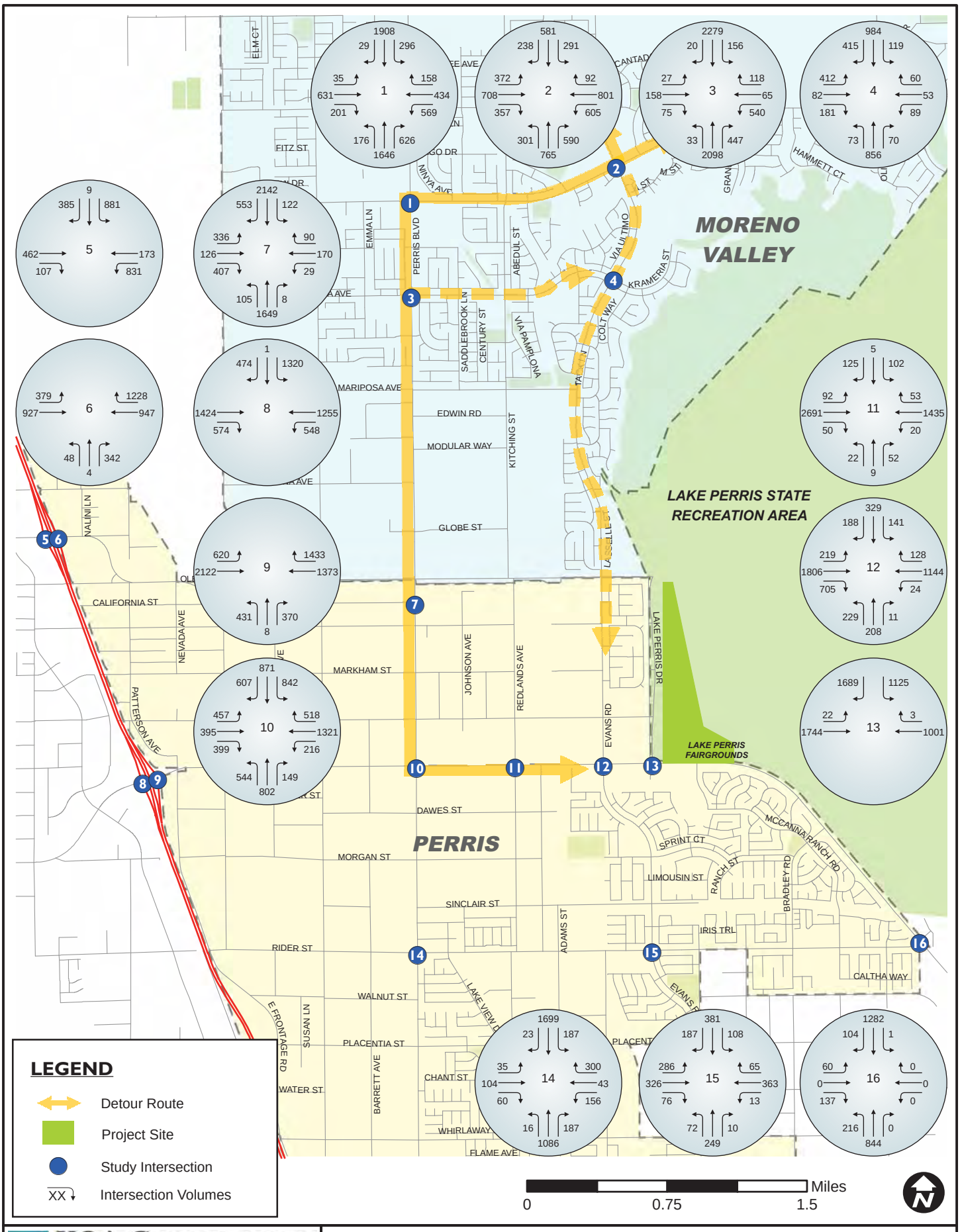

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Figure 20

Future with Project Construction (50% Closure) - PM Peak Hour Intersection Volumes

Evans Road – Option A Traffic Diversion Analysis

The partial closure construction work area for the Evans Road study intersection operations for the future with-Project construction scenario is summarized in Table 14. Table 14 summarizes the traffic conditions that would occur at different construction phases for the Evans Road/Ramona Expressway intersection.

Table 14 – Evans Road Work Area Impacts –
Future with-Project Partial Closure Construction Conditions

Intersection	Peak Hour	Future 2023 No Construction Conditions		with Construction Conditions		Change in Delay Value
		Delay	LOS	Delay	LOS	
Two-Part Construction - Phase 1						
Evans Rd & Ramona Expwy	AM	141.9	**F**	326.2	**F**	184.30
	PM	58.7	E	107.6	**F**	48.90
Two-Part Construction - Phase 2						
Evans Rd & Ramona Expwy	AM	141.9	**F**	259.1	**F**	117.20
	PM	58.7	E	88.9	**F**	30.20
Three-Part Construction - Phase 1						
Evans Rd & Ramona Expwy	AM	141.9	**F**	258.7	**F**	116.80
	PM	58.7	E	88.9	**F**	30.20
Three-Part Construction - Phase 2						
Evans Rd & Ramona Expwy	AM	141.9	**F**	277.0	**F**	135.10
	PM	58.7	E	102.3	**F**	43.60

Table 14 summarizes the traffic impacts of the two alternatives and the two phases, respectively. The two- part construction alternative for Phase 1 and Phase 2 operation would worsen to LOS F during both the a.m. and p.m. peak hours, with generally worsened conditions under the with-construction conditions.

The three-part construction alternative for Phase 1 and Phase 2 would also worsen to LOS F during the a.m. and p.m. peak hours, under the with-construction conditions.

As operation would worsen to or within LOS F, traffic impact at the Evans Road/Ramona Expressway intersection would be significant during the a.m. peak hour under the Option A Project construction scenario.

7.3 Option B (Full Closure at Evans Road) Project Construction Analysis

In addition to the construction-period trip generation, shifts in traffic to the detour route and to other diversion routes were analyzed. Major anticipated shifts in traffic were applied along the signed detour route. The north leg of the Evans Road intersection would be fully closed under this analysis of the construction option.

During the full closure at the Evans Road intersection, all vehicles from the north would be diverted to take Perris Boulevard. Traffic from Ramona Expressway to Evans Road (north) and from the southern area would be diverted to Perris Boulevard. All traffic to/from Evans Road would be diverted to adjacent major roadway corridors due to the full closure of Evans Road.

Option B Traffic Diversion – Full Closure

The construction work area would be located at the Evans Road intersection on Ramona Expressway. The study intersection operations for the future and future with-Project scenarios are summarized in Table 15. This table summarizes the traffic impacts with full closure due to the work area at the Evans Road/ Ramona Expressway intersection.

**Table 15 – Study Intersection Impacts –
Future with-Project Construction Conditions (Full Closure)**

	Intersection	Peak Hour	Future 2023 No Construction Conditions		Future 2023 with Construction Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS		
1	Perris Blvd & Iris Ave	AM	50.4	D	158.3	**F**	107.9	**YES**
		PM	75.8	E	135.2	**F**	59.4	**YES**
2	Lasselle St & Iris Ave	AM	52.3	D	73.4	E	21.1	No
		PM	45.4	D	58.9	E	13.5	No
3	Perris Blvd & Krameria Ave	AM	54.0	D	283.0	**F**	229.0	**YES**
		PM	40.6	D	164.9	**F**	124.3	**YES**
4	Lasselle St & Krameria Ave	AM	33.8	C	103.1	**F**	69.3	**YES**
		PM	22.5	C	25.6	C	3.1	No
5	I-215 SB Ramps & Harley Knox Blvd	AM	152.5	**F**	178.4	**F**	25.9	**YES**
		PM	160.4	**F**	173.3	**F**	12.9	**YES**
6	I-215 NB Ramps & Harley Knox Blvd	AM	66.8	E	69.3	E	2.5	No
		PM	145.2	**F**	146.0	**F**	0.8	**YES**
7	Perris Blvd & Harley Knox Blvd	AM	88.8	**F**	197.2	**F**	108.4	**YES**
		PM	44.0	D	71.1	E	27.1	No
8	I-215 SB Ramps & Ramona Expwy	AM	79.2	**F**	82.5	**F**	3.3	**YES**
		PM	173.1	**F**	177.7	**F**	4.6	**YES**
9	I-215 NB Ramps & Ramona Expwy	AM	216.2	**F**	217.0	**F**	0.8	**YES**
		PM	230.0	**F**	230.2	**F**	0.2	**YES**
10	Perris Blvd & Ramona Expwy	AM	113.5	**F**	273.6	**F**	160.1	**YES**
		PM	72.6	E	125.6	**F**	53.0	**YES**
11	Redlands Ave & Ramona Expwy	AM	16.3	C	22.3	C	6.0	No
		PM	13.5	B	16.4	C	2.9	No
14	Perris Blvd & Rider St	AM	25.5	D	40.8	E	15.3	No
		PM	23.6	C	25.2	D	1.6	No
15	Evans Rd & Rider St	AM	46.7	D	64.6	E	17.9	No
		PM	29.2	C	32.6	C	3.4	No
16	Ramona Expwy & Rider St	AM	14.4	B	17.9	C	3.5	No
		PM	10.1	B	12.7	B	2.6	No

At the study intersections, the following significant level of service and operational changes would occur due to the full construction closure under Option B:

- Perris Boulevard/Iris Avenue – Operations would worsen to LOS F during both the a.m. and p.m. peak hours.
- Lasselle Street/Iris Avenue – Operations would worsen to LOS F during the a.m. peak hour and to LOS E during the p.m. peak hour.
- Perris Boulevard/Krameria Avenue – Operations would worsen to LOS F during the a.m. and p.m. peak hours.
- Lasselle Street/Krameria Avenue – Operations would worsen to LOS F during the a.m. peak hour.
- I-215 SB Ramps/Harley Knox Boulevard – Operations would worsen within LOS F during the a.m. and the p.m. peak hours.
- I-215 NB Ramps/Harley Knox Boulevard – Operations would worsen within LOS F during the a.m. and the p.m. peak hours.
- Perris Boulevard/Harley Knox Boulevard – Operations would worsen to LOS F during the a.m. and the p.m. peak hours.
- I-215 SB Ramps & Ramona Expressway – Operations would worsen within LOS F during the a.m. and the p.m. peak hours.
- I-215 NB Ramps & Ramona Expressway – Operations would worsen within LOS F during the a.m. and the p.m. peak hours.
- Perris Boulevard/Ramona Expressway – Operations would worsen to LOS F during the a.m. and the p.m. peak hours.
- Redlands Avenue/Ramona Expressway – Operations would worsen to LOS F during the a.m. peak hour.

The construction period analyzed traffic volumes for the future with-Project full closure construction scenario at the study intersections are provided on Figure 21 (a.m. peak) and Figure 22 (p.m. peak).

The delay calculation worksheets for this analysis scenario are provided in Appendix H.

Option B Traffic Impacts – Evans Road Intersection

The construction work area study intersection operations for the existing and existing plus-Project scenarios are summarized in Table 16. Multiple phasing would not apply to the full closure scenario as the southbound approach would be completely closed.

Table 16 – Evans Road Work Area Impacts – Future with-Project Construction Conditions (Full Closure)

Intersection	Peak Hour	Future 2023 No Construction Conditions		Future 2023 with Construction Conditions		Change in Delay Value
		Delay	LOS	Delay	LOS	
Evans Rd & Ramona Expwy	AM	141.9	**F**	40.0	D	-101.90
	PM	58.7	E	23.4	C	-35.30

Table 16 summarizes the traffic impacts during the full closure of Evans Road. Under future without construction conditions, the intersection operates at LOS E during the a.m. peak hour. However, the north leg closure would potentially improve the level of service operation to LOS D or better during both the a.m. and p.m. peak hours.

Full closure would apply to the Evans Road intersection and the analyzed detour route.

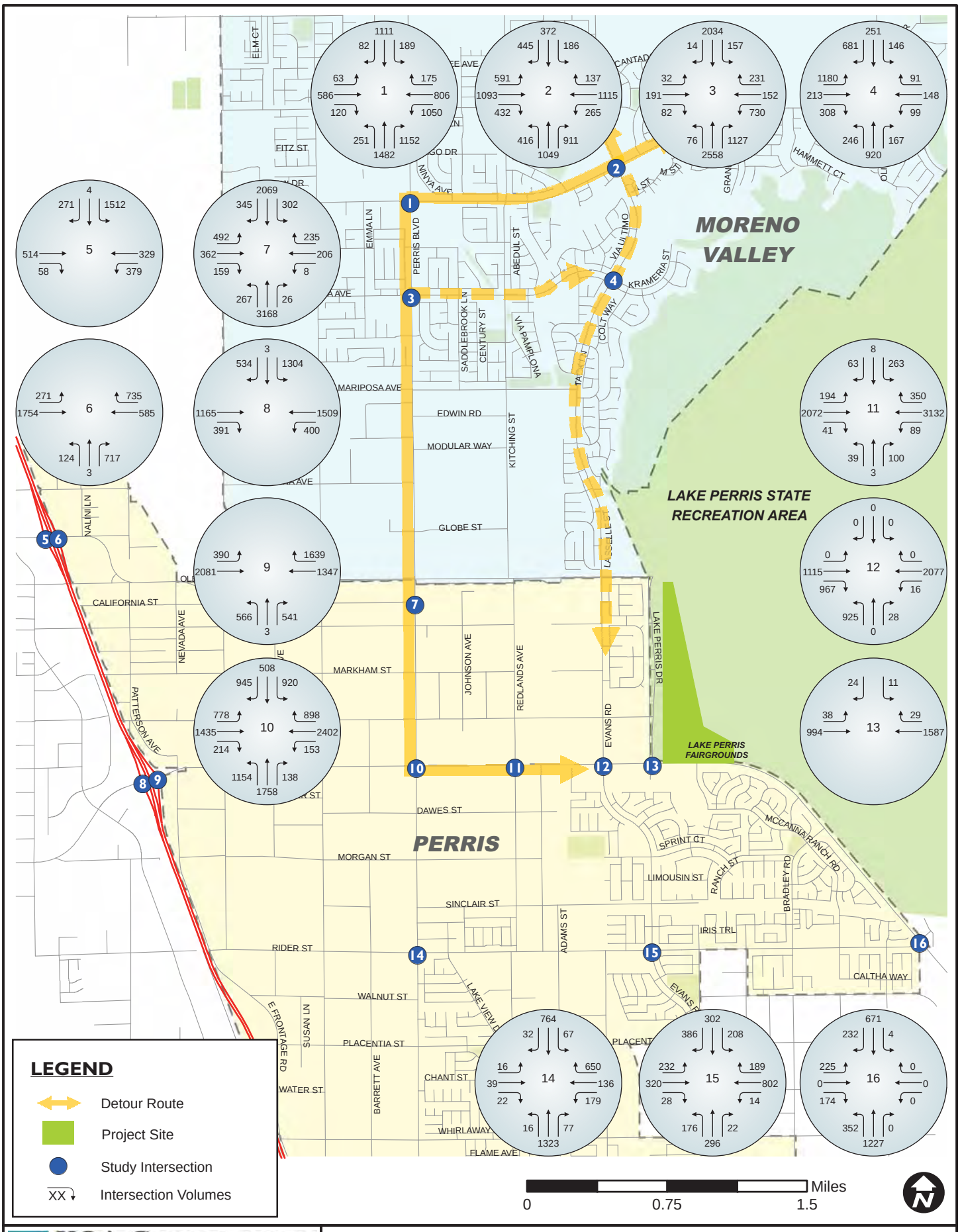

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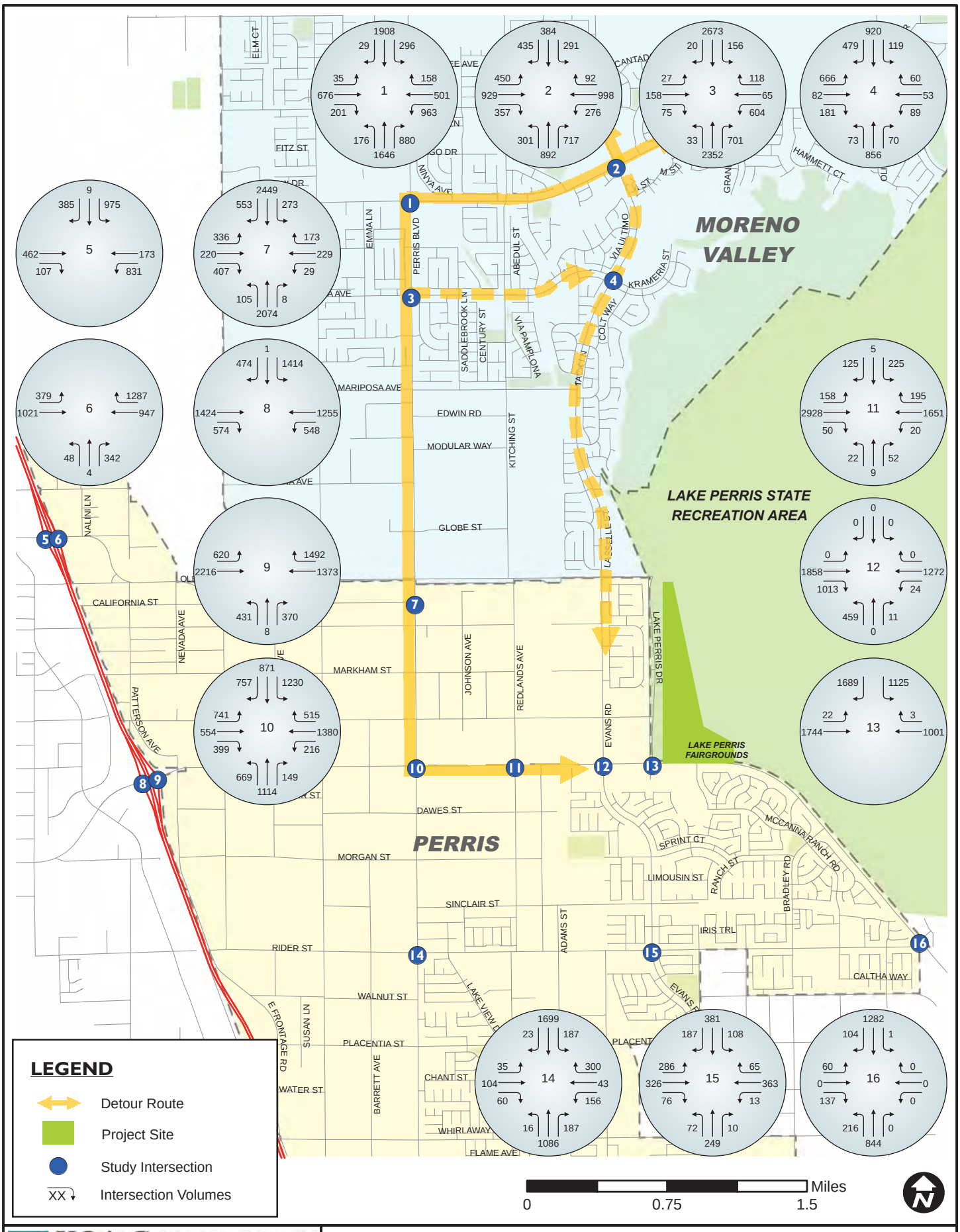
Figure 21

Future with Project Construction (Full Closure) - AM Peak Hour Intersection Volumes



KOA CORPORATION
PLANNING & ENGINEERING

DWR Lake Perris Project EIR

Figure 22

Future with Project Construction (Full Closure) - PM Peak Hour Intersection Volumes

7.4 Lake Perris Drive Closure Construction Analysis

Construction of the Lake Perris Drive replacement bridge is a separate Project element. The construction work area at the Lake Perris Drive intersection would affect the existing lane configuration during the second phase of construction. Lane capacity would be reduced to from three travel lanes to two at the southbound approach.

Table 17 summarizes the traffic conditions for the Lake Perris Drive work area. This intersection serves as the main entrance to the Perris Fairgrounds and the Lake Perris State Recreation Area. Special events hosted at the Perris Fairgrounds were analyzed during the p.m. peak hour only.

The p.m. period analysis was conducted to simulate a period of high traffic congestion, using weekday counts, as traffic counts for a major weekend event or period of high recreational activity were not available. Trip generation numbers for the Lake Perris Drive intersection approach were simulated, to create saturated flow conditions.

Under future conditions, the intersection would operate at LOS F during the p.m. peak hour.

Table 17 – Lake Perris Drive Work Area Impacts – Future with-Project Conditions

Intersection	Peak Hour	Future 2023 No Construction Conditions		with Construction Conditions		Change in Delay Value
		Delay	LOS	Delay	LOS	
Construction - Phase 2 *						
Lake Perris DR & Ramona Expwy	AM	3.2	A	4.1	A	0.90
	PM	152.5	**F**	177.5	**F**	25.0

* DWR drawings titled "Phase 1" and "Temporary Local Detour" were not analyzed, as the intersection configurations under those scenarios do not affect capacity.

The lane modification at the Lake Perris Drive / Ramona Expressway intersection would create a significant traffic impact. This impact would occur when events occur at the Perris Fairgrounds, or when major weekend activity occurs at the Lake.

9. Conclusions and Recommended Measures

This section provides major conclusions of the Project traffic impact analysis and recommendations to alleviate identified significant traffic impacts.

Scenario Level of Service Conclusions

- Under existing analyzed conditions, four of the sixteen study intersections operate at LOS E or F during the a.m. peak hour or p.m. peak hour.
- Under the existing with-Project construction Option A (partial closure) conditions, four of the sixteen study intersections would operate at LOS F during the a.m. or p.m. peak hours. These four intersections would be significantly impacted by the project construction detour and the construction closure.
- Under the existing with-Project construction Option B (full closure) conditions, six of the sixteen study intersections would operate at LOS F during the a.m. or p.m. peak hours. These six intersections would be significantly impacted by the project construction detour and the construction closure.
- Under the future without-Project conditions, nine of the sixteen study intersections would operate at LOS E or F during the a.m. or p.m. peak hours.
- Under the future with-Project construction with Option A (partial closure) conditions, nine of the sixteen study intersections would operate at LOS F during the a.m. or p.m. peak hours. These nine intersections would be significantly impacted by the project construction detour and the construction closure.
- Under the future with-Project construction with Option B (full closure) conditions, eleven of the sixteen study intersections would operate at LOS F during the a.m. or p.m. peak hours. These eleven intersections would be significantly impacted by the project construction detour and the construction closure.

Construction Closure Points – Intersection Operations Conclusions

Under the existing and future with-Project construction Option A (partial closure) conditions, operations at the Evans Road/Ramona Expressway intersection (study intersection 12) would worsen to LOS E or F during the a.m. or p.m. peak hours.

Under the existing and future with-Project construction Option B (full closure) conditions, the Evans Road/Ramona Expressway intersection (study intersection 12) would worsen to LOS E during the a.m. peak hour.

Operations at the Lake Perris Drive/Ramona Expressway intersection (study intersection 13) would worsen to LOS E or F during the a.m. or p.m. peak hours, under the Option A construction conditions. The Option B conditions would fully replace the intersection temporarily in an adjacent location, and impacts would not occur under that configuration.

Construction Detour Routes – Intersection Operations Conclusions

For intersections 1 through 11, traffic mitigation measures are proposed to reduce the traffic impact of the project detour route due to the construction closure, where impacts were identified.

Table 18 summarizes the recommended mitigation measures under the existing plus-project and the future with-project conditions. "YES" values in the table indicate for which scenarios – Option A (partial closure) and Option B (full closure) – the mitigation measures would be needed.

Table 18 – Traffic Mitigation Measures Summary

Int #	Mitigation Measures	Existing plus-Project Construction Option A (partial closure)	Existing plus-Project Construction Option B (full closure)	Future with-Project Construction Option A (partial closure)	Future with-Project Construction Option B (full closure)
1	New northbound right-turn overlap phase; change westbound, northbound, and southbound left-turn phasing to protected-permissive.	YES	YES	YES	YES
2	At all approaches, change left-turn phases to protected-permissive.				YES
3	Restripe westbound approach to provide two left-turn lanes and a shared thru-right lane; Change westbound left-turn phase to protected-permissive with eastbound phase remaining as permissive.	YES	YES	YES	YES
4	At all approaches, change left-turn phased to protected-permissive.		YES	YES	YES
7	At northbound, southbound, and eastbound approachs, change left-turn phases to protected-permissive.		YES	YES	YES
10	At all approaches, change left-turn phasing to protected-permissive; Restripe northbound lanes to provide two left-turn lanes, two through lanes and one shared through-right lane.	YES	YES	YES	YES
11	At southbound and east bound approaches, change left-turn phase to protected-permissive; at northbound and southbound approaches change right-turn phase to permissive-overlap				YES

The listed measures in Table 18 offset some of the identified significant traffic impacts of the Project. At some locations, the Project impact would remain significant even with implementation of the mitigation measures. Major improvement measures that included roadway widening and the potential purchase of property were considered to be infeasible within the scope of the proposed Project.

The measures would reduce some of the delay caused by Project construction traffic, where the significance of impacts is not fully removed. Potential mitigation measures for the four study intersections at the off-ramp intersections of the I-215 interchanges included in the study area were determined to be infeasible within the scope of this construction project. Identified significant impacts at those locations were determined to be significant and unavoidable during the construction period. Once construction is completed, however, the impacts would be removed.

Table 19 provides the level of service calculations for the four impacted intersections under the existing plus-Project conditions (partial closure), after the recommended mitigation measures are implemented. Operations at one of the four intersections would improve to LOS C or better while the other two intersections would still operate at LOS E or F during the peak hours. Impacts at the intersection of Perris Boulevard and Ramona Expressway and at the I-215/Ramona Expressway interchange (northbound off-ramp) would remain significant and unavoidable.

Table 19 – Level of Service Calculations – Existing plus-Construction Conditions (Partial Closure, Option A) Plus Mitigation Measures

	Intersection	Peak Hour	Existing (2015) Conditions		Existing with Construction Conditions		Change in Delay Value	Sig Impact?	Existing with Construction + Mitigation Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS			Delay	LOS		
1	Perris Blvd & Iris Ave	AM	25.5	C	81.4	**F**	55.9	**YES**	27.4	C	1.9	No
		PM	30.8	C	53.1	D	22.3	No	28.2	C	-2.6	No
3	Perris Blvd & Krameria Ave	AM	24.6	C	100.2	**F**	75.6	**YES**	32.9	C	8.3	No
		PM	19.2	B	32.9	C	13.7	No	18.6	B	-0.6	No
9	I-215 NB Ramps & Ramona Expwy	AM	97.1	**F**	89.8	**F**	-7.3	**YES**	*	*		
		PM	32.8	C	33.1	C	0.3	No	*	*		
10	Perris Blvd & Ramona Expwy	AM	55.8	**E**	115.7	**F**	59.9	**YES**	80.6	**F**	24.8	**YES**
		PM	46.5	D	54.6	D	8.1	No	34.2	C	-12.3	No

* Mitigation measures were determined to be infeasible within the scope of the construction project.

Table 20 provides the level of service calculations for the six impacted intersections under the existing plus-Project conditions (full closure), after the mitigation measures are implemented. Three of the six intersections would improve to LOS C or better, while three of the six intersections would still operate at LOS F during the peak hours.

Impacts at these latter locations would remain significant and unavoidable. This would include the I-215/Ramona Expressway interchange (northbound off-ramp intersection).

Table 20 – Level of Service Calculations – Existing plus-Construction Conditions (Full Closure, Option B) Plus Mitigation Measures

	Intersection	Peak Hour	Existing (2015) Conditions		Existing with Construction Conditions		Change in Delay Value	Sig Impact?	Existing with Construction + Mitigation Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS			Delay	LOS		
1	Perris Blvd & Iris Ave	AM	25.5	C	176.1	**F**	150.6	**YES**	48.0	D	22.5	No
		PM	30.8	C	132.8	**F**	102.0	**YES**	48.3	D	17.5	No
3	Perris Blvd & Krameria Ave	AM	24.6	C	173.4	**F**	148.8	**YES**	96.0	**F**	71.4	**YES**
		PM	19.2	B	52.5	D	33.3	No	23.3	C	4.1	No
4	Lasselle St & Krameria Ave	AM	24.8	C	97.4	**F**	72.6	**YES**	29.7	C	4.9	No
		PM	17.7	B	23.1	C	5.4	No	17.7	B	0.0	No
7	Perris Blvd & Harley Knox Blvd	AM	30.6	C	130.1	**F**	99.5	**YES**	115.1	**F**	84.5	**YES**
		PM	28.5	C	41.3	D	12.8	No	27.6	C	-0.9	No
9	I-215 NB Ramps & Ramona Expwy	AM	97.1	**F**	106.0	**F**	8.9	**YES**	*	*		
		PM	32.8	C	39.0	D	6.2	No	*	*		
10	Perris Blvd & Ramona Expwy	AM	55.8	**E**	174.1	**F**	118.3	**YES**	130.7	**F**	74.9	**YES**
		PM	46.5	D	76.4	**E**	29.9	No	43.5	D	-3.0	No

* Mitigation measures were determined to be infeasible within the scope of the construction project.

Table 21 provides the level of service calculations for the nine impacted intersections under the future with construction conditions (full closure), after the mitigation measures are implemented. Eight of the nine intersections would still operate at LOS E or F during the peak hours. Impacts at these latter locations would remain significant and unavoidable. However, the delay in seconds would be largely reduced.

Impacts at the study intersections at the off-ramps of the I-2-15/Harley Knox Boulevard and I-215/Ramona Expressway interchanges would remain significant and unavoidable, and mitigation measures at those locations were determined to be infeasible within the scope of the construction project.

Table 21 – Level of Service Calculations – Future with-Construction Conditions (Partial Closure) Plus Mitigation Measures

	Intersection	Peak Hour	Future 2023 No Construction Conditions		Future 2023 with Consruction Conditions		Change in Delay Value	Sig Impact?	Future 2023 with Construction + Mitigation Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS			Delay	LOS		
1	Perris Blvd & Iris Ave	AM	50.4	D	158.3	**F**	107.9	**YES**	81.4	**F**	31.0	**YES**
		PM	75.8	**E**	135.2	**F**	59.4	**YES**	97.9	**F**	22.1	**YES**
3	Perris Blvd & Krameria Ave	AM	54.0	D	283.0	**F**	229.0	**YES**	190.0	**F**	136.0	**YES**
		PM	40.6	D	164.9	**F**	124.3	**YES**	93.0	**F**	52.4	**YES**
4	Lasselle St & Krameria Ave	AM	33.8	C	103.1	**F**	69.3	**YES**	72.5	**E**	38.7	No
		PM	22.5	C	25.6	C	3.1	No	20.4	C	-2.1	No
5	I-215 SB Ramps & Harley Knox Blvd	AM	152.5	**F**	178.4	**F**	25.9	**YES**	*	*		
		PM	160.4	**F**	173.3	**F**	12.9	**YES**	*	*		
6	I-215 NB Ramps & Harley Knox Blvd	AM	66.8	**E**	69.3	**E**	2.5	No	*	*		
		PM	145.2	**F**	146.0	**F**	0.8	**YES**	*	*		
7	Perris Blvd & Harley Knox Blvd	AM	88.8	**F**	197.2	**F**	108.4	**YES**	161.9	**F**	73.1	**YES**
		PM	44.0	D	71.1	**E**	27.1	No	59.5	**E**	15.5	No
8	I-215 SB Ramps & Ramona Expwy	AM	79.2	**F**	82.5	**F**	3.3	**YES**	*	*		
		PM	173.1	**F**	177.7	**F**	4.6	**YES**	*	*		
9	I-215 NB Ramps & Ramona Expwy	AM	216.2	**F**	217.0	**F**	0.8	**YES**	*	*		
		PM	230.0	**F**	230.2	**F**	0.2	**YES**	*	*		
10	Perris Blvd & Ramona Expwy	AM	113.5	**F**	273.6	**F**	160.1	**YES**	227.2	**F**	113.7	**YES**
		PM	72.6	**E**	125.6	**F**	53.0	**YES**	98.0	**F**	25.4	**YES**

* Mitigation measures were determined to be infeasible within the scope of the construction project.

Table 22 provides the level of service calculations for the eleven impacted intersections under the future with construction conditions (full closure), after the mitigation measures are implemented. All of the eleven intersections would still operate at LOS E or F during the peak hours. Impacts at these latter locations would remain significant and unavoidable. However, the delay in seconds would be largely reduced.

Impacts at the study intersections at the off-ramps of the I-2-15/Harley Knox Boulevard and I-215/Ramona Expressway interchanges would remain significant and unavoidable, and mitigation measures at those locations were determined to be infeasible within the scope of the construction project.

Table 22 – Level of Service Calculations – Future with-Construction Conditions (Full Closure) Plus Mitigation Measures

	Intersection	Peak Hour	Future 2023 No Construction Conditions		Future 2023 with Consruction Conditions		Change in Delay Value	Sig Impact?	Future 2023 with Construction + Mitigation Conditions		Change in Delay Value	Sig Impact?
			Delay	LOS	Delay	LOS			Delay	LOS		
1	Perris Blvd & Iris Ave	AM	50.4	D	268.6	**F**	218.2	**YES**	128.9	**F**	78.5	**YES**
		PM	75.8	**E**	270.4	**F**	194.6	**YES**	176.2	**F**	100.4	**YES**
2	Lasselle St & Iris Ave	AM	52.3	D	107.2	**F**	54.9	**YES**	92.6	**F**	40.3	**YES**
		PM	45.4	D	65.1	**E**	19.7	**YES**	48.2	D	2.8	No
3	Perris Blvd & Krameria Ave	AM	54.0	D	376.5	**F**	322.5	**YES**	280.3	**F**	226.3	**YES**
		PM	40.6	D	239.0	**F**	198.4	**YES**	165.4	**F**	124.8	**YES**
4	Lasselle St & Krameria Ave	AM	33.8	C	131.0	**F**	97.2	**YES**	98.9	**F**	65.1	**YES**
		PM	22.5	C	36.0	D	13.5	No	28.0	C	5.5	No
5	I-215 SB Ramps & Harley Knox Blvd	AM	152.5	**F**	219.5	**F**	67.0	**YES**	*	*		
		PM	160.4	**F**	206.5	**F**	46.1	**YES**	*	*		
6	I-215 NB Ramps & Harley Knox Blvd	AM	66.8	**E**	87.1	**F**	20.3	**YES**	*	*		
		PM	145.2	**F**	156.2	**F**	11.0	**YES**	*	*		
7	Perris Blvd & Harley Knox Blvd	AM	88.8	**F**	258.3	**F**	169.5	**YES**	219.5	**F**	130.7	**YES**
		PM	44.0	D	129.2	**F**	85.2	**YES**	111.3	**F**	67.3	**YES**
8	I-215 SB Ramps & Ramona Expwy	AM	79.2	**F**	93.8	**F**	14.6	**YES**	*	*		
		PM	173.1	**F**	185.7	**F**	12.6	**YES**	*	*		
9	I-215 NB Ramps & Ramona Expwy	AM	216.2	**F**	232.3	**F**	16.1	**YES**	*	*		
		PM	230.0	**F**	237.4	**F**	7.4	**YES**	*	*		
10	Perris Blvd & Ramona Expwy	AM	113.5	**F**	384.9	**F**	271.4	**YES**	316.9	**F**	203.4	**YES**
		PM	72.6	**E**	214.0	**F**	141.4	**YES**	173.3	**F**	100.7	**YES**
11	Redlands Ave & Ramona Expwy	AM	16.3	C	99.8	**F**	83.5	**YES**	78.4	**F**	62.1	**YES**
		PM	13.5	B	25.1	D	11.6	No	17.5	C	4.0	No

* Mitigation measures were determined to be infeasible within the scope of the construction project.

The level of service calculation worksheets for the conditions with mitigation measures are provided in Appendix I.

APPENDIX A1
Existing Intersection Traffic Count Data

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-001 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

AM

NS/EW Streets:	Perris Blvd			Perris Blvd			Iris Ave			Iris Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	1	3	0	1	2	0	1	2	0	
7:00 AM	38	139	74	37	96	20	13	63	18	55	110	37	700
7:15 AM	60	175	67	39	89	21	13	90	21	63	129	29	796
7:30 AM	48	165	71	41	99	16	14	104	29	61	130	36	814
7:45 AM	52	145	42	32	88	8	10	88	27	52	102	36	682
8:00 AM	43	149	30	29	70	6	4	36	22	32	80	36	537
8:15 AM	31	104	30	33	76	4	5	34	13	34	45	26	435
8:30 AM	26	118	37	28	86	3	3	34	9	26	64	17	451
8:45 AM	29	89	22	37	75	4	8	32	20	27	58	18	419
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	327	1084	373	276	679	82	70	481	159	350	718	235	4834
APPROACH %'s :	18.33%	60.76%	20.91%	26.62%	65.48%	7.91%	9.86%	67.75%	22.39%	26.86%	55.10%	18.04%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	198	624	254	149	372	65	50	345	95	231	471	138	2992
PEAK HR FACTOR :		0.891			0.939			0.833			0.925		0.919

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-001 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

PM

NS/EW Streets:	Perris Blvd			Perris Blvd			Iris Ave			Iris Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	1	3	0	1	2	0	1	2	0	
4:00 PM	34	157	39	41	122	2	3	81	32	52	78	37	678
4:15 PM	38	144	64	45	137	4	11	79	33	53	75	23	706
4:30 PM	33	240	81	60	230	9	7	87	43	59	72	27	948
4:45 PM	37	164	65	50	172	5	6	112	33	55	57	36	792
5:00 PM	38	133	52	67	160	1	7	99	43	47	80	30	757
5:15 PM	31	138	44	57	171	8	8	134	40	62	66	32	791
5:30 PM	35	167	87	51	197	7	13	120	52	54	79	22	884
5:45 PM	35	132	56	69	198	6	7	118	38	54	79	29	821
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	281	1275	488	440	1387	42	62	830	314	436	586	236	6377
APPROACH %'s :	13.75%	62.38%	23.87%	23.54%	74.21%	2.25%	5.14%	68.82%	26.04%	34.66%	46.58%	18.76%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	139	675	242	234	733	23	28	432	159	223	275	125	3288
PEAK HR FACTOR :		0.746			0.828			0.850			0.973		0.867

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-002 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

AM

NS/EW Streets:	Lasselle St			Lasselle St			Iris Ave			Iris Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	0	2	3	0	2	3	0	
7:00 AM	93	126	95	23	143	23	40	89	86	151	153	10	1032
7:15 AM	113	118	89	25	100	19	36	104	87	111	149	23	974
7:30 AM	64	122	96	59	147	22	38	134	96	126	107	44	1055
7:45 AM	58	111	109	40	129	16	34	82	72	89	109	31	880
8:00 AM	59	123	109	29	68	11	11	62	45	53	79	17	666
8:15 AM	32	73	68	33	53	3	17	65	32	51	66	15	508
8:30 AM	24	85	54	26	54	9	13	55	40	52	86	20	518
8:45 AM	40	68	55	18	56	11	27	43	35	69	76	14	512
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	483	826	675	253	750	114	216	634	493	702	825	174	6145
APPROACH %'s :	24.34%	41.63%	34.02%	22.65%	67.14%	10.21%	16.08%	47.21%	36.71%	41.27%	48.50%	10.23%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	328	477	389	147	519	80	148	409	341	477	518	108	3941
PEAK HR FACTOR :		0.933			0.818			0.838			0.878		0.934

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-002 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

PM

NS/EW Streets:	Lasselle St			Lasselle St			Iris Ave			Iris Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	0	2	3	0	2	3	0	
4:00 PM	56	129	88	49	96	26	37	65	52	100	101	20	819
4:15 PM	52	110	81	38	91	26	31	81	38	94	117	14	773
4:30 PM	63	85	75	50	94	19	38	89	49	98	92	13	765
4:45 PM	41	130	72	58	120	17	34	94	54	117	98	23	858
5:00 PM	58	116	77	50	103	21	39	92	53	103	111	16	839
5:15 PM	61	94	72	66	124	21	44	94	79	131	115	10	911
5:30 PM	55	132	105	52	142	20	31	102	72	110	107	25	953
5:45 PM	64	110	108	62	153	22	45	87	78	121	109	22	981
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	450	906	678	425	923	172	299	704	475	874	850	143	6899
APPROACH %'s :	22.12%	44.54%	33.33%	27.96%	60.72%	11.32%	20.23%	47.63%	32.14%	46.81%	45.53%	7.66%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	238	452	362	230	522	84	159	375	282	465	442	73	3684
PEAK HR FACTOR :		0.901			0.882			0.940			0.957		0.939

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-003 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

AM

NS/EW Streets:	Perris Blvd			Perris Blvd			Krameria Ave			Krameria Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	0	1	0	1	1	1	
7:00 AM	13	214	68	29	127	4	6	30	14	53	24	38	620
7:15 AM	15	212	81	31	129	2	8	33	14	44	34	58	661
7:30 AM	26	214	65	31	143	2	2	40	17	35	36	45	656
7:45 AM	6	178	38	33	105	3	9	48	20	38	26	41	545
8:00 AM	5	140	21	10	100	1	3	11	9	30	20	29	379
8:15 AM	1	147	17	10	101	4	4	6	6	31	20	24	371
8:30 AM	5	116	14	16	98	2	6	5	5	29	18	21	335
8:45 AM	4	87	11	18	96	1	3	8	9	26	12	10	285
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	75	1308	315	178	899	19	41	181	94	286	190	266	3852
APPROACH %'s :	4.42%	77.03%	18.55%	16.24%	82.03%	1.73%	12.97%	57.28%	29.75%	38.54%	25.61%	35.85%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	60	818	252	124	504	11	25	151	65	170	120	182	2482
PEAK HR FACTOR :		0.917			0.908			0.782			0.868		0.939

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-003 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

PM

NS/EW Streets:	Perris Blvd			Perris Blvd			Krameria Ave			Krameria Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	0	1	0	1	1	1	
4:00 PM	5	164	30	26	159	3	3	25	9	23	14	20	481
4:15 PM	5	191	32	30	163	4	2	18	11	40	11	20	527
4:30 PM	10	273	57	30	244	6	7	28	12	57	16	29	769
4:45 PM	3	179	39	26	193	1	4	23	17	31	14	20	550
5:00 PM	5	175	26	28	173	3	4	40	14	34	13	18	533
5:15 PM	8	153	38	39	190	6	6	34	16	44	8	26	568
5:30 PM	8	230	40	36	228	3	7	49	15	23	14	27	680
5:45 PM	7	168	29	34	206	1	8	32	18	30	11	20	564
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	51	1533	291	249	1556	27	41	249	112	282	101	180	4672
APPROACH %'s :	2.72%	81.76%	15.52%	13.59%	84.93%	1.47%	10.20%	61.94%	27.86%	50.09%	17.94%	31.97%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	26	780	160	123	800	16	21	125	59	166	51	93	2420
PEAK HR FACTOR :		0.710			0.838			0.884			0.760		0.787

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-004 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

AM

NS/EW Streets:	Lasselle St			Lasselle St			Krameria Ave			Krameria Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	2	2	0	1	2	0	
7:00 AM	55	167	23	14	159	56	78	24	70	12	28	12	698
7:15 AM	62	177	21	23	160	44	111	36	89	25	25	17	790
7:30 AM	43	198	35	26	129	18	51	53	48	16	29	26	672
7:45 AM	34	159	53	52	106	13	54	55	36	25	35	17	639
8:00 AM	16	196	40	26	102	13	41	28	32	62	50	37	643
8:15 AM	29	150	11	5	90	22	22	8	27	14	20	24	422
8:30 AM	27	113	10	11	94	14	27	9	22	5	8	11	351
8:45 AM	21	120	6	10	78	4	24	1	15	4	5	4	292
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	287	1280	199	167	918	184	408	214	339	163	200	148	4507
APPROACH %'s :	16.25%	72.48%	11.27%	13.16%	72.34%	14.50%	42.46%	22.27%	35.28%	31.90%	39.14%	28.96%	

PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	194	701	132	115	554	131	294	168	243	78	117	72	2799
PEAK HR FACTOR :		0.930			0.873			0.747			0.867		0.886

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-004 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

PM

NS/EW Streets:	Lasselle St			Lasselle St			Krameria Ave			Krameria Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	2	2	0	1	2	0	
4:00 PM	24	160	11	22	161	8	22	7	40	21	15	8	499
4:15 PM	15	166	6	17	210	16	22	8	27	21	10	11	529
4:30 PM	20	125	4	19	216	18	26	11	24	17	18	16	514
4:45 PM	20	153	14	22	227	12	28	14	23	13	22	10	558
5:00 PM	20	139	6	19	237	20	27	9	33	24	14	15	563
5:15 PM	18	154	9	19	279	21	17	16	38	23	13	17	624
5:30 PM	9	129	15	22	245	12	43	20	35	15	9	8	562
5:45 PM	11	197	25	34	241	14	46	20	37	8	6	7	646
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	137	1223	90	174	1816	121	231	105	257	142	107	92	4495
APPROACH %'s :	9.45%	84.34%	6.21%	8.24%	86.03%	5.73%	38.95%	17.71%	43.34%	41.64%	31.38%	26.98%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	58	619	55	94	1002	67	133	65	143	70	42	47	2395
PEAK HR FACTOR :		0.785			0.911			0.828			0.750		0.927

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-007 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

AM

NS/EW Streets:	Lake Perris Dr			Lake Perris Dr			Ramona Expy			Ramona Expy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0.5	0.5	1	1	2	0	1	2	1	
7:00 AM	0	0	0	2	0	11	8	200	0	0	358	10	589
7:15 AM	0	0	0	4	0	3	9	215	0	0	294	4	529
7:30 AM	0	0	0	1	0	3	4	115	0	0	265	7	395
7:45 AM	0	0	0	2	0	2	9	117	0	0	222	2	354
8:00 AM	0	0	0	0	0	1	4	114	0	0	181	1	301
8:15 AM	0	0	0	1	0	5	8	105	0	0	152	1	272
8:30 AM	0	0	0	2	0	6	12	94	0	0	161	4	279
8:45 AM	0	0	0	1	0	2	6	66	0	0	156	2	233
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	13	0	33	60	1026	0	0	1789	31	2952
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	28.26%	0.00%	71.74%	5.52%	94.48%	0.00%	0.00%	98.30%	1.70%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	9	0	19	30	647	0	0	1139	23	1867
PEAK HR FACTOR :		0.000			0.538			0.756			0.789		0.792

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6069-007 **Day:** Thursday

City: Moreno Valley **Date:** 5/7/2015

PM

NS/EW Streets:	Lake Perris Dr			Lake Perris Dr			Ramona Expy			Ramona Expy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0.5	0.5	1	1	2	0	1	2	1	
4:00 PM	0	0	0	2	0	10	9	234	0	0	179	0	434
4:15 PM	0	0	0	3	0	14	3	265	0	0	185	0	470
4:30 PM	0	0	0	6	0	22	2	286	0	0	158	1	475
4:45 PM	0	0	0	9	0	24	3	281	0	0	159	1	477
5:00 PM	0	0	0	2	0	4	7	260	0	0	136	0	409
5:15 PM	0	0	0	2	0	7	4	253	0	0	168	2	436
5:30 PM	0	0	0	2	0	3	2	283	0	0	191	1	482
5:45 PM	0	0	0	2	0	5	1	261	0	0	163	1	433
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	28	0	89	31	2123	0	0	1339	6	3616
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	23.93%	0.00%	76.07%	1.44%	98.56%	0.00%	0.00%	99.55%	0.45%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	20	0	70	17	1066	0	0	681	2	1856
PEAK HR FACTOR :		0.000			0.682			0.940			0.923		0.973

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6158-001 **Day:** Monday

City: Perris **Date:** 9/21/2015

AM

NS/EW Streets:	Perris Blvd			Perris Blvd			Rider St			Rider St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	1	
7:00 AM	4	201	10	18	89	3	4	4	2	20	16	92	463
7:15 AM	1	194	16	11	89	11	1	9	2	33	23	82	472
7:30 AM	3	186	18	16	107	6	4	7	4	46	35	96	528
7:45 AM	5	147	17	8	129	5	4	11	9	42	33	78	488
8:00 AM	2	143	20	18	119	8	5	3	3	34	13	50	418
8:15 AM	0	105	14	14	72	4	6	3	1	35	23	43	320
8:30 AM	3	116	20	12	89	6	9	8	3	16	15	29	326
8:45 AM	4	96	11	15	117	5	1	7	2	28	8	36	330
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	22	1188	126	112	811	48	34	52	26	254	166	506	3345
APPROACH %'s :	1.65%	88.92%	9.43%	11.53%	83.52%	4.94%	30.36%	46.43%	23.21%	27.43%	17.93%	54.64%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	13	728	61	53	414	25	13	31	17	141	107	348	1951
PEAK HR FACTOR :		0.933			0.866			0.635			0.842		0.924

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6158-001 **Day:** Monday

City: Perris **Date:** 9/21/2015

PM

NS/EW Streets:	Perris Blvd			Perris Blvd			Rider St			Rider St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	1	
4:00 PM	2	152	38	29	188	0	5	9	10	26	6	30	495
4:15 PM	1	150	45	33	205	7	6	16	7	37	5	30	542
4:30 PM	4	178	45	37	237	6	5	16	12	26	8	38	612
4:45 PM	3	144	34	42	259	4	7	19	14	34	13	23	596
5:00 PM	2	158	33	38	233	1	8	23	10	35	7	25	573
5:15 PM	4	135	36	31	228	7	8	24	11	28	6	41	559
5:30 PM	0	155	39	41	223	4	9	24	5	37	7	56	600
5:45 PM	2	156	46	36	239	1	1	15	15	34	6	41	592
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	18	1228	316	287	1812	30	49	146	84	257	58	284	4569
APPROACH %'s :	1.15%	78.62%	20.23%	13.48%	85.11%	1.41%	17.56%	52.33%	30.11%	42.90%	9.68%	47.41%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	13	615	148	148	957	18	28	82	47	123	34	127	2340
PEAK HR FACTOR :		0.855			0.920			0.913			0.947		0.956

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6158-002 **Day:** Monday

City: Perris **Date:** 9/21/2015

AM

NS/EW Streets:	Evans Rd			Evans Rd			Rider St			Rider St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	28	66	4	38	64	89	51	64	3	0	95	21	523
7:15 AM	32	57	6	60	61	63	48	67	7	2	117	34	554
7:30 AM	33	62	6	38	57	86	42	76	6	5	141	41	593
7:45 AM	20	42	1	28	32	67	42	46	6	4	141	53	482
8:00 AM	13	40	1	10	37	63	42	37	4	2	72	23	344
8:15 AM	11	29	1	6	28	53	21	22	5	2	43	12	233
8:30 AM	6	39	0	3	25	33	32	31	5	2	34	10	220
8:45 AM	10	34	0	10	24	24	28	22	4	0	42	11	209
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	153	369	19	193	328	478	306	365	40	17	685	205	3158
APPROACH %'s :	28.28%	68.21%	3.51%	19.32%	32.83%	47.85%	43.04%	51.34%	5.63%	1.87%	75.52%	22.60%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	113	227	17	164	214	305	183	253	22	11	494	149	2152
PEAK HR FACTOR :		0.884			0.894			0.923			0.826		0.907

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6158-002

Day: Monday

City: Perris

Date: 9/21/2015

PM

NS/EW Streets:	Evans Rd			Evans Rd			Rider St			Rider St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	9	39	1	19	60	61	45	51	8	0	35	13	341
4:15 PM	6	35	2	13	50	49	53	53	22	0	49	10	342
4:30 PM	10	40	3	12	71	36	53	62	14	3	39	12	355
4:45 PM	5	35	1	18	77	46	41	53	15	0	45	11	347
5:00 PM	6	37	2	17	54	37	48	62	20	1	37	9	330
5:15 PM	6	49	3	21	61	33	52	68	13	2	42	11	361
5:30 PM	16	55	2	25	51	28	59	59	11	4	70	14	394
5:45 PM	7	56	1	22	76	50	67	68	16	3	50	17	433
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	65	346	15	147	500	340	418	476	119	13	367	97	2903
APPROACH %'s :	15.26%	81.22%	3.52%	14.89%	50.66%	34.45%	41.26%	46.99%	11.75%	2.73%	76.94%	20.34%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	35	197	8	85	242	148	226	257	60	10	199	51	1518
PEAK HR FACTOR :		0.822			0.802			0.899			0.739		0.876

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6158-003 **Day:** Monday

City: Perris **Date:** 9/21/2015

AM

NS/EW Streets:	Ramona Expy			Ramona Expy			Rider St			Rider St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	0	1	2	1	0.5	0.5	1	0	1	0	
7:00 AM	28	192	0	1	101	50	61	0	28	0	0	0	461
7:15 AM	33	189	0	0	91	58	46	0	49	0	0	0	466
7:30 AM	36	176	0	0	114	54	39	0	36	0	0	0	455
7:45 AM	42	164	0	2	86	21	32	0	24	0	0	0	371
8:00 AM	22	121	0	0	86	10	28	0	24	0	0	0	291
8:15 AM	17	121	0	0	87	12	14	0	16	0	0	0	267
8:30 AM	12	118	0	0	77	3	11	0	21	0	0	0	242
8:45 AM	14	119	0	0	64	4	9	0	15	0	0	0	225
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	204	1200	0	3	706	212	240	0	213	0	0	0	2778
APPROACH %'s :	14.53%	85.47%	0.00%	0.33%	76.66%	23.02%	52.98%	0.00%	47.02%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	139	721	0	3	392	183	178	0	137	0	0	0	1753
PEAK HR FACTOR :		0.968			0.860			0.829			0.000		0.940

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6158-003 **Day:** Monday

City: Perris **Date:** 9/21/2015

PM

NS/EW Streets:	Ramona Expy			Ramona Expy			Rider St			Rider St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	0	1	2	1	0.5	0.5	1	0	1	0	
4:00 PM	18	96	0	1	180	13	16	0	22	0	0	0	346
4:15 PM	20	122	0	0	137	25	12	0	26	0	0	0	342
4:30 PM	19	130	0	0	199	16	8	0	28	0	0	0	400
4:45 PM	16	102	0	1	192	21	16	0	28	0	0	0	376
5:00 PM	21	109	0	0	156	17	13	0	19	0	0	0	335
5:15 PM	27	129	0	0	159	28	10	0	33	0	0	0	386
5:30 PM	34	142	0	0	147	20	16	0	22	0	0	0	381
5:45 PM	25	120	0	0	144	28	5	0	23	0	0	0	345
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	180	950	0	2	1314	168	96	0	201	0	0	0	2911
APPROACH %'s :	15.93%	84.07%	0.00%	0.13%	88.54%	11.32%	32.32%	0.00%	67.68%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	83	470	0	1	706	82	47	0	108	0	0	0	1497
PEAK HR FACTOR :		0.886			0.917			0.881			0.000		0.936

CONTROL : Signalized

APPENDIX A2
Existing Roadway Segment Traffic Count Data

Prepared by National Data & Surveying Services

CLASSIFICATION

Perris Blvd N/O Ramona Expressway

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_001n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	57	6	0	0	0	0	4	0	0	0	0	0	67
01:00	0	45	6	0	0	0	1	3	1	0	0	0	0	56
02:00	0	46	5	0	4	0	0	3	1	0	0	0	0	59
03:00	0	112	20	0	4	0	0	4	0	0	0	0	0	140
04:00	1	561	76	2	19	1	0	9	0	0	0	0	0	669
05:00	0	530	82	0	21	2	0	10	0	0	0	0	0	645
06:00	1	644	80	0	28	6	0	15	0	0	0	0	0	774
07:00	1	1269	183	3	47	3	0	21	1	0	2	0	0	1530
08:00	2	599	90	3	30	0	0	16	0	0	0	0	0	740
09:00	2	429	71	2	25	0	0	25	0	0	1	0	0	555
10:00	1	393	63	1	32	1	0	20	1	0	0	0	0	512
11:00	1	400	66	2	24	2	0	19	0	0	0	0	0	514
12:00 PM	1	448	79	5	28	2	0	15	0	0	1	0	0	579
13:00	1	727	102	5	28	5	0	23	0	0	0	0	0	891
14:00	2	653	81	3	42	2	0	21	0	0	2	0	0	806
15:00	2	674	94	2	33	3	0	12	1	0	1	0	0	822
16:00	2	660	89	2	26	1	0	12	1	0	0	0	0	793
17:00	1	662	101	0	20	1	0	13	0	0	1	0	0	799
18:00	0	509	57	3	18	0	0	15	0	0	0	0	0	602
19:00	1	343	44	1	14	1	0	14	2	0	0	0	0	420
20:00	0	289	39	0	6	0	0	13	0	0	0	0	0	347
21:00	1	193	24	0	6	0	1	9	1	0	0	0	0	235
22:00	0	321	39	0	6	0	0	7	1	0	0	0	0	374
23:00	0	129	20	0	7	1	0	2	0	1	0	0	0	160
Totals	20	10693	1517	34	468	31	2	305	10	1	8			13089
% of Totals	0%	82%	12%	0%	4%	0%	0%	2%	0%	0%	0%			100%

AM Volumes	9	5085	748	13	234	15	1	149	4	0	3	0	0	6261
% AM	0%	39%	6%	0%	2%	0%	0%	1%	0%		0%			48%
AM Peak Hour	08:00	07:00	07:00	07:00	07:00	06:00	01:00	09:00	01:00		07:00			07:00
Volume	2	1269	183	3	47	6	1	25	1		2			1530
PM Volumes	11	5608	769	21	234	16	1	156	6	1	5	0	0	6828
% PM	0%	43%	6%	0%	2%	0%	0%	1%	0%	0%	0%			52%
PM Peak Hour	14:00	13:00	13:00	12:00	14:00	13:00	21:00	13:00	19:00	23:00	14:00			13:00
Volume	2	727	102	5	42	5	1	23	2	1	2			891

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	2270	⟷	17%	1470	⟷	11%	1592	⟷	12%	7757	⟷	59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Perris Blvd N/O Ramona Expressway

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_001s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	96	11	0	4	0	0	3	0	0	0	0	0	**114**
01:00	0	91	3	0	1	0	0	6	0	0	0	0	0	**101**
02:00	0	86	4	0	1	0	0	7	0	0	0	0	0	**98**
03:00	0	217	18	0	1	0	0	7	0	0	1	0	0	**244**
04:00	0	435	46	0	8	1	0	10	1	1	0	0	0	**502**
05:00	1	452	53	1	13	2	0	13	1	0	0	0	0	**536**
06:00	1	386	47	2	11	3	1	16	2	0	0	0	0	**469**
07:00	1	491	85	1	13	3	0	23	3	0	0	0	0	**620**
08:00	2	417	64	3	27	4	0	16	2	0	0	0	0	**535**
09:00	1	360	69	3	21	1	1	13	2	0	0	0	0	**471**
10:00	1	394	87	3	25	1	0	15	2	0	1	0	0	**529**
11:00	2	431	89	3	30	1	0	16	2	0	0	0	0	**574**
12:00 PM	0	508	74	3	18	0	1	17	1	0	0	0	0	**622**
13:00	4	803	122	3	33	1	1	27	3	3	0	0	0	**1000**
14:00	3	802	129	2	31	3	0	30	3	1	0	0	0	**1004**
15:00	2	752	104	1	49	0	1	13	1	0	2	0	0	**925**
16:00	4	873	130	2	38	1	1	15	2	0	0	0	0	**1066**
17:00	2	925	131	2	34	3	0	16	2	1	0	0	0	**1116**
18:00	2	781	114	2	24	2	0	12	3	0	0	0	0	**940**
19:00	0	466	61	2	16	2	2	12	2	0	0	0	0	**563**
20:00	0	340	33	2	8	0	0	9	0	0	0	0	0	**392**
21:00	0	233	23	0	6	0	0	9	0	0	2	0	0	**273**
22:00	0	435	38	0	8	0	0	7	0	0	0	0	0	**488**
23:00	0	198	20	0	1	0	0	6	0	0	0	0	0	**225**
Totals	**26**	**10972**	**1555**	**35**	**421**	**28**	**8**	**318**	**32**	**6**	**6**			**13407**
% of Totals	0%	82%	12%	0%	3%	0%	0%	2%	0%	0%	0%			100%

AM Volumes	9	3856	576	16	155	16	2	145	15	1	2	0	0	4793
% AM	0%	29%	4%	0%	1%	0%	0%	1%	0%	0%	0%			36%
AM Peak Hour	08:00	07:00	11:00	08:00	11:00	08:00	06:00	07:00	07:00	04:00	03:00			07:00
Volume	2	491	89	3	30	4	1	23	3	1	1			620
PM Volumes	17	7116	979	19	266	12	6	173	17	5	4	0	0	8614
% PM	0%	53%	7%	0%	2%	0%	0%	1%	0%	0%	0%			64%
PM Peak Hour	13:00	17:00	17:00	12:00	15:00	14:00	19:00	14:00	13:00	13:00	15:00			17:00
Volume	4	925	131	3	49	3	2	30	3	3	2			1116

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	1155	↔	9%	1622	↔	12%	2182	↔	16%	8448	↔	63%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Perris Blvd N/O Ramona Expressway

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	153	17	0	4	0	0	7	0	0	0	0	0	181
01:00	0	136	9	0	1	0	1	9	1	0	0	0	0	157
02:00	0	132	9	0	5	0	0	10	1	0	0	0	0	157
03:00	0	329	38	0	5	0	0	11	0	0	1	0	0	384
04:00	1	996	122	2	27	2	0	19	1	1	0	0	0	1171
05:00	1	982	135	1	34	4	0	23	1	0	0	0	0	1181
06:00	2	1030	127	2	39	9	1	31	2	0	0	0	0	1243
07:00	2	1760	268	4	60	6	0	44	4	0	2	0	0	2150
08:00	4	1016	154	6	57	4	0	32	2	0	0	0	0	1275
09:00	3	789	140	5	46	1	1	38	2	0	1	0	0	1026
10:00	2	787	150	4	57	2	0	35	3	0	1	0	0	1041
11:00	3	831	155	5	54	3	0	35	2	0	0	0	0	1088
12:00 PM	1	956	153	8	46	2	1	32	1	0	1	0	0	1201
13:00	5	1530	224	8	61	6	1	50	3	3	0	0	0	1891
14:00	5	1455	210	5	73	5	0	51	3	1	2	0	0	1810
15:00	4	1426	198	3	82	3	1	25	2	0	3	0	0	1747
16:00	6	1533	219	4	64	2	1	27	3	0	0	0	0	1859
17:00	3	1587	232	2	54	4	0	29	2	1	1	0	0	1915
18:00	2	1290	171	5	42	2	0	27	3	0	0	0	0	1542
19:00	1	809	105	3	30	3	2	26	4	0	0	0	0	983
20:00	0	629	72	2	14	0	0	22	0	0	0	0	0	739
21:00	1	426	47	0	12	0	1	18	1	0	2	0	0	508
22:00	0	756	77	0	14	0	0	14	1	0	0	0	0	862
23:00	0	327	40	0	8	1	0	8	0	1	0	0	0	385
Totals	46	21665	3072	69	889	59	10	623	42	7	14			26496
% of Totals	0%	82%	12%	0%	3%	0%	0%	2%	0%	0%	0%			100%

AM Volumes	18	8941	1324	29	389	31	3	294	19	1	5	0	0	11054
% AM	0%	34%	5%	0%	1%	0%	0%	1%	0%	0%	0%			42%
AM Peak Hour	08:00	07:00	07:00	08:00	07:00	06:00	01:00	07:00	07:00	04:00	07:00			07:00
Volume	4	1760	268	6	60	9	1	44	4	1	2			2150
PM Volumes	28	12724	1748	40	500	28	7	329	23	6	9	0	0	15442
% PM	0%	48%	7%	0%	2%	0%	0%	1%	0%	0%	0%			58%
PM Peak Hour	16:00	17:00	17:00	12:00	15:00	13:00	19:00	14:00	19:00	13:00	15:00			17:00
Volume	6	1587	232	8	82	6	2	51	4	3	3			1915

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	3425	↔	13%	3092	↔	12%	3774	↔	14%	16205	↔	61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
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5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	13,089	13,407	0	0	26,

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOT
00:00	18		38		0	0	56		12:00	137		136		0	0	273
00:15	12		27		0	0	39		12:15	161		130		0	0	291
00:30	23		30		0	0	53		12:30	142		189		0	0	331
00:45	14	67	19	114	0	0	33	181	12:45	139	579	167	622	0	0	306
01:00	19		18		0	0	37		13:00	156		203		0	0	359
01:15	21		20		0	0	41		13:15	193		190		0	0	383
01:30	7		23		0	0	30		13:30	315		321		0	0	636
01:45	9	56	40	101	0	0	49	157	13:45	227	891	286	1000	0	0	513
02:00	13		20		0	0	33		14:00	180		244		0	0	424
02:15	12		24		0	0	36		14:15	201		216		0	0	417
02:30	13		25		0	0	38		14:30	198		258		0	0	456
02:45	21	59	29	98	0	0	50	157	14:45	227	806	286	1004	0	0	513
03:00	13		15		0	0	28		15:00	207		209		0	0	416
03:15	32		41		0	0	73		15:15	221		242		0	0	463
03:30	28		84		0	0	112		15:30	201		224		0	0	425
03:45	67	140	104	244	0	0	171	384	15:45	193	822	250	925	0	0	443
04:00	85		50		0	0	135		16:00	171		250		0	0	421
04:15	154		93		0	0	247		16:15	204		209		0	0	413
04:30	248		159		0	0	407		16:30	238		329		0	0	567
04:45	182	669	200	502	0	0	382	1171	16:45	180	793	278	1066	0	0	458
05:00	97		100		0	0	197		17:00	166		282		0	0	448
05:15	123		124		0	0	247		17:15	209		254		0	0	463
05:30	222		159		0	0	381		17:30	227		285		0	0	512
05:45	203	645	153	536	0	0	356	1181	17:45	197	799	295	1116	0	0	492
06:00	112		125		0	0	237		18:00	174		263		0	0	437
06:15	119		108		0	0	227		18:15	174		279		0	0	453
06:30	254		106		0	0	360		18:30	127		188		0	0	315
06:45	289	774	130	469	0	0	419	1243	18:45	127	602	210	940	0	0	337
07:00	363		138		0	0	501		19:00	134		145		0	0	279
07:15	415		142		0	0	557		19:15	98		150		0	0	248
07:30	405		172		0	0	577		19:30	104		138		0	0	242
07:45	347	1530	168	620	0	0	515	2150	19:45	84	420	130	563	0	0	214
08:00	238		150		0	0	388		20:00	111		99		0	0	210
08:15	210		143		0	0	353		20:15	97		105		0	0	202
08:30	169		107		0	0	276		20:30	90		104		0	0	194
08:45	123	740	135	535	0	0	258	1275	20:45	49	347	84	392	0	0	133
09:00	134		101		0	0	235		21:00	50		57		0	0	107
09:15	137		114		0	0	251		21:15	56		62		0	0	118
09:30	133		131		0	0	264		21:30	61		79		0	0	140
09:45	151	555	125	471	0	0	276	1026	21:45	68	235	75	273	0	0	143
10:00	104		138		0	0	242		22:00	53		68		0	0	121
10:15	134		142		0	0	276		22:15	81		56		0	0	137
10:30	118		130		0	0	248		22:30	144		174		0	0	318
10:45	156	512	119	529	0	0	275	1041	22:45	96	374	190	488	0	0	286
11:00	117		125		0	0	242		23:00	53		68		0	0	121
11:15	131		151		0	0	282		23:15	39		53		0	0	92
11:30	139		144		0	0	283		23:30	38		70		0	0	108
11:45	127	514	154	574	0	0	281	1088	23:45	30	160	34	225	0	0	64
TOTALS		6261		4793				11054	TOTALS		6828		8614			
SPLIT %		56.6%		43.4%				41.7%	SPLIT %		44.2%		55.8%			

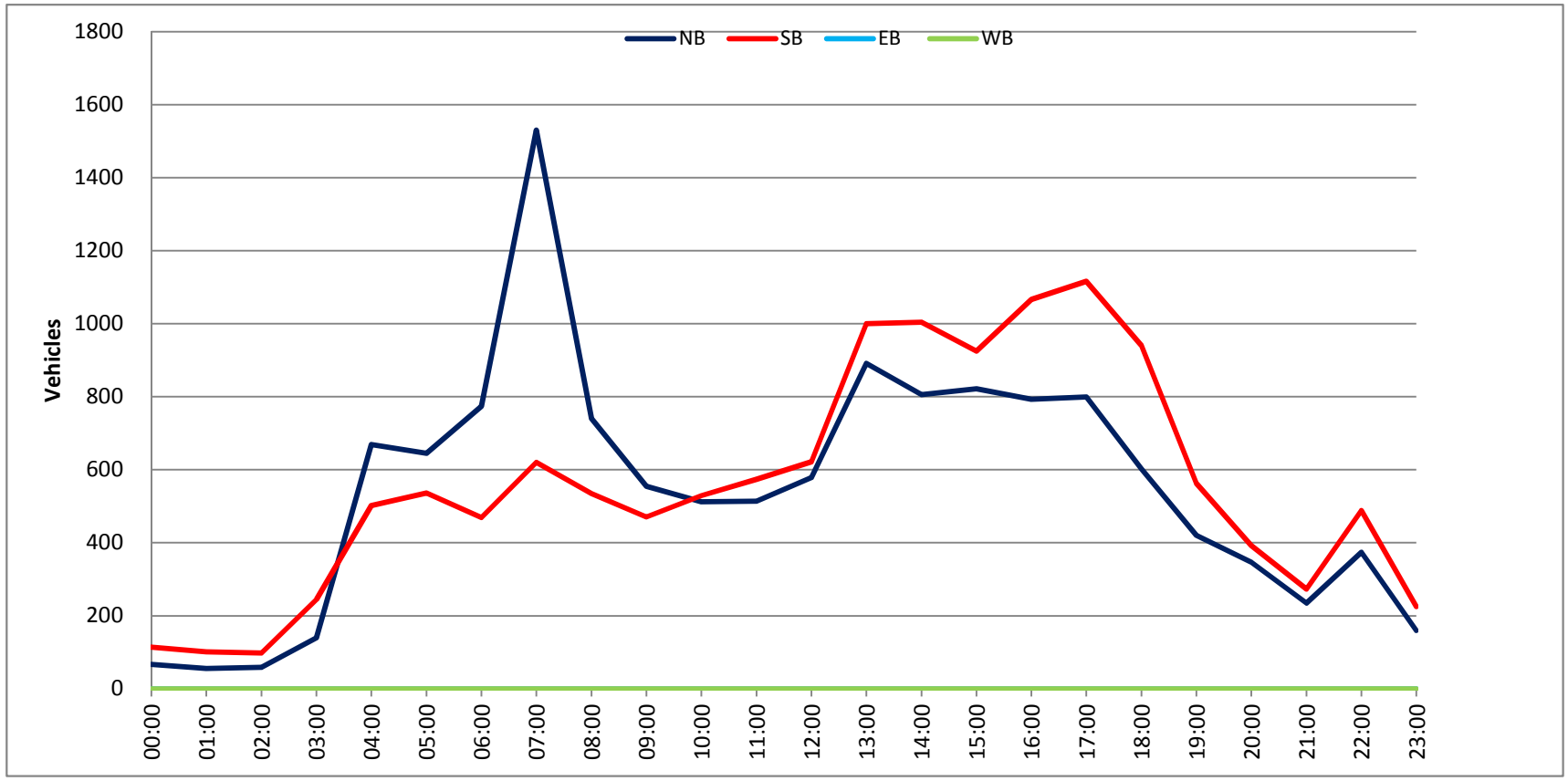
DAILY TOTALS	NB	SB	EB	WB	To
	13,089	13,407	0	0	26,

AM Peak Hour	07:00	07:30			07:00	PM Peak Hour	13:30	16:30		
AM Pk Volume	1530	633			2150	PM Pk Volume	923	1143		
Pk Hr Factor	0.922	0.920			0.932	Pk Hr Factor	0.888	0.946		
7 - 9 Volume	2270	1155	0	0	3425	4 - 6 Volume	1592	2182	0	0
7 - 9 Peak Hour	07:00	07:30			07:00	4 - 6 Peak Hour	17:00	16:30		
7 - 9 Pk Volume	1530	633	0	0	2150	4 - 6 Pk Volume	799	1143	0	0
Pk Hr Factor	0.922	0.920	0.000	0.000	0.932	Pk Hr Factor	0.880	0.869	0.000	0.000

Prepared by NDS/ATD

Project #: CA16_6002_001 **City:** Perris

Location: Perris Blvd N/O Ramona Expressway **Date:** 1/12/2016



Prepared by National Data & Surveying Services

CLASSIFICATION

Evans Rd N/O Ramona Expressway

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_002n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	66	4	0	1	0	0	0	0	0	0	0	0	71
01:00	0	26	4	0	0	0	0	0	0	0	0	0	0	30
02:00	0	15	4	0	0	0	0	0	0	0	0	0	0	19
03:00	0	39	6	0	1	0	0	0	0	0	0	0	0	46
04:00	0	108	24	0	4	0	0	1	0	0	0	0	0	137
05:00	0	152	38	2	9	0	0	1	0	0	0	0	0	202
06:00	0	707	93	1	20	2	0	13	0	0	1	0	0	837
07:00	4	910	119	3	27	2	3	13	0	0	1	0	0	1082
08:00	0	471	46	4	24	0	0	3	0	0	1	0	0	549
09:00	2	376	48	2	16	1	0	5	0	0	0	0	0	450
10:00	0	319	37	0	15	0	0	2	0	1	1	0	0	375
11:00	2	347	41	0	8	0	0	5	0	0	0	0	0	403
12:00 PM	0	338	57	1	7	0	0	3	0	0	2	0	0	408
13:00	1	402	63	3	14	2	0	3	0	0	0	0	0	488
14:00	1	789	85	3	30	2	0	15	0	0	0	0	0	925
15:00	0	710	94	0	16	1	0	5	0	0	0	0	0	826
16:00	1	632	88	3	20	1	0	7	0	0	2	0	0	754
17:00	0	619	92	1	17	1	0	7	0	0	2	0	0	739
18:00	0	546	58	1	14	2	0	5	0	0	0	0	0	626
19:00	0	398	46	4	11	1	0	1	0	0	1	0	0	462
20:00	0	327	28	0	9	0	0	2	0	0	0	0	0	366
21:00	1	250	29	0	7	0	0	1	0	0	0	0	0	288
22:00	0	169	18	0	2	0	0	0	0	0	0	0	0	189
23:00	0	119	9	0	1	0	0	0	0	0	0	0	0	129
Totals	12	8835	1131	28	273	15	3	92		1	11			10401
% of Totals	0%	85%	11%	0%	3%	0%	0%	1%		0%	0%			100%

AM Volumes	8	3536	464	12	125	5	3	43	0	1	4	0	0	4201
% AM	0%	34%	4%	0%	1%	0%	0%	0%		0%	0%			40%
AM Peak Hour	07:00	07:00	07:00	08:00	07:00	06:00	07:00	06:00		10:00	06:00			07:00
Volume	4	910	119	4	27	2	3	13		1	1			1082
PM Volumes	4	5299	667	16	148	10	0	49	0	0	7	0	0	6200
% PM	0%	51%	6%	0%	1%	0%		0%			0%			60%
PM Peak Hour	13:00	14:00	15:00	19:00	14:00	13:00		14:00			12:00			14:00
Volume	1	789	94	4	30	2		15			2			925

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	1631	↔	16%	896	↔	9%	1493	↔	14%	6381	↔	61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Evans Rd N/O Ramona Expressway

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_002s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	62	5	0	0	0	0	0	0	0	0	0	0	67
01:00	0	36	3	0	0	0	0	0	0	0	0	0	0	39
02:00	0	30	4	0	0	0	0	0	0	0	0	0	0	34
03:00	0	84	9	0	3	0	0	0	0	0	0	0	0	96
04:00	0	191	32	0	4	0	0	1	0	0	1	0	0	229
05:00	0	235	43	1	22	0	0	0	0	0	0	0	0	301
06:00	0	565	77	1	10	1	0	5	0	0	0	0	0	659
07:00	2	995	120	4	24	3	0	10	1	0	2	0	0	1161
08:00	1	373	45	2	17	2	0	2	0	0	0	0	0	442
09:00	1	278	43	4	8	1	0	4	0	0	0	0	0	339
10:00	0	248	33	1	8	0	0	0	0	0	0	0	0	290
11:00	1	371	45	2	17	0	0	3	0	0	0	0	0	439
12:00 PM	0	377	53	0	14	0	0	3	0	0	0	0	0	447
13:00	0	503	60	2	10	1	0	5	0	0	0	0	0	581
14:00	1	636	64	4	23	1	0	5	0	0	0	0	0	734
15:00	3	976	118	3	29	1	2	7	2	1	2	0	0	1144
16:00	0	729	94	5	14	0	0	6	0	0	0	0	0	848
17:00	1	754	87	0	21	2	0	8	0	0	0	0	0	873
18:00	0	664	61	0	22	1	0	6	0	0	0	0	0	754
19:00	0	520	55	3	7	0	0	3	0	0	0	0	0	588
20:00	0	376	31	0	5	1	0	2	0	0	0	0	0	415
21:00	0	281	28	0	5	0	0	1	0	0	0	0	0	315
22:00	0	191	24	0	1	0	0	1	0	0	0	0	0	217
23:00	0	111	7	0	2	0	0	0	0	0	0	0	0	120
Totals	10	9586	1141	32	266	14	2	72	3	1	5			11132
% of Totals	0%	86%	10%	0%	2%	0%	0%	1%	0%	0%	0%			100%

AM Volumes	5	3468	459	15	113	7	0	25	1	0	3	0	0	4096
% AM	0%	31%	4%	0%	1%	0%		0%	0%		0%			37%
AM Peak Hour	07:00	07:00	07:00	07:00	07:00	07:00		07:00	07:00		07:00			07:00
Volume	2	995	120	4	24	3		10	1		2			1161
PM Volumes	5	6118	682	17	153	7	2	47	2	1	2	0	0	7036
% PM	0%	55%	6%	0%	1%	0%	0%	0%	0%	0%	0%			63%
PM Peak Hour	15:00	15:00	15:00	16:00	15:00	17:00	15:00	17:00	15:00	15:00	15:00			15:00
Volume	3	976	118	5	29	2	2	8	2	1	2			1144

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	1603	↔	14%	1028	↔	9%	1721	↔	15%	6780	↔	61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Evans Rd N/O Ramona Expressway

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	128	9	0	1	0	0	0	0	0	0	0	0	138
01:00	0	62	7	0	0	0	0	0	0	0	0	0	0	69
02:00	0	45	8	0	0	0	0	0	0	0	0	0	0	53
03:00	0	123	15	0	4	0	0	0	0	0	0	0	0	142
04:00	0	299	56	0	8	0	0	2	0	0	1	0	0	366
05:00	0	387	81	3	31	0	0	1	0	0	0	0	0	503
06:00	0	1272	170	2	30	3	0	18	0	0	1	0	0	1496
07:00	6	1905	239	7	51	5	3	23	1	0	3	0	0	2243
08:00	1	844	91	6	41	2	0	5	0	0	1	0	0	991
09:00	3	654	91	6	24	2	0	9	0	0	0	0	0	789
10:00	0	567	70	1	23	0	0	2	0	1	1	0	0	665
11:00	3	718	86	2	25	0	0	8	0	0	0	0	0	842
12:00 PM	0	715	110	1	21	0	0	6	0	0	2	0	0	855
13:00	1	905	123	5	24	3	0	8	0	0	0	0	0	1069
14:00	2	1425	149	7	53	3	0	20	0	0	0	0	0	1659
15:00	3	1686	212	3	45	2	2	12	2	1	2	0	0	1970
16:00	1	1361	182	8	34	1	0	13	0	0	2	0	0	1602
17:00	1	1373	179	1	38	3	0	15	0	0	2	0	0	1612
18:00	0	1210	119	1	36	3	0	11	0	0	0	0	0	1380
19:00	0	918	101	7	18	1	0	4	0	0	1	0	0	1050
20:00	0	703	59	0	14	1	0	4	0	0	0	0	0	781
21:00	1	531	57	0	12	0	0	2	0	0	0	0	0	603
22:00	0	360	42	0	3	0	0	1	0	0	0	0	0	406
23:00	0	230	16	0	3	0	0	0	0	0	0	0	0	249
Totals	22	18421	2272	60	539	29	5	164	3	2	16			21533
% of Totals	0%	86%	11%	0%	3%	0%	0%	1%	0%	0%	0%			100%

AM Volumes	13	7004	923	27	238	12	3	68	1	1	7	0	0	8297
% AM	0%	33%	4%	0%	1%	0%	0%	0%	0%	0%	0%			39%
AM Peak Hour	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	10:00	07:00			07:00
Volume	6	1905	239	7	51	5	3	23	1	1	3			2243
PM Volumes	9	11417	1349	33	301	17	2	96	2	1	9	0	0	13236
% PM	0%	53%	6%	0%	1%	0%	0%	0%	0%	0%	0%			61%
PM Peak Hour	15:00	15:00	15:00	16:00	14:00	13:00	15:00	14:00	15:00	15:00	12:00			15:00
Volume	3	1686	212	8	53	3	2	20	2	1	2			1970

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	3234	↔	15%	1924	↔	9%	3214	↔	15%	13161	↔	61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	10,401	11,132	0	0	21,

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOT
00:00	21		22		0	0	43		12:00	110		104		0	0	214
00:15	22		15		0	0	37		12:15	79		123		0	0	202
00:30	12		21		0	0	33		12:30	117		123		0	0	240
00:45	16	71	9	67	0	0	25	138	12:45	102	408	97	447	0	0	199
01:00	11		9		0	0	20		13:00	78		140		0	0	218
01:15	13		13		0	0	26		13:15	120		139		0	0	259
01:30	3		8		0	0	11		13:30	139		149		0	0	288
01:45	3	30	9	39	0	0	12	69	13:45	151	488	153	581	0	0	304
02:00	4		5		0	0	9		14:00	168		118		0	0	286
02:15	3		7		0	0	10		14:15	187		134		0	0	321
02:30	3		9		0	0	12		14:30	268		153		0	0	421
02:45	9	19	13	34	0	0	22	53	14:45	302	925	329	734	0	0	631
03:00	9		15		0	0	24		15:00	243		422		0	0	665
03:15	8		23		0	0	31		15:15	205		327		0	0	532
03:30	14		32		0	0	46		15:30	177		229		0	0	406
03:45	15	46	26	96	0	0	41	142	15:45	201	826	166	1144	0	0	367
04:00	21		35		0	0	56		16:00	192		189		0	0	381
04:15	23		45		0	0	68		16:15	158		223		0	0	381
04:30	45		69		0	0	114		16:30	209		243		0	0	452
04:45	48	137	80	229	0	0	128	366	16:45	195	754	193	848	0	0	388
05:00	52		56		0	0	108		17:00	183		243		0	0	426
05:15	40		78		0	0	118		17:15	178		227		0	0	405
05:30	41		91		0	0	132		17:30	184		208		0	0	392
05:45	69	202	76	301	0	0	145	503	17:45	194	739	195	873	0	0	389
06:00	83		76		0	0	159		18:00	179		180		0	0	359
06:15	180		132		0	0	312		18:15	138		192		0	0	330
06:30	239		224		0	0	463		18:30	164		180		0	0	344
06:45	335	837	227	659	0	0	562	1496	18:45	145	626	202	754	0	0	347
07:00	371		308		0	0	679		19:00	142		162		0	0	304
07:15	374		328		0	0	702		19:15	137		142		0	0	279
07:30	164		343		0	0	507		19:30	93		144		0	0	237
07:45	173	1082	182	1161	0	0	355	2243	19:45	90	462	140	588	0	0	230
08:00	162		116		0	0	278		20:00	89		93		0	0	182
08:15	143		116		0	0	259		20:15	104		115		0	0	219
08:30	137		120		0	0	257		20:30	98		102		0	0	200
08:45	107	549	90	442	0	0	197	991	20:45	75	366	105	415	0	0	180
09:00	91		72		0	0	163		21:00	87		78		0	0	165
09:15	97		87		0	0	184		21:15	75		92		0	0	167
09:30	146		80		0	0	226		21:30	67		74		0	0	141
09:45	116	450	100	339	0	0	216	789	21:45	59	288	71	315	0	0	130
10:00	97		75		0	0	172		22:00	46		50		0	0	96
10:15	87		76		0	0	163		22:15	47		59		0	0	106
10:30	88		65		0	0	153		22:30	35		58		0	0	93
10:45	103	375	74	290	0	0	177	665	22:45	61	189	50	217	0	0	111
11:00	103		117		0	0	220		23:00	32		40		0	0	72
11:15	85		101		0	0	186		23:15	36		19		0	0	55
11:30	105		110		0	0	215		23:30	28		32		0	0	60
11:45	110	403	111	439	0	0	221	842	23:45	33	129	29	120	0	0	62
TOTALS		4201		4096				8297	TOTALS		6200		7036			
SPLIT %		50.6%		49.4%				38.5%	SPLIT %		46.8%		53.2%			

DAILY TOTALS	NB	SB	EB	WB	To
	10,401	11,132	0	0	21,

AM Peak Hour	06:30	06:45			06:45	PM Peak Hour	14:30	14:45		
AM Pk Volume	1319	1206			2450	PM Pk Volume	1018	1307		
Pk Hr Factor	0.882	0.879			0.873	Pk Hr Factor	0.850	0.696		
7 - 9 Volume	1631	1603	0	0	3234	4 - 6 Volume	1493	1721	0	0
7 - 9 Peak Hour	07:00	07:00			07:00	4 - 6 Peak Hour	16:30	16:30		
7 - 9 Pk Volume	1082	1161	0	0	2243	4 - 6 Pk Volume	765	906	0	0
Pk Hr Factor	0.723	0.846	0.000	0.000	0.799	Pk Hr Factor	0.915	0.932	0.000	0.000

Prepared by NDS/ATD

Project #: CA16_6002_002 **City:** Perris

Location: Evans Rd N/O Ramona Expressway **Date:** 1/12/2016

Prepared by NDS/ATD

VOLUME

Ramona Expy E/O Perris Blvd

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,213	16,470	32,683

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			58		30		88		12:00			195		160		355	
00:15			57		24		81		12:15			180		201		381	
00:30			52		27		79		12:30			184		223		407	
00:45			37	204	18	99	55	303	12:45			221	780	198	782	419	1562
01:00			39		21		60		13:00			212		221		433	
01:15			40		31		71		13:15			226		244		470	
01:30			14		16		30		13:30			216		255		471	
01:45			33	126	28	96	61	222	13:45			243	897	207	927	450	1824
02:00			24		23		47		14:00			238		208		446	
02:15			29		32		61		14:15			267		208		475	
02:30			32		34		66		14:30			297		212		509	
02:45			40	125	44	133	84	258	14:45			284	1086	264	892	548	1978
03:00			28		66		94		15:00			286		236		522	
03:15			30		97		127		15:15			282		231		513	
03:30			58		129		187		15:30			296		240		536	
03:45			64	180	135	427	199	607	15:45			301	1165	244	951	545	2116
04:00			35		165		200		16:00			300		197		497	
04:15			33		210		243		16:15			302		211		513	
04:30			106		280		386		16:30			341		227		568	
04:45			134	308	258	913	392	1221	16:45			371	1314	252	887	623	2201
05:00			81		229		310		17:00			333		231		564	
05:15			147		255		402		17:15			285		240		525	
05:30			84		317		401		17:30			357		269		626	
05:45			100	412	292	1093	392	1505	17:45			320	1295	228	968	548	2263
06:00			129		244		373		18:00			318		215		533	
06:15			165		249		414		18:15			371		208		579	
06:30			165		355		520		18:30			302		183		485	
06:45			187	646	350	1198	537	1844	18:45			328	1319	151	757	479	2076
07:00			196		338		534		19:00			298		143		441	
07:15			183		336		519		19:15			279		149		428	
07:30			169		385		554		19:30			225		117		342	
07:45			162	710	311	1370	473	2080	19:45			199	1001	117	526	316	1527
08:00			177		270		447		20:00			175		115		290	
08:15			158		230		388		20:15			197		108		305	
08:30			136		227		363		20:30			189		111		300	
08:45			162	633	226	953	388	1586	20:45			186	747	90	424	276	1171
09:00			136		194		330		21:00			188		93		281	
09:15			128		225		353		21:15			151		77		228	
09:30			145		178		323		21:30			129		62		191	
09:45			145	554	222	819	367	1373	21:45			138	606	95	327	233	933
10:00			147		197		344		22:00			141		57		198	
10:15			152		177		329		22:15			102		80		182	
10:30			147		145		292		22:30			163		78		241	
10:45			149	595	184	703	333	1298	22:45			141	547	75	290	216	837
11:00			145		200		345		23:00			102		52		154	
11:15			148		179		327		23:15			75		36		111	
11:30			151		208		359		23:30			86		40		126	
11:45			173	617	182	769	355	1386	23:45			83	346	38	166	121	512
TOTALS				5110		8573		13683	TOTALS				11103		7897		19000
SPLIT %				37.3%		62.7%		41.9%	SPLIT %				58.4%		41.6%		58.1%

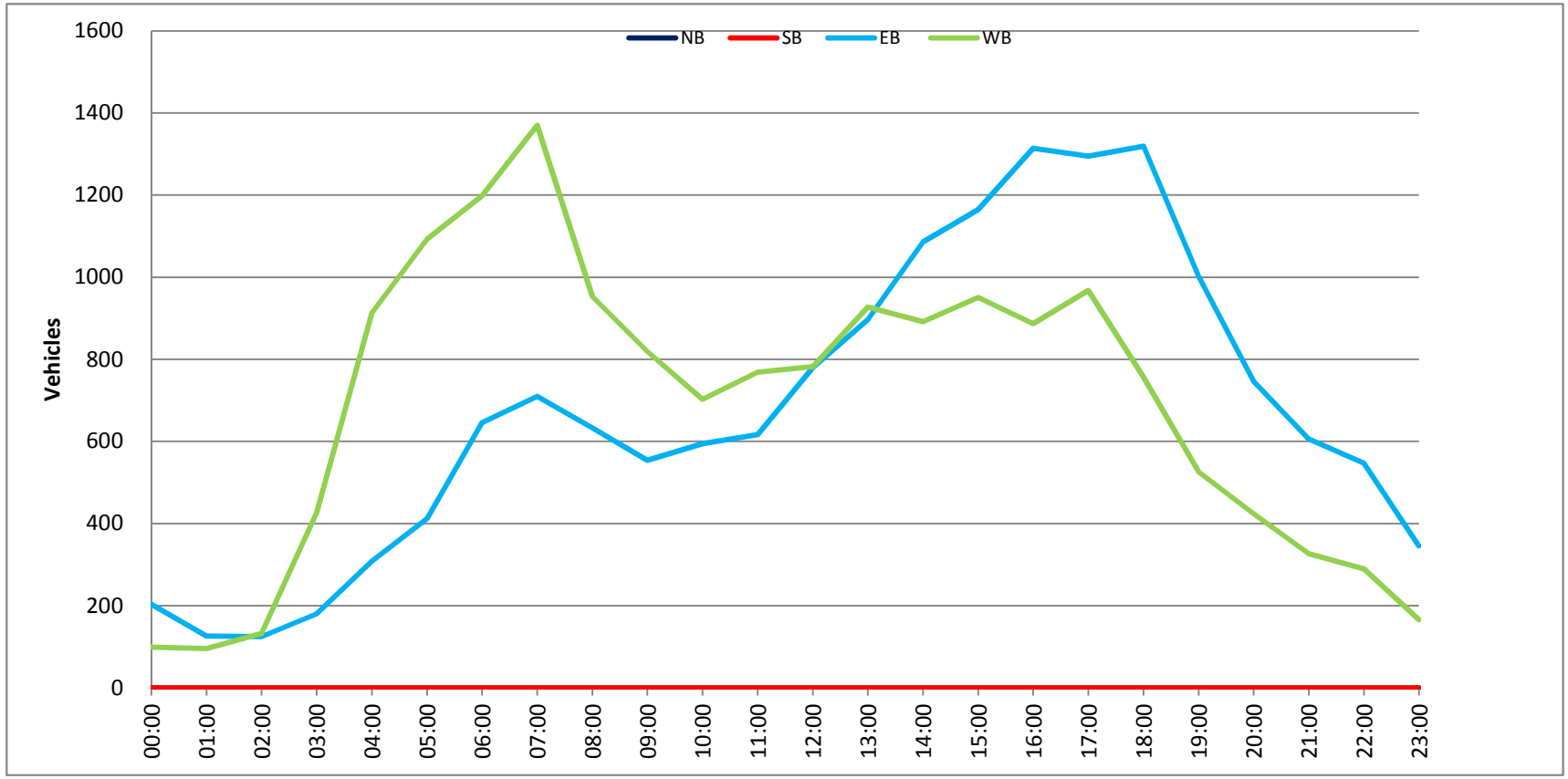
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,213	16,470	32,683

AM Peak Hour			06:45	06:45	06:45	PM Peak Hour			17:30	16:45	16:45
AM Pk Volume			735	1409	2144	PM Pk Volume			1366	992	2338
Pk Hr Factor			0.938	0.915	0.968	Pk Hr Factor			0.920	0.922	0.934
7 - 9 Volume	0	0	1343	2323	3666	4 - 6 Volume	0	0	2609	1855	4464
7 - 9 Peak Hour			07:00	07:00	07:00	4 - 6 Peak Hour			16:15	16:45	16:45
7 - 9 Pk Volume	0	0	710	1370	2080	4 - 6 Pk Volume	0	0	1347	992	2338
Pk Hr Factor	0.000	0.000	0.906	0.890	0.939	Pk Hr Factor	0.000	0.000	0.908	0.922	0.934

Prepared by NDS/ATD

Project #: CA16_6002_003 **City:** Perris

Location: Ramona Expy E/O Perris Blvd **Date:** 1/12/2016



Prepared by NDS/ATD

VOLUME

Ramona Expy W/O Perris Blvd

Day: Tuesday
Date: 1/12/2016

City: Perris
Project #: CA16_6002_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,221	20,597	39,818

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			57		35		92		12:00			237		226		463	
00:15			61		40		101		12:15			209		238		447	
00:30			50		37		87		12:30			235		253		488	
00:45			40	208	26	138	66	346	12:45			262	943	243	960	505	1903
01:00			54		26		80		13:00			248		259		507	
01:15			50		30		80		13:15			253		268		521	
01:30			18		20		38		13:30			251		327		578	
01:45			34	156	39	115	73	271	13:45			255	1007	289	1143	544	2150
02:00			27		30		57		14:00			294		246		540	
02:15			34		46		80		14:15			302		285		587	
02:30			35		55		90		14:30			317		295		612	
02:45			53	149	57	188	110	337	14:45			318	1231	307	1133	625	2364
03:00			35		82		117		15:00			342		297		639	
03:15			42		120		162		15:15			331		289		620	
03:30			70		165		235		15:30			392		326		718	
03:45			85	232	178	545	263	777	15:45			316	1381	309	1221	625	2602
04:00			46		235		281		16:00			379		256		635	
04:15			85		275		360		16:15			345		245		590	
04:30			187		342		529		16:30			408		277		685	
04:45			126	444	326	1178	452	1622	16:45			324	1456	332	1110	656	2566
05:00			84		313		397		17:00			345		285		630	
05:15			121		311		432		17:15			374		315		689	
05:30			129		390		519		17:30			376		324		700	
05:45			144	478	384	1398	528	1876	17:45			336	1431	271	1195	607	2626
06:00			160		316		476		18:00			387		220		607	
06:15			184		339		523		18:15			388		253		641	
06:30			241		400		641		18:30			341		234		575	
06:45			249	834	422	1477	671	2311	18:45			392	1508	211	918	603	2426
07:00			243		389		632		19:00			355		165		520	
07:15			218		397		615		19:15			312		164		476	
07:30			218		413		631		19:30			261		160		421	
07:45			263	942	383	1582	646	2524	19:45			225	1153	146	635	371	1788
08:00			232		345		577		20:00			224		153		377	
08:15			237		320		557		20:15			225		122		347	
08:30			223		287		510		20:30			234		151		385	
08:45			201	893	255	1207	456	2100	20:45			218	901	100	526	318	1427
09:00			183		269		452		21:00			213		106		319	
09:15			174		278		452		21:15			164		98		262	
09:30			165		266		431		21:30			177		87		264	
09:45			194	716	287	1100	481	1816	21:45			156	710	108	399	264	1109
10:00			165		255		420		22:00			154		87		241	
10:15			199		230		429		22:15			145		107		252	
10:30			183		194		377		22:30			169		93		262	
10:45			192	739	235	914	427	1653	22:45			144	612	105	392	249	1004
11:00			175		233		408		23:00			95		67		162	
11:15			181		225		406		23:15			94		51		145	
11:30			179		245		424		23:30			94		42		136	
11:45			187	722	224	927	411	1649	23:45			92	375	36	196	128	571
TOTALS				6513		10769		17282	TOTALS				12708		9828		22536
SPLIT %				37.7%		62.3%		43.4%	SPLIT %				56.4%		43.6%		56.6%

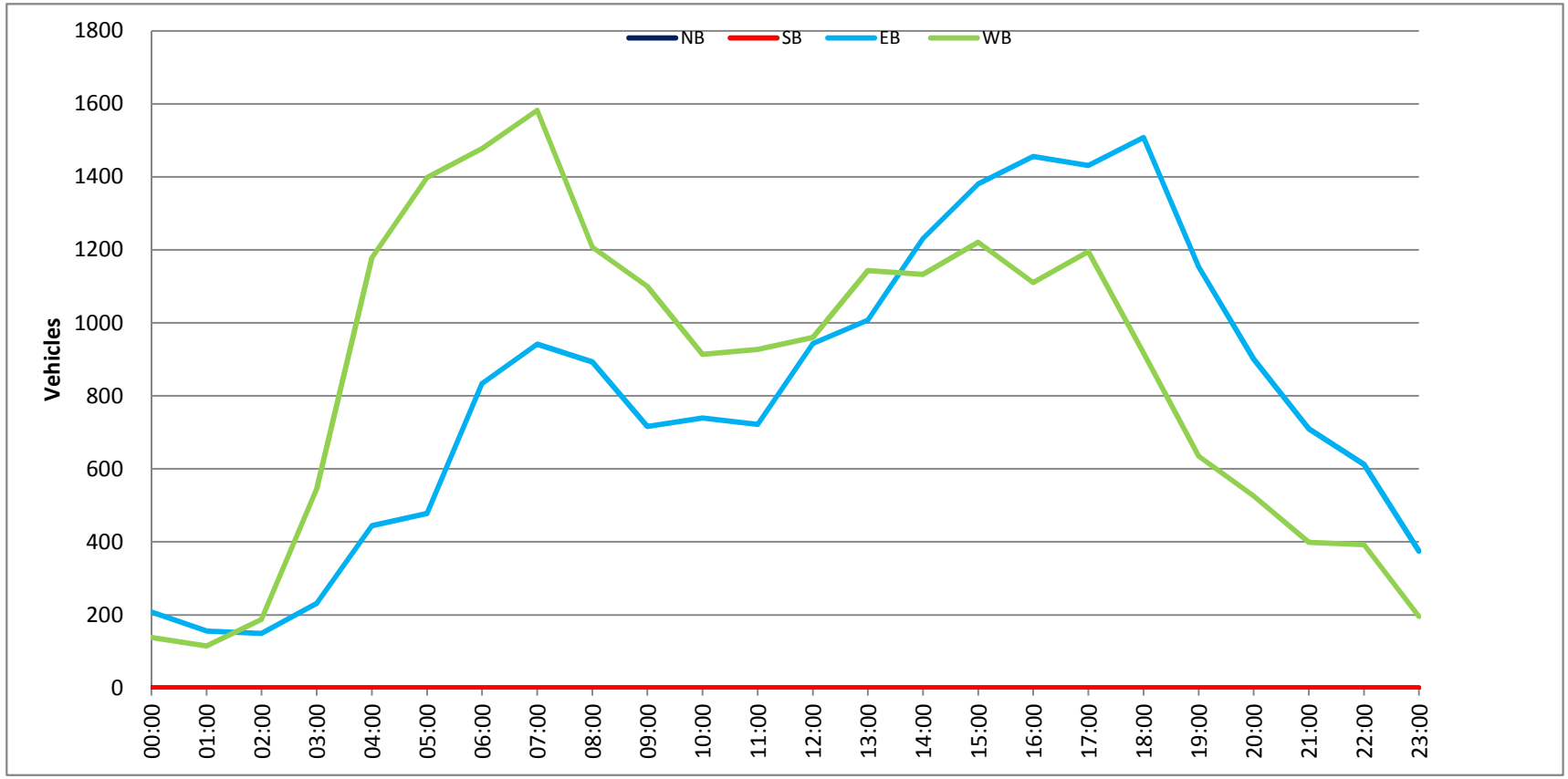
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,221	20,597	39,818

AM Peak Hour			07:45	06:45	06:30	PM Peak Hour			18:00	16:45	16:45
AM Pk Volume			955	1621	2559	PM Pk Volume			1508	1256	2675
Pk Hr Factor			0.908	0.960	0.953	Pk Hr Factor			0.962	0.946	0.955
7 - 9 Volume	0	0	1835	2789	4624	4 - 6 Volume	0	0	2887	2305	5192
7 - 9 Peak Hour			07:45	07:00	07:00	4 - 6 Peak Hour			16:00	16:45	16:45
7 - 9 Pk Volume	0	0	955	1582	2524	4 - 6 Pk Volume	0	0	1456	1256	2675
Pk Hr Factor	0.000	0.000	0.908	0.958	0.977	Pk Hr Factor	0.000	0.000	0.892	0.946	0.955

Prepared by NDS/ATD

Project #: CA16_6002_004 **City:** Perris

Location: Ramona Expy W/O Perris Blvd **Date:** 1/12/2016



APPENDIX B
LOS Operations Worksheets – Existing Conditions

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	345	95	231	471	138	198	624	254	149	372	65
Future Volume (veh/h)	50	345	95	231	471	138	198	624	254	149	372	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	50	345	95	231	471	138	198	624	254	149	372	65
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	522	142	283	824	240	246	1525	475	190	1175	200
Arrive On Green	0.04	0.19	0.19	0.16	0.30	0.30	0.14	0.30	0.30	0.11	0.27	0.27
Sat Flow, veh/h	1774	2753	748	1774	2706	787	1774	5085	1583	1774	4377	744
Grp Volume(v), veh/h	50	220	220	231	307	302	198	624	254	149	286	151
Grp Sat Flow(s),veh/h/ln	1774	1770	1731	1774	1770	1724	1774	1695	1583	1774	1695	1731
Q Serve(g_s), s	1.9	8.0	8.2	8.8	10.2	10.3	7.5	6.8	9.3	5.7	4.7	4.9
Cycle Q Clear(g_c), s	1.9	8.0	8.2	8.8	10.2	10.3	7.5	6.8	9.3	5.7	4.7	4.9
Prop In Lane	1.00		0.43	1.00		0.46	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	79	336	328	283	539	525	246	1525	475	190	910	465
V/C Ratio(X)	0.63	0.66	0.67	0.82	0.57	0.58	0.80	0.41	0.53	0.78	0.31	0.33
Avail Cap(c_a), veh/h	173	406	397	524	757	737	471	1525	475	395	910	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	26.1	26.2	28.3	20.4	20.4	29.1	19.5	20.3	30.3	20.4	20.4
Incr Delay (d2), s/veh	8.1	2.8	3.3	5.8	1.0	1.0	6.1	0.8	4.3	6.9	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.2	4.2	4.8	5.1	5.0	4.1	3.3	4.6	3.1	2.2	2.4
LnGrp Delay(d),s/veh	40.9	28.9	29.5	34.1	21.3	21.4	35.2	20.3	24.6	37.2	20.6	20.8
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		490			840			1076			586	
Approach Delay, s/veh		30.4			24.9			24.1			24.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	24.9	15.6	17.2	14.2	22.7	7.6	25.2
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	15.5	20.9	20.6	16.0	18.5	17.9	6.8	29.8
Max Q Clear Time (g_c+I1), s	7.7	11.3	10.8	10.2	9.5	6.9	3.9	12.3
Green Ext Time (p_c), s	0.2	5.0	0.5	3.0	0.3	5.5	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	409	341	477	518	108	328	477	389	147	519	80
Future Volume (veh/h)	148	409	341	477	518	108	328	477	389	147	519	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	148	409	341	477	518	108	328	477	389	147	519	80
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	669	312	587	1280	261	424	1265	566	225	1060	474
Arrive On Green	0.07	0.20	0.20	0.17	0.30	0.30	0.12	0.36	0.36	0.07	0.30	0.30
Sat Flow, veh/h	3442	3390	1583	3442	4236	864	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	148	409	341	477	412	214	328	477	389	147	519	80
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1710	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	3.4	8.9	16.0	10.8	7.8	8.1	7.5	8.1	17.0	3.4	9.8	3.0
Cycle Q Clear(g_c), s	3.4	8.9	16.0	10.8	7.8	8.1	7.5	8.1	17.0	3.4	9.8	3.0
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	669	312	587	1024	517	424	1265	566	225	1060	474
V/C Ratio(X)	0.66	0.61	1.09	0.81	0.40	0.41	0.77	0.38	0.69	0.65	0.49	0.17
Avail Cap(c_a), veh/h	361	669	312	827	1128	569	615	1265	566	361	1060	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	29.7	32.6	32.4	22.5	22.6	34.5	19.4	22.2	37.0	23.3	21.0
Incr Delay (d2), s/veh	3.2	1.6	77.8	4.3	0.3	0.5	3.7	0.9	6.7	3.2	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.4	13.7	5.4	3.7	3.9	3.8	4.1	8.4	1.7	4.8	1.3
LnGrp Delay(d),s/veh	40.2	31.4	110.4	36.7	22.7	23.1	38.2	20.2	28.9	40.2	23.7	21.1
LnGrp LOS	D	C	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		898			1103			1194			746	
Approach Delay, s/veh		62.8			28.8			28.0			26.7	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	33.0	18.3	20.0	14.5	28.3	9.8	28.5
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	29.0	19.5	16.0	14.5	23.0	8.5	27.0
Max Q Clear Time (g_c+I1), s	5.4	19.0	12.8	18.0	9.5	11.8	5.4	10.1
Green Ext Time (p_c), s	0.1	5.5	1.0	0.0	0.5	5.9	0.1	8.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	151	65	170	120	182	60	818	252	124	504	11
Future Volume (veh/h)	25	151	65	170	120	182	60	818	252	124	504	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	151	65	170	120	182	60	818	252	124	504	11
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	202	202	213	150	318	87	1356	415	159	2006	44
Arrive On Green	0.13	0.13	0.13	0.20	0.20	0.20	0.05	0.35	0.35	0.09	0.39	0.39
Sat Flow, veh/h	263	1587	1583	1061	749	1583	1774	3863	1182	1774	5122	111
Grp Volume(v), veh/h	176	0	65	290	0	182	60	717	353	124	333	182
Grp Sat Flow(s),veh/h/ln	1850	0	1583	1810	0	1583	1774	1695	1654	1774	1695	1843
Q Serve(g_s), s	6.5	0.0	2.7	10.9	0.0	7.4	2.4	12.4	12.5	4.9	4.7	4.7
Cycle Q Clear(g_c), s	6.5	0.0	2.7	10.9	0.0	7.4	2.4	12.4	12.5	4.9	4.7	4.7
Prop In Lane	0.14		1.00	0.59		1.00	1.00		0.71	1.00		0.06
Lane Grp Cap(c), veh/h	235	0	202	363	0	318	87	1190	581	159	1328	722
V/C Ratio(X)	0.75	0.00	0.32	0.80	0.00	0.57	0.69	0.60	0.61	0.78	0.25	0.25
Avail Cap(c_a), veh/h	415	0	356	534	0	467	214	1190	581	286	1328	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	28.3	27.1	0.0	25.7	33.4	19.0	19.1	31.7	14.6	14.6
Incr Delay (d2), s/veh	4.7	0.0	0.9	5.3	0.0	1.6	9.5	2.3	4.7	8.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	1.2	5.9	0.0	3.4	1.4	6.2	6.4	2.7	2.2	2.5
LnGrp Delay(d),s/veh	34.7	0.0	29.2	32.4	0.0	27.3	42.9	21.3	23.7	39.8	14.7	14.8
LnGrp LOS	C		C	C		C	D	C	C	D	B	B
Approach Vol, veh/h		241			472			1130			639	
Approach Delay, s/veh		33.2			30.5			23.2			19.6	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	29.0		13.1	8.0	31.9		18.3
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	11.5	25.0		16.0	8.6	27.9		21.0
Max Q Clear Time (g_c+I1), s	6.9	14.5		8.5	4.4	6.7		12.9
Green Ext Time (p_c), s	0.1	6.6		0.6	0.0	10.5		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	168	243	78	117	72	194	701	132	115	554	131
Future Volume (veh/h)	294	168	243	78	117	72	194	701	132	115	554	131
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	294	168	243	78	117	72	194	701	132	115	554	131
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	353	316	101	304	175	240	1514	677	148	1069	252
Arrive On Green	0.12	0.20	0.20	0.06	0.14	0.14	0.14	0.43	0.43	0.08	0.38	0.38
Sat Flow, veh/h	3442	1770	1583	1774	2164	1248	1774	3539	1583	1774	2844	670
Grp Volume(v), veh/h	294	168	243	78	94	95	194	701	132	115	344	341
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1642	1774	1770	1583	1774	1770	1744
Q Serve(g_s), s	6.0	6.1	10.6	3.2	3.5	3.8	7.8	10.3	3.8	4.6	11.0	11.1
Cycle Q Clear(g_c), s	6.0	6.1	10.6	3.2	3.5	3.8	7.8	10.3	3.8	4.6	11.0	11.1
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	399	353	316	101	249	231	240	1514	677	148	665	656
V/C Ratio(X)	0.74	0.48	0.77	0.77	0.38	0.41	0.81	0.46	0.19	0.78	0.52	0.52
Avail Cap(c_a), veh/h	621	476	426	230	387	359	439	1514	677	303	665	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	25.9	27.7	34.0	28.5	28.7	30.7	14.9	13.1	32.9	17.7	17.7
Incr Delay (d2), s/veh	2.7	1.0	5.8	11.9	1.0	1.2	6.4	1.0	0.6	8.4	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.1	5.2	1.9	1.8	1.8	4.2	5.3	1.8	2.6	5.5	5.4
LnGrp Delay(d),s/veh	33.9	26.9	33.5	45.9	29.5	29.8	37.1	16.0	13.7	41.3	18.4	18.4
LnGrp LOS	C	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		705			267			1027			800	
Approach Delay, s/veh		32.1			34.4			19.7			21.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.3	8.7	18.6	14.4	31.5	13.0	14.3
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	31.3	9.5	19.7	18.1	25.7	13.2	16.0
Max Q Clear Time (g_c+I1), s	6.6	12.3	5.2	12.6	9.8	13.1	8.0	5.8
Green Ext Time (p_c), s	0.1	9.3	0.0	2.0	0.3	7.3	0.5	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	351	18	119	182	0	0	0	0	293	3	91
Future Volume (veh/h)	0	351	18	119	182	0	0	0	0	293	3	91
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	351	18	119	182	0				293	3	91
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1927	99	148	2463	0				359	4	323
Arrive On Green	0.00	0.56	0.56	0.17	1.00	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	3519	175	1774	3632	0				1757	18	1583
Grp Volume(v), veh/h	0	181	188	119	182	0				296	0	91
Grp Sat Flow(s),veh/h/ln	0	1770	1832	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	4.5	4.5	5.8	0.0	0.0				14.3	0.0	4.4
Cycle Q Clear(g_c), s	0.0	4.5	4.5	5.8	0.0	0.0				14.3	0.0	4.4
Prop In Lane	0.00		0.10	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	995	1030	148	2463	0				362	0	323
V/C Ratio(X)	0.00	0.18	0.18	0.80	0.07	0.00				0.82	0.00	0.28
Avail Cap(c_a), veh/h	0	995	1030	246	2463	0				907	0	809
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.6	9.6	36.8	0.0	0.0				34.2	0.0	30.2
Incr Delay (d2), s/veh	0.0	0.4	0.4	9.6	0.1	0.0				4.5	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
%ile BackOfQ(50%),veh/ln	0.0	2.3	2.4	3.2	0.0	0.0				7.4	0.0	2.0
LnGrp Delay(d),s/veh	0.0	10.0	10.0	46.3	0.1	0.0				38.8	0.0	30.7
LnGrp LOS		A	A	D	A					D		C
Approach Vol, veh/h		369			301						387	
Approach Delay, s/veh		10.0			18.4						36.9	
Approach LOS		A			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			12.0	55.1		22.9		67.1
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			12.5	18.0		46.0		35.0
Max Q Clear Time (g_c+I1), s			7.8	6.5		16.3		2.0
Green Ext Time (p_c), s			0.1	2.5		2.0		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	478	0	0	272	225	29	2	127	0	0	0
Future Volume (veh/h)	165	478	0	0	272	225	29	2	127	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	165	478	0	0	272	225	29	2	127			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2810	0	0	1183	947	176	12	168			
Arrive On Green	0.22	1.00	0.00	0.00	0.63	0.63	0.11	0.11	0.11			
Sat Flow, veh/h	1774	3632	0	0	1964	1498	1665	115	1583			
Grp Volume(v), veh/h	165	478	0	0	257	240	31	0	127			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1598	1780	0	1583			
Q Serve(g_s), s	8.0	0.0	0.0	0.0	5.6	5.8	1.4	0.0	7.0			
Cycle Q Clear(g_c), s	8.0	0.0	0.0	0.0	5.6	5.8	1.4	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		0.94	0.94		1.00			
Lane Grp Cap(c), veh/h	198	2810	0	0	1119	1011	189	0	168			
V/C Ratio(X)	0.83	0.17	0.00	0.00	0.23	0.24	0.16	0.00	0.76			
Avail Cap(c_a), veh/h	325	2810	0	0	1119	1011	702	0	625			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.2	0.0	0.0	0.0	7.1	7.2	36.6	0.0	39.1			
Incr Delay (d2), s/veh	9.1	0.1	0.0	0.0	0.5	0.6	0.4	0.0	6.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	0.1	0.0	0.0	2.9	2.7	0.7	0.0	3.4			
LnGrp Delay(d),s/veh	43.3	0.1	0.0	0.0	7.6	7.7	37.0	0.0	45.9			
LnGrp LOS	D	A			A	A	D		D			
Approach Vol, veh/h		643			497			158				
Approach Delay, s/veh		11.2			7.6			44.2				
Approach LOS		B			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		14.0		76.0			14.5	61.4
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		35.5		45.5			16.5	24.5
Max Q Clear Time (g_c+I1), s		9.0		2.0			10.0	7.8
Green Ext Time (p_c), s		0.5		7.5			0.2	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	0	83	0	0	0	104	917	0	0	577	129
Future Volume (veh/h)	159	0	83	0	0	0	104	917	0	0	577	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	173	0	90	0	0	0	113	997	0	0	577	129
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	2045	915	2	1445	0	144	1695	0	2	1029	320
Arrive On Green	0.12	0.00	0.58	0.00	0.00	0.00	0.08	0.33	0.00	0.00	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3632	0	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	173	0	90	0	0	0	113	997	0	0	577	129
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	0	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	8.6	0.0	2.3	0.0	0.0	0.0	5.6	14.6	0.0	0.0	9.2	6.4
Cycle Q Clear(g_c), s	8.6	0.0	2.3	0.0	0.0	0.0	5.6	14.6	0.0	0.0	9.2	6.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	2045	915	2	1445	0	144	1695	0	2	1029	320
V/C Ratio(X)	0.82	0.00	0.10	0.00	0.00	0.00	0.79	0.59	0.00	0.00	0.56	0.40
Avail Cap(c_a), veh/h	424	2045	915	99	1445	0	282	1695	0	108	1198	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.98	0.98
Uniform Delay (d), s/veh	38.7	0.0	8.5	0.0	0.0	0.0	40.6	24.9	0.0	0.0	32.3	31.2
Incr Delay (d2), s/veh	7.5	0.0	0.2	0.0	0.0	0.0	9.1	1.5	0.0	0.0	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	1.1	0.0	0.0	0.0	3.1	7.1	0.0	0.0	4.3	2.9
LnGrp Delay(d),s/veh	46.1	0.0	8.7	0.0	0.0	0.0	49.7	26.4	0.0	0.0	32.8	32.0
LnGrp LOS	D		A				D	C			C	C
Approach Vol, veh/h		263			0			1110			706	
Approach Delay, s/veh		33.3			0.0			28.8			32.6	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	34.0	0.0	56.0	11.8	22.2	15.2	40.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	5.5	30.0	5.0	32.5	14.3	21.2	21.5	16.0
Max Q Clear Time (g_c+I1), s	0.0	16.6	0.0	4.3	7.6	11.2	10.6	0.0
Green Ext Time (p_c), s	0.0	8.7	0.0	0.3	0.1	7.0	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	631	259	235	888	0	0	0	0	590	2	177
Future Volume (veh/h)	0	631	259	235	888	0	0	0	0	590	2	177
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	631	259	235	888	0				591	0	177
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1208	495	267	2454	0				733	0	327
Arrive On Green	0.00	0.49	0.49	0.30	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	2543	1005	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	456	434	235	888	0				591	0	177
Grp Sat Flow(s),veh/h/ln	0	1770	1685	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	15.8	15.8	11.3	0.0	0.0				14.3	0.0	9.0
Cycle Q Clear(g_c), s	0.0	15.8	15.8	11.3	0.0	0.0				14.3	0.0	9.0
Prop In Lane	0.00		0.60	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	872	831	267	2454	0				733	0	327
V/C Ratio(X)	0.00	0.52	0.52	0.88	0.36	0.00				0.81	0.00	0.54
Avail Cap(c_a), veh/h	0	872	831	345	2454	0				1124	0	501
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	15.6	30.7	0.0	0.0				34.0	0.0	31.9
Incr Delay (d2), s/veh	0.0	2.2	2.3	2.1	0.0	0.0				2.6	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.3	7.9	5.6	0.0	0.0				7.2	0.0	4.1
LnGrp Delay(d),s/veh	0.0	17.8	17.9	32.8	0.0	0.0				36.5	0.0	33.3
LnGrp LOS		B	B	C	A					D		C
Approach Vol, veh/h		890			1123						768	
Approach Delay, s/veh		17.9			6.9						35.8	
Approach LOS		B			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	48.9		23.1		66.9
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			17.5	30.5		28.5		52.5
Max Q Clear Time (g_c+I1), s			13.3	17.8		16.3		2.0
Green Ext Time (p_c), s			0.2	8.5		2.3		17.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	997	0	0	813	1083	311	2	331	0	0	0
Future Volume (veh/h)	224	997	0	0	813	1083	311	2	331	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	224	997	0	0	813	1083	312	0	331			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	259	2328	0	0	817	731	859	0	383			
Arrive On Green	0.29	1.00	0.00	0.00	0.46	0.46	0.24	0.00	0.24			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	224	997	0	0	813	1083	312	0	331			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	10.8	0.0	0.0	0.0	41.2	41.6	6.6	0.0	18.0			
Cycle Q Clear(g_c), s	10.8	0.0	0.0	0.0	41.2	41.6	6.6	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	259	2328	0	0	817	731	859	0	383			
V/C Ratio(X)	0.86	0.43	0.00	0.00	0.99	1.48	0.36	0.00	0.86			
Avail Cap(c_a), veh/h	463	2328	0	0	817	731	1202	0	537			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.74	0.74	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	31.0	0.0	0.0	0.0	24.1	24.2	28.3	0.0	32.7			
Incr Delay (d2), s/veh	6.4	0.4	0.0	0.0	30.3	223.9	0.3	0.0	10.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.7	0.1	0.0	0.0	26.7	63.5	3.2	0.0	9.0			
LnGrp Delay(d),s/veh	37.4	0.4	0.0	0.0	54.4	248.1	28.6	0.0	42.9			
LnGrp LOS	D	A			D	F	C		D			
Approach Vol, veh/h		1221			1896			643				
Approach Delay, s/veh		7.2			165.1			35.9				
Approach LOS		A			F			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		26.3		63.7			17.7	46.1
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		30.5		50.5			23.5	22.5
Max Q Clear Time (g_c+I1), s		20.0		2.0			12.8	43.6
Green Ext Time (p_c), s		1.8		38.5			0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	91.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	671	161	103	1621	193	409	368	91	107	238	207
Future Volume (veh/h)	196	671	161	103	1621	193	409	368	91	107	238	207
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	196	671	161	103	1621	193	409	368	91	107	238	207
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	2481	772	137	2118	252	459	1231	551	142	905	405
Arrive On Green	0.07	0.49	0.49	0.04	0.46	0.46	0.13	0.35	0.35	0.04	0.26	0.26
Sat Flow, veh/h	3442	5085	1583	3442	4609	548	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	196	671	161	103	1191	623	409	368	91	107	238	207
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1766	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	11.5	15.9	11.8	6.0	59.8	60.1	23.9	15.4	8.1	6.3	11.0	22.8
Cycle Q Clear(g_c), s	11.5	15.9	11.8	6.0	59.8	60.1	23.9	15.4	8.1	6.3	11.0	22.8
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	2481	772	137	1558	811	459	1231	551	142	905	405
V/C Ratio(X)	0.83	0.27	0.21	0.75	0.76	0.77	0.89	0.30	0.17	0.76	0.26	0.51
Avail Cap(c_a), veh/h	413	3065	954	245	1877	978	767	1231	551	245	905	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	93.9	30.8	29.8	97.0	46.0	46.0	87.0	48.4	46.0	96.8	60.6	65.0
Incr Delay (d2), s/veh	7.6	0.1	0.1	7.9	1.6	3.1	7.5	0.6	0.6	7.9	0.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.5	5.2	3.0	28.3	29.9	11.8	7.7	3.7	3.1	5.4	10.1
LnGrp Delay(d),s/veh	101.5	30.9	29.9	104.9	47.6	49.1	94.5	49.1	46.7	104.8	60.8	66.1
LnGrp LOS	F	C	C	F	D	D	F	D	D	F	E	E
Approach Vol, veh/h		1028			1917			868			552	
Approach Delay, s/veh		44.2			51.1			70.2			71.3	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	75.0	12.6	103.6	31.7	56.2	18.4	97.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	14.5	71.0	14.5	123.0	45.5	40.0	24.5	113.0
Max Q Clear Time (g_c+I1), s	8.3	17.4	8.0	17.9	25.9	24.8	13.5	62.1
Green Ext Time (p_c), s	0.1	5.6	0.1	44.5	1.3	4.3	0.4	31.7

Intersection Summary	
HCM 2010 Ctrl Delay	55.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	889	28	57	1775	0	11	0	72	0	0	0
Future Volume (veh/h)	0	889	28	57	1775	0	11	0	72	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	889	28	57	1775	0	11	0	72	0	0	0
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	2	3762	1171	75	4231	0	24	127	108	2	9	7
Arrive On Green	0.00	0.74	0.74	0.04	0.83	0.00	0.01	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5253	0	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	889	28	57	1775	0	11	0	72	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	0	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	5.0	0.4	2.9	8.1	0.0	0.6	0.0	4.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.0	0.4	2.9	8.1	0.0	0.6	0.0	4.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	3762	1171	75	4231	0	24	127	108	2	9	7
V/C Ratio(X)	0.00	0.24	0.02	0.76	0.42	0.00	0.46	0.00	0.67	0.00	0.00	0.00
Avail Cap(c_a), veh/h	108	3762	1171	187	4231	0	108	412	350	101	404	343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.96	0.96	0.40	0.40	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.7	3.1	42.7	2.0	0.0	44.1	0.0	41.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	6.2	0.1	0.0	13.5	0.0	7.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.2	1.5	3.7	0.0	0.4	0.0	1.9	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	3.8	3.1	48.9	2.1	0.0	57.5	0.0	47.9	0.0	0.0	0.0
LnGrp LOS		A	A	D	A		E		D			
Approach Vol, veh/h		917			1832			83			0	
Approach Delay, s/veh		3.8			3.5			49.2			0.0	
Approach LOS		A			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	10.6	8.3	71.1	5.7	4.9	0.0	79.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	19.9	9.5	37.5	5.5	19.5	5.5	41.5
Max Q Clear Time (g_c+I1), s	0.0	6.0	4.9	7.0	2.6	0.0	0.0	10.1
Green Ext Time (p_c), s	0.0	0.1	0.0	23.6	0.0	0.0	0.0	24.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	478	131	13	985	364	380	646	22	387	766	569
Future Volume (veh/h)	340	478	131	13	985	364	380	646	22	387	766	569
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	340	478	0	13	985	364	380	646	22	387	766	569
Adj No. of Lanes	2	3	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	2110	657	22	1124	503	420	1310	586	429	1320	591
Arrive On Green	0.11	0.42	0.00	0.01	0.32	0.32	0.12	0.37	0.37	0.12	0.37	0.37
Sat Flow, veh/h	3442	5085	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	340	478	0	13	985	364	380	646	22	387	766	569
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	21.4	13.3	0.0	1.6	57.6	44.6	23.9	30.8	1.9	24.3	37.9	77.0
Cycle Q Clear(g_c), s	21.4	13.3	0.0	1.6	57.6	44.6	23.9	30.8	1.9	24.3	37.9	77.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	2110	657	22	1124	503	420	1310	586	429	1320	591
V/C Ratio(X)	0.90	0.23	0.00	0.59	0.88	0.72	0.91	0.49	0.04	0.90	0.58	0.96
Avail Cap(c_a), veh/h	479	2334	727	49	1229	550	527	1310	586	577	1342	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	96.2	41.3	0.0	107.5	70.6	66.2	94.9	53.1	44.0	94.5	54.9	67.2
Incr Delay (d2), s/veh	16.8	0.1	0.0	22.3	6.9	4.3	16.7	1.3	0.1	14.2	0.6	27.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	6.3	0.0	0.9	29.3	20.2	12.4	15.3	0.9	12.4	18.6	38.2
LnGrp Delay(d),s/veh	113.1	41.4	0.0	129.8	77.6	70.5	111.6	54.4	44.1	108.7	55.5	94.8
LnGrp LOS	F	D		F	E	E	F	D	D	F	E	F
Approach Vol, veh/h		818			1362			1048			1722	
Approach Delay, s/veh		71.2			76.2			74.9			80.4	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.8	85.1	7.2	94.9	31.2	85.7	28.6	73.5
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	36.7	79.8	6.0	100.5	33.5	83.0	30.5	76.0
Max Q Clear Time (g_c+I1), s	26.3	32.8	3.6	15.3	25.9	79.0	23.4	59.6
Green Ext Time (p_c), s	1.0	17.5	0.0	18.1	0.8	2.6	0.7	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	76.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	647	0	0	1139	23	0	0	0	9	0	19
Future Volume (veh/h)	30	647	0	0	1139	23	0	0	0	9	0	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	30	647	0	0	1139	23	0	0	0	9	0	0
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	2910	0	4	2454	1087	0	4	0	17	0	15
Arrive On Green	0.03	0.82	0.00	0.00	0.69	0.69	0.00	0.00	0.00	0.01	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3539	1568	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	30	647	0	0	1139	23	0	0	0	9	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1568	0	1863	0	1774	0	1583
Q Serve(g_s), s	0.8	1.9	0.0	0.0	6.9	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.8	1.9	0.0	0.0	6.9	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	2910	0	4	2454	1087	0	4	0	17	0	15
V/C Ratio(X)	0.49	0.22	0.00	0.00	0.46	0.02	0.00	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	765	13435	0	187	12281	5439	0	705	0	746	0	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.5	0.9	0.0	0.0	3.3	2.3	0.0	0.0	0.0	23.4	0.0	0.0
Incr Delay (d2), s/veh	6.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	24.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.0	0.0	3.4	0.1	0.0	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	28.6	1.0	0.0	0.0	3.4	2.3	0.0	0.0	0.0	47.7	0.0	0.0
LnGrp LOS	C	A			A	A				D		
Approach Vol, veh/h		677			1162			0			9	
Approach Delay, s/veh		2.2			3.4			0.0			47.7	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	43.1		4.4	6.1	37.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	180.5		20.0	20.5	165.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	3.9		2.2	2.8	8.9
Green Ext Time (p_c), s		0.0	0.0	24.1		0.0	0.0	24.0

Intersection Summary	
HCM 2010 Ctrl Delay	3.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	31	17	141	107	348	13	728	61	53	414	25
Future Volume (veh/h)	13	31	17	141	107	348	13	728	61	53	414	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	31	17	141	107	348	13	728	61	53	414	25
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	286	157	393	471	400	27	1840	154	72	1973	119
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.02	0.56	0.56	0.04	0.58	0.58
Sat Flow, veh/h	932	1132	621	1352	1863	1583	1774	3307	277	1774	3392	204
Grp Volume(v), veh/h	13	0	48	141	107	348	13	389	400	53	215	224
Grp Sat Flow(s),veh/h/ln	932	0	1753	1352	1863	1583	1774	1770	1814	1774	1770	1827
Q Serve(g_s), s	1.0	0.0	1.9	8.1	4.1	18.9	0.7	11.3	11.3	2.7	5.2	5.3
Cycle Q Clear(g_c), s	5.1	0.0	1.9	9.9	4.1	18.9	0.7	11.3	11.3	2.7	5.2	5.3
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.15	1.00		0.11
Lane Grp Cap(c), veh/h	273	0	443	393	471	400	27	985	1009	72	1029	1063
V/C Ratio(X)	0.05	0.00	0.11	0.36	0.23	0.87	0.48	0.40	0.40	0.73	0.21	0.21
Avail Cap(c_a), veh/h	348	0	584	502	621	528	335	985	1009	335	1029	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	25.8	29.6	26.7	32.2	43.9	11.4	11.4	42.7	9.0	9.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.1	6.4	12.3	1.2	1.2	13.3	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.9	3.0	2.1	9.0	0.4	5.8	6.0	1.6	2.6	2.7
LnGrp Delay(d),s/veh	28.7	0.0	25.9	29.9	26.8	38.6	56.2	12.5	12.5	55.9	9.4	9.4
LnGrp LOS	C		C	C	C	D	E	B	B	E	A	A
Approach Vol, veh/h		61			596			802			492	
Approach Delay, s/veh		26.5			34.4			13.2			14.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	54.6		27.3	5.9	56.9		27.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.0	29.5		30.0	17.0	29.5		30.0
Max Q Clear Time (g_c+I1), s	4.7	13.3		7.1	2.7	7.3		20.9
Green Ext Time (p_c), s	0.1	6.6		2.5	0.0	7.5		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	253	22	11	494	149	113	227	17	164	214	305
Future Volume (veh/h)	183	253	22	11	494	149	113	227	17	164	214	305
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	183	253	22	12	537	162	123	247	18	178	233	332
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1125	97	26	622	187	154	1120	81	215	652	583
Arrive On Green	0.12	0.34	0.34	0.01	0.23	0.23	0.09	0.33	0.33	0.12	0.37	0.37
Sat Flow, veh/h	1774	3298	285	1774	2684	806	1774	3347	242	1774	1770	1583
Grp Volume(v), veh/h	183	135	140	12	353	346	123	130	135	178	233	332
Grp Sat Flow(s),veh/h/ln	1774	1770	1813	1774	1770	1720	1774	1770	1820	1774	1770	1583
Q Serve(g_s), s	9.1	4.9	5.0	0.6	17.3	17.4	6.1	4.7	4.8	8.8	8.6	15.1
Cycle Q Clear(g_c), s	9.1	4.9	5.0	0.6	17.3	17.4	6.1	4.7	4.8	8.8	8.6	15.1
Prop In Lane	1.00		0.16	1.00		0.47	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	220	604	619	26	410	399	154	592	609	215	652	583
V/C Ratio(X)	0.83	0.22	0.23	0.47	0.86	0.87	0.80	0.22	0.22	0.83	0.36	0.57
Avail Cap(c_a), veh/h	325	657	673	101	433	421	227	592	609	306	652	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	21.1	21.2	44.0	33.2	33.2	40.3	21.5	21.5	38.7	20.7	22.7
Incr Delay (d2), s/veh	10.9	0.2	0.2	12.8	15.6	16.6	11.5	0.9	0.8	12.2	0.3	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	5.1	2.4	2.5	0.4	10.2	10.1	3.5	2.4	2.5	5.0	4.3	6.8
LnGrp Delay(d),s/veh	49.4	21.3	21.3	56.8	48.8	49.9	51.8	22.4	22.4	50.8	21.0	24.0
LnGrp LOS	D	C	C	E	D	D	D	C	C	D	C	C
Approach Vol, veh/h		458			711			388			743	
Approach Delay, s/veh		32.5			49.5			31.7			29.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	34.1	5.8	34.7	12.3	37.2	15.7	24.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	15.5	19.0	5.1	33.4	11.5	23.0	16.5	22.0
Max Q Clear Time (g_c+I1), s	10.8	6.8	2.6	7.0	8.1	17.1	11.1	19.4
Green Ext Time (p_c), s	0.2	4.2	0.0	6.6	0.1	2.6	0.2	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	0	137	0	0	0	139	721	0	3	392	183
Future Volume (veh/h)	178	0	137	0	0	0	139	721	0	3	392	183
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	178	0	137	0	0	0	151	784	0	3	426	199
Adj No. of Lanes	0	1	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	0	251	0	296	0	226	3551	0	7	2253	1008
Arrive On Green	0.16	0.00	0.16	0.00	0.00	0.00	0.07	0.70	0.00	0.00	0.64	0.64
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	5253	0	1774	3539	1583
Grp Volume(v), veh/h	178	0	137	0	0	0	151	784	0	3	426	199
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1695	0	1774	1770	1583
Q Serve(g_s), s	10.9	0.0	7.2	0.0	0.0	0.0	3.9	4.9	0.0	0.2	4.5	4.7
Cycle Q Clear(g_c), s	10.9	0.0	7.2	0.0	0.0	0.0	3.9	4.9	0.0	0.2	4.5	4.7
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	0	251	0	296	0	226	3551	0	7	2253	1008
V/C Ratio(X)	0.59	0.00	0.54	0.00	0.00	0.00	0.67	0.22	0.00	0.42	0.19	0.20
Avail Cap(c_a), veh/h	723	0	721	0	849	0	440	3551	0	306	2253	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	34.9	0.0	0.0	0.0	41.1	4.8	0.0	44.7	6.8	6.8
Incr Delay (d2), s/veh	1.8	0.0	1.8	0.0	0.0	0.0	3.4	0.1	0.0	35.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.3	0.0	0.0	0.0	1.9	2.3	0.0	0.1	2.2	2.1
LnGrp Delay(d),s/veh	38.2	0.0	36.7	0.0	0.0	0.0	44.4	5.0	0.0	79.8	6.8	6.9
LnGrp LOS	D		D				D	A		E	A	A
Approach Vol, veh/h		315			0			935			628	
Approach Delay, s/veh		37.6			0.0			11.4			7.2	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	66.8		18.3	10.4	61.3		18.3
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	15.5	21.0		41.0	11.5	25.0		41.0
Max Q Clear Time (g_c+I1), s	2.2	6.9		12.9	5.9	6.7		0.0
Green Ext Time (p_c), s	0.0	7.5		1.4	0.2	8.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	432	159	223	275	125	139	675	242	234	733	23
Future Volume (veh/h)	28	432	159	223	275	125	139	675	242	234	733	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	28	432	159	223	275	125	139	675	242	234	733	23
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	52	511	186	270	773	342	178	1377	429	277	1656	52
Arrive On Green	0.03	0.20	0.20	0.15	0.32	0.32	0.10	0.27	0.27	0.16	0.33	0.33
Sat Flow, veh/h	1774	2542	927	1774	2388	1058	1774	5085	1583	1774	5066	159
Grp Volume(v), veh/h	28	299	292	223	202	198	139	675	242	234	490	266
Grp Sat Flow(s),veh/h/ln	1774	1770	1699	1774	1770	1676	1774	1695	1583	1774	1695	1835
Q Serve(g_s), s	1.2	12.6	12.8	9.4	6.7	7.0	5.9	8.6	10.2	9.9	8.8	8.8
Cycle Q Clear(g_c), s	1.2	12.6	12.8	9.4	6.7	7.0	5.9	8.6	10.2	9.9	8.8	8.8
Prop In Lane	1.00		0.55	1.00		0.63	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	52	355	341	270	573	542	178	1377	429	277	1108	600
V/C Ratio(X)	0.54	0.84	0.85	0.83	0.35	0.37	0.78	0.49	0.56	0.85	0.44	0.44
Avail Cap(c_a), veh/h	156	367	352	474	683	647	425	1377	429	356	1108	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	29.7	29.7	31.7	19.9	20.0	33.9	23.6	24.2	31.7	20.4	20.5
Incr Delay (d2), s/veh	8.4	15.8	17.7	6.4	0.4	0.4	7.4	1.2	5.3	13.7	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.7	7.7	5.1	3.3	3.3	3.3	4.2	5.0	5.9	4.1	4.5
LnGrp Delay(d),s/veh	45.4	45.4	47.5	38.1	20.3	20.4	41.3	24.9	29.5	45.4	20.7	21.0
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		619			623			1056			990	
Approach Delay, s/veh		46.4			26.7			28.1			26.6	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	24.9	16.2	19.5	12.2	29.2	6.8	29.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	15.5	20.9	20.6	16.0	18.5	17.9	6.8	29.8
Max Q Clear Time (g_c+I1), s	11.9	12.2	11.4	14.8	7.9	10.8	3.2	9.0
Green Ext Time (p_c), s	0.2	5.8	0.4	0.7	0.2	4.9	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	375	282	465	442	73	238	452	362	230	522	84
Future Volume (veh/h)	159	375	282	465	442	73	238	452	362	230	522	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	159	375	282	465	442	73	238	452	362	230	522	84
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	651	304	571	1277	206	330	1232	551	309	1210	541
Arrive On Green	0.07	0.19	0.19	0.17	0.29	0.29	0.10	0.35	0.35	0.09	0.34	0.34
Sat Flow, veh/h	3442	3390	1583	3442	4414	713	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	159	375	282	465	337	178	238	452	362	230	522	84
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1737	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	3.8	8.4	14.6	10.9	6.5	6.8	5.6	8.0	16.1	5.4	9.5	3.1
Cycle Q Clear(g_c), s	3.8	8.4	14.6	10.9	6.5	6.8	5.6	8.0	16.1	5.4	9.5	3.1
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	651	304	571	981	503	330	1232	551	309	1210	541
V/C Ratio(X)	0.67	0.58	0.93	0.81	0.34	0.35	0.72	0.37	0.66	0.74	0.43	0.16
Avail Cap(c_a), veh/h	351	651	304	806	1099	563	599	1232	551	351	1210	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	30.6	33.1	33.5	23.4	23.4	36.6	20.3	22.9	37.0	21.2	19.0
Incr Delay (d2), s/veh	3.3	1.2	33.2	4.4	0.2	0.4	3.0	0.8	6.0	7.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.0	9.1	5.5	3.1	3.3	2.8	4.0	7.9	2.9	4.7	1.4
LnGrp Delay(d),s/veh	41.2	31.8	66.3	37.9	23.6	23.9	39.6	21.1	29.0	44.3	21.4	19.2
LnGrp LOS	D	C	E	D	C	C	D	C	C	D	C	B
Approach Vol, veh/h		816			980			1052			836	
Approach Delay, s/veh		45.6			30.4			28.0			27.5	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	33.0	18.3	20.0	12.5	32.5	10.2	28.1
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	29.0	19.5	16.0	14.5	23.0	8.5	27.0
Max Q Clear Time (g_c+I1), s	7.4	18.1	12.9	16.6	7.6	11.5	5.8	8.8
Green Ext Time (p_c), s	0.1	5.7	1.0	0.0	0.4	5.9	0.1	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	125	59	166	51	93	26	780	160	123	800	16
Future Volume (veh/h)	21	125	59	166	51	93	26	780	160	123	800	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	125	59	166	51	93	26	780	160	123	800	16
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	178	178	222	68	257	51	1624	330	159	2278	46
Arrive On Green	0.11	0.11	0.11	0.16	0.16	0.16	0.03	0.38	0.38	0.09	0.44	0.44
Sat Flow, veh/h	266	1583	1583	1372	422	1583	1774	4239	862	1774	5132	103
Grp Volume(v), veh/h	146	0	59	217	0	93	26	623	317	123	528	288
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1794	0	1583	1774	1695	1711	1774	1695	1845
Q Serve(g_s), s	5.0	0.0	2.2	7.5	0.0	3.4	0.9	9.1	9.2	4.4	6.7	6.7
Cycle Q Clear(g_c), s	5.0	0.0	2.2	7.5	0.0	3.4	0.9	9.1	9.2	4.4	6.7	6.7
Prop In Lane	0.14		1.00	0.76		1.00	1.00		0.50	1.00		0.06
Lane Grp Cap(c), veh/h	208	0	178	291	0	257	51	1299	656	159	1505	819
V/C Ratio(X)	0.70	0.00	0.33	0.75	0.00	0.36	0.51	0.48	0.48	0.78	0.35	0.35
Avail Cap(c_a), veh/h	454	0	388	578	0	510	234	1299	656	313	1505	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	26.7	26.1	0.0	24.3	31.2	15.2	15.2	29.1	12.0	12.0
Incr Delay (d2), s/veh	4.3	0.0	1.1	3.8	0.0	0.9	7.6	1.3	2.5	7.8	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	1.0	4.0	0.0	1.6	0.6	4.5	4.8	2.5	3.1	3.4
LnGrp Delay(d),s/veh	32.2	0.0	27.8	29.9	0.0	25.2	38.9	16.5	17.8	36.9	12.1	12.2
LnGrp LOS	C		C	C		C	D	B	B	D	B	B
Approach Vol, veh/h		205			310			966			939	
Approach Delay, s/veh		30.9			28.5			17.5			15.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	29.0		11.3	6.4	33.0		14.6
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	11.5	25.0		16.0	8.6	27.9		21.0
Max Q Clear Time (g_c+I1), s	6.4	11.2		7.0	2.9	8.7		9.5
Green Ext Time (p_c), s	0.1	8.8		0.6	0.0	10.9		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	65	143	70	42	47	58	619	55	94	1002	67
Future Volume (veh/h)	133	65	143	70	42	47	58	619	55	94	1002	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	133	65	143	70	42	47	58	619	55	94	1002	67
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	240	215	98	214	191	88	1698	760	122	1680	112
Arrive On Green	0.07	0.14	0.14	0.06	0.12	0.12	0.05	0.48	0.48	0.07	0.50	0.50
Sat Flow, veh/h	3442	1770	1583	1774	1770	1583	1774	3539	1583	1774	3367	225
Grp Volume(v), veh/h	133	65	143	70	42	47	58	619	55	94	526	543
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1823
Q Serve(g_s), s	2.4	2.2	5.6	2.5	1.4	1.8	2.1	7.2	1.2	3.4	13.8	13.8
Cycle Q Clear(g_c), s	2.4	2.2	5.6	2.5	1.4	1.8	2.1	7.2	1.2	3.4	13.8	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	240	240	215	98	214	191	88	1698	760	122	883	910
V/C Ratio(X)	0.55	0.27	0.67	0.72	0.20	0.25	0.66	0.36	0.07	0.77	0.60	0.60
Avail Cap(c_a), veh/h	696	534	478	258	434	388	492	1698	760	340	883	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	25.3	26.8	30.3	25.8	26.0	30.4	10.7	9.1	29.9	11.7	11.7
Incr Delay (d2), s/veh	2.0	0.6	3.5	9.4	0.4	0.7	8.0	0.6	0.2	9.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.1	2.6	1.5	0.7	0.8	1.2	3.6	0.6	2.0	7.0	7.2
LnGrp Delay(d),s/veh	31.3	25.9	30.3	39.7	26.3	26.6	38.4	11.3	9.3	39.5	12.8	12.7
LnGrp LOS	C	C	C	D	C	C	D	B	A	D	B	B
Approach Vol, veh/h		341			159			732			1163	
Approach Delay, s/veh		29.9			32.3			13.3			14.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	35.3	8.1	12.8	7.8	36.5	9.1	11.9
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	31.3	9.5	19.7	18.1	25.7	13.2	16.0
Max Q Clear Time (g_c+I1), s	5.4	9.2	4.5	7.6	4.1	15.8	4.4	3.8
Green Ext Time (p_c), s	0.1	12.0	0.0	1.2	0.1	6.9	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	222	10	110	98	0	0	0	0	341	7	249
Future Volume (veh/h)	0	222	10	110	98	0	0	0	0	341	7	249
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	222	10	110	98	0				341	7	249
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1845	83	142	2354	0				409	8	372
Arrive On Green	0.00	0.53	0.53	0.08	0.66	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3543	155	1774	3632	0				1740	36	1583
Grp Volume(v), veh/h	0	113	119	110	98	0				348	0	249
Grp Sat Flow(s),veh/h/ln	0	1770	1835	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	2.9	2.9	5.5	0.9	0.0				16.8	0.0	12.8
Cycle Q Clear(g_c), s	0.0	2.9	2.9	5.5	0.9	0.0				16.8	0.0	12.8
Prop In Lane	0.00		0.08	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	946	982	142	2354	0				417	0	372
V/C Ratio(X)	0.00	0.12	0.12	0.77	0.04	0.00				0.83	0.00	0.67
Avail Cap(c_a), veh/h	0	946	982	530	2354	0				623	0	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.4	10.4	40.6	5.2	0.0				32.8	0.0	31.2
Incr Delay (d2), s/veh	0.0	0.3	0.3	8.5	0.0	0.0				6.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	1.5	3.0	0.4	0.0				8.9	0.0	5.8
LnGrp Delay(d),s/veh	0.0	10.7	10.7	49.1	5.2	0.0				38.9	0.0	33.3
LnGrp LOS		B	B	D	A					D		C
Approach Vol, veh/h		232			208						597	
Approach Delay, s/veh		10.7			28.4						36.6	
Approach LOS		B			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			11.7	52.6		25.7		64.3
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			26.9	18.0		31.6		49.4
Max Q Clear Time (g_c+I1), s			7.5	4.9		18.8		2.9
Green Ext Time (p_c), s			0.2	1.5		2.4		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	396	0	0	203	287	6	3	104	0	0	0
Future Volume (veh/h)	167	396	0	0	203	287	6	3	104	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	167	396	0	0	203	287	6	3	104			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2981	0	0	1226	1097	100	50	131			
Arrive On Green	0.11	0.84	0.00	0.00	0.69	0.69	0.08	0.08	0.08			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1202	601	1583			
Grp Volume(v), veh/h	167	396	0	0	203	287	9	0	104			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1803	0	1583			
Q Serve(g_s), s	11.1	2.4	0.0	0.0	4.8	8.2	0.6	0.0	7.7			
Cycle Q Clear(g_c), s	11.1	2.4	0.0	0.0	4.8	8.2	0.6	0.0	7.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.67		1.00			
Lane Grp Cap(c), veh/h	198	2981	0	0	1226	1097	149	0	131			
V/C Ratio(X)	0.84	0.13	0.00	0.00	0.17	0.26	0.06	0.00	0.79			
Avail Cap(c_a), veh/h	421	2981	0	0	1226	1097	308	0	270			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	52.3	1.7	0.0	0.0	6.4	6.9	50.7	0.0	54.0			
Incr Delay (d2), s/veh	9.3	0.1	0.0	0.0	0.3	0.6	0.2	0.0	10.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.9	1.2	0.0	0.0	2.4	3.7	0.3	0.0	3.8			
LnGrp Delay(d),s/veh	61.5	1.8	0.0	0.0	6.7	7.5	50.9	0.0	64.2			
LnGrp LOS	E	A			A	A	D		E			
Approach Vol, veh/h		563			490			113				
Approach Delay, s/veh		19.5			7.2			63.2				
Approach LOS		B			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		14.4		105.6			17.9	87.7
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		20.5		90.5			28.5	57.5
Max Q Clear Time (g_c+I1), s		9.7		4.4			13.1	10.2
Green Ext Time (p_c), s		0.2		6.8			0.4	6.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	0	205	0	0	0	37	506	0	0	680	107
Future Volume (veh/h)	142	0	205	0	0	0	37	506	0	0	680	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	154	0	223	0	0	0	40	550	0	0	680	107
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	2143	959	2	1583	0	62	1555	0	2	1122	349
Arrive On Green	0.11	0.00	0.61	0.00	0.00	0.00	0.04	0.31	0.00	0.00	0.22	0.22
Sat Flow, veh/h	1774	3539	1583	1774	3632	0	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	154	0	223	0	0	0	40	550	0	0	680	107
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	0	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	7.6	0.0	5.8	0.0	0.0	0.0	2.0	7.6	0.0	0.0	10.8	5.1
Cycle Q Clear(g_c), s	7.6	0.0	5.8	0.0	0.0	0.0	2.0	7.6	0.0	0.0	10.8	5.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	2143	959	2	1583	0	62	1555	0	2	1122	349
V/C Ratio(X)	0.80	0.00	0.23	0.00	0.00	0.00	0.64	0.35	0.00	0.00	0.61	0.31
Avail Cap(c_a), veh/h	444	2143	959	99	1583	0	136	1555	0	148	1559	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.94	0.94
Uniform Delay (d), s/veh	39.2	0.0	8.2	0.0	0.0	0.0	42.9	24.3	0.0	0.0	31.6	29.3
Incr Delay (d2), s/veh	7.6	0.0	0.6	0.0	0.0	0.0	10.5	0.6	0.0	0.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	2.7	0.0	0.0	0.0	1.2	3.6	0.0	0.0	5.1	2.3
LnGrp Delay(d),s/veh	46.8	0.0	8.7	0.0	0.0	0.0	53.4	25.0	0.0	0.0	32.1	29.8
LnGrp LOS	D		A				D	C			C	C
Approach Vol, veh/h		377			0			590			787	
Approach Delay, s/veh		24.3			0.0			26.9			31.7	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	31.5	0.0	58.5	7.7	23.9	14.2	44.3
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	7.5	27.0	5.0	33.5	6.9	27.6	22.5	16.0
Max Q Clear Time (g_c+I1), s	0.0	9.6	0.0	7.8	4.0	12.8	9.6	0.0
Green Ext Time (p_c), s	0.0	8.1	0.0	0.7	0.0	7.0	0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	688	329	253	653	0	0	0	0	859	1	260
Future Volume (veh/h)	0	688	329	253	653	0	0	0	0	859	1	260
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	688	329	253	653	0				860	0	260
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	966	462	287	2220	0				968	0	432
Arrive On Green	0.00	0.42	0.42	0.22	0.83	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	2418	1111	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	524	493	253	653	0				860	0	260
Grp Sat Flow(s),veh/h/ln	0	1770	1667	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	22.1	22.1	12.4	3.6	0.0				20.9	0.0	12.9
Cycle Q Clear(g_c), s	0.0	22.1	22.1	12.4	3.6	0.0				20.9	0.0	12.9
Prop In Lane	0.00		0.67	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	735	692	287	2220	0				968	0	432
V/C Ratio(X)	0.00	0.71	0.71	0.88	0.29	0.00				0.89	0.00	0.60
Avail Cap(c_a), veh/h	0	735	692	325	2220	0				1045	0	466
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.46	0.46	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.8	21.8	34.5	3.1	0.0				31.4	0.0	28.5
Incr Delay (d2), s/veh	0.0	5.8	6.2	11.4	0.2	0.0				9.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.9	11.3	7.0	1.7	0.0				11.5	0.0	5.9
LnGrp Delay(d),s/veh	0.0	27.6	28.0	45.9	3.2	0.0				40.5	0.0	30.4
LnGrp LOS		C	C	D	A					D		C
Approach Vol, veh/h		1017			906						1120	
Approach Delay, s/veh		27.8			15.2						38.1	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			19.1	41.9		29.1		60.9
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			16.5	33.5		26.5		54.5
Max Q Clear Time (g_c+I1), s			14.4	24.1		22.9		5.6
Green Ext Time (p_c), s			0.2	6.4		1.6		15.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	1302	0	0	649	893	257	6	239	0	0	0
Future Volume (veh/h)	244	1302	0	0	649	893	257	6	239	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	244	1302	0	0	649	893	261	0	239			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	280	2555	0	0	910	814	632	0	282			
Arrive On Green	0.32	1.00	0.00	0.00	0.51	0.51	0.18	0.00	0.18			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	244	1302	0	0	649	893	261	0	239			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	11.7	0.0	0.0	0.0	25.3	46.3	5.9	0.0	13.1			
Cycle Q Clear(g_c), s	11.7	0.0	0.0	0.0	25.3	46.3	5.9	0.0	13.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	280	2555	0	0	910	814	632	0	282			
V/C Ratio(X)	0.87	0.51	0.00	0.00	0.71	1.10	0.41	0.00	0.85			
Avail Cap(c_a), veh/h	503	2555	0	0	910	814	808	0	361			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.53	0.53	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.0	0.0	0.0	0.0	16.8	21.9	32.8	0.0	35.8			
Incr Delay (d2), s/veh	4.7	0.4	0.0	0.0	4.7	61.3	0.4	0.0	13.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.0	0.1	0.0	0.0	13.5	34.0	2.9	0.0	6.8			
LnGrp Delay(d),s/veh	34.6	0.4	0.0	0.0	21.5	83.2	33.2	0.0	49.7			
LnGrp LOS	C	A			C	F	C		D			
Approach Vol, veh/h		1546			1542			500				
Approach Delay, s/veh		5.8			57.2			41.1				
Approach LOS		A			E			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		20.5		69.5			18.7	50.8
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		20.5		60.5			25.5	30.5
Max Q Clear Time (g_c+I1), s		15.1		2.0			13.7	48.3
Green Ext Time (p_c), s		0.9		41.7			0.5	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	182	296	144	831	95	267	283	96	157	349	150
Future Volume (veh/h)	164	182	296	144	831	95	267	283	96	157	349	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	164	182	296	144	831	95	267	283	96	157	349	150
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1314	409	197	1166	133	331	1787	799	213	1666	745
Arrive On Green	0.06	0.26	0.26	0.06	0.25	0.25	0.10	0.50	0.50	0.06	0.47	0.47
Sat Flow, veh/h	3442	5085	1583	3442	4633	527	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	164	182	296	144	607	319	267	283	96	157	349	150
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1770	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.8	4.0	24.7	6.0	23.6	23.8	11.0	6.2	4.6	6.5	8.4	8.0
Cycle Q Clear(g_c), s	6.8	4.0	24.7	6.0	23.6	23.8	11.0	6.2	4.6	6.5	8.4	8.0
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	1314	409	197	853	445	331	1787	799	213	1666	745
V/C Ratio(X)	0.75	0.14	0.72	0.73	0.71	0.72	0.81	0.16	0.12	0.74	0.21	0.20
Avail Cap(c_a), veh/h	750	3341	1040	583	2063	1077	1083	1787	799	726	1666	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	41.2	48.9	67.0	49.3	49.4	64.0	19.3	18.9	66.7	22.5	22.4
Incr Delay (d2), s/veh	5.0	0.0	2.4	5.1	1.1	2.2	4.7	0.2	0.3	4.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	1.9	11.1	3.0	11.2	11.9	5.4	3.1	2.1	3.2	4.1	3.5
LnGrp Delay(d),s/veh	71.5	41.3	51.4	72.1	50.4	51.5	68.7	19.5	19.2	71.6	22.5	22.5
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	C	C
Approach Vol, veh/h		642			1070			646			656	
Approach Delay, s/veh		53.6			53.7			39.8			34.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	77.0	12.8	41.3	18.4	72.0	13.7	40.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	30.5	73.0	24.5	95.0	45.5	58.0	31.5	88.0
Max Q Clear Time (g_c+I1), s	8.5	8.2	8.0	26.7	13.0	10.4	8.8	25.8
Green Ext Time (p_c), s	0.5	5.6	0.4	10.7	0.9	5.6	0.5	10.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1479	18	9	896	0	10	0	26	0	0	0
Future Volume (veh/h)	0	1479	18	9	896	0	10	0	26	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	1479	18	9	896	0	10	0	26	0	0	0
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	2	3983	1240	20	4294	0	22	103	88	2	2	2
Arrive On Green	0.00	0.78	0.78	0.01	0.84	0.00	0.01	0.00	0.06	0.00	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5253	0	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	1479	18	9	896	0	10	0	26	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	0	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	8.0	0.2	0.5	3.0	0.0	0.5	0.0	1.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.0	0.2	0.5	3.0	0.0	0.5	0.0	1.4	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	3983	1240	20	4294	0	22	103	88	2	2	2
V/C Ratio(X)	0.00	0.37	0.01	0.45	0.21	0.00	0.46	0.00	0.30	0.00	0.00	0.00
Avail Cap(c_a), veh/h	134	3983	1240	99	4294	0	99	408	347	134	445	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.97	0.97	0.76	0.76	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.0	2.1	44.2	1.3	0.0	44.1	0.0	40.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	11.8	0.1	0.0	14.3	0.0	1.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.1	0.3	1.4	0.0	0.3	0.0	0.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	3.2	2.2	56.1	1.4	0.0	58.4	0.0	42.7	0.0	0.0	0.0
LnGrp LOS		A	A	E	A		E		D			
Approach Vol, veh/h		1497			905			36			0	
Approach Delay, s/veh		3.2			1.9			47.0			0.0	
Approach LOS		A			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	9.5	5.5	75.0	5.6	3.9	0.0	80.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.8	19.7	5.0	40.5	5.0	21.5	6.8	38.7
Max Q Clear Time (g_c+I1), s	0.0	3.4	2.5	10.0	2.5	0.0	0.0	5.0
Green Ext Time (p_c), s	0.0	0.0	0.0	21.1	0.0	0.0	0.0	22.6

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	973	253	19	535	188	191	314	9	215	505	284
Future Volume (veh/h)	319	973	253	19	535	188	191	314	9	215	505	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	319	973	0	19	535	188	191	314	9	215	505	284
Adj No. of Lanes	2	3	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	1727	538	32	873	391	245	1605	718	271	1631	730
Arrive On Green	0.11	0.34	0.00	0.02	0.25	0.25	0.07	0.45	0.45	0.08	0.46	0.46
Sat Flow, veh/h	3442	5085	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	319	973	0	19	535	188	191	314	9	215	505	284
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	14.0	24.1	0.0	1.6	20.7	15.7	8.4	8.2	0.5	9.5	13.8	18.2
Cycle Q Clear(g_c), s	14.0	24.1	0.0	1.6	20.7	15.7	8.4	8.2	0.5	9.5	13.8	18.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	1727	538	32	873	391	245	1605	718	271	1631	730
V/C Ratio(X)	0.84	0.56	0.00	0.59	0.61	0.48	0.78	0.20	0.01	0.79	0.31	0.39
Avail Cap(c_a), veh/h	1059	3525	1098	132	1628	728	725	1605	718	769	1651	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.2	41.6	0.0	75.2	51.6	49.7	70.5	25.3	23.2	69.9	26.2	27.3
Incr Delay (d2), s/veh	4.9	0.3	0.0	16.3	0.7	0.9	5.3	0.3	0.0	5.2	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	11.3	0.0	1.0	10.2	7.0	4.2	4.1	0.2	4.7	6.8	8.0
LnGrp Delay(d),s/veh	72.1	41.9	0.0	91.5	52.3	50.6	75.8	25.6	23.2	75.1	26.3	27.7
LnGrp LOS	E	D		F	D	D	E	C	C	E	C	C
Approach Vol, veh/h		1292			742			514			1004	
Approach Delay, s/veh		49.4			52.9			44.2			37.1	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	74.0	7.3	56.4	15.5	75.1	21.6	42.1
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	34.5	70.0	11.5	107.0	32.5	72.0	47.5	71.0
Max Q Clear Time (g_c+I1), s	11.5	10.2	3.6	26.1	10.4	20.2	16.0	22.7
Green Ext Time (p_c), s	0.7	7.4	0.0	16.6	0.6	7.4	1.1	15.4

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1072	0	0	681	2	0	0	0	1120	0	1670
Future Volume (veh/h)	17	1072	0	0	681	2	0	0	0	1120	0	1670
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.86	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	17	1072	0	0	681	2	0	0	0	1120	0	0
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	1757	0	2	1492	574	0	2	0	719	0	642
Arrive On Green	0.02	0.50	0.00	0.00	0.42	0.42	0.00	0.00	0.00	0.41	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3539	1361	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	17	1072	0	0	681	2	0	0	0	1120	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1361	0	1863	0	1774	0	1583
Q Serve(g_s), s	0.8	17.8	0.0	0.0	11.2	0.1	0.0	0.0	0.0	33.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	17.8	0.0	0.0	11.2	0.1	0.0	0.0	0.0	33.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	1757	0	2	1492	574	0	2	0	719	0	642
V/C Ratio(X)	0.49	0.61	0.00	0.00	0.46	0.00	0.00	0.00	0.00	1.56	0.00	0.00
Avail Cap(c_a), veh/h	359	7345	0	109	6845	2632	0	377	0	719	0	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.5	14.8	0.0	0.0	16.9	13.6	0.0	0.0	0.0	24.2	0.0	0.0
Incr Delay (d2), s/veh	10.2	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	257.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	8.7	0.0	0.0	5.5	0.0	0.0	0.0	0.0	67.5	0.0	0.0
LnGrp Delay(d),s/veh	49.8	15.2	0.0	0.0	17.1	13.6	0.0	0.0	0.0	282.1	0.0	0.0
LnGrp LOS	D	B			B	B				F		
Approach Vol, veh/h		1089			683			0			1120	
Approach Delay, s/veh		15.7			17.1			0.0			282.1	
Approach LOS		B			B						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	44.4		37.0	6.1	38.3
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		16.5	5.0	169.0		33.0	16.5	157.5
Max Q Clear Time (g_c+I1), s		0.0	0.0	19.8		35.0	2.8	13.2
Green Ext Time (p_c), s		0.0	0.0	20.6		0.0	0.0	20.6

Intersection Summary	
HCM 2010 Ctrl Delay	119.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	82	47	123	34	127	13	615	148	148	957	18
Future Volume (veh/h)	28	82	47	123	34	127	13	615	148	148	957	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	28	82	47	123	34	127	13	615	148	148	957	18
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	219	126	247	367	312	27	1557	374	184	2266	43
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.55	0.55	0.10	0.64	0.64
Sat Flow, veh/h	1220	1113	638	1256	1863	1583	1774	2832	680	1774	3554	67
Grp Volume(v), veh/h	28	0	129	123	34	127	13	384	379	148	477	498
Grp Sat Flow(s),veh/h/ln	1220	0	1750	1256	1863	1583	1774	1770	1743	1774	1770	1851
Q Serve(g_s), s	1.7	0.0	5.8	8.5	1.3	6.3	0.7	11.2	11.3	7.3	12.0	12.0
Cycle Q Clear(g_c), s	3.1	0.0	5.8	14.2	1.3	6.3	0.7	11.2	11.3	7.3	12.0	12.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.39	1.00		0.04
Lane Grp Cap(c), veh/h	302	0	345	247	367	312	27	973	958	184	1128	1180
V/C Ratio(X)	0.09	0.00	0.37	0.50	0.09	0.41	0.48	0.39	0.40	0.81	0.42	0.42
Avail Cap(c_a), veh/h	468	0	583	418	621	528	335	973	958	335	1128	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	31.3	37.5	29.6	31.6	43.9	11.7	11.7	39.5	8.1	8.1
Incr Delay (d2), s/veh	0.1	0.0	0.7	1.3	0.1	0.7	12.3	1.2	1.2	8.1	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.8	3.0	0.7	2.8	0.4	5.8	5.7	4.0	6.2	6.5
LnGrp Delay(d),s/veh	30.9	0.0	32.0	38.8	29.6	32.3	56.2	12.9	12.9	47.5	9.2	9.2
LnGrp LOS	C		C	D	C	C	E	B	B	D	A	A
Approach Vol, veh/h		157			284			776			1123	
Approach Delay, s/veh		31.8			34.8			13.6			14.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.8	54.0		22.2	5.9	61.9		22.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.0	29.5		30.0	17.0	29.5		30.0
Max Q Clear Time (g_c+I1), s	9.3	13.3		7.8	2.7	14.0		16.2
Green Ext Time (p_c), s	0.2	9.5		1.7	0.0	9.2		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	257	60	10	199	51	35	197	8	85	242	148
Future Volume (veh/h)	226	257	60	10	199	51	35	197	8	85	242	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	226	257	60	11	216	55	38	214	9	92	263	161
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	739	170	24	340	85	60	1636	69	118	1081	641
Arrive On Green	0.15	0.26	0.26	0.01	0.12	0.12	0.03	0.47	0.47	0.07	0.51	0.51
Sat Flow, veh/h	1774	2860	656	1774	2809	700	1774	3462	145	1774	2140	1269
Grp Volume(v), veh/h	226	157	160	11	134	137	38	109	114	92	216	208
Grp Sat Flow(s),veh/h/ln	1774	1770	1747	1774	1770	1739	1774	1770	1837	1774	1770	1639
Q Serve(g_s), s	11.2	6.5	6.7	0.6	6.5	6.7	1.9	3.1	3.1	4.6	6.2	6.5
Cycle Q Clear(g_c), s	11.2	6.5	6.7	0.6	6.5	6.7	1.9	3.1	3.1	4.6	6.2	6.5
Prop In Lane	1.00		0.38	1.00		0.40	1.00		0.08	1.00		0.77
Lane Grp Cap(c), veh/h	267	457	451	24	214	210	60	836	868	118	894	828
V/C Ratio(X)	0.84	0.34	0.35	0.46	0.63	0.65	0.63	0.13	0.13	0.78	0.24	0.25
Avail Cap(c_a), veh/h	483	708	699	108	334	329	148	836	868	246	894	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	27.2	27.2	44.1	37.6	37.7	42.9	13.3	13.3	41.3	12.5	12.6
Incr Delay (d2), s/veh	6.2	0.4	0.4	13.5	3.0	3.4	10.3	0.3	0.3	10.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	3.2	3.3	0.4	3.3	3.4	1.1	1.6	1.7	2.6	3.0	2.9
LnGrp Delay(d),s/veh	43.4	27.5	27.6	57.5	40.6	41.1	53.2	13.7	13.7	51.7	12.7	12.8
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	B	B
Approach Vol, veh/h		543			282			261			516	
Approach Delay, s/veh		34.2			41.5			19.4			19.7	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	46.5	5.7	27.3	7.6	49.5	18.1	14.9
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	19.0	5.5	36.0	7.5	24.0	24.5	17.0
Max Q Clear Time (g_c+I1), s	6.6	5.1	2.6	8.7	3.9	8.5	13.2	8.7
Green Ext Time (p_c), s	0.1	3.3	0.0	3.5	0.0	3.5	0.5	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	0	108	0	0	0	83	470	0	1	706	82
Future Volume (veh/h)	47	0	108	0	0	0	83	470	0	1	706	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	47	0	108	0	0	0	90	511	0	1	767	89
Adj No. of Lanes	0	1	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	0	147	0	173	0	171	3900	0	2	2543	1138
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.05	0.77	0.00	0.00	0.72	0.72
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	5253	0	1774	3539	1583
Grp Volume(v), veh/h	47	0	108	0	0	0	90	511	0	1	767	89
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1695	0	1774	1770	1583
Q Serve(g_s), s	2.8	0.0	6.0	0.0	0.0	0.0	2.3	2.3	0.0	0.1	7.0	1.5
Cycle Q Clear(g_c), s	2.8	0.0	6.0	0.0	0.0	0.0	2.3	2.3	0.0	0.1	7.0	1.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	0	147	0	173	0	171	3900	0	2	2543	1138
V/C Ratio(X)	0.22	0.00	0.73	0.00	0.00	0.00	0.53	0.13	0.00	0.41	0.30	0.08
Avail Cap(c_a), veh/h	723	0	721	0	849	0	440	3900	0	306	2543	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	39.7	0.0	0.0	0.0	41.7	2.7	0.0	44.9	4.6	3.8
Incr Delay (d2), s/veh	0.5	0.0	6.9	0.0	0.0	0.0	2.5	0.1	0.0	84.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.9	0.0	0.0	0.0	1.1	1.1	0.0	0.1	3.4	0.7
LnGrp Delay(d),s/veh	38.8	0.0	46.7	0.0	0.0	0.0	44.2	2.8	0.0	129.4	4.6	3.8
LnGrp LOS	D		D				D	A		F	A	A
Approach Vol, veh/h		155			0			601			857	
Approach Delay, s/veh		44.3			0.0			9.0			4.7	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	73.0		12.4	9.0	68.7		12.4
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	15.5	21.0		41.0	11.5	25.0		41.0
Max Q Clear Time (g_c+I1), s	2.1	4.3		8.0	4.3	9.0		0.0
Green Ext Time (p_c), s	0.0	8.5		0.6	0.1	8.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

APPENDIX C
LOS Operations Worksheets – Existing plus-Project Conditions (Partial Closure)

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	345	95	577	471	138	198	624	577	149	372	65
Future Volume (veh/h)	50	345	95	577	471	138	198	624	577	149	372	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	50	345	95	577	471	138	198	624	577	149	372	65
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	453	123	456	1028	299	241	1326	413	187	1009	172
Arrive On Green	0.04	0.16	0.16	0.26	0.38	0.38	0.14	0.26	0.26	0.11	0.23	0.23
Sat Flow, veh/h	1774	2753	748	1774	2706	787	1774	5085	1583	1774	4377	744
Grp Volume(v), veh/h	50	220	220	577	307	302	198	624	577	149	286	151
Grp Sat Flow(s),veh/h/ln	1774	1770	1731	1774	1770	1724	1774	1695	1583	1774	1695	1731
Q Serve(g_s), s	2.2	9.5	9.7	20.6	10.4	10.6	8.7	8.3	20.9	6.6	5.7	5.9
Cycle Q Clear(g_c), s	2.2	9.5	9.7	20.6	10.4	10.6	8.7	8.3	20.9	6.6	5.7	5.9
Prop In Lane	1.00		0.43	1.00		0.46	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	74	291	285	456	672	655	241	1326	413	187	781	399
V/C Ratio(X)	0.67	0.76	0.77	1.27	0.46	0.46	0.82	0.47	1.40	0.80	0.37	0.38
Avail Cap(c_a), veh/h	151	353	346	456	672	655	410	1326	413	343	781	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	31.9	32.0	29.8	18.6	18.7	33.7	25.0	29.6	35.0	25.9	26.0
Incr Delay (d2), s/veh	10.1	7.3	8.5	135.9	0.5	0.5	6.9	1.2	193.0	7.5	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.2	5.3	27.2	5.2	5.1	4.7	4.0	31.2	3.6	2.7	2.9
LnGrp Delay(d),s/veh	47.9	39.3	40.5	165.7	19.1	19.2	40.6	26.2	222.6	42.5	26.2	26.6
LnGrp LOS	D	D	D	F	B	B	D	C	F	D	C	C
Approach Vol, veh/h		490			1186			1399			586	
Approach Delay, s/veh		40.7			90.4			109.2			30.5	
Approach LOS		D			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	24.9	25.1	17.2	15.4	22.5	7.9	34.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	15.5	20.9	20.6	16.0	18.5	17.9	6.8	29.8
Max Q Clear Time (g_c+I1), s	8.6	22.9	22.6	11.7	10.7	7.9	4.2	12.6
Green Ext Time (p_c), s	0.2	0.0	0.0	1.4	0.3	6.0	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	81.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	506	341	477	691	108	328	639	551	147	346	253
Future Volume (veh/h)	374	506	341	477	691	108	328	639	551	147	346	253
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	374	506	341	477	691	108	328	639	551	147	346	253
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	675	315	586	1178	182	424	1261	564	225	1056	472
Arrive On Green	0.10	0.20	0.20	0.17	0.27	0.27	0.12	0.36	0.36	0.07	0.30	0.30
Sat Flow, veh/h	3442	3390	1583	3442	4444	688	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	374	506	341	477	525	274	328	639	551	147	346	253
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1741	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	8.5	11.4	16.2	10.9	11.0	11.1	7.5	11.5	28.0	3.4	6.2	10.9
Cycle Q Clear(g_c), s	8.5	11.4	16.2	10.9	11.0	11.1	7.5	11.5	28.0	3.4	6.2	10.9
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	675	315	586	899	462	424	1261	564	225	1056	472
V/C Ratio(X)	1.04	0.75	1.08	0.81	0.58	0.59	0.77	0.51	0.98	0.65	0.33	0.54
Avail Cap(c_a), veh/h	359	675	315	825	1125	578	613	1261	564	359	1056	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	30.7	32.6	32.5	26.0	26.1	34.6	20.6	25.9	37.1	22.2	23.8
Incr Delay (d2), s/veh	58.3	4.7	74.2	4.3	0.6	1.2	3.8	1.5	32.5	3.2	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	5.8	13.5	5.5	5.2	5.5	3.8	5.8	17.2	1.7	3.1	4.9
LnGrp Delay(d),s/veh	94.8	35.3	106.8	36.8	26.6	27.3	38.4	22.0	58.4	40.4	22.4	25.0
LnGrp LOS	F	D	F	D	C	C	D	C	E	D	C	C
Approach Vol, veh/h		1221			1276			1518			746	
Approach Delay, s/veh		73.5			30.6			38.8			26.8	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	33.0	18.4	20.2	14.5	28.3	13.0	25.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	29.0	19.5	16.0	14.5	23.0	8.5	27.0
Max Q Clear Time (g_c+I1), s	5.4	30.0	12.9	18.2	9.5	12.9	10.5	13.1
Green Ext Time (p_c), s	0.1	0.0	1.0	0.0	0.5	6.3	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	43.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	151	65	602	120	182	60	1141	575	124	850	11
Future Volume (veh/h)	25	151	65	602	120	182	60	1141	575	124	850	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	151	65	602	120	182	60	1141	575	124	850	11
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	196	196	395	79	419	82	1068	499	157	1850	24
Arrive On Green	0.12	0.12	0.12	0.26	0.26	0.26	0.05	0.31	0.31	0.09	0.36	0.36
Sat Flow, veh/h	263	1587	1583	1491	297	1583	1774	3390	1583	1774	5174	67
Grp Volume(v), veh/h	176	0	65	722	0	182	60	1141	575	124	557	304
Grp Sat Flow(s),veh/h/ln	1850	0	1583	1788	0	1583	1774	1695	1583	1774	1695	1851
Q Serve(g_s), s	7.3	0.0	3.0	21.0	0.0	7.6	2.6	25.0	25.0	5.4	10.0	10.0
Cycle Q Clear(g_c), s	7.3	0.0	3.0	21.0	0.0	7.6	2.6	25.0	25.0	5.4	10.0	10.0
Prop In Lane	0.14		1.00	0.83		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	229	0	196	473	0	419	82	1068	499	157	1212	662
V/C Ratio(X)	0.77	0.00	0.33	1.53	0.00	0.43	0.73	1.07	1.15	0.79	0.46	0.46
Avail Cap(c_a), veh/h	373	0	319	473	0	419	192	1068	499	257	1212	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	31.8	29.2	0.0	24.2	37.4	27.2	27.2	35.4	19.6	19.6
Incr Delay (d2), s/veh	5.4	0.0	1.0	247.2	0.0	0.7	11.8	47.8	89.7	8.4	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	1.3	42.7	0.0	3.4	1.6	18.7	23.2	3.0	4.7	5.2
LnGrp Delay(d),s/veh	39.0	0.0	32.8	276.4	0.0	25.0	49.2	75.0	116.9	43.9	19.9	20.1
LnGrp LOS	D		C	F		C	D	F	F	D	B	C
Approach Vol, veh/h		241			904			1776			985	
Approach Delay, s/veh		37.3			225.8			87.6			23.0	
Approach LOS		D			F			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	11.5	29.0		13.8	8.2	32.4		25.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	11.5	25.0		16.0	8.6	27.9		21.0
Max Q Clear Time (g_c+I1), s	7.4	27.0		9.3	4.6	12.0		23.0
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	13.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	100.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	617	168	243	78	117	72	194	701	132	115	122	563
Future Volume (veh/h)	617	168	243	78	117	72	194	701	132	115	122	563
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	617	168	243	78	117	72	194	701	132	115	122	563
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	594	404	362	101	244	140	238	1449	648	148	634	567
Arrive On Green	0.17	0.23	0.23	0.06	0.11	0.11	0.13	0.41	0.41	0.08	0.36	0.36
Sat Flow, veh/h	3442	1770	1583	1774	2164	1248	1774	3539	1583	1774	1770	1583
Grp Volume(v), veh/h	617	168	243	78	94	95	194	701	132	115	122	563
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1642	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.2	6.2	10.7	3.3	3.8	4.2	8.1	11.2	4.1	4.9	3.6	27.1
Cycle Q Clear(g_c), s	13.2	6.2	10.7	3.3	3.8	4.2	8.1	11.2	4.1	4.9	3.6	27.1
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	594	404	362	101	199	185	238	1449	648	148	634	567
V/C Ratio(X)	1.04	0.42	0.67	0.77	0.47	0.51	0.81	0.48	0.20	0.78	0.19	0.99
Avail Cap(c_a), veh/h	594	456	408	220	370	344	420	1449	648	290	634	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	25.2	26.9	35.6	31.8	32.0	32.2	16.6	14.6	34.4	16.9	24.4
Incr Delay (d2), s/veh	47.3	0.7	3.6	11.9	1.7	2.2	6.6	1.2	0.7	8.5	0.1	35.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	3.1	5.0	2.0	2.0	2.0	4.4	5.7	1.9	2.7	1.8	17.4
LnGrp Delay(d),s/veh	78.9	25.8	30.5	47.5	33.5	34.1	38.8	17.8	15.3	42.9	17.1	60.3
LnGrp LOS	F	C	C	D	C	C	D	B	B	D	B	E
Approach Vol, veh/h		1028			267			1027			800	
Approach Delay, s/veh		58.8			37.8			21.4			51.2	
Approach LOS		E			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	35.3	8.8	21.5	14.8	31.4	17.7	12.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	31.3	9.5	19.7	18.1	25.7	13.2	16.0
Max Q Clear Time (g_c+I1), s	6.9	13.2	5.3	12.7	10.1	29.1	15.2	6.2
Green Ext Time (p_c), s	0.1	9.6	0.0	2.0	0.3	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	351	18	119	182	0	0	0	0	351	3	91
Future Volume (veh/h)	0	351	18	119	182	0	0	0	0	351	3	91
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	351	18	119	182	0				351	3	91
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1803	92	151	2342	0				420	4	377
Arrive On Green	0.00	0.53	0.53	0.03	0.22	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3519	175	1774	3632	0				1760	15	1583
Grp Volume(v), veh/h	0	181	188	119	182	0				354	0	91
Grp Sat Flow(s),veh/h/ln	0	1770	1832	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	4.8	4.9	6.0	3.7	0.0				17.1	0.0	4.2
Cycle Q Clear(g_c), s	0.0	4.8	4.9	6.0	3.7	0.0				17.1	0.0	4.2
Prop In Lane	0.00		0.10	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	931	964	151	2342	0				423	0	377
V/C Ratio(X)	0.00	0.19	0.20	0.79	0.08	0.00				0.84	0.00	0.24
Avail Cap(c_a), veh/h	0	931	964	246	2342	0				878	0	783
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.2	11.3	42.9	13.3	0.0				32.6	0.0	27.7
Incr Delay (d2), s/veh	0.0	0.5	0.5	8.5	0.1	0.0				4.4	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
%ile BackOfQ(50%),veh/ln	0.0	2.5	2.6	3.3	1.8	0.0				8.9	0.0	1.9
LnGrp Delay(d),s/veh	0.0	11.7	11.7	51.4	13.4	0.0				37.0	0.0	28.0
LnGrp LOS		B	B	D	B					D		C
Approach Vol, veh/h		369			301						445	
Approach Delay, s/veh		11.7			28.4						35.2	
Approach LOS		B			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			12.2	51.9		26.0		64.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			12.5	19.5		44.5		36.5
Max Q Clear Time (g_c+I1), s			8.0	6.9		19.1		5.7
Green Ext Time (p_c), s			0.1	2.6		2.4		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	536	0	0	272	240	29	2	127	0	0	0
Future Volume (veh/h)	165	536	0	0	272	240	29	2	127	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	165	536	0	0	272	240	29	2	127			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2811	0	0	1146	979	176	12	167			
Arrive On Green	0.22	1.00	0.00	0.00	0.63	0.63	0.11	0.11	0.11			
Sat Flow, veh/h	1774	3632	0	0	1905	1547	1665	115	1583			
Grp Volume(v), veh/h	165	536	0	0	265	247	31	0	127			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1590	1780	0	1583			
Q Serve(g_s), s	8.0	0.0	0.0	0.0	5.8	6.1	1.4	0.0	7.0			
Cycle Q Clear(g_c), s	8.0	0.0	0.0	0.0	5.8	6.1	1.4	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		0.97	0.94		1.00			
Lane Grp Cap(c), veh/h	198	2811	0	0	1120	1006	188	0	167			
V/C Ratio(X)	0.83	0.19	0.00	0.00	0.24	0.25	0.16	0.00	0.76			
Avail Cap(c_a), veh/h	325	2811	0	0	1120	1006	623	0	554			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.2	0.0	0.0	0.0	7.1	7.2	36.6	0.0	39.1			
Incr Delay (d2), s/veh	9.1	0.1	0.0	0.0	0.5	0.6	0.4	0.0	6.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	0.1	0.0	0.0	3.0	2.8	0.7	0.0	3.4			
LnGrp Delay(d),s/veh	43.2	0.1	0.0	0.0	7.6	7.8	37.0	0.0	46.0			
LnGrp LOS	D	A			A	A	D		D			
Approach Vol, veh/h		701			512			158				
Approach Delay, s/veh		10.3			7.7			44.2				
Approach LOS		B			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		14.0		76.0			14.5	61.4
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		31.5		49.5			16.5	28.5
Max Q Clear Time (g_c+I1), s		9.0		2.0			10.0	8.1
Green Ext Time (p_c), s		0.5		8.3			0.2	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	58	83	0	15	16	104	1547	0	78	1277	129
Future Volume (veh/h)	159	58	83	0	15	16	104	1547	0	78	1277	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	173	63	90	0	16	17	113	1682	0	78	1277	129
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1747	782	2	574	513	144	1582	0	100	1456	453
Arrive On Green	0.12	0.49	0.49	0.00	0.32	0.32	0.08	0.31	0.00	0.06	0.29	0.29
Sat Flow, veh/h	1774	3539	1583	1774	1770	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	173	63	90	0	16	17	113	1682	0	78	1277	129
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	8.6	0.8	2.7	0.0	0.6	0.7	5.6	28.0	0.0	3.9	21.5	5.7
Cycle Q Clear(g_c), s	8.6	0.8	2.7	0.0	0.6	0.7	5.6	28.0	0.0	3.9	21.5	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	1747	782	2	574	513	144	1582	0	100	1456	453
V/C Ratio(X)	0.82	0.04	0.12	0.00	0.03	0.03	0.79	1.06	0.00	0.78	0.88	0.28
Avail Cap(c_a), veh/h	444	1747	782	99	574	513	282	1582	0	108	1456	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.91	0.91	1.00	1.00	0.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	38.6	11.7	12.2	0.0	20.7	20.8	40.6	31.0	0.0	41.9	30.6	25.0
Incr Delay (d2), s/veh	7.4	0.0	0.3	0.0	0.1	0.1	9.1	41.5	0.0	24.9	5.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.4	1.3	0.0	0.3	0.3	3.1	19.1	0.0	2.6	10.8	2.5
LnGrp Delay(d),s/veh	46.1	11.8	12.5	0.0	20.8	20.9	49.7	72.5	0.0	66.8	36.2	25.2
LnGrp LOS	D	B	B		C	C	D	F		E	D	C
Approach Vol, veh/h		326			33			1795			1484	
Approach Delay, s/veh		30.2			20.9			71.1			36.8	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	32.0	0.0	48.4	11.8	29.8	15.3	33.2
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	5.5	28.0	5.0	34.5	14.3	19.2	22.5	17.0
Max Q Clear Time (g_c+I1), s	5.9	30.0	0.0	4.7	7.6	23.5	10.6	2.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.1	0.0	0.3	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	53.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	631	259	235	888	0	0	0	0	648	2	177
Future Volume (veh/h)	0	631	259	235	888	0	0	0	0	648	2	177
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	631	259	235	888	0				649	0	177
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1173	481	267	2404	0				783	0	350
Arrive On Green	0.00	0.48	0.48	0.30	1.00	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	2543	1005	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	456	434	235	888	0				649	0	177
Grp Sat Flow(s),veh/h/ln	0	1770	1685	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	16.3	16.3	11.3	0.0	0.0				15.7	0.0	8.8
Cycle Q Clear(g_c), s	0.0	16.3	16.3	11.3	0.0	0.0				15.7	0.0	8.8
Prop In Lane	0.00		0.60	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	847	807	267	2404	0				783	0	350
V/C Ratio(X)	0.00	0.54	0.54	0.88	0.37	0.00				0.83	0.00	0.51
Avail Cap(c_a), veh/h	0	847	807	345	2404	0				1045	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.5	16.5	30.7	0.0	0.0				33.4	0.0	30.8
Incr Delay (d2), s/veh	0.0	2.4	2.6	2.1	0.0	0.0				4.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.4	8.1	5.6	0.0	0.0				8.1	0.0	3.9
LnGrp Delay(d),s/veh	0.0	18.9	19.0	32.8	0.0	0.0				37.7	0.0	31.9
LnGrp LOS		B	B	C	A					D		C
Approach Vol, veh/h		890			1123						826	
Approach Delay, s/veh		19.0			6.9						36.5	
Approach LOS		B			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	47.6		24.4		65.6
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			17.5	32.5		26.5		54.5
Max Q Clear Time (g_c+I1), s			13.3	18.3		17.7		2.0
Green Ext Time (p_c), s			0.2	9.2		2.2		17.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1055	0	0	813	1098	311	2	331	0	0	0
Future Volume (veh/h)	224	1055	0	0	813	1098	311	2	331	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	224	1055	0	0	813	1098	312	0	331			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	258	2357	0	0	833	745	830	0	370			
Arrive On Green	0.29	1.00	0.00	0.00	0.47	0.47	0.23	0.00	0.23			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	224	1055	0	0	813	1098	312	0	331			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	10.8	0.0	0.0	0.0	40.5	42.4	6.6	0.0	18.2			
Cycle Q Clear(g_c), s	10.8	0.0	0.0	0.0	40.5	42.4	6.6	0.0	18.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	258	2357	0	0	833	745	830	0	370			
V/C Ratio(X)	0.87	0.45	0.00	0.00	0.98	1.47	0.38	0.00	0.89			
Avail Cap(c_a), veh/h	404	2357	0	0	833	745	926	0	413			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	31.1	0.0	0.0	0.0	23.3	23.8	29.0	0.0	33.4			
Incr Delay (d2), s/veh	8.7	0.4	0.0	0.0	25.9	220.4	0.3	0.0	19.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.8	0.1	0.0	0.0	25.6	64.0	3.3	0.0	9.9			
LnGrp Delay(d),s/veh	39.8	0.4	0.0	0.0	49.3	244.3	29.2	0.0	53.2			
LnGrp LOS	D	A			D	F	C		D			
Approach Vol, veh/h		1279			1911			643				
Approach Delay, s/veh		7.3			161.3			41.6				
Approach LOS		A			F			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		25.6		64.4			17.6	46.9
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		23.5		57.5			20.5	32.5
Max Q Clear Time (g_c+I1), s		20.2		2.0			12.8	44.4
Green Ext Time (p_c), s		0.8		43.8			0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	89.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	751	161	103	1690	547	668	599	91	522	238	492
Future Volume (veh/h)	281	751	161	103	1690	547	668	599	91	522	238	492
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	281	751	161	103	1690	547	668	599	91	522	238	492
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	2304	717	132	1566	492	667	971	434	563	864	387
Arrive On Green	0.08	0.45	0.45	0.04	0.41	0.41	0.19	0.27	0.27	0.16	0.24	0.24
Sat Flow, veh/h	3442	5085	1583	3442	3835	1206	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	281	751	161	103	1488	749	668	599	91	522	238	492
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1650	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	19.6	22.7	14.9	7.1	98.0	98.0	46.5	35.5	10.6	35.9	13.1	58.6
Cycle Q Clear(g_c), s	19.6	22.7	14.9	7.1	98.0	98.0	46.5	35.5	10.6	35.9	13.1	58.6
Prop In Lane	1.00		1.00	1.00		0.73	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	285	2304	717	132	1384	674	667	971	434	563	864	387
V/C Ratio(X)	0.98	0.33	0.22	0.78	1.08	1.11	1.00	0.62	0.21	0.93	0.28	1.27
Avail Cap(c_a), veh/h	285	2304	717	179	1384	674	667	971	434	683	864	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	109.9	42.1	40.0	114.4	71.0	71.0	96.8	76.1	67.1	98.9	73.5	90.7
Incr Delay (d2), s/veh	48.9	0.1	0.2	14.3	47.2	69.3	35.3	2.9	1.1	16.9	0.2	141.5
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	11.3	10.7	6.5	3.7	55.0	57.7	25.4	17.8	4.8	18.4	6.4	40.9
LnGrp Delay(d),s/veh	158.8	42.2	40.1	128.7	118.2	140.3	132.0	79.0	68.2	115.8	73.7	232.2
LnGrp LOS	F	D	D	F	F	F	F	E	E	F	E	F
Approach Vol, veh/h		1193			2340			1358			1252	
Approach Delay, s/veh		69.4			125.7			104.4			153.6	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.8	69.8	13.7	112.7	51.0	62.6	24.4	102.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	47.6	57.5	12.5	105.4	46.5	58.6	19.9	98.0
Max Q Clear Time (g_c+I1), s	37.9	37.5	9.1	24.7	48.5	60.6	21.6	100.0
Green Ext Time (p_c), s	1.4	7.6	0.1	55.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	115.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1398	28	57	1898	31	11	0	72	68	0	0
Future Volume (veh/h)	17	1398	28	57	1898	31	11	0	72	68	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	1398	28	57	1898	31	11	0	72	68	0	0
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	3258	1015	75	3421	56	24	126	108	87	193	164
Arrive On Green	0.02	0.64	0.64	0.04	0.66	0.66	0.01	0.00	0.07	0.05	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5154	84	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	17	1398	28	57	1248	681	11	0	72	68	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1848	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.9	12.3	0.6	2.9	17.6	17.7	0.6	0.0	4.0	3.4	0.0	0.0
Cycle Q Clear(g_c), s	0.9	12.3	0.6	2.9	17.6	17.7	0.6	0.0	4.0	3.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	34	3258	1015	75	2250	1227	24	126	108	87	193	164
V/C Ratio(X)	0.50	0.43	0.03	0.76	0.55	0.56	0.46	0.00	0.67	0.78	0.00	0.00
Avail Cap(c_a), veh/h	108	3258	1015	187	2250	1227	108	383	325	101	375	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.09	0.09	0.09	1.00	0.00	1.00	0.99	0.00	0.00
Uniform Delay (d), s/veh	43.7	8.0	5.9	42.7	8.1	8.1	44.1	0.0	41.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.3	0.0	1.5	0.1	0.2	13.5	0.0	7.0	28.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.8	0.3	1.4	8.2	8.9	0.4	0.0	1.9	2.3	0.0	0.0
LnGrp Delay(d),s/veh	52.7	8.4	6.0	44.1	8.1	8.2	57.5	0.0	48.0	70.3	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	E		D	E		
Approach Vol, veh/h		1443			1986			83			68	
Approach Delay, s/veh		8.8			9.2			49.2			70.3	
Approach LOS		A			A			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	10.6	8.3	62.2	5.7	13.8	6.2	64.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.5	9.5	38.9	5.5	18.1	5.5	42.9
Max Q Clear Time (g_c+I1), s	5.4	6.0	4.9	14.3	2.6	0.0	2.9	19.7
Green Ext Time (p_c), s	0.0	0.1	0.0	22.2	0.0	0.0	0.0	21.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	31	17	141	107	485	13	728	61	53	414	25
Future Volume (veh/h)	13	31	17	141	107	485	13	728	61	53	414	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	31	17	141	107	485	13	728	61	53	414	25
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	368	202	494	606	515	27	1600	134	72	1728	104
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.02	0.48	0.48	0.04	0.51	0.51
Sat Flow, veh/h	821	1132	621	1352	1863	1583	1774	3307	277	1774	3392	204
Grp Volume(v), veh/h	13	0	48	141	107	485	13	389	400	53	215	224
Grp Sat Flow(s),veh/h/ln	821	0	1753	1352	1863	1583	1774	1770	1814	1774	1770	1827
Q Serve(g_s), s	1.0	0.0	1.7	7.3	3.7	26.8	0.7	13.1	13.1	2.7	6.1	6.2
Cycle Q Clear(g_c), s	4.7	0.0	1.7	9.0	3.7	26.8	0.7	13.1	13.1	2.7	6.1	6.2
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.15	1.00		0.11
Lane Grp Cap(c), veh/h	313	0	570	494	606	515	27	856	878	72	901	930
V/C Ratio(X)	0.04	0.00	0.08	0.29	0.18	0.94	0.48	0.45	0.46	0.73	0.24	0.24
Avail Cap(c_a), veh/h	320	0	584	505	621	528	335	856	878	335	901	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	21.1	24.2	21.7	29.5	43.9	15.4	15.4	42.7	12.3	12.3
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.1	14.7	12.3	1.7	1.7	13.3	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.8	2.7	1.9	13.8	0.4	6.8	7.0	1.6	3.1	3.3
LnGrp Delay(d),s/veh	23.5	0.0	21.1	24.3	21.8	44.2	56.2	17.1	17.1	55.9	13.0	13.0
LnGrp LOS	C		C	C	C	D	E	B	B	E	B	B
Approach Vol, veh/h		61			733			802			492	
Approach Delay, s/veh		21.6			37.1			17.7			17.6	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	48.1		33.8	5.9	50.3		33.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.0	29.5		30.0	17.0	29.5		30.0
Max Q Clear Time (g_c+I1), s	4.7	15.1		6.7	2.7	8.2		28.8
Green Ext Time (p_c), s	0.1	6.3		3.2	0.0	7.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	253	22	11	608	149	136	204	17	164	214	305
Future Volume (veh/h)	183	253	22	11	608	149	136	204	17	164	214	305
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	183	253	22	12	661	162	148	222	18	178	233	332
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1254	108	26	765	187	182	982	79	214	556	497
Arrive On Green	0.12	0.38	0.38	0.01	0.27	0.27	0.10	0.30	0.30	0.12	0.31	0.31
Sat Flow, veh/h	1774	3298	285	1774	2820	690	1774	3318	267	1774	1770	1583
Grp Volume(v), veh/h	183	135	140	12	415	408	148	118	122	178	233	332
Grp Sat Flow(s),veh/h/ln	1774	1770	1813	1774	1770	1741	1774	1770	1816	1774	1770	1583
Q Serve(g_s), s	9.1	4.6	4.7	0.6	20.1	20.1	7.4	4.5	4.6	8.8	9.4	16.4
Cycle Q Clear(g_c), s	9.1	4.6	4.7	0.6	20.1	20.1	7.4	4.5	4.6	8.8	9.4	16.4
Prop In Lane	1.00		0.16	1.00		0.40	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	219	673	689	26	480	472	182	524	537	214	556	497
V/C Ratio(X)	0.84	0.20	0.20	0.47	0.86	0.87	0.81	0.22	0.23	0.83	0.42	0.67
Avail Cap(c_a), veh/h	286	696	713	101	511	503	246	524	537	286	556	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	18.7	18.7	44.0	31.2	31.2	39.5	23.9	23.9	38.7	24.4	26.8
Incr Delay (d2), s/veh	14.9	0.1	0.1	12.8	13.7	14.0	13.9	1.0	1.0	14.3	0.5	3.4
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	5.3	2.3	2.4	0.4	11.6	11.5	4.3	2.3	2.4	5.2	4.7	7.6
LnGrp Delay(d),s/veh	53.5	18.9	18.9	56.8	44.9	45.3	53.5	24.9	24.9	53.0	24.9	30.2
LnGrp LOS	D	B	B	E	D	D	D	C	C	D	C	C
Approach Vol, veh/h		458			835			388			743	
Approach Delay, s/veh		32.7			45.3			35.8			34.0	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	30.6	5.8	38.2	13.7	32.3	15.6	28.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	14.5	18.0	5.1	35.4	12.5	20.0	14.5	26.0
Max Q Clear Time (g_c+I1), s	10.8	6.6	2.6	6.7	9.4	18.4	11.1	22.1
Green Ext Time (p_c), s	0.2	3.9	0.0	7.9	0.1	0.8	0.1	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	0	137	0	0	0	253	721	0	3	392	183
Future Volume (veh/h)	178	0	137	0	0	0	253	721	0	3	392	183
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	178	0	137	0	0	0	275	784	0	3	426	199
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	0	251	0	296	0	353	2471	0	7	2122	949
Arrive On Green	0.16	0.00	0.16	0.00	0.00	0.00	0.10	0.70	0.00	0.00	0.60	0.60
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	178	0	137	0	0	0	275	784	0	3	426	199
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	10.9	0.0	7.2	0.0	0.0	0.0	7.0	7.7	0.0	0.2	4.9	5.2
Cycle Q Clear(g_c), s	10.9	0.0	7.2	0.0	0.0	0.0	7.0	7.7	0.0	0.2	4.9	5.2
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	0	251	0	296	0	353	2471	0	7	2122	949
V/C Ratio(X)	0.59	0.00	0.54	0.00	0.00	0.00	0.78	0.32	0.00	0.42	0.20	0.21
Avail Cap(c_a), veh/h	723	0	721	0	849	0	440	2471	0	306	2122	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	34.9	0.0	0.0	0.0	39.4	5.3	0.0	44.7	8.2	8.3
Incr Delay (d2), s/veh	1.8	0.0	1.8	0.0	0.0	0.0	6.9	0.3	0.0	35.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.3	0.0	0.0	0.0	3.7	3.8	0.0	0.1	2.4	2.3
LnGrp Delay(d),s/veh	38.2	0.0	36.7	0.0	0.0	0.0	46.3	5.6	0.0	79.8	8.2	8.4
LnGrp LOS	D		D				D	A		E	A	A
Approach Vol, veh/h		315			0			1059			628	
Approach Delay, s/veh		37.6			0.0			16.2			8.6	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	66.8		18.3	13.7	58.0		18.3
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	15.5	21.0		41.0	11.5	25.0		41.0
Max Q Clear Time (g_c+I1), s	2.2	9.7		12.9	9.0	7.2		0.0
Green Ext Time (p_c), s	0.0	6.5		1.4	0.2	6.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Future Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	170	779	0	13	1221	182	352	323	22	193	383	284
Adj No. of Lanes	1	3	1	1	2	0	0	1	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1877	585	21	941	140	288	264	482	151	299	389
Arrive On Green	0.08	0.37	0.00	0.01	0.30	0.30	0.30	0.30	0.30	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1583	1774	3093	459	947	869	1583	614	1218	1583
Grp Volume(v), veh/h	170	779	0	13	696	707	675	0	22	576	0	284
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1782	1815	0	1583	1832	0	1583
Q Serve(g_s), s	18.5	27.4	0.0	1.8	73.0	73.0	73.0	0.0	2.4	59.0	0.0	39.6
Cycle Q Clear(g_c), s	18.5	27.4	0.0	1.8	73.0	73.0	73.0	0.0	2.4	59.0	0.0	39.6
Prop In Lane	1.00		1.00	1.00		0.26	0.52		1.00	0.34		1.00
Lane Grp Cap(c), veh/h	137	1877	585	21	538	542	552	0	482	450	0	389
V/C Ratio(X)	1.24	0.41	0.00	0.61	1.29	1.30	1.22	0.00	0.05	1.28	0.00	0.73
Avail Cap(c_a), veh/h	137	1877	585	44	538	542	552	0	482	450	0	389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	110.8	56.4	0.0	118.0	83.5	83.5	83.5	0.0	58.9	90.5	0.0	83.2
Incr Delay (d2), s/veh	156.5	0.1	0.0	24.6	145.4	149.9	115.6	0.0	0.2	141.7	0.0	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	12.9	0.0	1.0	57.5	58.6	54.4	0.0	1.1	47.6	0.0	18.1
LnGrp Delay(d),s/veh	267.2	56.5	0.0	142.6	228.9	233.4	199.1	0.0	59.1	232.2	0.0	90.0
LnGrp LOS	F	E		F	F	F	F		E	F		F
Approach Vol, veh/h		949			1416			697			860	
Approach Delay, s/veh		94.3			230.4			194.7			185.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		77.0	7.4	92.6		63.0	23.0	77.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		73.0	6.0	85.5		59.0	18.5	73.0
Max Q Clear Time (g_c+I1), s		75.0	3.8	29.4		61.0	20.5	75.0
Green Ext Time (p_c), s		0.0	0.0	26.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	181.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Future Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	170	779	0	13	1221	182	352	323	22	193	383	284
Adj No. of Lanes	1	3	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	2089	650	21	1044	155	318	674	46	208	327	243
Arrive On Green	0.09	0.41	0.00	0.01	0.34	0.34	0.18	0.39	0.39	0.12	0.33	0.33
Sat Flow, veh/h	1774	5085	1583	1774	3093	459	1774	1725	117	1774	995	738
Grp Volume(v), veh/h	170	779	0	13	696	707	352	0	345	193	0	667
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1782	1774	0	1842	1774	0	1733
Q Serve(g_s), s	20.5	25.6	0.0	1.8	81.0	81.0	43.0	0.0	33.7	25.9	0.0	79.0
Cycle Q Clear(g_c), s	20.5	25.6	0.0	1.8	81.0	81.0	43.0	0.0	33.7	25.9	0.0	79.0
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.06	1.00		0.43
Lane Grp Cap(c), veh/h	152	2089	650	21	597	601	318	0	720	208	0	570
V/C Ratio(X)	1.12	0.37	0.00	0.61	1.17	1.18	1.11	0.00	0.48	0.93	0.00	1.17
Avail Cap(c_a), veh/h	152	2089	650	44	597	601	318	0	720	281	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	109.8	49.2	0.0	118.0	79.5	79.5	98.5	0.0	54.8	104.9	0.0	80.5
Incr Delay (d2), s/veh	109.6	0.1	0.0	24.6	91.7	95.5	82.5	0.0	2.3	29.2	0.0	94.0
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	14.7	12.0	0.0	1.0	54.9	55.9	28.4	0.0	17.6	14.4	0.0	52.8
LnGrp Delay(d),s/veh	219.3	49.3	0.0	142.6	171.2	175.0	181.0	0.0	57.1	134.1	0.0	174.5
LnGrp LOS	F	D		F	F	F	F		E	F		F
Approach Vol, veh/h		949			1416			697			860	
Approach Delay, s/veh		79.8			172.9			119.7			165.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.2	97.8	7.4	102.6	47.0	83.0	25.0	85.0
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	38.0	84.0	6.0	95.5	43.0	79.0	20.5	81.0
Max Q Clear Time (g_c+I1), s	27.9	35.7	3.8	27.6	45.0	81.0	22.5	83.0
Green Ext Time (p_c), s	0.4	8.1	0.0	27.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	139.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Future Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	170	779	0	13	1221	182	352	323	22	193	383	284
Adj No. of Lanes	1	3	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	2089	650	21	1044	155	318	728	619	208	327	243
Arrive On Green	0.09	0.41	0.00	0.01	0.34	0.34	0.18	0.39	0.39	0.12	0.33	0.33
Sat Flow, veh/h	1774	5085	1583	1774	3093	459	1774	1863	1583	1774	995	738
Grp Volume(v), veh/h	170	779	0	13	696	707	352	323	22	193	0	667
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1782	1774	1863	1583	1774	0	1733
Q Serve(g_s), s	20.5	25.6	0.0	1.8	81.0	81.0	43.0	30.7	2.1	25.9	0.0	79.0
Cycle Q Clear(g_c), s	20.5	25.6	0.0	1.8	81.0	81.0	43.0	30.7	2.1	25.9	0.0	79.0
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	152	2089	650	21	597	601	318	728	619	208	0	570
V/C Ratio(X)	1.12	0.37	0.00	0.61	1.17	1.18	1.11	0.44	0.04	0.93	0.00	1.17
Avail Cap(c_a), veh/h	152	2089	650	44	597	601	318	728	619	281	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	109.8	49.2	0.0	118.0	79.5	79.5	98.5	53.9	45.2	104.9	0.0	80.5
Incr Delay (d2), s/veh	109.6	0.1	0.0	24.6	91.7	95.5	82.5	2.0	0.1	29.2	0.0	94.0
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	14.7	12.0	0.0	1.0	54.9	55.9	28.4	16.2	0.9	14.4	0.0	52.8
LnGrp Delay(d),s/veh	219.3	49.3	0.0	142.6	171.2	175.0	181.0	55.8	45.3	134.1	0.0	174.5
LnGrp LOS	F	D		F	F	F	F	E	D	F		F
Approach Vol, veh/h		949			1416			697			860	
Approach Delay, s/veh		79.8			172.9			118.7			165.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.2	97.8	7.4	102.6	47.0	83.0	25.0	85.0
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	38.0	84.0	6.0	95.5	43.0	79.0	20.5	81.0
Max Q Clear Time (g_c+I1), s	27.9	32.7	3.8	27.6	45.0	81.0	22.5	83.0
Green Ext Time (p_c), s	0.4	8.0	0.0	27.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	139.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Future Volume (veh/h)	170	779	514	13	1221	182	352	323	22	193	383	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	170	779	0	13	1221	182	352	323	22	193	383	284
Adj No. of Lanes	1	3	1	1	2	0	2	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	2261	704	21	1121	166	615	308	21	182	360	468
Arrive On Green	0.09	0.44	0.00	0.01	0.36	0.36	0.18	0.18	0.18	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1583	1774	3093	459	3442	1725	117	614	1218	1583
Grp Volume(v), veh/h	170	779	0	13	696	707	352	0	345	576	0	284
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1782	1721	0	1842	1832	0	1583
Q Serve(g_s), s	22.6	24.1	0.0	1.8	87.0	87.0	22.5	0.0	42.9	71.0	0.0	36.9
Cycle Q Clear(g_c), s	22.6	24.1	0.0	1.8	87.0	87.0	22.5	0.0	42.9	71.0	0.0	36.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.06	0.34		1.00
Lane Grp Cap(c), veh/h	167	2261	704	21	641	646	615	0	329	542	0	468
V/C Ratio(X)	1.02	0.34	0.00	0.61	1.09	1.09	0.57	0.00	1.05	1.06	0.00	0.61
Avail Cap(c_a), veh/h	167	2261	704	44	641	646	615	0	329	542	0	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	108.7	43.7	0.0	118.0	76.5	76.5	90.2	0.0	98.6	84.5	0.0	72.5
Incr Delay (d2), s/veh	74.3	0.1	0.0	24.6	60.8	64.0	3.8	0.0	62.7	56.4	0.0	2.2
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.5	11.3	0.0	1.0	53.4	54.4	11.0	0.0	27.6	44.5	0.0	16.5
LnGrp Delay(d),s/veh	183.2	43.8	0.0	142.6	137.3	140.5	94.0	0.0	161.2	140.9	0.0	74.7
LnGrp LOS	F	D		F	F	F	F		F	F		E
Approach Vol, veh/h		949			1416			697			860	
Approach Delay, s/veh		68.8			138.9			127.3			119.1	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		46.9	7.4	110.7		75.0	27.1	91.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		42.9	6.0	103.6		71.0	22.6	87.0
Max Q Clear Time (g_c+I1), s		44.9	3.8	26.1		73.0	24.6	89.0
Green Ext Time (p_c), s		0.0	0.0	29.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	115.5
HCM 2010 LOS	F

HCM 2010 Signalized Intersection Summary
13: Driveway/Lake Perris Drive

1/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	647	0	0	1031	23	0	0	0	9	0	19
Future Volume (veh/h)	30	647	0	0	1031	23	0	0	0	9	0	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	30	647	0	0	1031	23	0	0	0	9	0	19
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	2806	0	4	2323	1028	0	4	0	14	0	29
Arrive On Green	0.03	0.79	0.00	0.00	0.66	0.66	0.00	0.00	0.00	0.03	0.00	0.03
Sat Flow, veh/h	1774	3632	0	1774	3539	1567	0	1863	0	527	0	1113
Grp Volume(v), veh/h	30	647	0	0	1031	23	0	0	0	28	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1567	0	1863	0	1640	0	0
Q Serve(g_s), s	0.7	2.1	0.0	0.0	6.3	0.2	0.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	0.7	2.1	0.0	0.0	6.3	0.2	0.0	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	0.32		0.68
Lane Grp Cap(c), veh/h	62	2806	0	4	2323	1028	0	4	0	43	0	0
V/C Ratio(X)	0.49	0.23	0.00	0.00	0.44	0.02	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap(c_a), veh/h	822	14439	0	200	13199	5843	0	758	0	741	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.0	1.2	0.0	0.0	3.7	2.7	0.0	0.0	0.0	21.3	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	15.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.0	0.0	3.1	0.1	0.0	0.0	0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh	26.7	1.2	0.0	0.0	3.8	2.7	0.0	0.0	0.0	36.5	0.0	0.0
LnGrp LOS	C	A			A	A				D		
Approach Vol, veh/h		677			1054			0			28	
Approach Delay, s/veh		2.3			3.8			0.0			36.5	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	39.1		5.2	6.0	33.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	180.5		20.0	20.5	165.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	4.1		2.7	2.7	8.3
Green Ext Time (p_c), s		0.0	0.0	20.8		0.1	0.0	20.8

Intersection Summary	
HCM 2010 Ctrl Delay	3.8
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	432	159	425	275	125	139	675	420	234	733	23
Future Volume (veh/h)	28	432	159	425	275	125	139	675	420	234	733	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	28	432	159	425	275	125	139	675	420	234	733	23
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	463	169	416	927	410	175	1209	376	271	1479	46
Arrive On Green	0.03	0.18	0.18	0.23	0.39	0.39	0.10	0.24	0.24	0.15	0.29	0.29
Sat Flow, veh/h	1774	2542	927	1774	2388	1058	1774	5085	1583	1774	5066	159
Grp Volume(v), veh/h	28	299	292	425	202	198	139	675	420	234	490	266
Grp Sat Flow(s),veh/h/ln	1774	1770	1699	1774	1770	1676	1774	1695	1583	1774	1695	1835
Q Serve(g_s), s	1.4	14.7	14.9	20.6	6.9	7.2	6.7	10.3	20.9	11.3	10.5	10.6
Cycle Q Clear(g_c), s	1.4	14.7	14.9	20.6	6.9	7.2	6.7	10.3	20.9	11.3	10.5	10.6
Prop In Lane	1.00		0.55	1.00		0.63	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	50	322	309	416	687	651	175	1209	376	271	990	536
V/C Ratio(X)	0.56	0.93	0.94	1.02	0.29	0.30	0.80	0.56	1.12	0.86	0.50	0.50
Avail Cap(c_a), veh/h	137	322	309	416	687	651	373	1209	376	313	990	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	35.4	35.5	33.7	18.6	18.7	38.8	29.5	33.5	36.4	25.8	25.8
Incr Delay (d2), s/veh	9.5	32.5	36.2	50.0	0.2	0.3	8.0	1.9	81.6	19.4	0.4	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	0.8	10.1	10.1	15.8	3.4	3.3	3.7	5.0	17.6	7.0	5.0	5.4
LnGrp Delay(d),s/veh	51.6	67.9	71.7	83.6	18.8	18.9	46.7	31.3	115.1	55.8	26.2	26.5
LnGrp LOS	D	E	E	F	B	B	D	C	F	E	C	C
Approach Vol, veh/h		619			825			1234			990	
Approach Delay, s/veh		69.0			52.2			61.6			33.2	
Approach LOS		E			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	24.9	25.1	20.0	13.2	29.7	7.0	38.1
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	15.5	20.9	20.6	16.0	18.5	17.9	6.8	29.8
Max Q Clear Time (g_c+I1), s	13.3	22.9	22.6	16.9	8.7	12.6	3.4	9.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.2	4.0	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	428	282	465	543	73	238	541	451	230	421	185
Future Volume (veh/h)	284	428	282	465	543	73	238	541	451	230	421	185
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	284	428	282	465	543	73	238	541	451	230	421	185
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	651	304	571	1163	154	330	1232	551	309	1210	541
Arrive On Green	0.10	0.19	0.19	0.17	0.26	0.26	0.10	0.35	0.35	0.09	0.34	0.34
Sat Flow, veh/h	3442	3390	1583	3442	4544	602	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	284	428	282	465	403	213	238	541	451	230	421	185
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1756	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.7	9.7	14.6	10.9	8.4	8.5	5.6	9.8	21.6	5.4	7.4	7.3
Cycle Q Clear(g_c), s	6.7	9.7	14.6	10.9	8.4	8.5	5.6	9.8	21.6	5.4	7.4	7.3
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	651	304	571	868	450	330	1232	551	309	1210	541
V/C Ratio(X)	0.81	0.66	0.93	0.81	0.46	0.47	0.72	0.44	0.82	0.74	0.35	0.34
Avail Cap(c_a), veh/h	351	651	304	806	1099	569	599	1232	551	351	1210	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	31.1	33.1	33.5	26.2	26.2	36.6	20.9	24.7	37.0	20.5	20.4
Incr Delay (d2), s/veh	13.2	2.4	33.2	4.4	0.4	0.8	3.0	1.1	12.7	7.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.7	9.1	5.5	4.0	4.2	2.8	5.0	11.4	2.9	3.7	3.2
LnGrp Delay(d),s/veh	49.8	33.5	66.3	37.9	26.6	27.0	39.6	22.0	37.5	44.3	20.6	20.8
LnGrp LOS	D	C	E	D	C	C	D	C	D	D	C	C
Approach Vol, veh/h		994			1081			1230			836	
Approach Delay, s/veh		47.5			31.5			31.1			27.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	33.0	18.3	20.0	12.5	32.5	13.0	25.3
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	29.0	19.5	16.0	14.5	23.0	8.5	27.0
Max Q Clear Time (g_c+I1), s	7.4	23.6	12.9	16.6	7.6	9.4	8.7	10.5
Green Ext Time (p_c), s	0.1	3.6	1.0	0.0	0.4	7.0	0.0	7.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	125	59	418	51	93	26	958	338	123	1002	16
Future Volume (veh/h)	21	125	59	418	51	93	26	958	338	123	1002	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	125	59	418	51	93	26	958	338	123	1002	16
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	170	170	429	52	428	49	1195	421	157	1971	31
Arrive On Green	0.11	0.11	0.11	0.27	0.27	0.27	0.03	0.32	0.32	0.09	0.38	0.38
Sat Flow, veh/h	266	1583	1583	1589	194	1583	1774	3714	1308	1774	5156	82
Grp Volume(v), veh/h	146	0	59	469	0	93	26	874	422	123	659	359
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1783	0	1583	1774	1695	1632	1774	1695	1848
Q Serve(g_s), s	5.9	0.0	2.7	20.2	0.0	3.5	1.1	18.3	18.4	5.3	11.6	11.6
Cycle Q Clear(g_c), s	5.9	0.0	2.7	20.2	0.0	3.5	1.1	18.3	18.4	5.3	11.6	11.6
Prop In Lane	0.14		1.00	0.89		1.00	1.00		0.80	1.00		0.04
Lane Grp Cap(c), veh/h	199	0	170	482	0	428	49	1091	525	157	1296	707
V/C Ratio(X)	0.73	0.00	0.35	0.97	0.00	0.22	0.53	0.80	0.80	0.79	0.51	0.51
Avail Cap(c_a), veh/h	381	0	326	482	0	428	196	1091	525	263	1296	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	0.0	32.1	28.1	0.0	22.0	37.3	24.1	24.1	34.7	18.4	18.4
Incr Delay (d2), s/veh	5.2	0.0	1.2	34.0	0.0	0.3	8.6	6.2	12.3	8.4	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.2	14.5	0.0	1.6	0.7	9.4	10.0	3.0	5.5	6.0
LnGrp Delay(d),s/veh	38.8	0.0	33.4	62.1	0.0	22.2	45.9	30.3	36.4	43.1	18.7	19.0
LnGrp LOS	D		C	E		C	D	C	D	D	B	B
Approach Vol, veh/h		205			562			1322			1141	
Approach Delay, s/veh		37.2			55.5			32.6			21.4	
Approach LOS		D			E			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	11.4	29.0		12.4	6.6	33.7		25.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	11.5	25.0		16.0	8.6	27.9		21.0
Max Q Clear Time (g_c+I1), s	7.3	20.4		7.9	3.1	13.6		22.2
Green Ext Time (p_c), s	0.1	4.1		0.5	0.0	11.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	65	143	70	42	47	58	619	55	94	750	319
Future Volume (veh/h)	311	65	143	70	42	47	58	619	55	94	750	319
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	311	65	143	70	42	47	58	619	55	94	750	319
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	428	260	233	97	137	122	88	1673	748	122	1192	506
Arrive On Green	0.12	0.15	0.15	0.05	0.08	0.08	0.05	0.47	0.47	0.07	0.49	0.49
Sat Flow, veh/h	3442	1770	1583	1774	1770	1583	1774	3539	1583	1774	2421	1029
Grp Volume(v), veh/h	311	65	143	70	42	47	58	619	55	94	548	521
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1681
Q Serve(g_s), s	5.8	2.2	5.6	2.6	1.5	1.9	2.1	7.4	1.3	3.4	15.1	15.1
Cycle Q Clear(g_c), s	5.8	2.2	5.6	2.6	1.5	1.9	2.1	7.4	1.3	3.4	15.1	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	428	260	233	97	137	122	88	1673	748	122	871	827
V/C Ratio(X)	0.73	0.25	0.61	0.72	0.31	0.38	0.66	0.37	0.07	0.77	0.63	0.63
Avail Cap(c_a), veh/h	686	526	471	255	428	383	485	1673	748	335	871	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	25.0	26.5	30.8	28.9	29.1	30.9	11.2	9.5	30.3	12.4	12.4
Incr Delay (d2), s/veh	2.4	0.5	2.6	9.7	1.3	2.0	8.2	0.6	0.2	9.7	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.1	2.6	1.5	0.8	0.9	1.2	3.8	0.6	2.0	7.7	7.3
LnGrp Delay(d),s/veh	30.3	25.5	29.1	40.5	30.1	31.0	39.1	11.8	9.7	40.0	13.8	13.9
LnGrp LOS	C	C	C	D	C	C	D	B	A	D	B	B
Approach Vol, veh/h		519			159			732			1163	
Approach Delay, s/veh		29.3			34.9			13.8			16.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	35.3	8.1	13.7	7.8	36.6	12.7	9.1
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	31.3	9.5	19.7	18.1	25.7	13.2	16.0
Max Q Clear Time (g_c+I1), s	5.4	9.4	4.6	7.6	4.1	17.1	7.8	3.9
Green Ext Time (p_c), s	0.1	12.1	0.0	1.2	0.1	6.2	0.5	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	222	10	110	98	0	0	0	0	377	7	249
Future Volume (veh/h)	0	222	10	110	98	0	0	0	0	377	7	249
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	222	10	110	98	0				377	7	249
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1778	80	142	2285	0				444	8	403
Arrive On Green	0.00	0.52	0.52	0.08	0.65	0.00				0.25	0.25	0.25
Sat Flow, veh/h	0	3543	155	1774	3632	0				1743	32	1583
Grp Volume(v), veh/h	0	113	119	110	98	0				384	0	249
Grp Sat Flow(s),veh/h/ln	0	1770	1835	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	3.0	3.0	5.5	0.9	0.0				18.5	0.0	12.5
Cycle Q Clear(g_c), s	0.0	3.0	3.0	5.5	0.9	0.0				18.5	0.0	12.5
Prop In Lane	0.00		0.08	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	912	946	142	2285	0				452	0	403
V/C Ratio(X)	0.00	0.12	0.13	0.77	0.04	0.00				0.85	0.00	0.62
Avail Cap(c_a), veh/h	0	912	946	530	2285	0				621	0	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.3	11.3	40.6	5.8	0.0				31.9	0.0	29.7
Incr Delay (d2), s/veh	0.0	0.3	0.3	8.5	0.0	0.0				8.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	1.6	3.0	0.4	0.0				10.1	0.0	5.6
LnGrp Delay(d),s/veh	0.0	11.6	11.6	49.1	5.9	0.0				40.0	0.0	31.2
LnGrp LOS		B	B	D	A					D		C
Approach Vol, veh/h		232			208						633	
Approach Delay, s/veh		11.6			28.7						36.5	
Approach LOS		B			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			11.7	50.9		27.4		62.6
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			26.9	18.1		31.5		49.5
Max Q Clear Time (g_c+I1), s			7.5	5.0		20.5		2.9
Green Ext Time (p_c), s			0.2	1.5		2.4		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	432	0	0	203	295	6	3	104	0	0	0
Future Volume (veh/h)	167	432	0	0	203	295	6	3	104	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	167	432	0	0	203	295	6	3	104			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	205	2872	0	0	1143	1023	106	53	140			
Arrive On Green	0.12	0.81	0.00	0.00	0.65	0.65	0.09	0.09	0.09			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1202	601	1583			
Grp Volume(v), veh/h	167	432	0	0	203	295	9	0	104			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1803	0	1583			
Q Serve(g_s), s	8.3	2.4	0.0	0.0	4.1	7.3	0.4	0.0	5.8			
Cycle Q Clear(g_c), s	8.3	2.4	0.0	0.0	4.1	7.3	0.4	0.0	5.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.67		1.00			
Lane Grp Cap(c), veh/h	205	2872	0	0	1143	1023	160	0	140			
V/C Ratio(X)	0.82	0.15	0.00	0.00	0.18	0.29	0.06	0.00	0.74			
Avail Cap(c_a), veh/h	369	2872	0	0	1143	1023	361	0	317			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.9	1.8	0.0	0.0	6.4	6.9	37.6	0.0	40.0			
Incr Delay (d2), s/veh	7.7	0.1	0.0	0.0	0.3	0.7	0.1	0.0	7.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	1.2	0.0	0.0	2.1	3.3	0.2	0.0	2.8			
LnGrp Delay(d),s/veh	46.6	1.9	0.0	0.0	6.7	7.6	37.7	0.0	47.5			
LnGrp LOS	D	A			A	A	D		D			
Approach Vol, veh/h		599			498			113				
Approach Delay, s/veh		14.4			7.3			46.7				
Approach LOS		B			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		12.5		77.5			14.9	62.7
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			18.7	39.8
Max Q Clear Time (g_c+I1), s		7.8		4.4			10.3	9.3
Green Ext Time (p_c), s		0.2		7.2			0.3	6.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	36	205	0	8	7	37	855	0	45	1089	107
Future Volume (veh/h)	142	36	205	0	8	7	37	855	0	45	1089	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	154	39	223	0	9	8	40	929	0	45	1089	107
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1916	857	2	727	565	62	1435	0	67	1447	451
Arrive On Green	0.11	0.54	0.54	0.00	0.38	0.38	0.04	0.28	0.00	0.04	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	1898	1475	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	154	39	223	0	8	9	40	929	0	45	1089	107
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1603	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	7.6	0.5	6.8	0.0	0.3	0.3	2.0	14.4	0.0	2.3	17.5	4.7
Cycle Q Clear(g_c), s	7.6	0.5	6.8	0.0	0.3	0.3	2.0	14.4	0.0	2.3	17.5	4.7
Prop In Lane	1.00		1.00	1.00		0.92	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1916	857	2	678	614	62	1435	0	67	1447	451
V/C Ratio(X)	0.80	0.02	0.26	0.00	0.01	0.01	0.64	0.65	0.00	0.68	0.75	0.24
Avail Cap(c_a), veh/h	444	1916	857	99	678	614	136	1435	0	148	1469	457
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	0.91	0.91	1.00	1.00	0.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	39.2	9.6	11.0	0.0	17.2	17.2	42.9	28.4	0.0	42.8	29.3	24.7
Incr Delay (d2), s/veh	7.6	0.0	0.7	0.0	0.0	0.0	10.5	2.3	0.0	9.9	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.2	3.1	0.0	0.1	0.1	1.2	7.0	0.0	1.3	8.4	2.1
LnGrp Delay(d),s/veh	46.8	9.6	11.8	0.0	17.2	17.2	53.4	30.6	0.0	52.7	31.2	24.9
LnGrp LOS	D	A	B		B	B	D	C		D	C	C
Approach Vol, veh/h		416			17			969			1241	
Approach Delay, s/veh		24.5			17.2			31.6			31.5	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	29.4	0.0	52.7	7.7	29.6	14.2	38.5
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	7.5	25.4	5.0	35.1	6.9	26.0	22.5	17.6
Max Q Clear Time (g_c+I1), s	4.3	16.4	0.0	8.8	4.0	19.5	9.6	2.3
Green Ext Time (p_c), s	0.0	7.3	0.0	1.1	0.0	5.4	0.3	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	688	329	253	653	0	0	0	0	895	1	260
Future Volume (veh/h)	0	688	329	253	653	0	0	0	0	895	1	260
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	688	329	253	653	0				896	0	260
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	998	477	283	2261	0				926	0	413
Arrive On Green	0.00	0.43	0.43	0.32	1.00	0.00				0.26	0.00	0.26
Sat Flow, veh/h	0	2418	1111	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	524	493	253	653	0				896	0	260
Grp Sat Flow(s),veh/h/ln	0	1770	1667	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	21.6	21.6	12.2	0.0	0.0				22.5	0.0	13.1
Cycle Q Clear(g_c), s	0.0	21.6	21.6	12.2	0.0	0.0				22.5	0.0	13.1
Prop In Lane	0.00		0.67	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	760	715	283	2261	0				926	0	413
V/C Ratio(X)	0.00	0.69	0.69	0.89	0.29	0.00				0.97	0.00	0.63
Avail Cap(c_a), veh/h	0	760	715	325	2261	0				926	0	413
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.51	0.51	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.8	20.8	29.9	0.0	0.0				32.9	0.0	29.4
Incr Delay (d2), s/veh	0.0	5.1	5.4	13.8	0.2	0.0				21.9	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.5	10.9	7.0	0.1	0.0				13.8	0.0	6.1
LnGrp Delay(d),s/veh	0.0	25.9	26.2	43.7	0.2	0.0				54.7	0.0	32.4
LnGrp LOS		C	C	D	A					D		C
Approach Vol, veh/h		1017			906						1156	
Approach Delay, s/veh		26.0			12.3						49.7	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.9	43.1		28.0		62.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			16.5	36.5		23.5		57.5
Max Q Clear Time (g_c+I1), s			14.2	23.6		24.5		2.0
Green Ext Time (p_c), s			0.2	8.2		0.0		16.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	1338	0	0	649	901	257	6	239	0	0	0
Future Volume (veh/h)	244	1338	0	0	649	901	257	6	239	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	244	1338	0	0	649	901	261	0	239			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	277	2566	0	0	918	822	621	0	277			
Arrive On Green	0.31	1.00	0.00	0.00	0.52	0.52	0.17	0.00	0.17			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	244	1338	0	0	649	901	261	0	239			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	11.7	0.0	0.0	0.0	25.1	46.7	5.9	0.0	13.2			
Cycle Q Clear(g_c), s	11.7	0.0	0.0	0.0	25.1	46.7	5.9	0.0	13.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	277	2566	0	0	918	822	621	0	277			
V/C Ratio(X)	0.88	0.52	0.00	0.00	0.71	1.10	0.42	0.00	0.86			
Avail Cap(c_a), veh/h	384	2566	0	0	918	822	710	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.51	0.51	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.2	0.0	0.0	0.0	16.4	21.6	33.1	0.0	36.1			
Incr Delay (d2), s/veh	9.0	0.4	0.0	0.0	4.6	61.1	0.5	0.0	19.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.4	0.1	0.0	0.0	13.2	34.0	2.9	0.0	7.3			
LnGrp Delay(d),s/veh	39.1	0.4	0.0	0.0	21.0	82.7	33.5	0.0	55.3			
LnGrp LOS	D	A			C	F	C		E			
Approach Vol, veh/h		1582			1550			500				
Approach Delay, s/veh		6.4			56.9			43.9				
Approach LOS		A			E			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		20.2		69.8			18.5	51.2
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			19.5	39.0
Max Q Clear Time (g_c+I1), s		15.2		2.0			13.7	48.7
Green Ext Time (p_c), s		0.5		43.8			0.3	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	192	296	144	946	271	407	406	96	424	349	292
Future Volume (veh/h)	244	192	296	144	946	271	407	406	96	424	349	292
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	192	296	144	946	271	407	406	96	424	349	292
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	1768	550	190	1245	356	470	1246	558	488	1265	566
Arrive On Green	0.09	0.35	0.35	0.06	0.32	0.32	0.14	0.35	0.35	0.14	0.36	0.36
Sat Flow, veh/h	3442	5085	1583	3442	3931	1123	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	244	192	296	144	815	402	407	406	96	424	349	292
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1665	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	11.5	4.2	24.7	6.8	35.7	35.8	19.1	13.8	6.9	19.9	11.6	23.9
Cycle Q Clear(g_c), s	11.5	4.2	24.7	6.8	35.7	35.8	19.1	13.8	6.9	19.9	11.6	23.9
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1768	550	190	1073	527	470	1246	558	488	1265	566
V/C Ratio(X)	0.82	0.11	0.54	0.76	0.76	0.76	0.87	0.33	0.17	0.87	0.28	0.52
Avail Cap(c_a), veh/h	637	2809	875	428	1667	819	992	1246	558	1118	1375	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.0	36.4	43.1	76.7	50.6	50.7	69.6	39.0	36.8	69.2	37.7	41.7
Incr Delay (d2), s/veh	5.7	0.0	0.8	6.1	1.1	2.3	4.9	0.7	0.7	4.9	0.1	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	5.7	2.0	10.9	3.4	16.8	16.8	9.4	6.9	3.1	9.8	5.7	10.6
LnGrp Delay(d),s/veh	79.7	36.5	43.9	82.8	51.8	53.0	74.6	39.7	37.5	74.0	37.8	42.4
LnGrp LOS	E	D	D	F	D	D	E	D	D	E	D	D
Approach Vol, veh/h		732			1361			909			1065	
Approach Delay, s/veh		53.9			55.4			55.1			53.5	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.9	62.0	13.6	61.3	27.0	62.9	18.7	56.2
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	53.5	58.0	20.5	91.0	47.5	64.0	30.5	81.0
Max Q Clear Time (g_c+I1), s	21.9	15.8	8.8	26.7	21.1	25.9	13.5	37.8
Green Ext Time (p_c), s	1.5	7.1	0.3	15.5	1.4	7.0	0.7	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	54.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1799	18	9	958	15	10	0	26	41	0	0
Future Volume (veh/h)	16	1799	18	9	958	15	10	0	26	41	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	16	1799	18	9	958	15	10	0	26	41	0	0
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	32	3548	1105	20	3562	56	22	103	88	63	147	125
Arrive On Green	0.02	0.70	0.70	0.01	0.69	0.69	0.01	0.00	0.06	0.04	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5158	81	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	16	1799	18	9	629	344	10	0	26	41	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1849	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.8	14.9	0.3	0.5	6.4	6.4	0.5	0.0	1.4	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.8	14.9	0.3	0.5	6.4	6.4	0.5	0.0	1.4	2.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	3548	1105	20	2341	1276	22	103	88	63	147	125
V/C Ratio(X)	0.49	0.51	0.02	0.45	0.27	0.27	0.46	0.00	0.30	0.65	0.00	0.00
Avail Cap(c_a), veh/h	134	3548	1105	99	2341	1276	99	373	317	134	410	348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.49	0.49	0.49	1.00	0.00	1.00	0.99	0.00	0.00
Uniform Delay (d), s/veh	43.8	6.4	4.2	44.2	5.3	5.3	44.1	0.0	40.8	42.8	0.0	0.0
Incr Delay (d2), s/veh	9.5	0.4	0.0	7.7	0.1	0.3	14.3	0.0	1.8	10.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	7.0	0.1	0.3	3.0	3.3	0.3	0.0	0.7	1.2	0.0	0.0
LnGrp Delay(d),s/veh	53.2	6.8	4.2	51.9	5.4	5.5	58.4	0.0	42.7	53.4	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	E		D	D		
Approach Vol, veh/h		1833			982			36			41	
Approach Delay, s/veh		7.2			5.9			47.0			53.4	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	9.5	5.5	67.3	5.6	11.6	6.1	66.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.8	18.0	5.0	42.2	5.0	19.8	6.8	40.4
Max Q Clear Time (g_c+I1), s	4.1	3.4	2.5	16.9	2.5	0.0	2.8	8.4
Green Ext Time (p_c), s	0.0	0.0	0.0	20.6	0.0	0.0	0.0	24.9

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	82	47	123	34	215	13	615	148	148	957	18
Future Volume (veh/h)	28	82	47	123	34	215	13	615	148	148	957	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	28	82	47	123	34	215	13	615	148	148	957	18
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	223	128	252	373	317	27	1547	372	184	2254	42
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.55	0.55	0.10	0.63	0.63
Sat Flow, veh/h	1126	1113	638	1256	1863	1583	1774	2832	680	1774	3554	67
Grp Volume(v), veh/h	28	0	129	123	34	215	13	384	379	148	477	498
Grp Sat Flow(s),veh/h/ln	1126	0	1750	1256	1863	1583	1774	1770	1743	1774	1770	1851
Q Serve(g_s), s	1.9	0.0	5.7	8.4	1.3	11.3	0.7	11.3	11.4	7.3	12.1	12.1
Cycle Q Clear(g_c), s	3.2	0.0	5.7	14.2	1.3	11.3	0.7	11.3	11.4	7.3	12.1	12.1
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.39	1.00		0.04
Lane Grp Cap(c), veh/h	289	0	350	252	373	317	27	967	952	184	1123	1174
V/C Ratio(X)	0.10	0.00	0.37	0.49	0.09	0.68	0.48	0.40	0.40	0.81	0.42	0.42
Avail Cap(c_a), veh/h	439	0	583	419	621	528	335	967	952	335	1123	1174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	31.1	37.2	29.3	33.3	43.9	11.8	11.8	39.5	8.2	8.2
Incr Delay (d2), s/veh	0.1	0.0	0.6	1.1	0.1	2.0	12.3	1.2	1.2	8.0	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.8	3.0	0.7	5.1	0.4	5.8	5.7	4.0	6.2	6.5
LnGrp Delay(d),s/veh	30.8	0.0	31.7	38.3	29.4	35.3	56.2	13.1	13.1	47.5	9.4	9.4
LnGrp LOS	C		C	D	C	D	E	B	B	D	A	A
Approach Vol, veh/h		157			372			776			1123	
Approach Delay, s/veh		31.5			35.7			13.8			14.4	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.8	53.7		22.5	5.9	61.6		22.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.0	29.5		30.0	17.0	29.5		30.0
Max Q Clear Time (g_c+I1), s	9.3	13.4		7.7	2.7	14.1		16.2
Green Ext Time (p_c), s	0.2	9.8		2.1	0.0	9.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	257	60	10	267	51	55	177	8	85	242	148
Future Volume (veh/h)	226	257	60	10	267	51	55	177	8	85	242	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	226	257	60	11	290	55	60	192	9	92	263	161
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	792	182	24	415	78	77	1564	73	118	1022	606
Arrive On Green	0.15	0.28	0.28	0.01	0.14	0.14	0.04	0.45	0.45	0.07	0.48	0.48
Sat Flow, veh/h	1774	2860	656	1774	2977	557	1774	3443	161	1774	2140	1269
Grp Volume(v), veh/h	226	157	160	11	171	174	60	98	103	92	216	208
Grp Sat Flow(s),veh/h/ln	1774	1770	1747	1774	1770	1764	1774	1770	1834	1774	1770	1639
Q Serve(g_s), s	11.2	6.3	6.6	0.6	8.3	8.5	3.0	2.9	2.9	4.6	6.5	6.8
Cycle Q Clear(g_c), s	11.2	6.3	6.6	0.6	8.3	8.5	3.0	2.9	2.9	4.6	6.5	6.8
Prop In Lane	1.00		0.38	1.00		0.32	1.00		0.09	1.00		0.77
Lane Grp Cap(c), veh/h	267	490	483	24	247	246	77	804	833	118	845	782
V/C Ratio(X)	0.85	0.32	0.33	0.46	0.69	0.71	0.78	0.12	0.12	0.78	0.26	0.27
Avail Cap(c_a), veh/h	463	688	679	108	334	333	187	804	833	246	845	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	25.8	25.9	44.1	36.9	37.0	42.6	14.2	14.2	41.3	14.0	14.1
Incr Delay (d2), s/veh	6.2	0.3	0.3	13.5	3.7	4.3	15.2	0.3	0.3	10.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	3.1	3.2	0.4	4.3	4.4	1.8	1.5	1.6	2.6	3.2	3.1
LnGrp Delay(d),s/veh	43.5	26.2	26.2	57.5	40.6	41.3	57.8	14.5	14.5	51.7	14.2	14.3
LnGrp LOS	D	C	C	E	D	D	E	B	B	D	B	B
Approach Vol, veh/h		543			356			261			516	
Approach Delay, s/veh		33.4			41.5			24.5			20.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	44.9	5.7	28.9	8.4	47.0	18.1	16.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	20.0	5.5	35.0	9.5	23.0	23.5	17.0
Max Q Clear Time (g_c+I1), s	6.6	4.9	2.6	8.6	5.0	8.8	13.2	10.5
Green Ext Time (p_c), s	0.1	3.4	0.0	4.0	0.0	3.3	0.4	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	0	108	0	0	0	151	470	0	1	706	82
Future Volume (veh/h)	47	0	108	0	0	0	151	470	0	1	706	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	47	0	108	0	0	0	164	511	0	1	767	89
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	0	147	0	173	0	241	2714	0	2	2471	1106
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.07	0.77	0.00	0.00	0.70	0.70
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	47	0	108	0	0	0	164	511	0	1	767	89
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	2.8	0.0	6.0	0.0	0.0	0.0	4.2	3.5	0.0	0.1	7.5	1.6
Cycle Q Clear(g_c), s	2.8	0.0	6.0	0.0	0.0	0.0	4.2	3.5	0.0	0.1	7.5	1.6
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	0	147	0	173	0	241	2714	0	2	2471	1106
V/C Ratio(X)	0.22	0.00	0.73	0.00	0.00	0.00	0.68	0.19	0.00	0.41	0.31	0.08
Avail Cap(c_a), veh/h	723	0	721	0	849	0	440	2714	0	306	2471	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	39.7	0.0	0.0	0.0	40.9	2.9	0.0	44.9	5.2	4.3
Incr Delay (d2), s/veh	0.5	0.0	6.9	0.0	0.0	0.0	3.4	0.2	0.0	84.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.9	0.0	0.0	0.0	2.1	1.8	0.0	0.1	3.6	0.7
LnGrp Delay(d),s/veh	38.8	0.0	46.7	0.0	0.0	0.0	44.2	3.0	0.0	129.4	5.3	4.4
LnGrp LOS	D		D				D	A		F	A	A
Approach Vol, veh/h		155			0			675			857	
Approach Delay, s/veh		44.3			0.0			13.0			5.4	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	73.0		12.4	10.8	66.8		12.4
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	15.5	21.0		41.0	11.5	25.0		41.0
Max Q Clear Time (g_c+I1), s	2.1	5.5		8.0	6.2	9.5		0.0
Green Ext Time (p_c), s	0.0	8.1		0.6	0.2	7.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Future Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	159	1135	0	19	736	94	174	157	9	107	252	142
Adj No. of Lanes	1	3	1	1	2	0	0	1	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1916	596	29	925	118	296	268	492	117	275	338
Arrive On Green	0.10	0.38	0.00	0.02	0.29	0.29	0.31	0.31	0.31	0.21	0.21	0.21
Sat Flow, veh/h	1774	5085	1583	1774	3158	403	954	861	1583	547	1288	1583
Grp Volume(v), veh/h	159	1135	0	19	412	418	331	0	9	359	0	142
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1792	1815	0	1583	1835	0	1583
Q Serve(g_s), s	17.7	35.7	0.0	2.1	42.9	42.9	30.7	0.0	0.8	38.2	0.0	15.5
Cycle Q Clear(g_c), s	17.7	35.7	0.0	2.1	42.9	42.9	30.7	0.0	0.8	38.2	0.0	15.5
Prop In Lane	1.00		1.00	1.00		0.23	0.53		1.00	0.30		1.00
Lane Grp Cap(c), veh/h	178	1916	596	29	518	525	564	0	492	392	0	338
V/C Ratio(X)	0.89	0.59	0.00	0.66	0.80	0.80	0.59	0.00	0.02	0.92	0.00	0.42
Avail Cap(c_a), veh/h	289	2360	735	61	594	602	564	0	492	570	0	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.7	49.9	0.0	97.6	65.0	65.1	58.0	0.0	47.7	76.7	0.0	67.8
Incr Delay (d2), s/veh	18.3	0.3	0.0	22.4	6.6	6.5	4.4	0.0	0.1	15.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	16.8	0.0	1.2	21.9	22.2	16.1	0.0	0.4	21.0	0.0	6.9
LnGrp Delay(d),s/veh	107.1	50.2	0.0	120.0	71.6	71.6	62.4	0.0	47.7	91.7	0.0	68.6
LnGrp LOS	F	D		F	E	E	E		D	F		E
Approach Vol, veh/h		1294			849			340			501	
Approach Delay, s/veh		57.2			72.7			62.0			85.2	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		66.0	7.8	79.2		46.6	24.5	62.4
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		62.0	6.9	92.6		62.0	32.5	67.0
Max Q Clear Time (g_c+I1), s		32.7	4.1	37.7		40.2	19.7	44.9
Green Ext Time (p_c), s		2.0	0.0	20.9		2.5	0.3	13.5

Intersection Summary	
HCM 2010 Ctrl Delay	66.8
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary
12: Evans Road & Ramona Expwy

1/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Future Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	159	1135	0	19	736	94	174	157	9	107	252	142
Adj No. of Lanes	1	3	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1940	604	29	940	120	339	787	45	125	370	208
Arrive On Green	0.10	0.38	0.00	0.02	0.30	0.30	0.19	0.45	0.45	0.07	0.33	0.33
Sat Flow, veh/h	1774	5085	1583	1774	3158	403	1774	1745	100	1774	1120	631
Grp Volume(v), veh/h	159	1135	0	19	412	418	174	0	166	107	0	394
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1792	1774	0	1845	1774	0	1751
Q Serve(g_s), s	18.1	36.2	0.0	2.2	43.5	43.5	17.9	0.0	11.1	12.2	0.0	39.6
Cycle Q Clear(g_c), s	18.1	36.2	0.0	2.2	43.5	43.5	17.9	0.0	11.1	12.2	0.0	39.6
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.05	1.00		0.36
Lane Grp Cap(c), veh/h	178	1940	604	29	526	533	339	0	833	125	0	578
V/C Ratio(X)	0.90	0.59	0.00	0.66	0.78	0.78	0.51	0.00	0.20	0.86	0.00	0.68
Avail Cap(c_a), veh/h	309	2504	780	62	625	633	339	0	833	209	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	90.7	50.2	0.0	99.7	65.6	65.6	73.9	0.0	33.7	93.8	0.0	59.0
Incr Delay (d2), s/veh	15.6	0.3	0.0	23.1	5.5	5.4	5.4	0.0	0.5	16.4	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	17.1	0.0	1.3	22.1	22.4	9.3	0.0	5.7	6.5	0.0	19.5
LnGrp Delay(d),s/veh	106.3	50.5	0.0	122.9	71.0	71.0	79.4	0.0	34.3	110.2	0.0	61.4
LnGrp LOS	F	D		F	E	E	E		C	F		E
Approach Vol, veh/h		1294			849			340			501	
Approach Delay, s/veh		57.4			72.2			57.3			71.8	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	96.0	7.8	81.8	43.0	71.3	24.9	64.7
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	24.0	92.0	7.1	100.4	39.0	77.0	35.5	72.0
Max Q Clear Time (g_c+I1), s	14.2	13.1	4.2	38.2	19.9	41.6	20.1	45.5
Green Ext Time (p_c), s	0.2	3.7	0.0	21.7	0.4	3.6	0.3	15.1

Intersection Summary	
HCM 2010 Ctrl Delay	64.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Future Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	159	1135	0	19	736	94	174	157	9	107	252	142
Adj No. of Lanes	1	3	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1940	604	29	940	120	339	841	715	125	370	208
Arrive On Green	0.10	0.38	0.00	0.02	0.30	0.30	0.19	0.45	0.45	0.07	0.33	0.33
Sat Flow, veh/h	1774	5085	1583	1774	3158	403	1774	1863	1583	1774	1120	631
Grp Volume(v), veh/h	159	1135	0	19	412	418	174	157	9	107	0	394
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1792	1774	1863	1583	1774	0	1751
Q Serve(g_s), s	18.1	36.2	0.0	2.2	43.5	43.5	17.9	10.3	0.6	12.2	0.0	39.6
Cycle Q Clear(g_c), s	18.1	36.2	0.0	2.2	43.5	43.5	17.9	10.3	0.6	12.2	0.0	39.6
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	178	1940	604	29	526	533	339	841	715	125	0	578
V/C Ratio(X)	0.90	0.59	0.00	0.66	0.78	0.78	0.51	0.19	0.01	0.86	0.00	0.68
Avail Cap(c_a), veh/h	309	2504	780	62	625	633	339	841	715	209	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	90.7	50.2	0.0	99.7	65.6	65.6	73.9	33.5	30.9	93.8	0.0	59.0
Incr Delay (d2), s/veh	15.6	0.3	0.0	23.1	5.5	5.4	5.4	0.5	0.0	16.4	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	17.1	0.0	1.3	22.1	22.4	9.3	5.4	0.3	6.5	0.0	19.5
LnGrp Delay(d),s/veh	106.3	50.5	0.0	122.9	71.0	71.0	79.4	34.0	30.9	110.2	0.0	61.4
LnGrp LOS	F	D		F	E	E	E	C	C	F		E
Approach Vol, veh/h		1294			849			340			501	
Approach Delay, s/veh		57.4			72.2			57.1			71.8	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	96.0	7.8	81.8	43.0	71.3	24.9	64.7
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	24.0	92.0	7.1	100.4	39.0	77.0	35.5	72.0
Max Q Clear Time (g_c+I1), s	14.2	12.3	4.2	38.2	19.9	41.6	20.1	45.5
Green Ext Time (p_c), s	0.2	3.6	0.0	21.7	0.4	3.5	0.3	15.1

Intersection Summary	
HCM 2010 Ctrl Delay	64.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Future Volume (veh/h)	159	1135	506	19	736	94	174	157	9	107	252	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	159	1135	0	19	736	94	174	157	9	107	252	142
Adj No. of Lanes	1	3	1	1	2	0	2	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1916	596	29	925	118	1069	542	31	117	275	338
Arrive On Green	0.10	0.38	0.00	0.02	0.29	0.29	0.31	0.31	0.31	0.21	0.21	0.21
Sat Flow, veh/h	1774	5085	1583	1774	3158	403	3442	1745	100	547	1288	1583
Grp Volume(v), veh/h	159	1135	0	19	412	418	174	0	166	359	0	142
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1792	1721	0	1845	1835	0	1583
Q Serve(g_s), s	17.7	35.7	0.0	2.1	42.9	42.9	7.3	0.0	13.6	38.2	0.0	15.5
Cycle Q Clear(g_c), s	17.7	35.7	0.0	2.1	42.9	42.9	7.3	0.0	13.6	38.2	0.0	15.5
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.05	0.30		1.00
Lane Grp Cap(c), veh/h	178	1916	596	29	518	525	1069	0	573	392	0	338
V/C Ratio(X)	0.89	0.59	0.00	0.66	0.80	0.80	0.16	0.00	0.29	0.92	0.00	0.42
Avail Cap(c_a), veh/h	289	2360	735	61	594	602	1069	0	573	570	0	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.7	49.9	0.0	97.6	65.0	65.1	49.9	0.0	52.1	76.7	0.0	67.8
Incr Delay (d2), s/veh	18.3	0.3	0.0	22.4	6.6	6.5	0.3	0.0	1.3	15.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	16.8	0.0	1.2	21.9	22.2	3.5	0.0	7.2	21.0	0.0	6.9
LnGrp Delay(d),s/veh	107.1	50.2	0.0	120.0	71.6	71.6	50.2	0.0	53.4	91.7	0.0	68.6
LnGrp LOS	F	D		F	E	E	D		D	F		E
Approach Vol, veh/h		1294			849			340			501	
Approach Delay, s/veh		57.2			72.7			51.8			85.2	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		66.0	7.8	79.2		46.6	24.5	62.4
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		62.0	6.9	92.6		62.0	32.5	67.0
Max Q Clear Time (g_c+I1), s		15.6	4.1	37.7		40.2	19.7	44.9
Green Ext Time (p_c), s		1.5	0.0	20.9		2.5	0.3	13.5

Intersection Summary	
HCM 2010 Ctrl Delay	65.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1072	0	0	613	2	0	0	0	1120	0	1670
Future Volume (veh/h)	17	1072	0	0	613	2	0	0	0	1120	0	1670
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	17	1072	0	0	613	2	0	0	0	1120	0	1670
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	1964	0	3	1639	722	0	3	0	211	0	315
Arrive On Green	0.02	0.56	0.00	0.00	0.46	0.46	0.00	0.00	0.00	0.32	0.00	0.32
Sat Flow, veh/h	1774	3632	0	1774	3539	1560	0	1863	0	664	0	990
Grp Volume(v), veh/h	17	1072	0	0	613	2	0	0	0	2790	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1560	0	1863	0	1655	0	0
Q Serve(g_s), s	0.6	12.2	0.0	0.0	7.1	0.0	0.0	0.0	0.0	20.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.2	0.0	0.0	7.1	0.0	0.0	0.0	0.0	20.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	0.40		0.60
Lane Grp Cap(c), veh/h	36	1964	0	3	1639	722	0	3	0	526	0	0
V/C Ratio(X)	0.47	0.55	0.00	0.00	0.37	0.00	0.00	0.00	0.00	5.30	0.00	0.00
Avail Cap(c_a), veh/h	578	10152	0	141	9280	4090	0	533	0	526	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.5	8.9	0.0	0.0	11.0	9.1	0.0	0.0	0.0	21.5	0.0	0.0
Incr Delay (d2), s/veh	9.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1941.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.9	0.0	0.0	3.4	0.0	0.0	0.0	0.0	292.7	0.0	0.0
LnGrp Delay(d),s/veh	39.6	9.2	0.0	0.0	11.1	9.1	0.0	0.0	0.0	1962.8	0.0	0.0
LnGrp LOS	D	A			B	A				F		
Approach Vol, veh/h		1089			615			0			2790	
Approach Delay, s/veh		9.6			11.1			0.0			1962.8	
Approach LOS		A			B						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	38.9		24.0	5.8	33.1
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	180.5		20.0	20.5	165.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	14.2		22.0	2.6	9.1
Green Ext Time (p_c), s		0.0	0.0	20.1		0.0	0.0	20.1

Intersection Summary	
HCM 2010 Ctrl Delay	1222.4
HCM 2010 LOS	F

APPENDIX D
LOS Operations Worksheets – Existing plus-Project Conditions (Full Closure)

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	426	95	757	597	138	198	624	874	149	372	65
Future Volume (veh/h)	50	426	95	757	597	138	198	624	874	149	372	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	50	426	95	757	597	138	198	624	874	149	372	65
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	493	109	547	1255	289	221	1310	408	129	902	153
Arrive On Green	0.04	0.17	0.17	0.31	0.44	0.44	0.12	0.26	0.26	0.07	0.21	0.21
Sat Flow, veh/h	1774	2882	638	1774	2857	659	1774	5085	1583	1774	4377	744
Grp Volume(v), veh/h	50	260	261	757	369	366	198	624	874	149	286	151
Grp Sat Flow(s),veh/h/ln	1774	1770	1750	1774	1770	1746	1774	1695	1583	1774	1695	1731
Q Serve(g_s), s	2.5	12.8	13.0	27.5	13.2	13.3	9.8	9.3	23.0	6.5	6.5	6.8
Cycle Q Clear(g_c), s	2.5	12.8	13.0	27.5	13.2	13.3	9.8	9.3	23.0	6.5	6.5	6.8
Prop In Lane	1.00		0.36	1.00		0.38	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	71	303	299	547	777	767	221	1310	408	129	699	357
V/C Ratio(X)	0.71	0.86	0.87	1.38	0.48	0.48	0.90	0.48	2.14	1.15	0.41	0.42
Avail Cap(c_a), veh/h	135	317	314	547	777	767	221	1310	408	129	699	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	36.0	36.0	30.9	17.7	17.8	38.5	28.0	33.1	41.4	30.7	30.8
Incr Delay (d2), s/veh	12.2	20.0	21.8	184.4	0.5	0.5	34.4	1.2	522.1	126.3	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.9	8.0	41.4	6.6	6.5	6.9	4.5	69.2	7.7	3.1	3.3
LnGrp Delay(d),s/veh	54.6	55.9	57.8	215.3	18.2	18.2	72.9	29.3	555.3	167.7	31.1	31.6
LnGrp LOS	D	E	E	F	B	B	E	C	F	F	C	C
Approach Vol, veh/h		571			1492			1696			586	
Approach Delay, s/veh		56.7			118.2			305.4			66.0	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	27.0	32.0	19.3	15.6	22.4	8.1	43.2
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	6.5	23.0	27.5	16.0	11.1	18.4	6.8	36.7
Max Q Clear Time (g_c+I1), s	8.5	25.0	29.5	15.0	11.8	8.8	4.5	15.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	6.6	0.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	176.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	458	800	341	214	781	108	328	787	699	147	256	343
Future Volume (veh/h)	458	800	341	214	781	108	328	787	699	147	256	343
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	458	800	341	214	781	108	328	787	699	147	256	343
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	373	895	379	316	1079	148	428	1310	586	227	1102	493
Arrive On Green	0.11	0.26	0.26	0.09	0.24	0.24	0.12	0.37	0.37	0.07	0.31	0.31
Sat Flow, veh/h	3442	3506	1485	3442	4522	621	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	458	773	368	214	584	305	328	787	699	147	256	343
Grp Sat Flow(s),veh/h/ln	1721	1695	1601	1721	1695	1753	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	8.5	17.2	17.4	4.7	12.4	12.6	7.2	14.1	29.0	3.3	4.2	14.9
Cycle Q Clear(g_c), s	8.5	17.2	17.4	4.7	12.4	12.6	7.2	14.1	29.0	3.3	4.2	14.9
Prop In Lane	1.00		0.93	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	373	866	409	316	809	418	428	1310	586	227	1102	493
V/C Ratio(X)	1.23	0.89	0.90	0.68	0.72	0.73	0.77	0.60	1.19	0.65	0.23	0.70
Avail Cap(c_a), veh/h	373	866	409	856	1168	604	637	1310	586	373	1102	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	28.1	28.2	34.5	27.4	27.5	33.2	20.0	24.7	35.7	20.0	23.7
Incr Delay (d2), s/veh	123.6	11.6	22.2	2.6	1.2	2.5	3.2	2.0	102.9	3.1	0.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	9.5	10.2	2.3	5.9	6.4	3.6	7.3	29.3	1.6	2.1	7.1
LnGrp Delay(d),s/veh	158.6	39.8	50.4	37.0	28.7	30.0	36.4	22.0	127.5	38.8	20.1	27.9
LnGrp LOS	F	D	D	D	C	C	D	C	F	D	C	C
Approach Vol, veh/h		1599			1103			1814			746	
Approach Delay, s/veh		76.2			30.7			65.3			27.4	
Approach LOS		E			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	33.0	11.7	24.0	14.3	28.4	13.0	22.7
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	29.0	19.5	16.0	14.5	23.0	8.5	27.0
Max Q Clear Time (g_c+I1), s	5.3	31.0	6.7	19.4	9.2	16.9	10.5	14.6
Green Ext Time (p_c), s	0.1	0.0	0.5	0.0	0.5	4.6	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	56.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	151	65	563	120	182	60	1438	872	124	1030	11
Future Volume (veh/h)	25	151	65	563	120	182	60	1438	872	124	1030	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	151	65	563	120	182	60	1438	872	124	1030	11
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	196	196	390	83	419	82	1068	499	157	1855	20
Arrive On Green	0.12	0.12	0.12	0.26	0.26	0.26	0.05	0.31	0.31	0.09	0.36	0.36
Sat Flow, veh/h	263	1587	1583	1475	314	1583	1774	3390	1583	1774	5188	55
Grp Volume(v), veh/h	176	0	65	683	0	182	60	1438	872	124	673	368
Grp Sat Flow(s),veh/h/ln	1850	0	1583	1789	0	1583	1774	1695	1583	1774	1695	1853
Q Serve(g_s), s	7.3	0.0	3.0	21.0	0.0	7.6	2.6	25.0	25.0	5.4	12.6	12.6
Cycle Q Clear(g_c), s	7.3	0.0	3.0	21.0	0.0	7.6	2.6	25.0	25.0	5.4	12.6	12.6
Prop In Lane	0.14		1.00	0.82		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	229	0	196	473	0	419	82	1068	499	157	1212	662
V/C Ratio(X)	0.77	0.00	0.33	1.44	0.00	0.43	0.73	1.35	1.75	0.79	0.56	0.56
Avail Cap(c_a), veh/h	373	0	319	473	0	419	192	1068	499	257	1212	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	31.8	29.2	0.0	24.2	37.4	27.2	27.2	35.4	20.4	20.4
Incr Delay (d2), s/veh	5.4	0.0	1.0	211.0	0.0	0.7	11.8	162.3	345.0	8.4	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	1.3	38.0	0.0	3.4	1.6	35.6	58.6	3.0	6.0	6.6
LnGrp Delay(d),s/veh	39.0	0.0	32.8	240.2	0.0	25.0	49.2	189.4	372.2	43.9	21.0	21.5
LnGrp LOS	D		C	F		C	D	F	F	D	C	C
Approach Vol, veh/h		241			865			2370			1165	
Approach Delay, s/veh		37.3			194.9			253.1			23.6	
Approach LOS		D			F			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	11.5	29.0		13.8	8.2	32.4		25.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	11.5	25.0		16.0	8.6	27.9		21.0
Max Q Clear Time (g_c+I1), s	7.4	27.0		9.3	4.6	14.6		23.0
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	12.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	173.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	914	168	243	78	117	72	194	701	132	115	161	524
Future Volume (veh/h)	914	168	243	78	117	72	194	701	132	115	161	524
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	914	168	243	78	117	72	194	701	132	115	161	524
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	594	404	362	101	244	140	238	1449	648	148	634	567
Arrive On Green	0.17	0.23	0.23	0.06	0.11	0.11	0.13	0.41	0.41	0.08	0.36	0.36
Sat Flow, veh/h	3442	1770	1583	1774	2164	1248	1774	3539	1583	1774	1770	1583
Grp Volume(v), veh/h	914	168	243	78	94	95	194	701	132	115	161	524
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1642	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.2	6.2	10.7	3.3	3.8	4.2	8.1	11.2	4.1	4.9	4.9	24.3
Cycle Q Clear(g_c), s	13.2	6.2	10.7	3.3	3.8	4.2	8.1	11.2	4.1	4.9	4.9	24.3
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	594	404	362	101	199	185	238	1449	648	148	634	567
V/C Ratio(X)	1.54	0.42	0.67	0.77	0.47	0.51	0.81	0.48	0.20	0.78	0.25	0.92
Avail Cap(c_a), veh/h	594	456	408	220	370	344	420	1449	648	290	634	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	25.2	26.9	35.6	31.8	32.0	32.2	16.6	14.6	34.4	17.3	23.5
Incr Delay (d2), s/veh	250.7	0.7	3.6	11.9	1.7	2.2	6.6	1.2	0.7	8.5	0.2	21.0
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	26.9	3.1	5.0	2.0	2.0	2.0	4.4	5.7	1.9	2.7	2.4	13.8
LnGrp Delay(d),s/veh	282.3	25.8	30.5	47.5	33.5	34.1	38.8	17.8	15.3	42.9	17.5	44.6
LnGrp LOS	F	C	C	D	C	C	D	B	B	D	B	D
Approach Vol, veh/h		1325			267			1027			800	
Approach Delay, s/veh		203.6			37.8			21.4			38.9	
Approach LOS		F			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	35.3	8.8	21.5	14.8	31.4	17.7	12.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	31.3	9.5	19.7	18.1	25.7	13.2	16.0
Max Q Clear Time (g_c+I1), s	6.9	13.2	5.3	12.7	10.1	26.3	15.2	6.2
Green Ext Time (p_c), s	0.1	9.5	0.0	2.0	0.3	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	97.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	351	18	119	182	0	0	0	0	466	3	91
Future Volume (veh/h)	0	351	18	119	182	0	0	0	0	466	3	91
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	351	18	119	182	0				466	3	91
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1573	80	151	2104	0				539	3	484
Arrive On Green	0.00	0.46	0.46	0.03	0.20	0.00				0.31	0.31	0.31
Sat Flow, veh/h	0	3519	175	1774	3632	0				1763	11	1583
Grp Volume(v), veh/h	0	181	188	119	182	0				469	0	91
Grp Sat Flow(s),veh/h/ln	0	1770	1832	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	5.5	5.6	6.0	3.8	0.0				22.4	0.0	3.8
Cycle Q Clear(g_c), s	0.0	5.5	5.6	6.0	3.8	0.0				22.4	0.0	3.8
Prop In Lane	0.00		0.10	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	812	841	151	2104	0				542	0	484
V/C Ratio(X)	0.00	0.22	0.22	0.79	0.09	0.00				0.86	0.00	0.19
Avail Cap(c_a), veh/h	0	812	841	246	2104	0				877	0	783
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.7	14.7	42.9	16.2	0.0				29.5	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.6	0.6	8.4	0.1	0.0				5.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	3.0	3.3	1.9	0.0				11.7	0.0	1.7
LnGrp Delay(d),s/veh	0.0	15.3	15.3	51.3	16.3	0.0				34.8	0.0	23.2
LnGrp LOS		B	B	D	B					C		C
Approach Vol, veh/h		369			301						560	
Approach Delay, s/veh		15.3			30.1						32.9	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			12.2	45.8		32.0		58.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			12.5	19.5		44.5		36.5
Max Q Clear Time (g_c+I1), s			8.0	7.6		24.4		5.8
Green Ext Time (p_c), s			0.1	2.6		3.1		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	651	0	0	272	328	29	2	127	0	0	0
Future Volume (veh/h)	165	651	0	0	272	328	29	2	127	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	165	651	0	0	272	328	29	2	127			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2811	0	0	1120	1002	176	12	167			
Arrive On Green	0.22	1.00	0.00	0.00	0.63	0.63	0.11	0.11	0.11			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1665	115	1583			
Grp Volume(v), veh/h	165	651	0	0	272	328	31	0	127			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1780	0	1583			
Q Serve(g_s), s	8.0	0.0	0.0	0.0	6.0	8.6	1.4	0.0	7.0			
Cycle Q Clear(g_c), s	8.0	0.0	0.0	0.0	6.0	8.6	1.4	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	198	2811	0	0	1120	1002	188	0	167			
V/C Ratio(X)	0.83	0.23	0.00	0.00	0.24	0.33	0.16	0.00	0.76			
Avail Cap(c_a), veh/h	325	2811	0	0	1120	1002	623	0	554			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.97	0.97	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.2	0.0	0.0	0.0	7.2	7.7	36.6	0.0	39.1			
Incr Delay (d2), s/veh	9.0	0.2	0.0	0.0	0.5	0.9	0.4	0.0	6.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	0.1	0.0	0.0	3.0	4.0	0.7	0.0	3.4			
LnGrp Delay(d),s/veh	43.1	0.2	0.0	0.0	7.7	8.5	37.0	0.0	46.0			
LnGrp LOS	D	A			A	A	D		D			
Approach Vol, veh/h		816			600			158				
Approach Delay, s/veh		8.9			8.1			44.2				
Approach LOS		A			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		14.0		76.0			14.5	61.4
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		31.5		49.5			16.5	28.5
Max Q Clear Time (g_c+I1), s		9.0		2.0			10.0	10.6
Green Ext Time (p_c), s		0.5		10.8			0.2	7.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	173	83	0	103	137	104	2020	0	184	1312	129
Future Volume (veh/h)	159	173	83	0	103	137	104	2020	0	184	1312	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	173	188	90	0	112	149	113	2196	0	184	1312	129
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1730	774	2	565	506	144	1582	0	108	1481	461
Arrive On Green	0.12	0.49	0.49	0.00	0.32	0.32	0.08	0.31	0.00	0.06	0.29	0.29
Sat Flow, veh/h	1774	3539	1583	1774	1770	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	173	188	90	0	112	149	113	2196	0	184	1312	129
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	8.6	2.6	2.8	0.0	4.1	6.4	5.6	28.0	0.0	5.5	22.2	5.7
Cycle Q Clear(g_c), s	8.6	2.6	2.8	0.0	4.1	6.4	5.6	28.0	0.0	5.5	22.2	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	1730	774	2	565	506	144	1582	0	108	1481	461
V/C Ratio(X)	0.82	0.11	0.12	0.00	0.20	0.29	0.79	1.39	0.00	1.70	0.89	0.28
Avail Cap(c_a), veh/h	444	1730	774	99	565	506	282	1582	0	108	1481	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.91	0.91	1.00	1.00	0.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	38.6	12.4	12.5	0.0	22.3	23.0	40.6	31.0	0.0	42.2	30.5	24.6
Incr Delay (d2), s/veh	7.4	0.1	0.3	0.0	0.7	1.3	9.1	178.6	0.0	342.3	5.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	1.3	1.3	0.0	2.1	3.0	3.1	39.2	0.0	13.0	11.1	2.5
LnGrp Delay(d),s/veh	46.1	12.5	12.8	0.0	23.0	24.4	49.7	209.6	0.0	384.6	35.9	24.9
LnGrp LOS	D	B	B		C	C	D	F		F	D	C
Approach Vol, veh/h		451			261			2309			1625	
Approach Delay, s/veh		25.5			23.8			201.8			74.5	
Approach LOS		C			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	32.0	0.0	48.0	11.8	30.2	15.3	32.7
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	5.5	28.0	5.0	34.5	14.3	19.2	22.5	17.0
Max Q Clear Time (g_c+I1), s	7.5	30.0	0.0	4.8	7.6	24.2	10.6	8.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.3	0.1	0.0	0.3	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	130.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	631	259	235	888	0	0	0	0	763	2	177
Future Volume (veh/h)	0	631	259	235	888	0	0	0	0	763	2	177
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	631	259	235	888	0				764	0	177
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1101	452	267	2300	0				887	0	396
Arrive On Green	0.00	0.45	0.45	0.30	1.00	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	2543	1005	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	456	434	235	888	0				764	0	177
Grp Sat Flow(s),veh/h/ln	0	1770	1685	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	17.2	17.2	11.3	0.0	0.0				18.5	0.0	8.5
Cycle Q Clear(g_c), s	0.0	17.2	17.2	11.3	0.0	0.0				18.5	0.0	8.5
Prop In Lane	0.00		0.60	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	795	757	267	2300	0				887	0	396
V/C Ratio(X)	0.00	0.57	0.57	0.88	0.39	0.00				0.86	0.00	0.45
Avail Cap(c_a), veh/h	0	795	757	345	2300	0				1045	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	18.4	30.7	0.0	0.0				32.2	0.0	28.5
Incr Delay (d2), s/veh	0.0	3.0	3.1	2.1	0.0	0.0				6.6	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.0	8.6	5.6	0.0	0.0				9.8	0.0	3.8
LnGrp Delay(d),s/veh	0.0	21.4	21.5	32.8	0.0	0.0				38.8	0.0	29.3
LnGrp LOS		C	C	C	A					D		C
Approach Vol, veh/h		890			1123						941	
Approach Delay, s/veh		21.4			6.9						37.0	
Approach LOS		C			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	44.9		27.0		63.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			17.5	32.5		26.5		54.5
Max Q Clear Time (g_c+I1), s			13.3	19.2		20.5		2.0
Green Ext Time (p_c), s			0.2	8.8		2.0		17.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1170	0	0	813	1186	311	2	331	0	0	0
Future Volume (veh/h)	224	1170	0	0	813	1186	311	2	331	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	224	1170	0	0	813	1186	312	0	331			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	258	2357	0	0	833	745	830	0	370			
Arrive On Green	0.29	1.00	0.00	0.00	0.47	0.47	0.23	0.00	0.23			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	224	1170	0	0	813	1186	312	0	331			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	10.8	0.0	0.0	0.0	40.5	42.4	6.6	0.0	18.2			
Cycle Q Clear(g_c), s	10.8	0.0	0.0	0.0	40.5	42.4	6.6	0.0	18.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	258	2357	0	0	833	745	830	0	370			
V/C Ratio(X)	0.87	0.50	0.00	0.00	0.98	1.59	0.38	0.00	0.89			
Avail Cap(c_a), veh/h	404	2357	0	0	833	745	926	0	413			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	31.1	0.0	0.0	0.0	23.3	23.8	29.0	0.0	33.4			
Incr Delay (d2), s/veh	8.1	0.5	0.0	0.0	25.9	272.7	0.3	0.0	19.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.8	0.2	0.0	0.0	25.6	74.9	3.3	0.0	9.9			
LnGrp Delay(d),s/veh	39.1	0.5	0.0	0.0	49.3	296.5	29.2	0.0	53.2			
LnGrp LOS	D	A			D	F	C		D			
Approach Vol, veh/h		1394			1999			643				
Approach Delay, s/veh		6.7			195.9			41.6				
Approach LOS		A			F			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		25.6		64.4			17.6	46.9
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		23.5		57.5			20.5	32.5
Max Q Clear Time (g_c+I1), s		20.2		2.0			12.8	44.4
Green Ext Time (p_c), s		0.8		47.0			0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	106.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	1054	161	103	1778	537	858	1083	91	622	238	640
Future Volume (veh/h)	455	1054	161	103	1778	537	858	1083	91	622	238	640
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	455	1054	161	103	1778	537	858	1083	91	622	238	640
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	2189	682	132	1433	419	667	988	442	624	944	422
Arrive On Green	0.10	0.43	0.43	0.04	0.37	0.37	0.19	0.28	0.28	0.18	0.27	0.27
Sat Flow, veh/h	3442	5085	1583	3442	3909	1142	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	455	1054	161	103	1534	781	858	1083	91	622	238	640
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1661	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	24.5	35.7	15.5	7.1	88.0	88.0	46.5	67.0	10.5	43.3	12.7	64.0
Cycle Q Clear(g_c), s	24.5	35.7	15.5	7.1	88.0	88.0	46.5	67.0	10.5	43.3	12.7	64.0
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	2189	682	132	1243	609	667	988	442	624	944	422
V/C Ratio(X)	1.30	0.48	0.24	0.78	1.23	1.28	1.29	1.10	0.21	1.00	0.25	1.52
Avail Cap(c_a), veh/h	351	2189	682	179	1243	609	667	988	442	624	944	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	107.8	49.1	43.3	114.4	76.0	76.0	96.8	86.5	66.2	98.2	69.2	88.0
Incr Delay (d2), s/veh	152.4	0.2	0.2	14.3	112.5	139.1	140.2	58.6	1.1	35.3	0.1	244.0
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	19.1	16.8	6.8	3.7	60.7	64.0	35.1	40.8	4.8	23.7	6.2	56.7
LnGrp Delay(d),s/veh	260.1	49.3	43.5	128.7	188.5	215.1	236.9	145.1	67.2	133.4	69.3	332.0
LnGrp LOS	F	D	D	F	F	F	F	F	E	F	E	F
Approach Vol, veh/h		1670			2418			2032			1500	
Approach Delay, s/veh		106.2			194.6			180.4			208.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.0	71.0	13.7	107.3	51.0	68.0	29.0	92.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	43.5	67.0	12.5	100.0	46.5	64.0	24.5	88.0
Max Q Clear Time (g_c+I1), s	45.3	69.0	9.1	37.7	48.5	66.0	26.5	90.0
Green Ext Time (p_c), s	0.0	0.0	0.1	51.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	174.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1501	28	57	2222	240	11	0	72	179	0	0
Future Volume (veh/h)	68	1501	28	57	2222	240	11	0	72	179	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	68	1501	28	57	2222	240	11	0	72	179	0	0
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	3220	1003	75	2924	311	24	126	108	101	207	176
Arrive On Green	0.05	0.63	0.63	0.04	0.63	0.63	0.01	0.00	0.07	0.06	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	4669	496	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	68	1501	28	57	1603	859	11	0	72	179	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1775	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.4	13.8	0.6	2.9	30.2	31.5	0.6	0.0	4.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	3.4	13.8	0.6	2.9	30.2	31.5	0.6	0.0	4.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	87	3220	1003	75	2123	1112	24	126	108	101	207	176
V/C Ratio(X)	0.78	0.47	0.03	0.76	0.76	0.77	0.46	0.00	0.67	1.78	0.00	0.00
Avail Cap(c_a), veh/h	108	3220	1003	187	2123	1112	108	383	325	101	375	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.62	0.62	0.62	1.00	0.00	1.00	0.99	0.00	0.00
Uniform Delay (d), s/veh	42.3	8.6	6.2	42.7	11.9	12.2	44.1	0.0	41.0	42.5	0.0	0.0
Incr Delay (d2), s/veh	18.1	0.3	0.0	9.4	1.6	3.3	13.5	0.0	7.0	388.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.5	0.3	1.6	14.5	16.3	0.4	0.0	1.9	13.3	0.0	0.0
LnGrp Delay(d),s/veh	60.5	8.9	6.2	52.1	13.5	15.5	57.5	0.0	48.0	430.5	0.0	0.0
LnGrp LOS	E	A	A	D	B	B	E		D	F		
Approach Vol, veh/h		1597			2519			83			179	
Approach Delay, s/veh		11.1			15.1			49.2			430.5	
Approach LOS		B			B			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	10.6	8.3	61.5	5.7	14.5	8.9	60.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.5	9.5	38.9	5.5	18.1	5.5	42.9
Max Q Clear Time (g_c+I1), s	7.1	6.0	4.9	15.8	2.6	0.0	5.4	33.5
Green Ext Time (p_c), s	0.0	0.1	0.0	22.2	0.0	0.0	0.0	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
12: Evans Road & Ramona Expwy

5/31/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	802	705	13	1403	0	703	0	22	0	0	0
Future Volume (vph)	0	802	705	13	1403	0	703	0	22	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.97		1.00			
Frt		1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)		5085	1583	1770	3539		3433		1583			
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)		5085	1583	1770	3539		3433		1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	802	705	13	1403	0	703	0	22	0	0	0
RTOR Reduction (vph)	0	0	411	0	0	0	0	0	11	0	0	0
Lane Group Flow (vph)	0	802	294	13	1403	0	703	0	11	0	0	0
Turn Type		NA	Perm	Prot	NA		Prot		Perm			Perm
Protected Phases		4		3	8		2			6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)		67.1	67.1	2.4	74.0		78.8		78.8			
Effective Green, g (s)		67.1	67.1	2.4	74.0		78.8		78.8			
Actuated g/C Ratio		0.42	0.42	0.01	0.46		0.49		0.49			
Clearance Time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		2121	660	26	1628		1682		775			
v/s Ratio Prot		0.16		0.01	c0.40		c0.20					
v/s Ratio Perm			0.19						0.01			
v/c Ratio		0.38	0.45	0.50	0.86		0.42		0.01			
Uniform Delay, d1		32.4	33.5	78.6	38.8		26.3		21.1			
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2		0.1	0.5	14.3	5.0		0.8		0.0			
Delay (s)		32.5	34.0	92.9	43.8		27.1		21.1			
Level of Service		C	C	F	D		C		C			
Approach Delay (s)		33.2			44.2			26.9			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.8	Sum of lost time (s)	16.5
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
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)	13	31	17	141	107	485	13	728	61	53	414	25
Future Volume (veh/h)	13	31	17	141	107	485	13	728	61	53	414	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	31	17	141	107	485	13	728	61	53	414	25
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	368	202	494	606	515	27	1600	134	72	1728	104
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.02	0.48	0.48	0.04	0.51	0.51
Sat Flow, veh/h	821	1132	621	1352	1863	1583	1774	3307	277	1774	3392	204
Grp Volume(v), veh/h	13	0	48	141	107	485	13	389	400	53	215	224
Grp Sat Flow(s),veh/h/ln	821	0	1753	1352	1863	1583	1774	1770	1814	1774	1770	1827
Q Serve(g_s), s	1.0	0.0	1.7	7.3	3.7	26.8	0.7	13.1	13.1	2.7	6.1	6.2
Cycle Q Clear(g_c), s	4.7	0.0	1.7	9.0	3.7	26.8	0.7	13.1	13.1	2.7	6.1	6.2
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.15	1.00		0.11
Lane Grp Cap(c), veh/h	313	0	570	494	606	515	27	856	878	72	901	930
V/C Ratio(X)	0.04	0.00	0.08	0.29	0.18	0.94	0.48	0.45	0.46	0.73	0.24	0.24
Avail Cap(c_a), veh/h	320	0	584	505	621	528	335	856	878	335	901	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	21.1	24.2	21.7	29.5	43.9	15.4	15.4	42.7	12.3	12.3
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.1	14.7	12.3	1.7	1.7	13.3	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.8	2.7	1.9	13.8	0.4	6.8	7.0	1.6	3.1	3.3
LnGrp Delay(d),s/veh	23.5	0.0	21.1	24.3	21.8	44.2	56.2	17.1	17.1	55.9	13.0	13.0
LnGrp LOS	C		C	C	C	D	E	B	B	E	B	B
Approach Vol, veh/h		61			733			802			492	
Approach Delay, s/veh		21.6			37.1			17.7			17.6	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	48.1		33.8	5.9	50.3		33.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.0	29.5		30.0	17.0	29.5		30.0
Max Q Clear Time (g_c+I1), s	4.7	15.1		6.7	2.7	8.2		28.8
Green Ext Time (p_c), s	0.1	6.3		3.2	0.0	7.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	253	22	11	608	149	136	204	17	164	214	305
Future Volume (veh/h)	183	253	22	11	608	149	136	204	17	164	214	305
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	183	253	22	12	661	162	148	222	18	178	233	332
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1254	108	26	765	187	182	982	79	214	556	497
Arrive On Green	0.12	0.38	0.38	0.01	0.27	0.27	0.10	0.30	0.30	0.12	0.31	0.31
Sat Flow, veh/h	1774	3298	285	1774	2820	690	1774	3318	267	1774	1770	1583
Grp Volume(v), veh/h	183	135	140	12	415	408	148	118	122	178	233	332
Grp Sat Flow(s),veh/h/ln	1774	1770	1813	1774	1770	1741	1774	1770	1816	1774	1770	1583
Q Serve(g_s), s	9.1	4.6	4.7	0.6	20.1	20.1	7.4	4.5	4.6	8.8	9.4	16.4
Cycle Q Clear(g_c), s	9.1	4.6	4.7	0.6	20.1	20.1	7.4	4.5	4.6	8.8	9.4	16.4
Prop In Lane	1.00		0.16	1.00		0.40	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	219	673	689	26	480	472	182	524	537	214	556	497
V/C Ratio(X)	0.84	0.20	0.20	0.47	0.86	0.87	0.81	0.22	0.23	0.83	0.42	0.67
Avail Cap(c_a), veh/h	286	696	713	101	511	503	246	524	537	286	556	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	18.7	18.7	44.0	31.2	31.2	39.5	23.9	23.9	38.7	24.4	26.8
Incr Delay (d2), s/veh	14.9	0.1	0.1	12.8	13.7	14.0	13.9	1.0	1.0	14.3	0.5	3.4
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	5.3	2.3	2.4	0.4	11.6	11.5	4.3	2.3	2.4	5.2	4.7	7.6
LnGrp Delay(d),s/veh	53.5	18.9	18.9	56.8	44.9	45.3	53.5	24.9	24.9	53.0	24.9	30.2
LnGrp LOS	D	B	B	E	D	D	D	C	C	D	C	C
Approach Vol, veh/h		458			835			388			743	
Approach Delay, s/veh		32.7			45.3			35.8			34.0	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	30.6	5.8	38.2	13.7	32.3	15.6	28.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	14.5	18.0	5.1	35.4	12.5	20.0	14.5	26.0
Max Q Clear Time (g_c+I1), s	10.8	6.6	2.6	6.7	9.4	18.4	11.1	22.1
Green Ext Time (p_c), s	0.2	3.9	0.0	7.9	0.1	0.8	0.1	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	0	137	0	0	0	253	721	0	3	392	183
Future Volume (veh/h)	178	0	137	0	0	0	253	721	0	3	392	183
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	178	0	137	0	0	0	275	784	0	3	426	199
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	0	251	0	296	0	353	2471	0	7	2122	949
Arrive On Green	0.16	0.00	0.16	0.00	0.00	0.00	0.10	0.70	0.00	0.00	0.60	0.60
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	178	0	137	0	0	0	275	784	0	3	426	199
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	10.9	0.0	7.2	0.0	0.0	0.0	7.0	7.7	0.0	0.2	4.9	5.2
Cycle Q Clear(g_c), s	10.9	0.0	7.2	0.0	0.0	0.0	7.0	7.7	0.0	0.2	4.9	5.2
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	0	251	0	296	0	353	2471	0	7	2122	949
V/C Ratio(X)	0.59	0.00	0.54	0.00	0.00	0.00	0.78	0.32	0.00	0.42	0.20	0.21
Avail Cap(c_a), veh/h	723	0	721	0	849	0	440	2471	0	306	2122	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	34.9	0.0	0.0	0.0	39.4	5.3	0.0	44.7	8.2	8.3
Incr Delay (d2), s/veh	1.8	0.0	1.8	0.0	0.0	0.0	6.9	0.3	0.0	35.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.3	0.0	0.0	0.0	3.7	3.8	0.0	0.1	2.4	2.3
LnGrp Delay(d),s/veh	38.2	0.0	36.7	0.0	0.0	0.0	46.3	5.6	0.0	79.8	8.2	8.4
LnGrp LOS	D		D				D	A		E	A	A
Approach Vol, veh/h		315			0			1059			628	
Approach Delay, s/veh		37.6			0.0			16.2			8.6	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	66.8		18.3	13.7	58.0		18.3
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	15.5	21.0		41.0	11.5	25.0		41.0
Max Q Clear Time (g_c+I1), s	2.2	9.7		12.9	9.0	7.2		0.0
Green Ext Time (p_c), s	0.0	6.5		1.4	0.2	6.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	467	159	725	329	125	139	675	607	234	733	23
Future Volume (veh/h)	28	467	159	725	329	125	139	675	607	234	733	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	28	467	159	725	329	125	139	675	607	234	733	23
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	462	156	581	1206	450	160	1017	317	187	1092	34
Arrive On Green	0.03	0.18	0.18	0.33	0.48	0.48	0.09	0.20	0.20	0.11	0.22	0.22
Sat Flow, veh/h	1774	2599	878	1774	2524	942	1774	5085	1583	1774	5066	159
Grp Volume(v), veh/h	28	317	309	725	229	225	139	675	607	234	490	266
Grp Sat Flow(s),veh/h/ln	1774	1770	1708	1774	1770	1697	1774	1695	1583	1774	1695	1835
Q Serve(g_s), s	1.4	16.0	16.0	29.5	7.0	7.2	7.0	11.0	18.0	9.5	11.9	12.0
Cycle Q Clear(g_c), s	1.4	16.0	16.0	29.5	7.0	7.2	7.0	11.0	18.0	9.5	11.9	12.0
Prop In Lane	1.00		0.51	1.00		0.56	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	50	315	304	581	845	810	160	1017	317	187	731	395
V/C Ratio(X)	0.56	1.01	1.02	1.25	0.27	0.28	0.87	0.66	1.92	1.25	0.67	0.67
Avail Cap(c_a), veh/h	112	315	304	581	845	810	160	1017	317	187	731	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	37.0	37.0	30.3	14.1	14.2	40.4	33.2	36.0	40.3	32.4	32.4
Incr Delay (d2), s/veh	9.7	52.6	56.4	125.0	0.2	0.2	37.0	3.4	424.1	148.7	2.4	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	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	12.4	12.3	34.6	3.4	3.4	5.0	5.4	45.1	12.4	5.8	6.5
LnGrp Delay(d),s/veh	52.9	89.6	93.4	155.2	14.3	14.3	77.4	36.6	460.1	188.9	34.8	36.8
LnGrp LOS	D	F	F	F	B	B	E	D	F	F	C	D
Approach Vol, veh/h		654			1179			1421			990	
Approach Delay, s/veh		89.9			101.0			221.5			71.7	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	22.0	34.0	20.0	12.6	23.4	7.0	47.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	9.5	18.0	29.5	16.0	8.1	19.4	5.7	39.8
Max Q Clear Time (g_c+I1), s	11.5	20.0	31.5	18.0	9.0	14.0	3.4	9.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.3	0.0	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	132.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	593	282	214	693	73	238	635	545	230	271	335
Future Volume (veh/h)	342	593	282	214	693	73	238	635	545	230	271	335
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	342	593	282	214	693	73	238	635	545	230	271	335
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	817	379	314	1053	110	334	1288	576	313	1266	566
Arrive On Green	0.11	0.24	0.24	0.09	0.23	0.23	0.10	0.36	0.36	0.09	0.36	0.36
Sat Flow, veh/h	3442	3398	1577	3442	4678	489	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	342	592	283	214	501	265	238	635	545	230	271	335
Grp Sat Flow(s),veh/h/ln	1721	1695	1584	1721	1695	1776	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	7.9	12.8	13.2	4.8	10.7	10.8	5.3	11.1	26.6	5.2	4.2	13.7
Cycle Q Clear(g_c), s	7.9	12.8	13.2	4.8	10.7	10.8	5.3	11.1	26.6	5.2	4.2	13.7
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	815	381	314	763	400	334	1288	576	313	1266	566
V/C Ratio(X)	0.93	0.73	0.74	0.68	0.66	0.66	0.71	0.49	0.95	0.74	0.21	0.59
Avail Cap(c_a), veh/h	367	815	381	842	1149	602	626	1288	576	367	1266	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	27.8	28.0	35.1	28.1	28.1	34.9	19.6	24.6	35.3	17.8	20.8
Incr Delay (d2), s/veh	30.1	3.2	7.7	2.6	1.0	1.9	2.8	1.4	26.2	6.3	0.1	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	5.2	6.4	6.6	2.4	5.1	5.5	2.7	5.6	15.8	2.7	2.1	6.2
LnGrp Delay(d),s/veh	65.4	31.1	35.6	37.7	29.0	30.0	37.7	21.0	50.8	41.6	17.9	22.5
LnGrp LOS	E	C	D	D	C	C	D	C	D	D	B	C
Approach Vol, veh/h		1217			980			1418			836	
Approach Delay, s/veh		41.8			31.2			35.3			26.2	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	33.0	11.8	23.2	12.2	32.5	13.0	21.9
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	29.0	19.5	16.0	14.5	23.0	8.5	27.0
Max Q Clear Time (g_c+I1), s	7.2	28.6	6.8	15.2	7.3	15.7	9.9	12.8
Green Ext Time (p_c), s	0.1	0.3	0.5	0.7	0.4	4.8	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	125	59	467	51	93	26	1145	525	123	1302	16
Future Volume (veh/h)	21	125	59	467	51	93	26	1145	525	123	1302	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	125	59	467	51	93	26	1145	525	123	1302	16
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	170	170	434	47	428	49	1099	502	157	1980	24
Arrive On Green	0.11	0.11	0.11	0.27	0.27	0.27	0.03	0.32	0.32	0.09	0.38	0.38
Sat Flow, veh/h	266	1583	1583	1607	175	1583	1774	3416	1561	1774	5178	64
Grp Volume(v), veh/h	146	0	59	518	0	93	26	1136	534	123	852	466
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1782	0	1583	1774	1695	1587	1774	1695	1852
Q Serve(g_s), s	5.9	0.0	2.7	21.0	0.0	3.5	1.1	25.0	25.0	5.3	16.1	16.1
Cycle Q Clear(g_c), s	5.9	0.0	2.7	21.0	0.0	3.5	1.1	25.0	25.0	5.3	16.1	16.1
Prop In Lane	0.14		1.00	0.90		1.00	1.00		0.98	1.00		0.03
Lane Grp Cap(c), veh/h	199	0	170	482	0	428	49	1091	511	157	1296	708
V/C Ratio(X)	0.73	0.00	0.35	1.08	0.00	0.22	0.53	1.04	1.05	0.79	0.66	0.66
Avail Cap(c_a), veh/h	381	0	326	482	0	428	196	1091	511	263	1296	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	0.0	32.1	28.4	0.0	22.0	37.3	26.4	26.4	34.7	19.8	19.8
Incr Delay (d2), s/veh	5.2	0.0	1.2	62.8	0.0	0.3	8.6	38.8	52.1	8.4	1.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.2	18.6	0.0	1.6	0.7	17.4	18.2	3.0	7.7	8.6
LnGrp Delay(d),s/veh	38.8	0.0	33.4	91.1	0.0	22.2	45.9	65.2	78.5	43.1	21.0	22.0
LnGrp LOS	D		C	F		C	D	F	F	D	C	C
Approach Vol, veh/h		205			611			1696			1441	
Approach Delay, s/veh		37.2			80.6			69.1			23.2	
Approach LOS		D			F			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	11.4	29.0		12.4	6.6	33.7		25.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	11.5	25.0		16.0	8.6	27.9		21.0
Max Q Clear Time (g_c+I1), s	7.3	27.0		7.9	3.1	18.1		23.0
Green Ext Time (p_c), s	0.1	0.0		0.5	0.0	9.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	498	65	143	70	42	47	58	619	55	94	701	368
Future Volume (veh/h)	498	65	143	70	42	47	58	619	55	94	701	368
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	498	65	143	70	42	47	58	619	55	94	701	368
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	593	343	307	94	131	117	85	1570	702	122	1043	547
Arrive On Green	0.17	0.19	0.19	0.05	0.07	0.07	0.05	0.44	0.44	0.07	0.46	0.46
Sat Flow, veh/h	3442	1770	1583	1774	1770	1583	1774	3539	1583	1774	2246	1178
Grp Volume(v), veh/h	498	65	143	70	42	47	58	619	55	94	552	517
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1655
Q Serve(g_s), s	9.9	2.2	5.6	2.7	1.6	2.0	2.3	8.3	1.4	3.7	17.1	17.2
Cycle Q Clear(g_c), s	9.9	2.2	5.6	2.7	1.6	2.0	2.3	8.3	1.4	3.7	17.1	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	593	343	307	94	131	117	85	1570	702	122	822	768
V/C Ratio(X)	0.84	0.19	0.47	0.75	0.32	0.40	0.68	0.39	0.08	0.77	0.67	0.67
Avail Cap(c_a), veh/h	644	494	442	239	401	359	455	1570	702	314	822	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	23.8	25.2	32.9	31.0	31.2	33.0	13.2	11.3	32.3	14.7	14.7
Incr Delay (d2), s/veh	9.1	0.3	1.1	11.1	1.4	2.2	9.1	0.7	0.2	9.7	2.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	1.1	2.6	1.6	0.8	0.9	1.3	4.2	0.7	2.1	8.8	8.2
LnGrp Delay(d),s/veh	37.3	24.1	26.3	44.0	32.4	33.4	42.1	14.0	11.5	42.0	16.9	17.0
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		706			159			732			1163	
Approach Delay, s/veh		33.9			37.8			16.0			19.0	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	35.3	8.2	17.7	7.9	36.8	16.7	9.2
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	31.3	9.5	19.7	18.1	25.7	13.2	16.0
Max Q Clear Time (g_c+I1), s	5.7	10.3	4.7	7.6	4.3	19.2	11.9	4.0
Green Ext Time (p_c), s	0.1	11.8	0.0	1.2	0.1	4.9	0.3	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	222	10	110	98	0	0	0	0	449	7	249
Future Volume (veh/h)	0	222	10	110	98	0	0	0	0	449	7	249
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	222	10	110	98	0				449	7	249
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1616	72	140	2113	0				529	8	479
Arrive On Green	0.00	0.47	0.47	0.08	0.60	0.00				0.30	0.30	0.30
Sat Flow, veh/h	0	3543	155	1774	3632	0				1748	27	1583
Grp Volume(v), veh/h	0	113	119	110	98	0				456	0	249
Grp Sat Flow(s),veh/h/ln	0	1770	1835	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	3.3	3.3	5.5	1.0	0.0				21.7	0.0	11.7
Cycle Q Clear(g_c), s	0.0	3.3	3.3	5.5	1.0	0.0				21.7	0.0	11.7
Prop In Lane	0.00		0.08	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	829	860	140	2113	0				538	0	479
V/C Ratio(X)	0.00	0.14	0.14	0.79	0.05	0.00				0.85	0.00	0.52
Avail Cap(c_a), veh/h	0	829	860	246	2113	0				878	0	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.6	13.6	40.7	7.5	0.0				29.4	0.0	26.0
Incr Delay (d2), s/veh	0.0	0.3	0.3	9.2	0.0	0.0				4.3	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
%ile BackOfQ(50%),veh/ln	0.0	1.7	1.8	3.0	0.5	0.0				11.3	0.0	5.2
LnGrp Delay(d),s/veh	0.0	13.9	13.9	49.9	7.6	0.0				33.8	0.0	26.8
LnGrp LOS		B	B	D	A					C		C
Approach Vol, veh/h		232			208						705	
Approach Delay, s/veh		13.9			29.9						31.3	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			11.6	46.7		31.8		58.2
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			12.5	19.5		44.5		36.5
Max Q Clear Time (g_c+I1), s			7.5	5.3		23.7		3.0
Green Ext Time (p_c), s			0.1	1.6		3.6		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	504	0	0	203	339	6	3	104	0	0	0
Future Volume (veh/h)	167	504	0	0	203	339	6	3	104	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	167	504	0	0	203	339	6	3	104			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	200	2868	0	0	1146	1025	108	54	142			
Arrive On Green	0.23	1.00	0.00	0.00	0.65	0.65	0.09	0.09	0.09			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1202	601	1583			
Grp Volume(v), veh/h	167	504	0	0	203	339	9	0	104			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1803	0	1583			
Q Serve(g_s), s	8.1	0.0	0.0	0.0	4.1	8.6	0.4	0.0	5.8			
Cycle Q Clear(g_c), s	8.1	0.0	0.0	0.0	4.1	8.6	0.4	0.0	5.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.67		1.00			
Lane Grp Cap(c), veh/h	200	2868	0	0	1146	1025	162	0	142			
V/C Ratio(X)	0.84	0.18	0.00	0.00	0.18	0.33	0.06	0.00	0.73			
Avail Cap(c_a), veh/h	325	2868	0	0	1146	1025	631	0	554			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.1	0.0	0.0	0.0	6.3	7.1	37.5	0.0	39.9			
Incr Delay (d2), s/veh	9.5	0.1	0.0	0.0	0.3	0.9	0.1	0.0	7.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	0.1	0.0	0.0	2.1	4.0	0.2	0.0	2.8			
LnGrp Delay(d),s/veh	43.6	0.1	0.0	0.0	6.7	8.0	37.6	0.0	47.0			
LnGrp LOS	D	A			A	A	D		D			
Approach Vol, veh/h		671			542			113				
Approach Delay, s/veh		10.9			7.5			46.2				
Approach LOS		B			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		12.6		77.4			14.6	62.8
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		31.5		49.5			16.5	28.5
Max Q Clear Time (g_c+I1), s		7.8		2.0			10.1	10.6
Green Ext Time (p_c), s		0.3		8.4			0.2	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	108	205	0	52	69	37	1167	0	161	1322	107
Future Volume (veh/h)	142	108	205	0	52	69	37	1167	0	161	1322	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	154	117	223	0	57	75	40	1268	0	161	1322	107
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1730	774	2	585	524	62	1582	0	108	1714	534
Arrive On Green	0.11	0.49	0.49	0.00	0.33	0.33	0.04	0.31	0.00	0.06	0.34	0.34
Sat Flow, veh/h	1774	3539	1583	1774	1770	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	154	117	223	0	57	75	40	1268	0	161	1322	107
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	7.6	1.6	7.5	0.0	2.0	3.0	2.0	20.6	0.0	5.5	21.0	4.3
Cycle Q Clear(g_c), s	7.6	1.6	7.5	0.0	2.0	3.0	2.0	20.6	0.0	5.5	21.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1730	774	2	585	524	62	1582	0	108	1714	534
V/C Ratio(X)	0.80	0.07	0.29	0.00	0.10	0.14	0.64	0.80	0.00	1.49	0.77	0.20
Avail Cap(c_a), veh/h	444	1730	774	99	585	524	282	1582	0	108	1714	534
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	0.91	0.91	1.00	1.00	0.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	39.2	12.2	13.7	0.0	20.8	21.2	42.9	28.4	0.0	42.2	26.7	21.2
Incr Delay (d2), s/veh	7.6	0.1	0.9	0.0	0.3	0.5	10.5	4.4	0.0	250.5	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.8	3.5	0.0	1.0	1.4	1.2	10.3	0.0	10.2	10.1	1.9
LnGrp Delay(d),s/veh	46.8	12.2	14.6	0.0	21.1	21.7	53.4	32.8	0.0	292.7	28.3	21.3
LnGrp LOS	D	B	B		C	C	D	C		F	C	C
Approach Vol, veh/h		494			132			1308			1590	
Approach Delay, s/veh		24.1			21.4			33.5			54.6	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	32.0	0.0	48.0	7.7	34.3	14.2	33.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	5.5	28.0	5.0	34.5	14.3	19.2	22.5	17.0
Max Q Clear Time (g_c+I1), s	7.5	22.6	0.0	9.5	4.0	23.0	9.6	5.0
Green Ext Time (p_c), s	0.0	5.0	0.0	2.3	0.0	0.0	0.3	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	688	329	253	653	0	0	0	0	967	1	260
Future Volume (veh/h)	0	688	329	253	653	0	0	0	0	967	1	260
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	688	329	253	653	0				968	0	260
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	926	443	284	2153	0				1035	0	462
Arrive On Green	0.00	0.40	0.40	0.32	1.00	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	2418	1111	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	524	493	253	653	0				968	0	260
Grp Sat Flow(s),veh/h/ln	0	1770	1667	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	22.8	22.8	12.2	0.0	0.0				23.9	0.0	12.5
Cycle Q Clear(g_c), s	0.0	22.8	22.8	12.2	0.0	0.0				23.9	0.0	12.5
Prop In Lane	0.00		0.67	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	705	664	284	2153	0				1035	0	462
V/C Ratio(X)	0.00	0.74	0.74	0.89	0.30	0.00				0.94	0.00	0.56
Avail Cap(c_a), veh/h	0	705	664	345	2153	0				1045	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.42	0.42	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.2	23.2	29.8	0.0	0.0				31.0	0.0	27.0
Incr Delay (d2), s/veh	0.0	7.0	7.4	10.4	0.2	0.0				14.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.4	11.8	6.7	0.0	0.0				13.8	0.0	5.7
LnGrp Delay(d),s/veh	0.0	30.1	30.5	40.2	0.2	0.0				45.8	0.0	28.5
LnGrp LOS		C	C	D	A					D		C
Approach Vol, veh/h		1017			906						1228	
Approach Delay, s/veh		30.3			11.3						42.1	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.9	40.3		30.8		59.2
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			17.5	32.5		26.5		54.5
Max Q Clear Time (g_c+I1), s			14.2	24.8		25.9		2.0
Green Ext Time (p_c), s			0.2	5.5		0.3		16.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	1410	0	0	649	945	257	6	239	0	0	0
Future Volume (veh/h)	244	1410	0	0	649	945	257	6	239	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	244	1410	0	0	649	945	261	0	239			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	277	2545	0	0	907	812	642	0	286			
Arrive On Green	0.31	1.00	0.00	0.00	0.51	0.51	0.18	0.00	0.18			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	244	1410	0	0	649	945	261	0	239			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	11.7	0.0	0.0	0.0	25.4	46.1	5.9	0.0	13.1			
Cycle Q Clear(g_c), s	11.7	0.0	0.0	0.0	25.4	46.1	5.9	0.0	13.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	277	2545	0	0	907	812	642	0	286			
V/C Ratio(X)	0.88	0.55	0.00	0.00	0.72	1.16	0.41	0.00	0.83			
Avail Cap(c_a), veh/h	404	2545	0	0	907	812	926	0	413			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.44	0.44	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.1	0.0	0.0	0.0	16.9	21.9	32.6	0.0	35.6			
Incr Delay (d2), s/veh	7.0	0.4	0.0	0.0	4.8	87.2	0.4	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			
%ile BackOfQ(50%),veh/ln	6.2	0.1	0.0	0.0	13.5	39.7	2.9	0.0	6.5			
LnGrp Delay(d),s/veh	37.1	0.4	0.0	0.0	21.7	109.1	33.0	0.0	45.1			
LnGrp LOS	D	A			C	F	C		D			
Approach Vol, veh/h		1654			1594			500				
Approach Delay, s/veh		5.8			73.5			38.8				
Approach LOS		A			E			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		20.8		69.2			18.6	50.6
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		23.5		57.5			20.5	32.5
Max Q Clear Time (g_c+I1), s		15.1		2.0			13.7	48.1
Green Ext Time (p_c), s		1.2		43.0			0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	448	314	296	144	990	268	502	641	96	712	349	403
Future Volume (veh/h)	448	314	296	144	990	268	502	641	96	712	349	403
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	448	314	296	144	990	268	502	641	96	712	349	403
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	493	1941	604	179	1159	313	553	914	409	774	1142	511
Arrive On Green	0.14	0.38	0.38	0.05	0.29	0.29	0.16	0.26	0.26	0.22	0.32	0.32
Sat Flow, veh/h	3442	5085	1583	3442	3986	1077	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	448	314	296	144	842	416	502	641	96	712	349	403
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1673	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	26.3	8.3	29.2	8.5	48.1	48.2	29.4	33.6	9.8	41.5	15.2	47.4
Cycle Q Clear(g_c), s	26.3	8.3	29.2	8.5	48.1	48.2	29.4	33.6	9.8	41.5	15.2	47.4
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	1941	604	179	986	486	553	914	409	774	1142	511
V/C Ratio(X)	0.91	0.16	0.49	0.80	0.85	0.86	0.91	0.70	0.23	0.92	0.31	0.79
Avail Cap(c_a), veh/h	612	2107	656	277	1074	530	768	914	409	1149	1306	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.6	41.8	48.2	96.2	68.6	68.7	84.6	68.9	60.1	77.7	52.2	63.1
Incr Delay (d2), s/veh	15.4	0.0	0.6	9.2	6.4	12.3	11.4	4.5	1.3	8.7	0.1	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	3.9	12.8	4.3	23.4	24.0	14.9	17.0	4.4	20.7	7.5	21.7
LnGrp Delay(d),s/veh	102.0	41.8	48.8	105.4	75.1	81.0	96.0	73.4	61.4	86.4	52.4	69.5
LnGrp LOS	F	D	D	F	E	F	F	E	E	F	D	E
Approach Vol, veh/h		1058			1402			1239			1464	
Approach Delay, s/veh		69.3			79.9			81.6			73.6	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	50.6	57.0	15.2	82.3	37.5	70.2	33.9	63.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	68.5	53.0	16.5	85.0	45.8	75.7	36.5	65.0
Max Q Clear Time (g_c+I1), s	43.5	35.6	10.5	31.2	31.4	49.4	28.3	50.2
Green Ext Time (p_c), s	2.7	7.7	0.2	17.6	1.6	9.2	1.1	9.4

Intersection Summary	
HCM 2010 Ctrl Delay	76.4
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1977	18	9	1120	121	10	0	26	135	0	0
Future Volume (veh/h)	64	1977	18	9	1120	121	10	0	26	135	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	64	1977	18	9	1120	121	10	0	26	135	0	0
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	3441	1071	20	2990	323	22	103	88	101	186	158
Arrive On Green	0.05	0.68	0.68	0.01	0.64	0.64	0.01	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	4661	503	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	64	1977	18	9	814	427	10	0	26	135	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1774	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.2	18.5	0.3	0.5	10.2	10.2	0.5	0.0	1.4	5.1	0.0	0.0
Cycle Q Clear(g_c), s	3.2	18.5	0.3	0.5	10.2	10.2	0.5	0.0	1.4	5.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	3441	1071	20	2175	1138	22	103	88	101	186	158
V/C Ratio(X)	0.78	0.57	0.02	0.45	0.37	0.37	0.46	0.00	0.30	1.34	0.00	0.00
Avail Cap(c_a), veh/h	108	3441	1071	187	2175	1138	108	383	325	101	375	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.90	0.90	0.90	1.00	0.00	1.00	0.99	0.00	0.00
Uniform Delay (d), s/veh	42.5	7.7	4.8	44.2	7.6	7.6	44.1	0.0	40.8	42.5	0.0	0.0
Incr Delay (d2), s/veh	17.6	0.5	0.0	13.8	0.4	0.8	14.3	0.0	1.8	206.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	8.8	0.2	0.3	4.9	5.2	0.3	0.0	0.7	8.2	0.0	0.0
LnGrp Delay(d),s/veh	60.1	8.2	4.8	58.0	8.1	8.5	58.4	0.0	42.7	248.9	0.0	0.0
LnGrp LOS	E	A	A	E	A	A	E		D	F		
Approach Vol, veh/h		2059			1250			36			135	
Approach Delay, s/veh		9.8			8.6			47.0			248.9	
Approach LOS		A			A			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	9.5	5.5	65.4	5.6	13.5	8.7	62.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.5	9.5	38.9	5.5	18.1	5.5	42.9
Max Q Clear Time (g_c+I1), s	7.1	3.4	2.5	20.5	2.5	0.0	5.2	12.2
Green Ext Time (p_c), s	0.0	0.0	0.0	16.8	0.0	0.0	0.0	26.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

HCM Signalized Intersection Capacity Analysis
12: Evans Road & Ramona Expwy

5/31/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1192	721	19	830	0	348	0	9	0	0	0
Future Volume (vph)	0	1192	721	19	830	0	348	0	9	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.97		1.00			
Frt		1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)		5085	1583	1770	3539		3433		1583			
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)		5085	1583	1770	3539		3433		1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1192	721	19	830	0	348	0	9	0	0	0
RTOR Reduction (vph)	0	0	455	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	0	1192	266	19	830	0	348	0	4	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot		Perm			Perm
Protected Phases	7	4		3	8		2			6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)		47.3	47.3	4.3	56.1		64.0		64.0			
Effective Green, g (s)		47.3	47.3	4.3	56.1		64.0		64.0			
Actuated g/C Ratio		0.37	0.37	0.03	0.44		0.50		0.50			
Clearance Time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		1877	584	59	1549		1715		790			
v/s Ratio Prot		c0.23		0.01	c0.23		c0.10					
v/s Ratio Perm			0.17						0.00			
v/c Ratio		0.64	0.46	0.32	0.54		0.20		0.01			
Uniform Delay, d1		33.3	30.6	60.5	26.4		17.8		16.1			
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2		0.7	0.6	3.2	0.4		0.3		0.0			
Delay (s)		34.0	31.2	63.6	26.8		18.1		16.1			
Level of Service		C	C	E	C		B		B			
Approach Delay (s)		32.9			27.6			18.1			0.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	128.1	Sum of lost time (s)	16.5
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
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)	0	1192	721	19	830	0	348	0	9	0	0	0
Future Volume (veh/h)	0	1192	721	19	830	0	348	0	9	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0	1863	0	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1192	0	19	830	0	348	0	9	0	0	0
Adj No. of Lanes	1	3	1	1	2	0	2	0	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2	2	2	2
Cap, veh/h	4	3928	1223	42	3199	0	0	0	0	0	4	4
Arrive On Green	0.00	0.77	0.00	0.02	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5085	1583	1774	3632	0		0		0	1863	1583
Grp Volume(v), veh/h	0	1192	0	19	830	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	0				0	1863	1583
Q Serve(g_s), s	0.0	2.9	0.0	0.4	1.2	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.9	0.0	0.4	1.2	0.0				0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				0.00		1.00
Lane Grp Cap(c), veh/h	4	3928	1223	42	3199	0				0	4	4
V/C Ratio(X)	0.00	0.30	0.00	0.45	0.26	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	213	15864	4939	617	11848	0				0	715	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.4	0.0	20.1	0.3	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.4	0.0	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	0.0	0.3	0.5	0.0				0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	1.5	0.0	27.5	0.3	0.0				0.0	0.0	0.0
LnGrp LOS		A		C	A							
Approach Vol, veh/h		1192			849						0	
Approach Delay, s/veh		1.5			0.9						0.0	
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6	7	8
Phs Duration (G+Y+Rc), s			5.5	36.2		0.0	0.0	41.7
Change Period (Y+Rc), s			4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s			14.5	130.0		16.0	5.0	139.5
Max Q Clear Time (g_c+I1), s			2.4	4.9		0.0	0.0	3.2
Green Ext Time (p_c), s			0.0	27.3		0.0	0.0	27.4

Intersection Summary	
HCM 2010 Ctrl Delay	1.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	82	47	123	34	215	13	615	148	148	957	18
Future Volume (veh/h)	28	82	47	123	34	215	13	615	148	148	957	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	28	82	47	123	34	215	13	615	148	148	957	18
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	223	128	252	373	317	27	1547	372	184	2254	42
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.55	0.55	0.10	0.63	0.63
Sat Flow, veh/h	1126	1113	638	1256	1863	1583	1774	2832	680	1774	3554	67
Grp Volume(v), veh/h	28	0	129	123	34	215	13	384	379	148	477	498
Grp Sat Flow(s),veh/h/ln	1126	0	1750	1256	1863	1583	1774	1770	1743	1774	1770	1851
Q Serve(g_s), s	1.9	0.0	5.7	8.4	1.3	11.3	0.7	11.3	11.4	7.3	12.1	12.1
Cycle Q Clear(g_c), s	3.2	0.0	5.7	14.2	1.3	11.3	0.7	11.3	11.4	7.3	12.1	12.1
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.39	1.00		0.04
Lane Grp Cap(c), veh/h	289	0	350	252	373	317	27	967	952	184	1123	1174
V/C Ratio(X)	0.10	0.00	0.37	0.49	0.09	0.68	0.48	0.40	0.40	0.81	0.42	0.42
Avail Cap(c_a), veh/h	439	0	583	419	621	528	335	967	952	335	1123	1174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	31.1	37.2	29.3	33.3	43.9	11.8	11.8	39.5	8.2	8.2
Incr Delay (d2), s/veh	0.1	0.0	0.6	1.2	0.1	2.0	12.3	1.2	1.2	8.0	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.8	3.0	0.7	5.1	0.4	5.8	5.7	4.0	6.2	6.5
LnGrp Delay(d),s/veh	30.8	0.0	31.7	38.3	29.4	35.3	56.2	13.1	13.1	47.5	9.4	9.4
LnGrp LOS	C		C	D	C	D	E	B	B	D	A	A
Approach Vol, veh/h		157			372			776			1123	
Approach Delay, s/veh		31.5			35.8			13.8			14.4	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.8	53.7		22.5	5.9	61.6		22.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.0	29.5		30.0	17.0	29.5		30.0
Max Q Clear Time (g_c+I1), s	9.3	13.4		7.7	2.7	14.1		16.2
Green Ext Time (p_c), s	0.2	9.8		2.1	0.0	9.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	257	60	10	267	51	55	177	8	85	242	148
Future Volume (veh/h)	226	257	60	10	267	51	55	177	8	85	242	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	226	257	60	11	290	55	60	192	9	92	263	161
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	820	188	24	456	85	78	1529	71	119	1000	593
Arrive On Green	0.15	0.29	0.29	0.01	0.15	0.15	0.04	0.44	0.44	0.07	0.47	0.47
Sat Flow, veh/h	1774	2860	656	1774	2977	557	1774	3443	161	1774	2140	1269
Grp Volume(v), veh/h	226	157	160	11	171	174	60	98	103	92	216	208
Grp Sat Flow(s),veh/h/ln	1774	1770	1747	1774	1770	1764	1774	1770	1834	1774	1770	1639
Q Serve(g_s), s	11.2	6.3	6.5	0.6	8.1	8.3	3.0	2.9	3.0	4.6	6.7	7.0
Cycle Q Clear(g_c), s	11.2	6.3	6.5	0.6	8.1	8.3	3.0	2.9	3.0	4.6	6.7	7.0
Prop In Lane	1.00		0.38	1.00		0.32	1.00		0.09	1.00		0.77
Lane Grp Cap(c), veh/h	261	508	501	24	271	270	78	786	814	119	827	766
V/C Ratio(X)	0.87	0.31	0.32	0.46	0.63	0.65	0.77	0.13	0.13	0.77	0.26	0.27
Avail Cap(c_a), veh/h	286	696	687	101	511	510	246	786	814	286	827	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	25.1	25.2	44.1	35.7	35.8	42.6	14.7	14.7	41.3	14.6	14.6
Incr Delay (d2), s/veh	19.3	0.3	0.3	13.5	2.4	2.6	14.9	0.3	0.3	10.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	3.1	3.1	0.4	4.2	4.3	1.8	1.5	1.6	2.6	3.3	3.2
LnGrp Delay(d),s/veh	56.8	25.4	25.5	57.5	38.2	38.4	57.5	15.1	15.1	51.5	14.7	14.8
LnGrp LOS	E	C	C	E	D	D	E	B	B	D	B	B
Approach Vol, veh/h		543			356			261			516	
Approach Delay, s/veh		38.5			38.9			24.8			21.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	44.0	5.7	29.8	8.4	46.0	17.7	17.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	14.5	18.0	5.1	35.4	12.5	20.0	14.5	26.0
Max Q Clear Time (g_c+I1), s	6.6	5.0	2.6	8.5	5.0	9.0	13.2	10.3
Green Ext Time (p_c), s	0.1	3.1	0.0	4.0	0.1	2.9	0.1	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	0	108	0	0	0	151	470	0	1	706	82
Future Volume (veh/h)	47	0	108	0	0	0	151	470	0	1	706	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	47	0	108	0	0	0	164	511	0	1	767	89
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	0	147	0	173	0	241	2714	0	2	2471	1106
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.07	0.77	0.00	0.00	0.70	0.70
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	47	0	108	0	0	0	164	511	0	1	767	89
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	2.8	0.0	6.0	0.0	0.0	0.0	4.2	3.5	0.0	0.1	7.5	1.6
Cycle Q Clear(g_c), s	2.8	0.0	6.0	0.0	0.0	0.0	4.2	3.5	0.0	0.1	7.5	1.6
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	0	147	0	173	0	241	2714	0	2	2471	1106
V/C Ratio(X)	0.22	0.00	0.73	0.00	0.00	0.00	0.68	0.19	0.00	0.41	0.31	0.08
Avail Cap(c_a), veh/h	723	0	721	0	849	0	440	2714	0	306	2471	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	39.7	0.0	0.0	0.0	40.9	2.9	0.0	44.9	5.2	4.3
Incr Delay (d2), s/veh	0.5	0.0	6.9	0.0	0.0	0.0	3.4	0.2	0.0	84.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.9	0.0	0.0	0.0	2.1	1.8	0.0	0.1	3.6	0.7
LnGrp Delay(d),s/veh	38.8	0.0	46.7	0.0	0.0	0.0	44.2	3.0	0.0	129.4	5.3	4.4
LnGrp LOS	D		D				D	A		F	A	A
Approach Vol, veh/h		155			0			675			857	
Approach Delay, s/veh		44.3			0.0			13.0			5.4	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	73.0		12.4	10.8	66.8		12.4
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	15.5	21.0		41.0	11.5	25.0		41.0
Max Q Clear Time (g_c+I1), s	2.1	5.5		8.0	6.2	9.5		0.0
Green Ext Time (p_c), s	0.0	8.1		0.6	0.2	7.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

APPENDIX E
Related Projects List and Trip Assignment

Appendix E Related Projects and Trip Assignment

#	Project Name	Location	Land Use	Intensity	Units	Weekday Daily Total	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
City of Perris												
1	P 05-0113 (IDI)	Southwest Corner of Perris Boulevard and Nance Street	Warehouse	1,750.000	ksf	4,661	291	189	102	324	107	217
2	P 05-0192 (Oakmont I)	Southwest Corner of Perris Boulevard and Markham Street	Warehouse	697.600	ksf	1,858	116	75	41	129	43	86
3	P 05-0477	Between Johnson Street and Redlands Avenue	Warehouse	462.692	ksf	1,232	77	50	27	86	28	58
4	Rados Distribution Center	Northwest Corner of Heacock Street and Rider Street	Warehouse	1,200.000	ksf	3,196	200	130	70	222	73	149
5	Investment Development Services (IDS) II	Southwest Corner of Redlands Avenue and Rider Street	Warehouse	350.000	ksf	932	58	38	20	65	21	44
6	P 07-09-0018	Northeast Corner of Heacock Street and Nance Street	Warehouse	170.000	ksf	1,119	94	75	19	101	25	76
7	P 07-07-0029 (Oakmont II)	Northwest Corner of Indian Street and Ramona Expressway	Warehouse	1,600.000	ksf	4,261	266	173	93	296	98	198
8	TR 32707	Between Murrieta Road and Lake Perris Drive	Single-Family Homes	137	du	1,311	103	26	77	138	88	50
9	TR 34716	Northwest Corner of Redlands Avenue and Markham Street	Single-Family Homes	318	du	3,043	239	60	179	321	204	117
10	P 05-0493 (Ridge I)	Southwest Corner of Perris Boulevard and Ramona Expressway	Warehouse	700.000	ksf	1,864	117	76	41	129	43	86
11	Ridge II	Northwest Corner of Perris Boulevard and Rider Street	Warehouse	2,000.000	ksf	5,327	333	216	117	370	122	248
12	Harvest Landing Specific Plan	Northwest Corner of N. Perris Boulevard and Nuevo Road	Single-Family Homes	717	du	6,862	538	136	402	724	459	265
			Condominiums	1,139	du	6,618	501	80	421	592	399	193
			Sports Park	16.7	acre	697	27	15	12	78	39	39
			Business Park	1,233.401	ksf	15,738	1,764	1,480	284	1,591	370	1,221
			Shopping Center	73.181	ksf	3,142	73	45	28	273	134	139
			Internal Trip Reduction (20%)			-6,611	-581	-351	-230	-652	-280	-372
			Pass-by Reduction			-628	-15	-9	-6	-55	-27	-28
			Subtotal:			26,446	2,322	1,404	918	2,607	1,121	1,486
13	P 06-0411 (Concrete Batch Plant)	Patterson Avenue North of Harley Knox Boulevard	Manufacturing	2.000	ksf	12	2	0	2	2	1	1
14	Jordan Distribution	Northeast Corner of Redlands Avenue and Rider Street	Warehouse	378.000	ksf	1,007	63	41	22	70	23	47
15	Aiere	Northwest Corner of Redlands Avenue and Rider Street	Warehouse	642.000	ksf	1,710	107	69	38	119	39	80
16	P 08-11-0005; P 08-11-0006 (Starcrest)	Southeast Corner of Webster Avenue and Ramona Expressway	Warehouse	454.088	ksf	1,209	76	49	27	84	28	56
17	Perris Marketplace	Southwest Corner of Perris Boulevard and Citrus Avenue	Warehouse	7,399.291	ksf	23,787	1,859	984	875	1,913	949	964
City of Perris Total						**79,779**	**6,123**	**3,529**	**2,594**	**6,754**	**2,938**	**3,816**
City of Moreno Valley												
18	PA 06-0152 & PA 06-0153 (First Industrial Realty Trust)	Northwest Corner of Indian Street and Nandina Avenue	Warehouse	1,182.918	ksf	3,150	197	128	69	219	72	147
19	PA 06-0014 (Pierce Hardy Limited Partnership)	Southeast Corner of Heacock Street and Nandina Avenue	Lumber Yard	67.000	ksf	3,026	174	117	57	301	141	160
20	March Business Center	Southeast Corner of Heacock Street and Iris Avenue	Warehouse	1,380.246	ksf	4,400	298	205	93	328	100	228
			Warehouse	87.429	ksf							
			Industrial	16.732	ksf							
21	"PA 07-0035; PA 07-0039 (Moreno Valley Industrial Park)"	Northeast Corner of Heacock Street and Iris Avenue	Industrial	204.657	ksf	2,905	308	255	53	328	55	273
22	PA 07-0079 (Indian Business Park)	Southwest Corner of Indian Street and Iris Avenue	Warehouse	1,560.046	ksf	4,155	260	169	91	289	95	194
23	PA 06-0021; PA 06-0022; PA 06-0048; PA 06-0049 (Komar Investments)	Northwest Corner of Indian Street and Cardinal Avenue	Warehouse	2,057.400	ksf	13,546	1,142	913	229	1,218	304	914
24	PA 06-0017 (Ivan Devries)	Northeast Corner of Perris Boulevard and Edwin Road	Industrial	569.200	ksf	3,962	478	393	85	490	102	388
25	PA 09-0004 (Vogel)	Southwest Corner of Perris Boulevard and Grove View Road	Warehouse	1,616.133	ksf	4,304	269	175	94	299	99	200
26	TM 34748	Southeast Corner of Heacock Street and Gentian Avenue	Single-Family Homes	135	du	1,292	101	26	75	136	86	50
27	TM 32917	Northeast Corner of Lasselle Street and Krameria Avenue	Condominiums	227	du	1,319	100	16	84	118	79	39
28	PA 07-0166 (San Michele Logistics Center)	Northeast Corner of Knox Street and Nandina Avenue	Warehouse	865.960	ksf	2,306	144	94	50	160	53	107
29	TM 33810	Southeast Corner of Indian Street and Iris Avenue	Single-Family Homes	16	du	153	12	3	9	16	10	6
30	TM 34151	East of Indiana Street, South of Iris Avenue	Single-Family Homes	37	du	354	28	7	21	37	24	13
31	TM 32716	Southeast Corner of Indian Street and Superior Avenue	Single-Family Homes	57	du	545	43	11	32	58	36	22
City of Moreno Valley Total						**45,418**	**3,553**	**2,511**	**1,042**	**3,996**	**1,258**	**2,738**
March Joint Powers Authority												

Appendix E Related Projects and Trip Assignment

#	Project Name	Location	Land Use	Intensity	Units	Weekday Daily Total	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
32	March Lifecare Campus Specific Plan	Southwest Corner of Indian Street and Cactus Avenue	Medical Offices	190.000	ksf	6,865	437	346	91	657	177	480
			Retail	210.000	ksf	9,017	210	128	82	783	384	399
			Research & Education	200.000	ksf	1,622	244	202	42	214	32	182
			Hospital	50	beds	591	57	41	16	66	24	42
			Institutional Residential	660	beds	1,808	112	82	30	191	100	91
			Internal Trip Reduction (15%)			-2,985	-159	-120	-39	-287	-107	-180
			Pass-by Reduction			-1,916	-45	-27	-18	-166	-82	-84
			Subtotal:			15,001	857	651	206	1,458	527	931
33	Airport Master Plan	West of Heacock Street between Krameria Avenue and Nandina Avenue	Airport	559.000	ksf	4,952	654	575	79	689	83	606
March Joint Powers Authority Total						**19,953**	**1,510**	**1,227**	**283**	**2,148**	**610**	**1,538**
County of Riverside												
34	PP 18908	Northwest Corner of Harvil Avenue and Placentia Avenue	Industrial	133.000	ksf	1,178	156	137	19	164	20	144
35	SP 341; PP 21552 (Majestic Freeway Business Center)	West of I-215 between Harley Knox Boulevard and Cajalco Road	Warehouse	6,200.000	ksf	16,512	1,032	671	361	1,147	378	769
36	PP 20699 (Oleander Business Park)	West of I-215 at Cajalco Road	Warehouse	1,206.710	ksf	7,945	670	536	134	714	179	535
37	Ramona Metrolink Station	Southwest Corner of Harvill Avenue and Cajalco Road	Light Rail Transit Station	300	parking spaces	753	321	258	63	372	216	156
38	TM 33869	South of Cajalco Road, East of Day Street	Single-Family Homes	39	du	373	29	7	22	39	25	14
39	PP 16978	Southwest Corner of Harvill Avenue and Rider Street	Industrial	85.000	ksf	753	99	87	12	105	13	92
40	PP 21144	Northwest Corner of Harvil Avenue and Rider Street	Industrial	190.802	ksf	1,328	160	132	28	164	34	130
41	Meridian Business Park	Northwest of I-215, South of Alessandro Boulevard	Industrial	5,985.000	ksf	41,656	5,027	3,469	1,558	5,147	926	4,221
42	South Perris Industrial	Southern portion of Perris, Southwest of I-215 and South of Fourth Street	Warehouse	7,399.291	ksf	19,704	1,228	799	429	1,369	451	918
43	Stratford Ranch Industrial Park	Southeast Corner of Redlands Avenue and Oleander Avenue	Warehouse	1,712.880	ksf	4,561	284	185	99	317	104	213
44	Optimus Logistics Center 1	Northeast Corner of Patterson Avenue and Markham Street	Warehouse	1,037.811	ksf	2,764	172	112	60	192	63	129
45	Integra Perris Distribution Center	South of Nance Street, North of Markham Street, West of Indian Street	Warehouse	864.000	ksf	2,301	143	93	50	160	53	107
46	Moreno Valley Walmart	Northwest Corner of Perris Boulevard and Iris Avenue	Freestanding Discount Store	189.520	ksf	9,618	351	196	154	824	404	420
			Gas Station	16	vfp	2,697	195	99	95	222	111	111
			Subtotal:			12,315	545	296	250	1,046	515	531
47	First Inland Logistics Center 11	Northwest Corner of Perris Boulevard and Nandina Avenue	Warehouse	400.130	ksf	1,066	66	43	23	74	24	50
48	Modular Logistics (Dorado Property)	Southeast Corner of N. Perris Boulevard and Modular Way	Warehouse	1,109.378	ksf	2,954	184	120	64	205	68	137
49	First Nandina Logistics Center	South side of Nandina Avenue, East of Nandina Avenue and Heacock Street	Warehouse	1,450.000	ksf	3,861	241	157	84	268	88	180
50	Pelican Perris 33-Acre Industrial	South side of E. Nance Street, West of Nance Street and Redlands Avenue	Warehouse	480.000	ksf	1,278	80	52	28	89	29	60
			Industrial	120.000	ksf	1,063	140	123	17	148	18	130
			Subtotal:			2,341	220	175	45	237	47	190
51	Moreno Valley Industrial Center (Industrial Area SP)	North side of San Michelle Road, West of San Michelle Road and Perris Boulevard	Industrial	354.810	ksf	3,143	415	365	50	437	52	385
52	TR 22180/Young Homes	Northwest Corner of Perris Boulevard and Santiago Drive	Single-Family Homes	87	du	833	65	17	48	88	56	32
53	TR 32141	East of La Salle Street and Iris Avenue	Single-Family Homes	81	du	775	61	15	46	82	52	30
County of Riverside Total						**127,117**	**11,118**	**7,674**	**3,444**	**12,327**	**3,364**	**8,963**
Grand Total						**252,314**	**20,794**	**13,714**	**7,080**	**23,077**	**7,560**	**15,517**

Trip Generation Source: Institute of Transportation Engineers (ITE) "Trip Generation - 8th Edition", except where noted.

[a] Source: "Stratford Ranch Industrial Traffic Study", prepared by Urban Crossroads, August/September 2014."

[b] Source: "Traffic Study for Optimus Logistics Center 2", prepared by Crown City Engineers, July 2015.

APPENDIX F
LOS Operations Worksheets – Future Without-Project Conditions (Partial Closure)

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	482	120	362	644	175	251	1482	344	189	1111	82
Future Volume (veh/h)	63	482	120	362	644	175	251	1482	344	189	1111	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	63	482	120	362	644	175	251	1482	344	189	1111	82
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	500	124	382	957	260	282	1526	475	209	1251	92
Arrive On Green	0.05	0.18	0.18	0.22	0.35	0.35	0.16	0.30	0.30	0.12	0.26	0.26
Sat Flow, veh/h	1774	2813	696	1774	2753	747	1774	5085	1583	1774	4834	356
Grp Volume(v), veh/h	63	302	300	362	414	405	251	1482	344	189	779	414
Grp Sat Flow(s),veh/h/ln	1774	1770	1740	1774	1770	1731	1774	1695	1583	1774	1695	1800
Q Serve(g_s), s	3.2	15.2	15.4	18.1	17.9	17.9	12.5	25.9	17.5	9.5	19.9	19.9
Cycle Q Clear(g_c), s	3.2	15.2	15.4	18.1	17.9	17.9	12.5	25.9	17.5	9.5	19.9	19.9
Prop In Lane	1.00		0.40	1.00		0.43	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	81	315	309	382	615	602	282	1526	475	209	878	466
V/C Ratio(X)	0.78	0.96	0.97	0.95	0.67	0.67	0.89	0.97	0.72	0.90	0.89	0.89
Avail Cap(c_a), veh/h	120	315	309	382	615	602	282	1526	475	209	878	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	36.7	36.8	34.8	25.0	25.0	37.1	31.1	28.2	39.2	32.1	32.1
Incr Delay (d2), s/veh	17.0	40.0	42.8	32.5	2.9	2.9	27.6	17.2	9.3	37.2	11.0	18.6
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	1.9	11.0	11.1	12.3	9.2	9.0	8.3	14.5	8.9	6.8	10.6	12.3
LnGrp Delay(d),s/veh	59.5	76.7	79.6	67.3	27.8	27.9	64.7	48.3	37.4	76.4	43.0	50.7
LnGrp LOS	E	E	E	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		665			1181			2077			1382	
Approach Delay, s/veh		76.4			40.0			48.5			49.9	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	31.0	23.9	20.0	18.8	27.3	8.6	35.3
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	10.6	27.0	19.4	16.0	14.3	23.3	6.1	29.3
Max Q Clear Time (g_c+I1), s	11.5	27.9	20.1	17.4	14.5	21.9	5.2	19.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.3	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	50.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	585	432	609	771	137	416	645	507	186	716	101
Future Volume (veh/h)	187	585	432	609	771	137	416	645	507	186	716	101
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	187	585	432	609	771	137	416	645	507	186	716	101
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	697	325	691	1434	253	494	1147	513	260	906	405
Arrive On Green	0.08	0.21	0.21	0.20	0.33	0.33	0.14	0.32	0.32	0.08	0.26	0.26
Sat Flow, veh/h	3442	3390	1583	3442	4351	767	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	187	585	432	609	599	309	416	645	507	186	716	101
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1727	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	4.6	14.5	18.0	15.1	12.6	12.8	10.3	13.2	27.9	4.6	16.5	4.4
Cycle Q Clear(g_c), s	4.6	14.5	18.0	15.1	12.6	12.8	10.3	13.2	27.9	4.6	16.5	4.4
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	697	325	691	1117	569	494	1147	513	260	906	405
V/C Ratio(X)	0.71	0.84	1.33	0.88	0.54	0.54	0.84	0.56	0.99	0.72	0.79	0.25
Avail Cap(c_a), veh/h	377	697	325	750	1117	569	542	1147	513	295	906	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	33.4	34.8	34.0	23.9	24.0	36.5	24.5	29.4	39.6	30.4	25.9
Incr Delay (d2), s/veh	3.5	9.0	167.3	11.2	0.5	1.1	10.7	2.0	36.8	7.0	4.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	7.7	22.9	8.2	6.0	6.3	5.6	6.8	17.4	2.4	8.7	2.0
LnGrp Delay(d),s/veh	42.9	42.4	202.1	45.2	24.4	25.0	47.3	26.5	66.2	46.6	35.2	26.2
LnGrp LOS	D	D	F	D	C	C	D	C	E	D	D	C
Approach Vol, veh/h		1204			1517			1568			1003	
Approach Delay, s/veh		99.8			32.9			44.8			36.4	
Approach LOS		F			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	32.4	22.1	22.0	17.1	26.4	11.2	32.9
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	7.5	28.4	19.1	18.0	13.8	22.1	9.6	27.5
Max Q Clear Time (g_c+I1), s	6.6	29.9	17.1	20.0	12.3	18.5	6.6	14.8
Green Ext Time (p_c), s	0.1	0.0	0.5	0.0	0.3	2.9	0.2	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	191	82	215	152	231	76	1750	319	157	1346	14
Future Volume (veh/h)	32	191	82	215	152	231	76	1750	319	157	1346	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	191	82	215	152	231	76	1750	319	157	1346	14
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	231	231	196	138	292	98	1700	307	154	2200	23
Arrive On Green	0.15	0.15	0.15	0.18	0.18	0.18	0.06	0.39	0.39	0.09	0.42	0.42
Sat Flow, veh/h	265	1584	1583	1060	750	1583	1774	4333	782	1774	5189	54
Grp Volume(v), veh/h	223	0	82	367	0	231	76	1365	704	157	879	481
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1810	0	1583	1774	1695	1725	1774	1695	1853
Q Serve(g_s), s	10.1	0.0	4.0	16.0	0.0	12.1	3.7	34.0	34.0	7.5	17.5	17.5
Cycle Q Clear(g_c), s	10.1	0.0	4.0	16.0	0.0	12.1	3.7	34.0	34.0	7.5	17.5	17.5
Prop In Lane	0.14		1.00	0.59		1.00	1.00		0.45	1.00		0.03
Lane Grp Cap(c), veh/h	270	0	231	334	0	292	98	1330	677	154	1437	786
V/C Ratio(X)	0.83	0.00	0.36	1.10	0.00	0.79	0.78	1.03	1.04	1.02	0.61	0.61
Avail Cap(c_a), veh/h	342	0	292	334	0	292	137	1330	677	154	1437	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	33.3	35.3	0.0	33.7	40.4	26.3	26.3	39.6	19.4	19.4
Incr Delay (d2), s/veh	12.5	0.0	0.9	78.2	0.0	13.6	16.7	31.6	45.3	78.6	0.8	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	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	1.8	15.1	0.0	6.3	2.2	21.5	24.5	7.0	8.3	9.3
LnGrp Delay(d),s/veh	48.4	0.0	34.3	113.5	0.0	47.3	57.1	57.9	71.6	118.4	20.2	20.8
LnGrp LOS	D		C	F		D	E	F	F	F	C	C
Approach Vol, veh/h		305			598			2145			1517	
Approach Delay, s/veh		44.6			87.9			62.4			30.5	
Approach LOS		D			F			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	12.0	38.0		16.6	9.3	40.7		20.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	7.5	34.0		16.0	6.7	34.8		16.0
Max Q Clear Time (g_c+I1), s	9.5	36.0		12.1	5.7	19.5		18.0
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	14.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	213	308	99	148	91	246	920	167	146	766	166
Future Volume (veh/h)	372	213	308	99	148	91	246	920	167	146	766	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	372	213	308	99	148	91	246	920	167	146	766	166
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	383	343	127	335	195	287	1429	639	181	996	216
Arrive On Green	0.13	0.22	0.22	0.07	0.16	0.16	0.16	0.40	0.40	0.10	0.34	0.34
Sat Flow, veh/h	3442	1770	1583	1774	2158	1253	1774	3539	1583	1774	2894	627
Grp Volume(v), veh/h	372	213	308	99	120	119	246	920	167	146	468	464
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1642	1774	1770	1583	1774	1770	1752
Q Serve(g_s), s	8.7	8.8	15.6	4.5	5.1	5.5	11.1	17.3	5.8	6.6	19.5	19.5
Cycle Q Clear(g_c), s	8.7	8.8	15.6	4.5	5.1	5.5	11.1	17.3	5.8	6.6	19.5	19.5
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	457	383	343	127	275	255	287	1429	639	181	609	603
V/C Ratio(X)	0.81	0.56	0.90	0.78	0.44	0.47	0.86	0.64	0.26	0.81	0.77	0.77
Avail Cap(c_a), veh/h	530	388	348	228	343	319	361	1429	639	237	609	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	28.8	31.4	37.6	31.6	31.7	33.6	19.8	16.4	36.2	24.1	24.1
Incr Delay (d2), s/veh	8.3	1.7	24.8	9.8	1.1	1.3	15.3	2.2	1.0	14.3	5.9	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.5	9.2	2.6	2.5	2.6	6.7	8.9	2.7	4.0	10.5	10.4
LnGrp Delay(d),s/veh	43.1	30.5	56.3	47.4	32.7	33.1	48.9	22.0	17.4	50.5	30.1	30.1
LnGrp LOS	D	C	E	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		893			338			1333			1078	
Approach Delay, s/veh		44.6			37.1			26.4			32.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	37.3	10.4	21.8	17.8	32.4	15.5	16.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	11.0	33.3	10.6	18.1	16.8	27.5	12.7	16.0
Max Q Clear Time (g_c+I1), s	8.6	19.3	6.5	17.6	13.1	21.5	10.7	7.5
Green Ext Time (p_c), s	0.1	10.0	0.1	0.2	0.2	4.9	0.3	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	514	58	379	329	0	0	0	0	1288	4	271
Future Volume (veh/h)	0	514	58	379	329	0	0	0	0	1288	4	271
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	514	58	379	329	0				1288	4	271
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	659	74	266	1435	0				875	3	783
Arrive On Green	0.00	0.21	0.21	0.25	0.68	0.00				0.49	0.49	0.49
Sat Flow, veh/h	0	3301	361	1774	3632	0				1769	5	1583
Grp Volume(v), veh/h	0	283	289	379	329	0				1292	0	271
Grp Sat Flow(s),veh/h/ln	0	1770	1799	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	13.6	13.7	13.5	3.2	0.0				44.5	0.0	9.4
Cycle Q Clear(g_c), s	0.0	13.6	13.7	13.5	3.2	0.0				44.5	0.0	9.4
Prop In Lane	0.00		0.20	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	364	370	266	1435	0				877	0	783
V/C Ratio(X)	0.00	0.78	0.78	1.42	0.23	0.00				1.47	0.00	0.35
Avail Cap(c_a), veh/h	0	364	370	266	1435	0				877	0	783
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.15	0.15	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.8	33.8	33.7	9.1	0.0				22.8	0.0	13.9
Incr Delay (d2), s/veh	0.0	15.0	15.1	194.1	0.1	0.0				218.9	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
%ile BackOfQ(50%),veh/ln	0.0	8.1	8.4	20.9	1.5	0.0				75.0	0.0	4.1
LnGrp Delay(d),s/veh	0.0	48.8	49.0	227.9	9.2	0.0				241.7	0.0	14.1
LnGrp LOS		D	D	F	A					F		B
Approach Vol, veh/h		572			708						1563	
Approach Delay, s/veh		48.9			126.3						202.2	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	23.0		49.0		41.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			13.5	18.5		44.5		36.5
Max Q Clear Time (g_c+I1), s			15.5	15.7		46.5		5.2
Green Ext Time (p_c), s			0.0	1.5		0.0		6.3

Intersection Summary	
HCM 2010 Ctrl Delay	152.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	1530	0	0	585	603	124	3	717	0	0	0
Future Volume (veh/h)	271	1530	0	0	585	603	124	3	717	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	271	1530	0	0	585	603	124	3	717			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	274	1817	0	0	547	489	671	16	612			
Arrive On Green	0.31	1.00	0.00	0.00	0.31	0.31	0.39	0.39	0.39			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1734	42	1583			
Grp Volume(v), veh/h	271	1530	0	0	585	603	127	0	717			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1776	0	1583			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	27.8	27.8	4.3	0.0	34.8			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	27.8	27.8	4.3	0.0	34.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	274	1817	0	0	547	489	687	0	612			
V/C Ratio(X)	0.99	0.84	0.00	0.00	1.07	1.23	0.18	0.00	1.17			
Avail Cap(c_a), veh/h	274	1817	0	0	547	489	687	0	612			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.52	0.52	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	31.0	0.0	0.0	0.0	31.1	31.1	18.2	0.0	27.6			
Incr Delay (d2), s/veh	36.3	2.6	0.0	0.0	58.6	121.6	0.1	0.0	93.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.4	0.7	0.0	0.0	22.4	28.6	2.1	0.0	31.0			
LnGrp Delay(d),s/veh	67.3	2.6	0.0	0.0	89.7	152.7	18.4	0.0	121.2			
LnGrp LOS	E	A			F	F	B		F			
Approach Vol, veh/h		1801			1188			844				
Approach Delay, s/veh		12.4			121.7			105.7				
Approach LOS		B			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		39.3		50.7			18.4	32.3
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		34.8		46.2			13.9	27.8
Max Q Clear Time (g_c+I1), s		36.8		2.0			15.7	29.8
Green Ext Time (p_c), s		0.0		33.0			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	492	138	159	8	74	58	267	1729	26	61	1107	345
Future Volume (veh/h)	492	138	159	8	74	58	267	1729	26	61	1107	345
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	535	150	173	9	80	63	290	1879	28	61	1107	345
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	463	1533	686	20	361	259	282	1666	25	78	1057	329
Arrive On Green	0.26	0.43	0.43	0.01	0.18	0.18	0.16	0.32	0.32	0.04	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	1968	1414	1774	5162	77	1774	5085	1583
Grp Volume(v), veh/h	535	150	173	9	71	72	290	1234	673	61	1107	345
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1613	1774	1695	1849	1774	1695	1583
Q Serve(g_s), s	23.5	2.3	6.3	0.5	3.1	3.4	14.3	29.0	29.0	3.1	18.7	18.7
Cycle Q Clear(g_c), s	23.5	2.3	6.3	0.5	3.1	3.4	14.3	29.0	29.0	3.1	18.7	18.7
Prop In Lane	1.00		1.00	1.00		0.88	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	463	1533	686	20	324	296	282	1094	597	78	1057	329
V/C Ratio(X)	1.15	0.10	0.25	0.45	0.22	0.24	1.03	1.13	1.13	0.78	1.05	1.05
Avail Cap(c_a), veh/h	463	1533	686	99	324	296	282	1094	597	99	1057	329
HCM Platoon Ratio	1.00	1.00	1.00	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	0.91	0.91	0.91	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	33.3	15.1	16.2	44.2	31.3	31.4	37.9	30.5	30.5	42.6	35.7	35.7
Incr Delay (d2), s/veh	91.7	0.1	0.9	13.9	1.4	1.8	61.2	69.5	77.6	20.6	37.6	56.4
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	23.3	1.1	2.9	0.3	1.6	1.7	11.8	24.1	27.6	2.0	12.4	13.3
LnGrp Delay(d),s/veh	125.0	15.2	17.1	58.1	32.7	33.2	99.1	100.0	108.1	63.2	73.2	92.1
LnGrp LOS	F	B	B	E	C	C	F	F	F	E	F	F
Approach Vol, veh/h		858			152			2197			1513	
Approach Delay, s/veh		84.0			34.4			102.4			77.1	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	33.0	5.5	43.0	18.8	22.7	28.0	20.5
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	5.0	28.0	5.0	35.0	14.3	18.7	23.5	16.5
Max Q Clear Time (g_c+I1), s	5.1	31.0	2.5	8.3	16.3	20.7	25.5	5.4
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	88.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1165	391	400	1509	0	0	0	0	1080	3	534
Future Volume (veh/h)	0	1165	391	400	1509	0	0	0	0	1080	3	534
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1165	391	400	1509	0				1082	0	534
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1004	330	325	2183	0				1005	0	449
Arrive On Green	0.00	0.38	0.38	0.37	1.00	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	2712	862	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	780	776	400	1509	0				1082	0	534
Grp Sat Flow(s),veh/h/ln	0	1770	1711	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.5	34.5	16.5	0.0	0.0				25.5	0.0	25.5
Cycle Q Clear(g_c), s	0.0	34.5	34.5	16.5	0.0	0.0				25.5	0.0	25.5
Prop In Lane	0.00		0.50	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	678	656	325	2183	0				1005	0	449
V/C Ratio(X)	0.00	1.15	1.18	1.23	0.69	0.00				1.08	0.00	1.19
Avail Cap(c_a), veh/h	0	678	656	325	2183	0				1005	0	449
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.8	27.8	28.5	0.0	0.0				32.3	0.0	32.3
Incr Delay (d2), s/veh	0.0	83.6	97.7	106.0	0.2	0.0				51.3	0.0	105.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	32.5	34.0	17.5	0.1	0.0				19.6	0.0	24.3
LnGrp Delay(d),s/veh	0.0	111.3	125.5	134.5	0.2	0.0				83.5	0.0	138.2
LnGrp LOS		F	F	F	A					F		F
Approach Vol, veh/h		1556			1909						1616	
Approach Delay, s/veh		118.4			28.3						101.6	
Approach LOS		F			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			21.0	39.0		30.0		60.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			16.5	34.5		25.5		55.5
Max Q Clear Time (g_c+I1), s			18.5	36.5		27.5		2.0
Green Ext Time (p_c), s			0.0	0.0		0.0		41.6

Intersection Summary	
HCM 2010 Ctrl Delay	79.2
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	1857	0	0	1347	1507	566	3	541	0	0	0
Future Volume (veh/h)	390	1857	0	0	1347	1507	566	3	541	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	390	1857	0	0	1347	1507	568	0	541			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	227	2379	0	0	875	783	808	0	361			
Arrive On Green	0.26	1.00	0.00	0.00	0.49	0.49	0.23	0.00	0.23			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	390	1857	0	0	1347	1507	568	0	541			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	11.5	0.0	0.0	0.0	44.5	44.5	13.2	0.0	20.5			
Cycle Q Clear(g_c), s	11.5	0.0	0.0	0.0	44.5	44.5	13.2	0.0	20.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	227	2379	0	0	875	783	808	0	361			
V/C Ratio(X)	1.72	0.78	0.00	0.00	1.54	1.92	0.70	0.00	1.50			
Avail Cap(c_a), veh/h	227	2379	0	0	875	783	808	0	361			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.5	0.0	0.0	0.0	22.8	22.8	31.9	0.0	34.8			
Incr Delay (d2), s/veh	325.9	0.2	0.0	0.0	248.5	421.0	2.8	0.0	239.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	26.1	0.1	0.0	0.0	82.0	110.9	6.8	0.0	32.9			
LnGrp Delay(d),s/veh	359.4	0.2	0.0	0.0	271.2	443.7	34.7	0.0	273.9			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		2247			2854			1109				
Approach Delay, s/veh		62.6			362.3			151.4				
Approach LOS		E			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		25.0		65.0			16.0	49.0
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		20.5		60.5			11.5	44.5
Max Q Clear Time (g_c+I1), s		22.5		2.0			13.5	46.5
Green Ext Time (p_c), s		0.0		58.1			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	216.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	977	214	153	2216	456	540	822	138	240	508	370
Future Volume (veh/h)	438	977	214	153	2216	456	540	822	138	240	508	370
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	438	977	214	153	2216	456	540	822	138	240	508	370
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	2855	889	183	2097	413	523	866	387	241	575	257
Arrive On Green	0.12	0.56	0.56	0.05	0.49	0.49	0.15	0.24	0.24	0.07	0.16	0.16
Sat Flow, veh/h	3442	5085	1583	3442	4265	839	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	438	977	214	153	1741	931	540	822	138	240	508	370
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1715	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	29.5	25.0	16.4	10.6	118.0	118.0	36.5	54.8	17.3	16.7	33.7	39.0
Cycle Q Clear(g_c), s	29.5	25.0	16.4	10.6	118.0	118.0	36.5	54.8	17.3	16.7	33.7	39.0
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	423	2855	889	183	1667	843	523	866	387	241	575	257
V/C Ratio(X)	1.04	0.34	0.24	0.84	1.04	1.10	1.03	0.95	0.36	1.00	0.88	1.44
Avail Cap(c_a), veh/h	423	2855	889	245	1667	843	523	866	387	241	575	257
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	105.3	28.6	26.7	112.6	61.0	61.0	101.7	89.2	75.0	111.6	98.3	100.5
Incr Delay (d2), s/veh	53.2	0.1	0.1	16.9	34.6	63.8	47.7	20.6	2.6	56.9	15.0	217.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	11.8	7.2	5.5	63.3	70.9	20.8	29.3	7.9	9.9	17.7	32.7
LnGrp Delay(d),s/veh	158.4	28.6	26.8	129.5	95.6	124.8	149.5	109.7	77.6	168.4	113.3	318.4
LnGrp LOS	F	C	C	F	F	F	F	F	E	F	F	F
Approach Vol, veh/h		1629			2825			1500			1118	
Approach Delay, s/veh		63.3			107.1			121.1			193.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	62.7	17.2	138.8	41.0	43.0	34.0	122.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	16.8	58.7	17.1	130.4	36.5	39.0	29.5	118.0
Max Q Clear Time (g_c+I1), s	18.7	56.8	12.6	27.0	38.5	41.0	31.5	120.0
Green Ext Time (p_c), s	0.0	1.5	0.2	86.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	113.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1274	41	89	2558	41	39	3	100	30	8	63
Future Volume (veh/h)	105	1274	41	89	2558	41	39	3	100	30	8	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	1274	41	89	2558	41	39	3	100	30	8	63
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	3146	979	114	3160	50	61	163	139	52	154	131
Arrive On Green	0.07	0.62	0.62	0.06	0.61	0.61	0.03	0.09	0.09	0.03	0.08	0.08
Sat Flow, veh/h	1774	5085	1583	1774	5156	82	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	105	1274	41	89	1679	920	39	3	100	30	8	63
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1848	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.3	11.5	0.9	4.4	34.2	34.5	2.0	0.1	5.5	1.5	0.4	3.4
Cycle Q Clear(g_c), s	5.3	11.5	0.9	4.4	34.2	34.5	2.0	0.1	5.5	1.5	0.4	3.4
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	3146	979	114	2078	1133	61	163	139	52	154	131
V/C Ratio(X)	0.85	0.41	0.04	0.78	0.81	0.81	0.64	0.02	0.72	0.58	0.05	0.48
Avail Cap(c_a), veh/h	124	3146	979	199	2078	1133	101	375	318	101	375	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.09	0.09	0.09	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	41.4	8.7	6.7	41.5	13.4	13.4	42.9	37.5	40.0	43.1	38.1	39.5
Incr Delay (d2), s/veh	35.3	0.3	0.1	1.1	0.3	0.6	10.4	0.0	6.8	9.6	0.1	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	3.8	5.4	0.4	2.2	16.0	17.6	1.1	0.1	2.7	0.9	0.2	1.6
LnGrp Delay(d),s/veh	76.7	9.1	6.8	42.5	13.7	14.0	53.3	37.6	46.8	52.8	38.2	42.2
LnGrp LOS	E	A	A	D	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1420			2688			142			101	
Approach Delay, s/veh		14.0			14.8			48.4			45.0	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	12.4	10.3	60.2	7.6	11.9	10.8	59.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.1	10.1	38.7	5.1	18.1	6.3	42.5
Max Q Clear Time (g_c+I1), s	3.5	7.5	6.4	13.5	4.0	5.4	7.3	36.5
Green Ext Time (p_c), s	0.0	0.4	0.1	24.1	0.0	0.4	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	763	181	16	1556	467	509	831	28	507	986	752
Future Volume (veh/h)	444	763	181	16	1556	467	509	831	28	507	986	752
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	444	763	0	16	1556	467	509	831	28	507	986	752
Adj No. of Lanes	2	3	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	2357	734	24	1298	581	423	1046	468	539	1165	521
Arrive On Green	0.11	0.46	0.00	0.01	0.37	0.37	0.12	0.30	0.30	0.16	0.33	0.33
Sat Flow, veh/h	3442	5085	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	444	763	0	16	1556	467	509	831	28	507	986	752
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	26.5	22.7	0.0	2.2	88.0	63.6	29.5	51.9	3.0	35.0	62.2	79.0
Cycle Q Clear(g_c), s	26.5	22.7	0.0	2.2	88.0	63.6	29.5	51.9	3.0	35.0	62.2	79.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	2357	734	24	1298	581	423	1046	468	539	1165	521
V/C Ratio(X)	1.17	0.32	0.00	0.66	1.20	0.80	1.20	0.79	0.06	0.94	0.85	1.44
Avail Cap(c_a), veh/h	380	2357	734	47	1298	581	423	1046	468	572	1165	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	106.8	40.6	0.0	117.8	76.0	68.3	105.3	77.8	60.6	100.1	74.9	80.5
Incr Delay (d2), s/veh	100.5	0.1	0.0	26.5	97.3	8.1	112.0	6.2	0.2	23.3	5.9	210.0
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	17.9	10.7	0.0	1.2	60.6	29.2	20.6	26.3	1.4	18.4	31.4	65.0
LnGrp Delay(d),s/veh	207.3	40.7	0.0	144.4	173.3	76.4	217.3	84.0	60.9	123.5	80.8	290.5
LnGrp LOS	F	D		F	F	E	F	F	E	F	F	F
Approach Vol, veh/h		1207			2039			1368			2245	
Approach Delay, s/veh		102.0			150.8			133.1			160.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.1	74.9	7.8	115.2	34.0	83.0	31.0	92.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	39.9	68.6	6.4	108.1	29.5	79.0	26.5	88.0
Max Q Clear Time (g_c+I1), s	37.0	53.9	4.2	24.7	31.5	81.0	28.5	90.0
Green Ext Time (p_c), s	0.6	11.8	0.0	44.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	141.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	994	0	0	1757	29	0	0	0	11	0	24
Future Volume (veh/h)	38	994	0	0	1757	29	0	0	0	11	0	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	38	994	0	0	1757	29	0	0	0	11	0	0
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	3243	0	2	2987	1325	0	2	0	18	0	16
Arrive On Green	0.03	0.92	0.00	0.00	0.84	0.84	0.00	0.00	0.00	0.01	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3539	1570	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	38	994	0	0	1757	29	0	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1570	0	1863	0	1774	0	1583
Q Serve(g_s), s	2.3	3.6	0.0	0.0	16.8	0.3	0.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	2.3	3.6	0.0	0.0	16.8	0.3	0.0	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	3243	0	2	2987	1325	0	2	0	18	0	16
V/C Ratio(X)	0.68	0.31	0.00	0.00	0.59	0.02	0.00	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	252	5943	0	81	5603	2486	0	307	0	276	0	246
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.4	0.5	0.0	0.0	2.6	1.4	0.0	0.0	0.0	53.8	0.0	0.0
Incr Delay (d2), s/veh	13.8	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	27.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	0.0	0.0	7.9	0.1	0.0	0.0	0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh	66.2	0.6	0.0	0.0	2.8	1.4	0.0	0.0	0.0	81.0	0.0	0.0
LnGrp LOS	E	A			A	A				F		
Approach Vol, veh/h		1032			1786			0			11	
Approach Delay, s/veh		3.0			2.8			0.0			81.0	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	104.1		5.1	7.9	96.2
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	183.5		17.0	15.5	173.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	5.6		2.7	4.3	18.8
Green Ext Time (p_c), s		0.0	0.0	77.3		0.0	0.0	73.4

Intersection Summary	
HCM 2010 Ctrl Delay	3.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	39	22	179	136	441	16	1323	77	67	764	32
Future Volume (veh/h)	16	39	22	179	136	441	16	1323	77	67	764	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	39	22	179	136	441	16	1323	77	67	764	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	330	186	439	548	466	32	1724	100	86	1860	78
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.02	0.51	0.51	0.05	0.54	0.54
Sat Flow, veh/h	833	1120	632	1336	1863	1583	1774	3400	198	1774	3462	145
Grp Volume(v), veh/h	16	0	61	179	136	441	16	687	713	67	390	406
Grp Sat Flow(s),veh/h/ln	833	0	1751	1336	1863	1583	1774	1770	1828	1774	1770	1837
Q Serve(g_s), s	1.3	0.0	2.3	10.2	5.0	24.5	0.8	28.2	28.3	3.4	11.8	11.8
Cycle Q Clear(g_c), s	6.3	0.0	2.3	12.5	5.0	24.5	0.8	28.2	28.3	3.4	11.8	11.8
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	279	0	516	439	548	466	32	897	927	86	951	987
V/C Ratio(X)	0.06	0.00	0.12	0.41	0.25	0.95	0.49	0.77	0.77	0.78	0.41	0.41
Avail Cap(c_a), veh/h	279	0	516	439	548	466	101	897	927	128	951	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.36	0.36	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	23.2	27.8	24.2	31.0	43.8	17.9	17.9	42.3	12.4	12.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.1	14.2	11.1	6.2	6.1	16.0	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	0.3	0.0	1.1	3.8	2.6	12.6	0.5	15.1	15.8	2.0	6.1	6.3
LnGrp Delay(d),s/veh	26.7	0.0	23.3	28.0	24.3	45.2	54.8	24.1	24.0	58.3	13.7	13.6
LnGrp LOS	C		C	C	C	D	D	C	C	E	B	B
Approach Vol, veh/h		77			756			1416			863	
Approach Delay, s/veh		24.0			37.4			24.4			17.1	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	50.1		31.0	6.1	52.9		31.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	43.5		26.5	5.1	44.9		26.5
Max Q Clear Time (g_c+I1), s	5.4	30.3		8.3	2.8	13.8		26.5
Green Ext Time (p_c), s	0.0	10.0		3.2	0.0	18.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	320	28	14	626	189	143	329	22	208	302	386
Future Volume (veh/h)	232	320	28	14	626	189	143	329	22	208	302	386
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	232	320	28	15	680	205	155	358	24	226	328	420
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	1343	117	31	734	221	189	803	54	262	495	443
Arrive On Green	0.15	0.41	0.41	0.02	0.27	0.27	0.11	0.24	0.24	0.15	0.28	0.28
Sat Flow, veh/h	1774	3295	287	1774	2682	808	1774	3368	225	1774	1770	1583
Grp Volume(v), veh/h	232	171	177	15	449	436	155	187	195	226	328	420
Grp Sat Flow(s),veh/h/ln	1774	1770	1812	1774	1770	1720	1774	1770	1823	1774	1770	1583
Q Serve(g_s), s	11.5	5.7	5.8	0.8	22.2	22.2	7.7	8.1	8.2	11.2	14.7	23.4
Cycle Q Clear(g_c), s	11.5	5.7	5.8	0.8	22.2	22.2	7.7	8.1	8.2	11.2	14.7	23.4
Prop In Lane	1.00		0.16	1.00		0.47	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	268	721	738	31	484	471	189	422	435	262	495	443
V/C Ratio(X)	0.87	0.24	0.24	0.49	0.93	0.93	0.82	0.44	0.45	0.86	0.66	0.95
Avail Cap(c_a), veh/h	313	721	738	99	492	478	229	422	435	309	495	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	17.5	17.5	43.8	31.8	31.8	39.4	29.2	29.2	37.4	28.6	31.8
Incr Delay (d2), s/veh	18.6	0.2	0.2	11.4	23.6	24.2	17.8	3.4	3.3	18.9	3.3	29.8
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	7.0	2.8	2.9	0.5	14.0	13.7	4.7	4.4	4.5	6.8	7.6	13.8
LnGrp Delay(d),s/veh	55.9	17.6	17.7	55.2	55.4	56.0	57.2	32.6	32.5	56.3	31.9	61.5
LnGrp LOS	E	B	B	E	E	E	E	C	C	E	C	E
Approach Vol, veh/h		580			900			537			974	
Approach Delay, s/veh		32.9			55.7			39.7			50.3	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	25.5	6.1	40.7	14.1	29.2	18.1	28.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	15.7	16.4	5.0	35.9	11.6	20.5	15.9	25.0
Max Q Clear Time (g_c+I1), s	13.2	10.2	2.8	7.8	9.7	25.4	13.5	24.2
Green Ext Time (p_c), s	0.2	3.5	0.0	9.1	0.1	0.0	0.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	46.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	0	174	0	0	0	176	1227	0	4	671	232
Future Volume (veh/h)	225	0	174	0	0	0	176	1227	0	4	671	232
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	225	0	174	0	0	0	191	1334	0	4	729	252
Adj No. of Lanes	0	1	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	0	304	0	358	0	271	3376	0	9	2089	935
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.08	0.66	0.00	0.01	0.59	0.59
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	5253	0	1774	3539	1583
Grp Volume(v), veh/h	225	0	174	0	0	0	191	1334	0	4	729	252
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1695	0	1774	1770	1583
Q Serve(g_s), s	13.8	0.0	9.0	0.0	0.0	0.0	4.9	10.8	0.0	0.2	9.6	7.0
Cycle Q Clear(g_c), s	13.8	0.0	9.0	0.0	0.0	0.0	4.9	10.8	0.0	0.2	9.6	7.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	0	304	0	358	0	271	3376	0	9	2089	935
V/C Ratio(X)	0.64	0.00	0.57	0.00	0.00	0.00	0.70	0.40	0.00	0.43	0.35	0.27
Avail Cap(c_a), veh/h	551	0	528	0	621	0	478	3376	0	108	2089	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	33.0	0.0	0.0	0.0	40.4	6.9	0.0	44.6	9.5	9.0
Incr Delay (d2), s/veh	2.0	0.0	1.7	0.0	0.0	0.0	3.3	0.3	0.0	27.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	4.0	0.0	0.0	0.0	2.4	5.0	0.0	0.2	4.7	3.0
LnGrp Delay(d),s/veh	36.9	0.0	34.7	0.0	0.0	0.0	43.8	7.2	0.0	72.5	9.6	9.1
LnGrp LOS	D		C				D	A		E	A	A
Approach Vol, veh/h		399			0			1525			985	
Approach Delay, s/veh		35.9			0.0			11.8			9.7	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	63.7		21.3	11.6	57.1		21.3
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.5	42.0		30.0	12.5	35.0		30.0
Max Q Clear Time (g_c+I1), s	2.2	12.8		15.8	6.9	11.6		0.0
Green Ext Time (p_c), s	0.0	20.0		1.5	0.3	17.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	631	201	305	434	158	176	1646	382	296	1908	29
Future Volume (veh/h)	35	631	201	305	434	158	176	1646	382	296	1908	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	35	631	201	305	434	158	176	1646	382	296	1908	29
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	470	150	266	753	272	168	1695	528	266	2007	30
Arrive On Green	0.03	0.18	0.18	0.15	0.30	0.30	0.09	0.33	0.33	0.15	0.39	0.39
Sat Flow, veh/h	1774	2643	841	1774	2550	920	1774	5085	1583	1774	5161	78
Grp Volume(v), veh/h	35	422	410	305	300	292	176	1646	382	296	1253	684
Grp Sat Flow(s),veh/h/ln	1774	1770	1714	1774	1770	1700	1774	1695	1583	1774	1695	1849
Q Serve(g_s), s	1.8	16.0	16.0	13.5	12.9	13.2	8.5	28.7	19.1	13.5	32.2	32.3
Cycle Q Clear(g_c), s	1.8	16.0	16.0	13.5	12.9	13.2	8.5	28.7	19.1	13.5	32.2	32.3
Prop In Lane	1.00		0.49	1.00		0.54	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	57	315	305	266	523	502	168	1695	528	266	1318	719
V/C Ratio(X)	0.61	1.34	1.34	1.15	0.57	0.58	1.05	0.97	0.72	1.11	0.95	0.95
Avail Cap(c_a), veh/h	118	315	305	266	523	502	168	1695	528	266	1318	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	37.0	37.0	38.3	26.9	27.0	40.8	29.6	26.4	38.3	26.7	26.7
Incr Delay (d2), s/veh	10.0	173.9	175.4	100.5	1.5	1.7	83.5	16.0	8.4	88.7	14.6	22.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	23.0	22.4	14.0	6.6	6.4	8.0	15.9	9.5	13.1	17.6	20.8
LnGrp Delay(d),s/veh	53.0	210.9	212.4	138.7	28.4	28.7	124.3	45.6	34.7	127.0	41.3	49.0
LnGrp LOS	D	F	F	F	C	C	F	D	C	F	D	D
Approach Vol, veh/h		867			897			2204			2233	
Approach Delay, s/veh		205.2			66.0			50.0			55.0	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	34.0	18.0	20.0	13.0	39.0	7.4	30.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	13.5	30.0	13.5	16.0	8.5	35.0	6.0	23.5
Max Q Clear Time (g_c+I1), s	15.5	30.7	15.5	18.0	10.5	34.3	3.8	15.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.7	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	75.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	635	357	605	669	92	301	643	468	291	713	106
Future Volume (veh/h)	201	635	357	605	669	92	301	643	468	291	713	106
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	201	635	357	605	669	92	301	643	468	291	713	106
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	703	329	693	1482	202	378	1020	456	369	1010	452
Arrive On Green	0.08	0.21	0.21	0.20	0.33	0.33	0.11	0.29	0.29	0.11	0.29	0.29
Sat Flow, veh/h	3442	3390	1583	3442	4528	616	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	201	635	357	605	499	262	301	643	468	291	713	106
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1754	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	4.9	15.8	18.0	14.8	10.1	10.2	7.4	13.7	25.0	7.2	15.6	4.4
Cycle Q Clear(g_c), s	4.9	15.8	18.0	14.8	10.1	10.2	7.4	13.7	25.0	7.2	15.6	4.4
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	703	329	693	1110	574	378	1020	456	369	1010	452
V/C Ratio(X)	0.72	0.90	1.09	0.87	0.45	0.46	0.80	0.63	1.03	0.79	0.71	0.23
Avail Cap(c_a), veh/h	397	703	329	774	1110	574	424	1020	456	417	1012	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	33.5	34.4	33.6	23.0	23.1	37.7	26.9	30.9	37.8	27.7	23.7
Incr Delay (d2), s/veh	3.6	15.0	74.8	10.0	0.3	0.6	9.1	3.0	48.9	8.8	2.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	8.9	14.6	7.9	4.8	5.0	4.0	7.1	17.1	3.8	7.9	2.0
LnGrp Delay(d),s/veh	42.5	48.5	109.2	43.6	23.3	23.6	46.8	29.8	79.7	46.6	30.0	24.0
LnGrp LOS	D	D	F	D	C	C	D	C	F	D	C	C
Approach Vol, veh/h		1193			1366			1412			1110	
Approach Delay, s/veh		65.7			32.3			50.0			33.8	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	29.0	22.0	22.0	14.0	28.8	11.6	32.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	10.5	25.0	19.5	18.0	10.7	24.8	10.0	27.5
Max Q Clear Time (g_c+I1), s	9.2	27.0	16.8	20.0	9.4	17.6	6.9	12.2
Green Ext Time (p_c), s	0.1	0.0	0.7	0.0	0.1	5.3	0.2	9.5

Intersection Summary	
HCM 2010 Ctrl Delay	45.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	158	75	210	65	118	33	1854	203	156	2015	20
Future Volume (veh/h)	27	158	75	210	65	118	33	1854	203	156	2015	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	27	158	75	210	65	118	33	1854	203	156	2015	20
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	201	202	242	75	280	57	1855	202	177	2419	24
Arrive On Green	0.13	0.13	0.13	0.18	0.18	0.18	0.03	0.40	0.40	0.10	0.47	0.47
Sat Flow, veh/h	270	1579	1583	1370	424	1583	1774	4657	507	1774	5192	52
Grp Volume(v), veh/h	185	0	75	275	0	118	33	1347	710	156	1315	720
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1794	0	1583	1774	1695	1773	1774	1695	1854
Q Serve(g_s), s	8.1	0.0	3.6	12.4	0.0	5.5	1.5	33.1	33.2	7.2	28.2	28.3
Cycle Q Clear(g_c), s	8.1	0.0	3.6	12.4	0.0	5.5	1.5	33.1	33.2	7.2	28.2	28.3
Prop In Lane	0.15		1.00	0.76		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	236	0	202	317	0	280	57	1350	706	177	1579	863
V/C Ratio(X)	0.79	0.00	0.37	0.87	0.00	0.42	0.58	1.00	1.01	0.88	0.83	0.83
Avail Cap(c_a), veh/h	355	0	304	344	0	304	109	1350	706	177	1579	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	33.3	33.4	0.0	30.5	39.8	25.0	25.1	37.1	19.4	19.4
Incr Delay (d2), s/veh	6.5	0.0	1.1	19.1	0.0	1.0	9.0	23.9	35.2	37.0	4.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	1.6	7.8	0.0	2.5	0.9	19.8	23.0	5.4	14.0	16.1
LnGrp Delay(d),s/veh	41.8	0.0	34.4	52.5	0.0	31.5	48.8	48.9	60.3	74.0	23.4	26.5
LnGrp LOS	D		C	D		C	D	D	F	E	C	C
Approach Vol, veh/h		260			393			2090			2191	
Approach Delay, s/veh		39.7			46.2			52.8			28.0	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	37.2		14.6	7.2	42.8		18.7
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	8.3	33.2		16.0	5.1	36.4		16.0
Max Q Clear Time (g_c+I1), s	9.2	35.2		10.1	3.5	30.3		14.4
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	6.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	82	181	89	53	60	73	856	70	119	1314	85
Future Volume (veh/h)	168	82	181	89	53	60	73	856	70	119	1314	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	168	82	181	89	53	60	73	856	70	119	1314	85
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	264	236	114	249	223	94	1695	758	152	1728	112
Arrive On Green	0.07	0.15	0.15	0.06	0.14	0.14	0.05	0.48	0.48	0.09	0.51	0.51
Sat Flow, veh/h	3442	1770	1583	1774	1770	1583	1774	3539	1583	1774	3376	218
Grp Volume(v), veh/h	168	82	181	89	53	60	73	856	70	119	687	712
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1824
Q Serve(g_s), s	3.6	3.2	8.4	3.8	2.0	2.6	3.1	12.7	1.8	5.0	23.8	23.9
Cycle Q Clear(g_c), s	3.6	3.2	8.4	3.8	2.0	2.6	3.1	12.7	1.8	5.0	23.8	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	250	264	236	114	249	223	94	1695	758	152	906	934
V/C Ratio(X)	0.67	0.31	0.77	0.78	0.21	0.27	0.78	0.51	0.09	0.78	0.76	0.76
Avail Cap(c_a), veh/h	319	369	331	176	381	341	155	1695	758	294	986	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	29.1	31.3	35.3	29.2	29.4	35.9	13.7	10.9	34.3	14.9	15.0
Incr Delay (d2), s/veh	3.7	0.7	6.9	11.2	0.4	0.6	12.9	1.1	0.2	8.4	3.2	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.6	4.1	2.2	1.0	1.2	1.9	6.4	0.8	2.8	12.3	12.7
LnGrp Delay(d),s/veh	38.4	29.8	38.2	46.5	29.6	30.0	48.8	14.8	11.1	42.7	18.1	18.1
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		431			202			999			1518	
Approach Delay, s/veh		36.7			37.2			17.0			20.1	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	40.7	9.4	15.4	8.5	43.2	10.1	14.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.7	36.7	7.6	16.0	6.7	42.7	7.1	16.5
Max Q Clear Time (g_c+I1), s	7.0	14.7	5.8	10.4	5.1	25.9	5.6	4.6
Green Ext Time (p_c), s	0.1	16.1	0.0	1.0	0.0	13.0	0.1	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	462	107	831	173	0	0	0	0	834	9	385
Future Volume (veh/h)	0	462	107	831	173	0	0	0	0	834	9	385
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	462	107	831	173	0				834	9	385
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	588	135	522	1947	0				615	7	554
Arrive On Green	0.00	0.21	0.21	0.49	0.92	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	2952	658	1774	3632	0				1756	19	1583
Grp Volume(v), veh/h	0	285	284	831	173	0				843	0	385
Grp Sat Flow(s),veh/h/ln	0	1770	1747	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	13.7	13.9	26.5	0.4	0.0				31.5	0.0	18.8
Cycle Q Clear(g_c), s	0.0	13.7	13.9	26.5	0.4	0.0				31.5	0.0	18.8
Prop In Lane	0.00		0.38	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	364	359	522	1947	0				621	0	554
V/C Ratio(X)	0.00	0.78	0.79	1.59	0.09	0.00				1.36	0.00	0.69
Avail Cap(c_a), veh/h	0	364	359	522	1947	0				621	0	554
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.8	33.9	22.9	1.7	0.0				29.3	0.0	25.1
Incr Delay (d2), s/veh	0.0	15.4	16.2	266.7	0.0	0.0				171.0	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.3	8.3	51.5	0.2	0.0				44.9	0.0	8.7
LnGrp Delay(d),s/veh	0.0	49.3	50.1	289.6	1.7	0.0				200.2	0.0	28.9
LnGrp LOS		D	D	F	A					F		C
Approach Vol, veh/h		569			1004						1228	
Approach Delay, s/veh		49.7			240.0						146.5	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			31.0	23.0		36.0		54.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			26.5	18.5		31.5		49.5
Max Q Clear Time (g_c+I1), s			28.5	15.9		33.5		2.4
Green Ext Time (p_c), s			0.0	1.2		0.0		5.3

Intersection Summary	
HCM 2010 Ctrl Delay	160.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	880	0	0	947	1217	48	4	342	0	0	0
Future Volume (veh/h)	379	880	0	0	947	1217	48	4	342	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	379	880	0	0	947	1217	48	4	342			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	306	2477	0	0	845	756	329	27	317			
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.48	0.20	0.20	0.20			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1644	137	1583			
Grp Volume(v), veh/h	379	880	0	0	947	1217	52	0	342			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1781	0	1583			
Q Serve(g_s), s	15.5	0.0	0.0	0.0	43.0	43.0	2.2	0.0	18.0			
Cycle Q Clear(g_c), s	15.5	0.0	0.0	0.0	43.0	43.0	2.2	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	306	2477	0	0	845	756	356	0	317			
V/C Ratio(X)	1.24	0.36	0.00	0.00	1.12	1.61	0.15	0.00	1.08			
Avail Cap(c_a), veh/h	306	2477	0	0	845	756	356	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.53	0.53	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	23.5	23.5	29.7	0.0	36.0			
Incr Delay (d2), s/veh	122.5	0.2	0.0	0.0	69.5	280.1	0.2	0.0	73.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	17.9	0.1	0.0	0.0	37.2	77.6	1.1	0.0	14.3			
LnGrp Delay(d),s/veh	152.0	0.2	0.0	0.0	93.0	303.6	29.9	0.0	109.6			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		1259			2164			394				
Approach Delay, s/veh		45.9			211.4			99.0				
Approach LOS		D			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.5		67.5			20.0	47.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			15.5	43.0
Max Q Clear Time (g_c+I1), s		20.0		2.0			17.5	45.0
Green Ext Time (p_c), s		0.0		50.9			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	145.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	79	407	29	159	80	105	1171	8	63	1607	553
Future Volume (veh/h)	336	79	407	29	159	80	105	1171	8	63	1607	553
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	365	86	442	32	173	87	114	1273	9	63	1607	553
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	1355	606	54	454	218	134	1835	13	81	1639	510
Arrive On Green	0.22	0.38	0.38	0.03	0.20	0.20	0.08	0.35	0.35	0.05	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	2319	1116	1774	5210	37	1774	5085	1583
Grp Volume(v), veh/h	365	86	442	32	130	130	114	828	454	63	1607	553
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1666	1774	1695	1856	1774	1695	1583
Q Serve(g_s), s	18.2	1.4	21.5	1.6	5.7	6.1	5.7	18.9	18.9	3.2	28.2	29.0
Cycle Q Clear(g_c), s	18.2	1.4	21.5	1.6	5.7	6.1	5.7	18.9	18.9	3.2	28.2	29.0
Prop In Lane	1.00		1.00	1.00		0.67	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	386	1355	606	54	346	326	134	1194	654	81	1639	510
V/C Ratio(X)	0.94	0.06	0.73	0.59	0.38	0.40	0.85	0.69	0.69	0.78	0.98	1.08
Avail Cap(c_a), veh/h	386	1355	606	101	346	326	134	1194	654	120	1639	510
HCM Platoon Ratio	1.00	1.00	1.00	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	0.91	0.91	0.91	1.00	1.00	1.00	0.44	0.44	0.44
Uniform Delay (d), s/veh	34.7	17.6	23.8	43.1	31.4	31.6	41.1	25.0	25.0	42.5	30.2	30.5
Incr Delay (d2), s/veh	31.9	0.1	7.5	8.9	2.8	3.3	37.5	3.3	6.0	8.1	10.7	52.2
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	12.3	0.7	10.7	0.9	3.1	3.1	4.2	9.3	10.7	1.7	14.7	20.0
LnGrp Delay(d),s/veh	66.5	17.7	31.3	52.0	34.2	34.9	78.6	28.3	31.0	50.6	40.9	82.7
LnGrp LOS	E	B	C	D	C	C	E	C	C	D	D	F
Approach Vol, veh/h		893			292			1396			2223	
Approach Delay, s/veh		44.4			36.5			33.3			51.6	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	35.7	7.3	38.4	11.3	33.0	24.1	21.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	6.1	29.7	5.1	32.1	6.8	29.0	19.6	17.6
Max Q Clear Time (g_c+I1), s	5.2	20.9	3.6	23.5	7.7	31.0	20.2	8.1
Green Ext Time (p_c), s	0.0	8.4	0.0	2.6	0.0	0.0	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1424	574	548	1255	0	0	0	0	1273	1	474
Future Volume (veh/h)	0	1424	574	548	1255	0	0	0	0	1273	1	474
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1424	574	548	1255	0				1274	0	474
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	964	364	325	2183	0				1005	0	449
Arrive On Green	0.00	0.38	0.38	0.37	1.00	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	2608	950	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	973	1025	548	1255	0				1274	0	474
Grp Sat Flow(s),veh/h/ln	0	1770	1695	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.5	34.5	16.5	0.0	0.0				25.5	0.0	25.5
Cycle Q Clear(g_c), s	0.0	34.5	34.5	16.5	0.0	0.0				25.5	0.0	25.5
Prop In Lane	0.00		0.56	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	678	650	325	2183	0				1005	0	449
V/C Ratio(X)	0.00	1.43	1.58	1.68	0.58	0.00				1.27	0.00	1.06
Avail Cap(c_a), veh/h	0	678	650	325	2183	0				1005	0	449
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.8	27.8	28.5	0.0	0.0				32.3	0.0	32.3
Incr Delay (d2), s/veh	0.0	204.1	266.9	309.4	0.1	0.0				128.2	0.0	58.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	55.2	64.2	35.9	0.0	0.0				30.3	0.0	18.3
LnGrp Delay(d),s/veh	0.0	231.9	294.7	337.9	0.1	0.0				160.5	0.0	90.5
LnGrp LOS		F	F	F	A					F		F
Approach Vol, veh/h		1998			1803						1748	
Approach Delay, s/veh		264.1			102.8						141.5	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			21.0	39.0		30.0		60.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			16.5	34.5		25.5		55.5
Max Q Clear Time (g_c+I1), s			18.5	36.5		27.5		2.0
Green Ext Time (p_c), s			0.0	0.0		0.0		45.2

Intersection Summary	
HCM 2010 Ctrl Delay	173.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	620	2075	0	0	1373	1422	431	8	370	0	0	0
Future Volume (veh/h)	620	2075	0	0	1373	1422	431	8	370	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	620	2075	0	0	1373	1422	437	0	370			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	345	2477	0	0	812	716	710	0	317			
Arrive On Green	0.39	1.00	0.00	0.00	0.46	0.46	0.20	0.00	0.20			
Sat Flow, veh/h	1774	3632	0	0	1875	1573	3548	0	1583			
Grp Volume(v), veh/h	620	2075	0	0	1362	1433	437	0	370			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1585	1774	0	1583			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	41.0	41.0	10.1	0.0	18.0			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	41.0	41.0	10.1	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		0.99	1.00		1.00			
Lane Grp Cap(c), veh/h	345	2477	0	0	806	722	710	0	317			
V/C Ratio(X)	1.80	0.84	0.00	0.00	1.69	1.98	0.62	0.00	1.17			
Avail Cap(c_a), veh/h	345	2477	0	0	806	722	710	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	0.0	0.0	0.0	24.5	24.5	32.8	0.0	36.0			
Incr Delay (d2), s/veh	359.9	0.3	0.0	0.0	315.5	448.1	1.6	0.0	104.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	42.9	0.1	0.0	0.0	90.6	107.7	5.1	0.0	17.0			
LnGrp Delay(d),s/veh	387.4	0.3	0.0	0.0	340.0	472.6	34.4	0.0	140.4			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		2695			2795			807				
Approach Delay, s/veh		89.4			408.0			83.0				
Approach LOS		F			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.5		67.5			22.0	45.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			17.5	41.0
Max Q Clear Time (g_c+I1), s		20.0		2.0			19.5	43.0
Green Ext Time (p_c), s		0.0		60.6			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	230.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	404	399	216	1203	282	348	628	149	495	871	419
Future Volume (veh/h)	347	404	399	216	1203	282	348	628	149	495	871	419
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	347	404	399	216	1203	282	348	628	149	495	871	419
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	1981	617	253	1440	338	391	1054	471	545	1212	542
Arrive On Green	0.11	0.39	0.39	0.07	0.35	0.35	0.11	0.30	0.30	0.16	0.34	0.34
Sat Flow, veh/h	3442	5085	1583	3442	4117	965	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	347	404	399	216	991	494	348	628	149	495	871	419
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1692	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	20.9	11.1	43.2	13.0	56.4	56.4	21.0	31.9	15.3	29.7	45.1	49.7
Cycle Q Clear(g_c), s	20.9	11.1	43.2	13.0	56.4	56.4	21.0	31.9	15.3	29.7	45.1	49.7
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	1981	617	253	1186	592	391	1054	471	545	1212	542
V/C Ratio(X)	0.89	0.20	0.65	0.85	0.84	0.84	0.89	0.60	0.32	0.91	0.72	0.77
Avail Cap(c_a), veh/h	552	2227	693	370	1306	652	555	1054	471	748	1252	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	92.0	42.6	52.4	96.3	62.8	62.8	91.9	63.0	57.2	87.0	60.3	61.8
Incr Delay (d2), s/veh	12.5	0.1	1.8	12.3	4.5	8.6	12.4	2.5	1.8	11.9	1.9	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	5.2	19.2	6.6	27.2	27.8	10.7	16.0	7.0	15.1	22.5	22.8
LnGrp Delay(d),s/veh	104.5	42.6	54.1	108.6	67.3	71.4	104.4	65.5	59.0	98.9	62.2	68.2
LnGrp LOS	F	D	D	F	E	E	F	E	E	F	E	E
Approach Vol, veh/h		1150			1701			1125			1785	
Approach Delay, s/veh		65.3			73.7			76.7			73.8	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.8	66.6	19.9	85.9	28.4	76.0	28.3	77.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	45.7	62.6	22.6	92.1	33.9	74.4	33.7	81.0
Max Q Clear Time (g_c+I1), s	31.7	33.9	15.0	45.2	23.0	51.7	22.9	58.4
Green Ext Time (p_c), s	1.6	15.6	0.4	23.1	0.9	13.6	0.9	15.1

Intersection Summary	
HCM 2010 Ctrl Delay	72.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	2273	50	20	1349	32	22	9	52	49	5	125
Future Volume (veh/h)	70	2273	50	20	1349	32	22	9	52	49	5	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	70	2273	50	20	1349	32	22	9	52	49	5	125
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	3313	1031	39	3181	75	42	163	139	70	192	163
Arrive On Green	0.05	0.65	0.65	0.02	0.62	0.62	0.02	0.09	0.09	0.04	0.10	0.10
Sat Flow, veh/h	1774	5085	1583	1774	5110	121	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	70	2273	50	20	895	486	22	9	52	49	5	125
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1841	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.5	25.4	1.0	1.0	12.2	12.2	1.1	0.4	2.8	2.5	0.2	6.9
Cycle Q Clear(g_c), s	3.5	25.4	1.0	1.0	12.2	12.2	1.1	0.4	2.8	2.5	0.2	6.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	3313	1031	39	2110	1146	42	163	139	70	192	163
V/C Ratio(X)	0.78	0.69	0.05	0.52	0.42	0.42	0.53	0.06	0.38	0.70	0.03	0.76
Avail Cap(c_a), veh/h	179	3313	1031	99	2110	1146	99	373	317	99	373	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.59	0.59	0.59	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	42.2	9.9	5.6	43.5	8.7	8.7	43.4	37.7	38.7	42.7	36.3	39.3
Incr Delay (d2), s/veh	11.2	1.0	0.1	6.1	0.4	0.7	10.0	0.1	1.7	12.1	0.1	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	11.9	0.5	0.6	5.7	6.3	0.7	0.2	1.3	1.4	0.1	3.3
LnGrp Delay(d),s/veh	53.4	10.9	5.7	49.7	9.1	9.4	53.4	37.8	40.4	54.8	36.3	46.5
LnGrp LOS	D	B	A	D	A	A	D	D	D	D	D	D
Approach Vol, veh/h		2393			1401			83			179	
Approach Delay, s/veh		12.0			9.8			43.6			48.5	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	12.4	6.5	63.1	6.6	13.8	9.1	60.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.0	5.0	44.0	5.0	18.0	9.1	39.9
Max Q Clear Time (g_c+I1), s	4.5	4.8	3.0	27.4	3.1	8.9	5.5	14.2
Green Ext Time (p_c), s	0.0	0.5	0.0	15.9	0.0	0.4	0.0	24.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	439	1610	376	24	908	257	251	416	11	283	658	376
Future Volume (veh/h)	439	1610	376	24	908	257	251	416	11	283	658	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	439	1610	0	24	908	257	251	416	11	283	658	376
Adj No. of Lanes	2	3	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	490	2482	773	33	1288	576	293	1111	497	327	1146	513
Arrive On Green	0.14	0.49	0.00	0.02	0.36	0.36	0.09	0.31	0.31	0.09	0.32	0.32
Sat Flow, veh/h	3442	5085	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	439	1610	0	24	908	257	251	416	11	283	658	376
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	25.2	47.6	0.0	2.7	44.0	24.7	14.4	18.3	1.0	16.3	31.0	42.3
Cycle Q Clear(g_c), s	25.2	47.6	0.0	2.7	44.0	24.7	14.4	18.3	1.0	16.3	31.0	42.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	490	2482	773	33	1288	576	293	1111	497	327	1146	513
V/C Ratio(X)	0.90	0.65	0.00	0.74	0.70	0.45	0.86	0.37	0.02	0.87	0.57	0.73
Avail Cap(c_a), veh/h	780	3015	939	84	1464	655	489	1111	497	540	1164	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.6	38.5	0.0	98.0	54.6	48.5	90.6	53.5	47.6	89.6	56.4	60.2
Incr Delay (d2), s/veh	8.4	0.4	0.0	27.1	1.3	0.5	7.8	1.0	0.1	8.0	0.7	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	12.6	22.3	0.0	1.6	21.8	10.9	7.2	9.1	0.4	8.1	15.3	19.2
LnGrp Delay(d),s/veh	92.9	38.8	0.0	125.1	55.9	49.0	98.4	54.5	47.6	97.6	57.1	65.4
LnGrp LOS	F	D		F	E	D	F	D	D	F	E	E
Approach Vol, veh/h		2049			1189			678			1317	
Approach Delay, s/veh		50.4			55.8			70.6			68.2	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.5	67.0	8.2	102.0	21.6	69.0	33.1	77.1
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	31.5	63.0	9.5	119.0	28.5	66.0	45.5	83.0
Max Q Clear Time (g_c+I1), s	18.3	20.3	4.7	49.6	16.4	44.3	27.2	46.0
Green Ext Time (p_c), s	0.8	10.7	0.0	40.5	0.6	8.7	1.4	27.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.7
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary
13: Driveway/Lake Perris Drive

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1738	0	0	1112	3	0	0	0	1125	0	1689
Future Volume (veh/h)	22	1738	0	0	1112	3	0	0	0	1125	0	1689
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	22	1738	0	0	1112	3	0	0	0	1125	0	0
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1280	0	1	1147	502	0	1	0	1067	0	952
Arrive On Green	0.02	0.36	0.00	0.00	0.32	0.32	0.00	0.00	0.00	0.60	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3539	1550	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	22	1738	0	0	1112	3	0	0	0	1125	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1550	0	1863	0	1774	0	1583
Q Serve(g_s), s	2.7	78.2	0.0	0.0	67.0	0.3	0.0	0.0	0.0	130.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	78.2	0.0	0.0	67.0	0.3	0.0	0.0	0.0	130.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	1280	0	1	1147	502	0	1	0	1067	0	952
V/C Ratio(X)	0.73	1.36	0.00	0.00	0.97	0.01	0.00	0.00	0.00	1.05	0.00	0.00
Avail Cap(c_a), veh/h	41	1280	0	41	1178	516	0	142	0	1067	0	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	105.8	69.0	0.0	0.0	72.0	49.5	0.0	0.0	0.0	43.1	0.0	0.0
Incr Delay (d2), s/veh	34.6	166.0	0.0	0.0	19.1	0.0	0.0	0.0	0.0	43.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	67.8	0.0	0.0	35.8	0.1	0.0	0.0	0.0	76.2	0.0	0.0
LnGrp Delay(d),s/veh	140.4	235.0	0.0	0.0	91.1	49.5	0.0	0.0	0.0	86.3	0.0	0.0
LnGrp LOS	F	F			F	D				F		
Approach Vol, veh/h		1760			1115			0			1125	
Approach Delay, s/veh		233.8			91.0			0.0			86.3	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	82.2		134.0	8.2	74.1
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		16.5	5.0	72.0		130.0	5.0	72.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	80.2		132.0	4.7	69.0
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	152.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	104	60	156	43	161	16	1086	187	187	1699	23
Future Volume (veh/h)	35	104	60	156	43	161	16	1086	187	187	1699	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	104	60	156	43	161	16	1086	187	187	1699	23
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	240	139	245	404	343	32	1534	263	223	2199	30
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.02	0.51	0.51	0.13	0.62	0.62
Sat Flow, veh/h	1173	1110	640	1217	1863	1583	1774	3022	519	1774	3575	48
Grp Volume(v), veh/h	35	0	164	156	43	161	16	635	638	187	840	882
Grp Sat Flow(s),veh/h/ln	1173	0	1750	1217	1863	1583	1774	1770	1771	1774	1770	1854
Q Serve(g_s), s	2.2	0.0	7.3	11.4	1.7	8.0	0.8	24.8	25.0	9.3	31.3	31.5
Cycle Q Clear(g_c), s	3.9	0.0	7.3	18.7	1.7	8.0	0.8	24.8	25.0	9.3	31.3	31.5
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	313	0	379	245	404	343	32	898	899	223	1088	1140
V/C Ratio(X)	0.11	0.00	0.43	0.64	0.11	0.47	0.49	0.71	0.71	0.84	0.77	0.77
Avail Cap(c_a), veh/h	313	0	379	245	404	343	101	898	899	286	1088	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	30.5	38.6	28.3	30.7	43.8	17.0	17.1	38.5	12.7	12.7
Incr Delay (d2), s/veh	0.2	0.0	0.8	4.1	0.1	0.8	11.1	4.7	4.7	15.8	5.3	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.6	4.1	0.9	3.5	0.5	13.2	13.2	5.5	16.8	17.6
LnGrp Delay(d),s/veh	30.0	0.0	31.2	42.6	28.4	31.5	54.8	21.7	21.8	54.3	18.0	17.9
LnGrp LOS	C		C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		199			360			1289			1909	
Approach Delay, s/veh		31.0			35.9			22.1			21.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	50.2		24.0	6.1	59.9		24.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	42.5		19.5	5.1	51.9		19.5
Max Q Clear Time (g_c+I1), s	11.3	27.0		9.3	2.8	33.5		20.7
Green Ext Time (p_c), s	0.1	14.0		1.7	0.0	16.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	326	76	13	252	65	44	277	10	108	381	187
Future Volume (veh/h)	286	326	76	13	252	65	44	277	10	108	381	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	286	326	76	14	274	71	48	301	11	117	414	203
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	882	203	29	392	100	69	1403	51	148	1034	502
Arrive On Green	0.18	0.31	0.31	0.02	0.14	0.14	0.04	0.40	0.40	0.08	0.45	0.45
Sat Flow, veh/h	1774	2859	658	1774	2795	711	1774	3483	127	1774	2313	1122
Grp Volume(v), veh/h	286	200	202	14	172	173	48	153	159	117	316	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1747	1774	1770	1737	1774	1770	1840	1774	1770	1665
Q Serve(g_s), s	14.1	7.9	8.1	0.7	8.3	8.6	2.4	5.1	5.1	5.8	10.8	11.0
Cycle Q Clear(g_c), s	14.1	7.9	8.1	0.7	8.3	8.6	2.4	5.1	5.1	5.8	10.8	11.0
Prop In Lane	1.00		0.38	1.00		0.41	1.00		0.07	1.00		0.67
Lane Grp Cap(c), veh/h	328	546	539	29	248	244	69	713	741	148	792	745
V/C Ratio(X)	0.87	0.37	0.37	0.48	0.69	0.71	0.70	0.21	0.22	0.79	0.40	0.40
Avail Cap(c_a), veh/h	483	698	689	99	315	309	132	713	741	246	792	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	24.3	24.3	43.9	36.8	36.9	42.7	17.6	17.6	40.5	16.7	16.8
Incr Delay (d2), s/veh	9.0	0.3	0.3	11.8	4.5	5.4	11.9	0.7	0.7	9.1	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	3.9	4.0	0.4	4.4	4.5	1.4	2.6	2.7	3.2	5.3	5.1
LnGrp Delay(d),s/veh	44.7	24.6	24.7	55.7	41.3	42.4	54.7	18.3	18.2	49.6	17.1	17.1
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	B	B
Approach Vol, veh/h		688			359			360			734	
Approach Delay, s/veh		32.9			42.4			23.1			22.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	40.2	6.0	31.8	8.0	44.3	21.1	16.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	20.0	5.0	35.5	6.7	25.8	24.5	16.0
Max Q Clear Time (g_c+I1), s	7.8	7.1	2.7	10.1	4.4	13.0	16.1	10.6
Green Ext Time (p_c), s	0.1	4.7	0.0	4.6	0.0	4.7	0.5	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	137	0	0	0	105	844	0	1	1282	104
Future Volume (veh/h)	60	0	137	0	0	0	105	844	0	1	1282	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	0	137	0	0	0	114	917	0	1	1393	113
Adj No. of Lanes	0	1	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	0	174	0	205	0	180	3813	0	2	2473	1106
Arrive On Green	0.11	0.00	0.11	0.00	0.00	0.00	0.05	0.75	0.00	0.00	0.70	0.70
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	5253	0	1774	3539	1583
Grp Volume(v), veh/h	60	0	137	0	0	0	114	917	0	1	1393	113
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1695	0	1774	1770	1583
Q Serve(g_s), s	3.6	0.0	7.6	0.0	0.0	0.0	2.9	5.0	0.0	0.1	17.6	2.1
Cycle Q Clear(g_c), s	3.6	0.0	7.6	0.0	0.0	0.0	2.9	5.0	0.0	0.1	17.6	2.1
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	0	174	0	205	0	180	3813	0	2	2473	1106
V/C Ratio(X)	0.26	0.00	0.79	0.00	0.00	0.00	0.63	0.24	0.00	0.41	0.56	0.10
Avail Cap(c_a), veh/h	347	0	299	0	352	0	287	3813	0	108	2473	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	39.0	0.0	0.0	0.0	41.8	3.4	0.0	44.9	6.7	4.4
Incr Delay (d2), s/veh	0.6	0.0	7.6	0.0	0.0	0.0	3.6	0.1	0.0	84.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	3.7	0.0	0.0	0.0	1.5	2.3	0.0	0.1	8.6	0.9
LnGrp Delay(d),s/veh	37.8	0.0	46.7	0.0	0.0	0.0	45.4	3.6	0.0	129.4	7.0	4.4
LnGrp LOS	D		D				D	A		F	A	A
Approach Vol, veh/h		197			0			1031			1507	
Approach Delay, s/veh		44.0			0.0			8.2			6.9	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	71.5		13.9	9.2	66.9		13.9
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.5	55.0		17.0	7.5	53.0		17.0
Max Q Clear Time (g_c+I1), s	2.1	7.0		9.6	4.9	19.6		0.0
Green Ext Time (p_c), s	0.0	30.7		0.4	0.1	24.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

APPENDIX G
LOS Operations Worksheets – Future with Project Construction Conditions (Partial Closure)

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	482	120	812	644	175	251	1482	767	189	1111	82
Future Volume (veh/h)	63	482	120	812	644	175	251	1482	767	189	1111	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	63	482	120	812	644	175	251	1482	767	189	1111	82
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	500	124	522	1174	319	187	1300	405	148	1128	83
Arrive On Green	0.05	0.18	0.18	0.29	0.43	0.43	0.11	0.26	0.26	0.08	0.23	0.23
Sat Flow, veh/h	1774	2813	696	1774	2753	747	1774	5085	1583	1774	4834	356
Grp Volume(v), veh/h	63	302	300	812	414	405	251	1482	767	189	779	414
Grp Sat Flow(s),veh/h/ln	1774	1770	1740	1774	1770	1731	1774	1695	1583	1774	1695	1800
Q Serve(g_s), s	3.2	15.2	15.4	26.5	15.7	15.8	9.5	23.0	23.0	7.5	20.6	20.6
Cycle Q Clear(g_c), s	3.2	15.2	15.4	26.5	15.7	15.8	9.5	23.0	23.0	7.5	20.6	20.6
Prop In Lane	1.00		0.40	1.00		0.43	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	81	315	309	522	755	738	187	1300	405	148	791	420
V/C Ratio(X)	0.78	0.96	0.97	1.55	0.55	0.55	1.34	1.14	1.90	1.28	0.98	0.99
Avail Cap(c_a), veh/h	173	315	309	522	755	738	187	1300	405	148	791	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	36.7	36.8	31.8	19.3	19.3	40.3	33.5	33.5	41.3	34.3	34.4
Incr Delay (d2), s/veh	14.5	40.0	42.8	258.8	0.8	0.9	184.6	72.9	412.2	167.2	28.1	40.1
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	1.9	11.0	11.1	50.5	7.9	7.7	14.2	19.5	56.3	10.5	12.7	14.9
LnGrp Delay(d),s/veh	57.0	76.7	79.6	290.6	20.2	20.2	224.8	106.4	445.7	208.4	62.5	74.4
LnGrp LOS	E	E	E	F	C	C	F	F	F	F	E	E
Approach Vol, veh/h		665			1631			2500			1382	
Approach Delay, s/veh		76.1			154.8			222.4			86.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	27.0	31.0	20.0	14.0	25.0	8.6	42.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	7.5	23.0	26.5	16.0	9.5	21.0	8.8	33.7
Max Q Clear Time (g_c+I1), s	9.5	25.0	28.5	17.4	11.5	22.6	5.2	17.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0

Intersection Summary	
HCM 2010 Ctrl Delay	158.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	483	712	432	609	996	137	416	857	719	186	491	326
Future Volume (veh/h)	483	712	432	609	996	137	416	857	719	186	491	326
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	483	712	432	609	996	137	416	857	719	186	491	326
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	539	716	334	669	1126	154	491	1192	533	237	931	416
Arrive On Green	0.16	0.21	0.21	0.19	0.25	0.25	0.14	0.34	0.34	0.07	0.26	0.26
Sat Flow, veh/h	3442	3390	1583	3442	4523	621	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	483	712	432	609	746	387	416	857	719	186	491	326
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1753	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	12.4	18.9	19.0	15.6	19.1	19.1	10.6	19.1	30.3	4.8	10.7	17.2
Cycle Q Clear(g_c), s	12.4	18.9	19.0	15.6	19.1	19.1	10.6	19.1	30.3	4.8	10.7	17.2
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	539	716	334	669	844	436	491	1192	533	237	931	416
V/C Ratio(X)	0.90	0.99	1.29	0.91	0.88	0.89	0.85	0.72	1.35	0.78	0.53	0.78
Avail Cap(c_a), veh/h	539	716	334	669	844	436	532	1192	533	237	931	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	35.5	35.5	35.5	32.6	32.6	37.6	26.1	29.9	41.2	28.4	30.8
Incr Delay (d2), s/veh	17.5	32.3	152.2	16.6	11.0	19.3	11.5	3.8	169.1	15.7	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	12.0	22.4	8.9	10.2	11.6	5.8	9.9	38.2	2.8	5.3	8.5
LnGrp Delay(d),s/veh	54.7	67.7	187.7	52.1	43.6	51.9	49.1	29.9	198.9	57.0	28.9	40.2
LnGrp LOS	D	E	F	D	D	D	D	C	F	E	C	D
Approach Vol, veh/h		1627			1742			1992			1003	
Approach Delay, s/veh		95.7			48.4			94.9			37.8	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	34.3	22.0	23.0	17.3	27.7	18.6	26.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	6.2	30.3	17.5	19.0	13.9	22.6	14.1	22.4
Max Q Clear Time (g_c+I1), s	6.8	32.3	17.6	21.0	12.6	19.2	14.4	21.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	3.0	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	73.4
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	191	82	777	152	231	76	2173	742	157	1796	14
Future Volume (veh/h)	32	191	82	777	152	231	76	2173	742	157	1796	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	191	82	777	152	231	76	2173	742	157	1796	14
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	231	231	432	84	457	97	1202	370	113	1667	13
Arrive On Green	0.15	0.15	0.15	0.29	0.29	0.29	0.05	0.31	0.31	0.06	0.32	0.32
Sat Flow, veh/h	265	1584	1583	1495	293	1583	1774	3856	1187	1774	5205	41
Grp Volume(v), veh/h	223	0	82	929	0	231	76	1882	1033	157	1170	640
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1788	0	1583	1774	1695	1653	1774	1695	1856
Q Serve(g_s), s	10.1	0.0	4.0	25.0	0.0	10.5	3.7	27.0	27.0	5.5	27.7	27.7
Cycle Q Clear(g_c), s	10.1	0.0	4.0	25.0	0.0	10.5	3.7	27.0	27.0	5.5	27.7	27.7
Prop In Lane	0.14		1.00	0.84		1.00	1.00		0.72	1.00		0.02
Lane Grp Cap(c), veh/h	270	0	231	516	0	457	97	1057	515	113	1086	594
V/C Ratio(X)	0.83	0.00	0.36	1.80	0.00	0.51	0.78	1.78	2.01	1.39	1.08	1.08
Avail Cap(c_a), veh/h	342	0	292	516	0	457	102	1057	515	113	1086	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	33.3	30.8	0.0	25.7	40.4	29.8	29.8	40.6	29.4	29.4
Incr Delay (d2), s/veh	12.5	0.0	0.9	368.0	0.0	0.9	30.0	355.3	459.3	222.4	50.7	59.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	1.8	64.9	0.0	4.7	2.6	64.6	77.9	9.6	20.5	23.9
LnGrp Delay(d),s/veh	48.4	0.0	34.3	398.8	0.0	26.6	70.5	385.2	489.1	263.0	80.1	89.0
LnGrp LOS	D		C	F		C	E	F	F	F	F	F
Approach Vol, veh/h		305			1160			2991			1967	
Approach Delay, s/veh		44.6			324.7			413.1			97.6	
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	10.0	31.0		16.6	9.3	31.7		29.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.5	27.0		16.0	5.0	27.5		25.0
Max Q Clear Time (g_c+I1), s	7.5	29.0		12.1	5.7	29.7		27.0
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	283.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	795	213	308	99	148	91	246	920	167	146	204	728
Future Volume (veh/h)	795	213	308	99	148	91	246	920	167	146	204	728
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	795	213	308	99	148	91	246	920	167	146	204	728
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	880	550	492	127	273	159	284	1105	495	179	449	401
Arrive On Green	0.26	0.31	0.31	0.07	0.13	0.13	0.16	0.31	0.31	0.10	0.25	0.25
Sat Flow, veh/h	3442	1770	1583	1774	2158	1253	1774	3539	1583	1774	1770	1583
Grp Volume(v), veh/h	795	213	308	99	120	119	246	920	167	146	204	728
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1642	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	18.6	7.9	13.9	4.6	5.3	5.7	11.3	20.1	6.8	6.7	8.1	21.1
Cycle Q Clear(g_c), s	18.6	7.9	13.9	4.6	5.3	5.7	11.3	20.1	6.8	6.7	8.1	21.1
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	880	550	492	127	224	208	284	1105	495	179	449	401
V/C Ratio(X)	0.90	0.39	0.63	0.78	0.53	0.57	0.87	0.83	0.34	0.81	0.45	1.81
Avail Cap(c_a), veh/h	930	593	531	226	340	316	309	1105	495	181	449	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	22.5	24.5	38.0	34.1	34.2	34.1	26.6	22.0	36.7	26.2	31.1
Incr Delay (d2), s/veh	11.6	0.4	2.1	9.8	2.0	2.5	20.9	7.4	1.8	23.8	0.7	375.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	3.9	6.4	2.6	2.7	2.7	7.2	11.0	3.2	4.5	4.1	51.1
LnGrp Delay(d),s/veh	41.6	22.9	26.6	47.8	36.0	36.7	55.0	34.0	23.9	60.5	26.9	407.0
LnGrp LOS	D	C	C	D	D	D	E	C	C	E	C	F
Approach Vol, veh/h		1316			338			1333			1078	
Approach Delay, s/veh		35.1			39.7			36.6			288.2	
Approach LOS		D			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	30.0	10.5	29.9	17.8	25.1	25.8	14.5
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	26.0	10.6	27.9	14.5	20.0	22.5	16.0
Max Q Clear Time (g_c+I1), s	8.7	22.1	6.6	15.9	13.3	23.1	20.6	7.7
Green Ext Time (p_c), s	0.0	3.4	0.1	3.5	0.1	0.0	0.7	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	103.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	514	58	379	329	0	0	0	0	1363	4	271
Future Volume (veh/h)	0	514	58	379	329	0	0	0	0	1363	4	271
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	514	58	379	329	0				1363	4	271
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	695	78	246	1435	0				875	3	783
Arrive On Green	0.00	0.22	0.22	0.23	0.68	0.00				0.49	0.49	0.49
Sat Flow, veh/h	0	3301	361	1774	3632	0				1769	5	1583
Grp Volume(v), veh/h	0	283	289	379	329	0				1367	0	271
Grp Sat Flow(s),veh/h/ln	0	1770	1799	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	13.4	13.5	12.5	3.2	0.0				44.5	0.0	9.4
Cycle Q Clear(g_c), s	0.0	13.4	13.5	12.5	3.2	0.0				44.5	0.0	9.4
Prop In Lane	0.00		0.20	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	383	390	246	1435	0				877	0	783
V/C Ratio(X)	0.00	0.74	0.74	1.54	0.23	0.00				1.56	0.00	0.35
Avail Cap(c_a), veh/h	0	383	390	246	1435	0				877	0	783
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.12	0.12	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.9	32.9	34.6	9.1	0.0				22.8	0.0	13.9
Incr Delay (d2), s/veh	0.0	12.0	12.0	244.7	0.0	0.0				256.8	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
%ile BackOfQ(50%),veh/ln	0.0	7.8	8.0	22.8	1.5	0.0				84.3	0.0	4.1
LnGrp Delay(d),s/veh	0.0	44.8	44.9	279.2	9.2	0.0				279.5	0.0	14.1
LnGrp LOS		D	D	F	A					F		B
Approach Vol, veh/h		572			708						1638	
Approach Delay, s/veh		44.9			153.7						235.6	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			17.0	24.0		49.0		41.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			12.5	19.5		44.5		36.5
Max Q Clear Time (g_c+I1), s			14.5	15.5		46.5		5.2
Green Ext Time (p_c), s			0.0	2.0		0.0		6.3

Intersection Summary	
HCM 2010 Ctrl Delay	178.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	1605	0	0	585	622	124	3	717	0	0	0
Future Volume (veh/h)	271	1605	0	0	585	622	124	3	717	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	271	1605	0	0	585	622	124	3	717			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	274	1817	0	0	547	489	671	16	612			
Arrive On Green	0.31	1.00	0.00	0.00	0.31	0.31	0.39	0.39	0.39			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1734	42	1583			
Grp Volume(v), veh/h	271	1605	0	0	585	622	127	0	717			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1776	0	1583			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	27.8	27.8	4.3	0.0	34.8			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	27.8	27.8	4.3	0.0	34.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	274	1817	0	0	547	489	687	0	612			
V/C Ratio(X)	0.99	0.88	0.00	0.00	1.07	1.27	0.18	0.00	1.17			
Avail Cap(c_a), veh/h	274	1817	0	0	547	489	687	0	612			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.58	0.58	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	31.0	0.0	0.0	0.0	31.1	31.1	18.2	0.0	27.6			
Incr Delay (d2), s/veh	38.5	4.0	0.0	0.0	58.6	137.6	0.1	0.0	93.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.6	1.0	0.0	0.0	22.4	30.8	2.1	0.0	31.0			
LnGrp Delay(d),s/veh	69.5	4.0	0.0	0.0	89.7	168.7	18.4	0.0	121.2			
LnGrp LOS	E	A			F	F	B		F			
Approach Vol, veh/h		1876			1207			844				
Approach Delay, s/veh		13.5			130.4			105.7				
Approach LOS		B			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		39.3		50.7			18.4	32.3
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		34.8		46.2			13.9	27.8
Max Q Clear Time (g_c+I1), s		36.8		2.0			15.7	29.8
Green Ext Time (p_c), s		0.0		34.2			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	492	213	159	8	93	76	267	2557	26	162	2018	345
Future Volume (veh/h)	492	213	159	8	93	76	267	2557	26	162	2018	345
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	535	232	173	9	101	83	290	2779	28	162	2018	345
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	1317	589	20	385	290	187	1846	19	128	1639	510
Arrive On Green	0.18	0.37	0.37	0.01	0.20	0.20	0.11	0.36	0.36	0.07	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	1925	1451	1774	5192	52	1774	5085	1583
Grp Volume(v), veh/h	535	232	173	9	92	92	290	1812	995	162	2018	345
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1607	1774	1695	1854	1774	1695	1583
Q Serve(g_s), s	16.5	4.0	6.9	0.5	4.0	4.4	9.5	32.0	32.0	6.5	29.0	17.0
Cycle Q Clear(g_c), s	16.5	4.0	6.9	0.5	4.0	4.4	9.5	32.0	32.0	6.5	29.0	17.0
Prop In Lane	1.00		1.00	1.00		0.90	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	325	1317	589	20	354	321	187	1205	659	128	1639	510
V/C Ratio(X)	1.64	0.18	0.29	0.45	0.26	0.29	1.55	1.50	1.51	1.26	1.23	0.68
Avail Cap(c_a), veh/h	325	1317	589	99	354	321	187	1205	659	128	1639	510
HCM Platoon Ratio	1.00	1.00	1.00	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	0.91	0.91	0.91	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	36.8	19.0	19.9	44.2	30.4	30.5	40.3	29.0	29.0	41.8	30.5	26.4
Incr Delay (d2), s/veh	303.7	0.3	1.3	13.9	1.6	2.0	271.6	230.9	237.2	124.7	104.7	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	35.5	2.0	3.2	0.3	2.1	2.1	18.8	53.6	59.7	7.6	29.4	7.4
LnGrp Delay(d),s/veh	340.5	19.3	21.2	58.1	32.0	32.6	311.8	259.9	266.2	166.5	135.2	26.8
LnGrp LOS	F	B	C	E	C	C	F	F	F	F	F	C
Approach Vol, veh/h		940			193			3097			2525	
Approach Delay, s/veh		202.4			33.5			266.8			122.4	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	36.0	5.5	37.5	14.0	33.0	21.0	22.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	6.5	32.0	5.0	29.5	9.5	29.0	16.5	18.0
Max Q Clear Time (g_c+I1), s	8.5	34.0	2.5	8.9	11.5	31.0	18.5	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	197.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1165	391	400	1509	0	0	0	0	1155	3	534
Future Volume (veh/h)	0	1165	391	400	1509	0	0	0	0	1155	3	534
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1165	391	400	1509	0				1157	0	534
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1004	330	306	2143	0				1045	0	466
Arrive On Green	0.00	0.38	0.38	0.34	1.00	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	2712	862	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	780	776	400	1509	0				1157	0	534
Grp Sat Flow(s),veh/h/ln	0	1770	1711	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.5	34.5	15.5	0.0	0.0				26.5	0.0	26.5
Cycle Q Clear(g_c), s	0.0	34.5	34.5	15.5	0.0	0.0				26.5	0.0	26.5
Prop In Lane	0.00		0.50	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	678	656	306	2143	0				1045	0	466
V/C Ratio(X)	0.00	1.15	1.18	1.31	0.70	0.00				1.11	0.00	1.15
Avail Cap(c_a), veh/h	0	678	656	306	2143	0				1045	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.8	27.8	29.5	0.0	0.0				31.8	0.0	31.8
Incr Delay (d2), s/veh	0.0	83.6	97.7	141.4	0.2	0.0				62.2	0.0	88.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	32.5	34.0	19.5	0.1	0.0				21.9	0.0	22.9
LnGrp Delay(d),s/veh	0.0	111.3	125.5	170.9	0.2	0.0				93.9	0.0	119.8
LnGrp LOS		F	F	F	A					F		F
Approach Vol, veh/h		1556			1909						1691	
Approach Delay, s/veh		118.4			35.9						102.1	
Approach LOS		F			D						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			20.0	39.0		31.0		59.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			15.5	34.5		26.5		54.5
Max Q Clear Time (g_c+I1), s			17.5	36.5		28.5		2.0
Green Ext Time (p_c), s			0.0	0.0		0.0		41.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	1932	0	0	1347	1526	566	3	541	0	0	0
Future Volume (veh/h)	390	1932	0	0	1347	1526	566	3	541	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	390	1932	0	0	1347	1526	568	0	541			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	227	2379	0	0	875	783	808	0	361			
Arrive On Green	0.26	1.00	0.00	0.00	0.49	0.49	0.23	0.00	0.23			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	390	1932	0	0	1347	1526	568	0	541			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	11.5	0.0	0.0	0.0	44.5	44.5	13.2	0.0	20.5			
Cycle Q Clear(g_c), s	11.5	0.0	0.0	0.0	44.5	44.5	13.2	0.0	20.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	227	2379	0	0	875	783	808	0	361			
V/C Ratio(X)	1.72	0.81	0.00	0.00	1.54	1.95	0.70	0.00	1.50			
Avail Cap(c_a), veh/h	227	2379	0	0	875	783	808	0	361			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.5	0.0	0.0	0.0	22.8	22.8	31.9	0.0	34.8			
Incr Delay (d2), s/veh	325.9	0.3	0.0	0.0	248.5	431.8	2.8	0.0	239.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	26.1	0.1	0.0	0.0	82.0	113.3	6.8	0.0	32.9			
LnGrp Delay(d),s/veh	359.4	0.3	0.0	0.0	271.2	454.6	34.7	0.0	273.9			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		2322			2873			1109				
Approach Delay, s/veh		60.6			368.6			151.4				
Approach LOS		E			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		25.0		65.0			16.0	49.0
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		20.5		60.5			11.5	44.5
Max Q Clear Time (g_c+I1), s		22.5		2.0			13.5	46.5
Green Ext Time (p_c), s		0.0		58.2			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	217.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	549	1048	214	153	2289	911	900	1135	138	775	508	746
Future Volume (veh/h)	549	1048	214	153	2289	911	900	1135	138	775	508	746
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	549	1048	214	153	2289	911	900	1135	138	775	508	746
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	2326	724	183	1516	535	581	973	435	495	885	396
Arrive On Green	0.10	0.46	0.46	0.05	0.41	0.41	0.17	0.28	0.28	0.14	0.25	0.25
Sat Flow, veh/h	3442	5085	1583	3442	3712	1310	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	549	1048	214	153	2065	1135	900	1135	138	775	508	746
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1632	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	24.5	33.8	20.4	10.6	98.0	98.0	40.5	66.0	16.6	34.5	30.2	60.0
Cycle Q Clear(g_c), s	24.5	33.8	20.4	10.6	98.0	98.0	40.5	66.0	16.6	34.5	30.2	60.0
Prop In Lane	1.00		1.00	1.00		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	2326	724	183	1384	666	581	973	435	495	885	396
V/C Ratio(X)	1.56	0.45	0.30	0.84	1.49	1.70	1.55	1.17	0.32	1.57	0.57	1.88
Avail Cap(c_a), veh/h	351	2326	724	245	1384	666	581	973	435	495	885	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	107.8	44.5	40.9	112.6	71.0	71.0	99.8	87.0	69.1	102.8	78.8	90.0
Incr Delay (d2), s/veh	266.7	0.1	0.2	16.9	225.2	322.9	255.8	86.0	1.9	264.6	0.9	407.5
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	24.7	15.8	9.0	5.5	89.3	104.0	39.9	43.9	7.5	34.6	14.9	71.1
LnGrp Delay(d),s/veh	374.4	44.6	41.1	129.5	296.2	393.9	355.5	173.0	71.0	367.4	79.7	497.5
LnGrp LOS	F	D	D	F	F	F	F	F	E	F	E	F
Approach Vol, veh/h		1811			3353			2173			2029	
Approach Delay, s/veh		144.2			321.7			242.2			343.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.0	70.0	17.2	113.8	45.0	64.0	29.0	102.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	34.5	66.0	17.1	105.4	40.5	60.0	24.5	98.0
Max Q Clear Time (g_c+I1), s	36.5	68.0	12.6	35.8	42.5	62.0	26.5	100.0
Green Ext Time (p_c), s	0.0	0.0	0.2	66.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	273.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	1933	41	89	2708	78	39	3	100	118	8	63
Future Volume (veh/h)	127	1933	41	89	2708	78	39	3	100	118	8	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	1933	41	89	2708	78	39	3	100	118	8	63
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	2986	930	114	2942	84	61	163	139	108	213	181
Arrive On Green	0.07	0.59	0.59	0.06	0.58	0.58	0.03	0.09	0.09	0.06	0.11	0.11
Sat Flow, veh/h	1774	5085	1583	1774	5082	145	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	127	1933	41	89	1800	986	39	3	100	118	8	63
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1837	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.4	22.8	1.0	4.4	42.9	43.9	2.0	0.1	5.5	5.5	0.3	3.3
Cycle Q Clear(g_c), s	6.4	22.8	1.0	4.4	42.9	43.9	2.0	0.1	5.5	5.5	0.3	3.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	2986	930	114	1963	1064	61	163	139	108	213	181
V/C Ratio(X)	0.99	0.65	0.04	0.78	0.92	0.93	0.64	0.02	0.72	1.09	0.04	0.35
Avail Cap(c_a), veh/h	128	2986	930	144	1963	1064	99	373	317	108	383	325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	0.09	0.09	0.09	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	41.7	12.4	7.9	41.5	17.0	17.2	42.9	37.5	40.0	42.2	35.5	36.8
Incr Delay (d2), s/veh	43.8	0.4	0.0	2.0	0.9	1.8	10.4	0.0	6.8	112.0	0.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	10.7	0.4	2.2	20.0	22.5	1.1	0.1	2.7	6.1	0.2	1.5
LnGrp Delay(d),s/veh	85.5	12.7	7.9	43.5	17.9	19.1	53.3	37.6	46.8	154.3	35.5	37.9
LnGrp LOS	F	B	A	D	B	B	D	D	D	F	D	D
Approach Vol, veh/h		2101			2875			142			189	
Approach Delay, s/veh		17.1			19.1			48.4			110.5	
Approach LOS		B			B			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	12.4	10.3	57.3	7.6	14.8	11.0	56.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	18.0	7.3	41.2	5.0	18.5	6.5	42.0
Max Q Clear Time (g_c+I1), s	7.5	7.5	6.4	24.8	4.0	5.3	8.4	45.9
Green Ext Time (p_c), s	0.0	0.4	0.0	16.3	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	39	22	179	136	650	16	1323	77	67	764	32
Future Volume (veh/h)	16	39	22	179	136	650	16	1323	77	67	764	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	39	22	179	136	650	16	1323	77	67	764	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	417	235	547	693	589	32	1460	85	86	1591	67
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.02	0.43	0.43	0.05	0.46	0.46
Sat Flow, veh/h	686	1120	632	1336	1863	1583	1774	3400	198	1774	3462	145
Grp Volume(v), veh/h	16	0	61	179	136	650	16	687	713	67	390	406
Grp Sat Flow(s),veh/h/ln	686	0	1751	1336	1863	1583	1774	1770	1828	1774	1770	1837
Q Serve(g_s), s	1.5	0.0	2.0	9.1	4.4	33.5	0.8	32.6	32.8	3.4	13.8	13.8
Cycle Q Clear(g_c), s	5.9	0.0	2.0	11.1	4.4	33.5	0.8	32.6	32.8	3.4	13.8	13.8
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	301	0	652	547	693	589	32	760	785	86	813	844
V/C Ratio(X)	0.05	0.00	0.09	0.33	0.20	1.10	0.49	0.90	0.91	0.78	0.48	0.48
Avail Cap(c_a), veh/h	301	0	652	547	693	589	101	760	785	104	813	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.11	0.11	0.11	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	18.4	22.0	19.1	28.2	43.8	24.0	24.0	42.3	16.9	16.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	49.8	11.1	16.3	16.3	25.8	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.0	3.3	2.3	22.6	0.5	19.3	20.0	2.3	7.2	7.4
LnGrp Delay(d),s/veh	21.2	0.0	18.4	22.0	19.1	78.0	54.8	40.3	40.3	68.2	18.9	18.8
LnGrp LOS	C		B	C	B	F	D	D	D	E	B	B
Approach Vol, veh/h		77			965			1416			863	
Approach Delay, s/veh		19.0			59.3			40.4			22.7	
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	8.9	43.1		38.0	6.1	45.9		38.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.3	37.7		33.5	5.1	37.9		33.5
Max Q Clear Time (g_c+I1), s	5.4	34.8		7.9	2.8	15.8		35.5
Green Ext Time (p_c), s	0.0	2.6		4.6	0.0	15.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	320	28	14	802	189	176	296	22	208	302	386
Future Volume (veh/h)	232	320	28	14	802	189	176	296	22	208	302	386
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	232	320	28	15	872	205	191	322	24	226	328	420
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1425	124	31	854	201	224	717	53	260	415	372
Arrive On Green	0.15	0.43	0.43	0.02	0.30	0.30	0.13	0.21	0.21	0.15	0.23	0.23
Sat Flow, veh/h	1774	3295	287	1774	2846	669	1774	3341	248	1774	1770	1583
Grp Volume(v), veh/h	232	171	177	15	542	535	191	170	176	226	328	420
Grp Sat Flow(s),veh/h/ln	1774	1770	1812	1774	1770	1745	1774	1770	1819	1774	1770	1583
Q Serve(g_s), s	11.5	5.5	5.5	0.8	27.0	27.0	9.5	7.5	7.6	11.2	15.7	21.1
Cycle Q Clear(g_c), s	11.5	5.5	5.5	0.8	27.0	27.0	9.5	7.5	7.6	11.2	15.7	21.1
Prop In Lane	1.00		0.16	1.00		0.38	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	266	765	784	31	531	523	224	380	391	260	415	372
V/C Ratio(X)	0.87	0.22	0.23	0.49	1.02	1.02	0.85	0.45	0.45	0.87	0.79	1.13
Avail Cap(c_a), veh/h	270	765	784	99	531	523	227	380	391	266	415	372
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	16.0	16.1	43.8	31.5	31.5	38.5	30.7	30.7	37.6	32.3	34.4
Incr Delay (d2), s/veh	23.9	0.1	0.1	11.4	44.5	45.0	25.1	3.8	3.7	24.8	9.9	86.9
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	7.4	2.7	2.8	0.5	19.7	19.5	6.2	4.1	4.2	7.2	8.8	18.2
LnGrp Delay(d),s/veh	61.3	16.2	16.2	55.2	76.0	76.5	63.6	34.5	34.5	62.3	42.2	121.3
LnGrp LOS	E	B	B	E	F	F	E	C	C	E	D	F
Approach Vol, veh/h		580			1092			537			974	
Approach Delay, s/veh		34.2			76.0			44.8			81.0	
Approach LOS		C			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	23.3	6.1	42.9	15.9	25.1	18.0	31.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	13.5	18.8	5.0	35.7	11.5	20.8	13.7	27.0
Max Q Clear Time (g_c+I1), s	13.2	9.6	2.8	7.5	11.5	23.1	13.5	29.0
Green Ext Time (p_c), s	0.0	4.6	0.0	11.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	0	174	0	0	0	352	1227	0	4	671	232
Future Volume (veh/h)	225	0	174	0	0	0	352	1227	0	4	671	232
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	225	0	174	0	0	0	383	1334	0	4	729	252
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	346	0	298	0	351	0	472	2362	0	9	1895	848
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.14	0.67	0.00	0.01	0.54	0.54
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	225	0	174	0	0	0	383	1334	0	4	729	252
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	13.8	0.0	9.0	0.0	0.0	0.0	9.7	18.1	0.0	0.2	10.8	7.9
Cycle Q Clear(g_c), s	13.8	0.0	9.0	0.0	0.0	0.0	9.7	18.1	0.0	0.2	10.8	7.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	0	298	0	351	0	472	2362	0	9	1895	848
V/C Ratio(X)	0.65	0.00	0.58	0.00	0.00	0.00	0.81	0.56	0.00	0.43	0.38	0.30
Avail Cap(c_a), veh/h	456	0	422	0	497	0	631	2362	0	101	1895	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	33.3	0.0	0.0	0.0	37.7	8.0	0.0	44.6	12.2	11.6
Incr Delay (d2), s/veh	2.1	0.0	1.8	0.0	0.0	0.0	5.9	1.0	0.0	27.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	4.1	0.0	0.0	0.0	5.0	9.0	0.0	0.2	5.3	3.5
LnGrp Delay(d),s/veh	37.3	0.0	35.1	0.0	0.0	0.0	43.6	9.0	0.0	72.5	12.4	11.7
LnGrp LOS	D		D				D	A		E	B	B
Approach Vol, veh/h		399			0			1717			985	
Approach Delay, s/veh		36.3			0.0			16.7			12.5	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	64.1		21.0	16.9	52.2		21.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.1	48.4		24.0	16.5	37.0		24.0
Max Q Clear Time (g_c+I1), s	2.2	20.1		15.8	11.7	12.8		0.0
Green Ext Time (p_c), s	0.0	19.9		1.1	0.6	17.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Future Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	222	1124	0	16	1844	233	462	415	28	253	493	376
Adj No. of Lanes	1	3	1	1	2	0	0	1	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	1975	615	24	1044	129	279	250	462	148	287	376
Arrive On Green	0.07	0.39	0.00	0.01	0.33	0.33	0.29	0.29	0.29	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1583	1774	3171	392	956	859	1583	621	1210	1583
Grp Volume(v), veh/h	222	1124	0	16	1012	1065	877	0	28	746	0	376
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1794	1815	0	1583	1832	0	1583
Q Serve(g_s), s	17.5	41.6	0.0	2.2	79.0	79.0	70.0	0.0	3.1	57.0	0.0	57.0
Cycle Q Clear(g_c), s	17.5	41.6	0.0	2.2	79.0	79.0	70.0	0.0	3.1	57.0	0.0	57.0
Prop In Lane	1.00		1.00	1.00		0.22	0.53		1.00	0.34		1.00
Lane Grp Cap(c), veh/h	129	1975	615	24	582	590	529	0	462	435	0	376
V/C Ratio(X)	1.72	0.57	0.00	0.66	1.74	1.80	1.66	0.00	0.06	1.71	0.00	1.00
Avail Cap(c_a), veh/h	129	1975	615	47	582	590	529	0	462	435	0	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	111.3	57.6	0.0	117.8	80.5	80.5	85.0	0.0	61.3	91.5	0.0	91.5
Incr Delay (d2), s/veh	352.7	0.4	0.0	26.5	338.8	368.6	303.9	0.0	0.3	331.3	0.0	46.4
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	21.3	19.6	0.0	1.2	93.5	99.6	79.8	0.0	1.4	68.9	0.0	29.8
LnGrp Delay(d),s/veh	464.0	58.0	0.0	144.4	419.3	449.1	388.9	0.0	61.5	422.8	0.0	137.9
LnGrp LOS	F	E		F	F	F	F		E	F		F
Approach Vol, veh/h		1346			2093			905			1122	
Approach Delay, s/veh		125.0			432.4			378.7			327.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		74.0	7.8	97.2		61.0	22.0	83.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		70.0	6.3	90.2		57.0	17.5	79.0
Max Q Clear Time (g_c+I1), s		72.0	4.2	43.6		59.0	19.5	81.0
Green Ext Time (p_c), s		0.0	0.0	39.6		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	326.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Future Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	222	1124	0	16	1844	233	462	415	28	253	493	376
Adj No. of Lanes	1	3	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	2208	688	24	1163	144	303	574	39	267	307	234
Arrive On Green	0.08	0.43	0.00	0.01	0.37	0.37	0.17	0.33	0.33	0.15	0.31	0.31
Sat Flow, veh/h	1774	5085	1583	1774	3171	392	1774	1726	116	1774	982	749
Grp Volume(v), veh/h	222	1124	0	16	1012	1065	462	0	443	253	0	869
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1794	1774	0	1842	1774	0	1731
Q Serve(g_s), s	19.5	38.5	0.0	2.2	88.0	88.0	41.0	0.0	50.7	33.9	0.0	75.0
Cycle Q Clear(g_c), s	19.5	38.5	0.0	2.2	88.0	88.0	41.0	0.0	50.7	33.9	0.0	75.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.06	1.00		0.43
Lane Grp Cap(c), veh/h	144	2208	688	24	649	658	303	0	613	267	0	541
V/C Ratio(X)	1.54	0.51	0.00	0.66	1.56	1.62	1.52	0.00	0.72	0.95	0.00	1.61
Avail Cap(c_a), veh/h	144	2208	688	47	649	658	303	0	613	296	0	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	110.3	49.3	0.0	117.8	76.0	76.0	99.5	0.0	70.4	100.9	0.0	82.5
Incr Delay (d2), s/veh	274.6	0.2	0.0	26.5	259.3	285.8	252.1	0.0	7.2	36.5	0.0	281.6
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	20.6	18.1	0.0	1.2	89.8	95.9	41.3	0.0	27.1	19.4	0.0	78.2
LnGrp Delay(d),s/veh	384.8	49.5	0.0	144.4	335.3	361.8	351.6	0.0	77.6	137.5	0.0	364.1
LnGrp LOS	F	D		F	F	F	F		E	F		F
Approach Vol, veh/h		1346			2093			905			1122	
Approach Delay, s/veh		104.8			347.3			217.5			313.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.2	83.8	7.8	108.2	45.0	79.0	24.0	92.0
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	40.0	76.0	6.4	101.1	41.0	75.0	19.5	88.0
Max Q Clear Time (g_c+I1), s	35.9	52.7	4.2	40.5	43.0	77.0	21.5	90.0
Green Ext Time (p_c), s	0.3	10.0	0.0	49.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	259.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Future Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	222	1124	0	16	1844	233	462	415	28	253	493	376
Adj No. of Lanes	1	3	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	2208	688	24	1163	144	303	620	527	267	307	234
Arrive On Green	0.08	0.43	0.00	0.01	0.37	0.37	0.17	0.33	0.33	0.15	0.31	0.31
Sat Flow, veh/h	1774	5085	1583	1774	3171	392	1774	1863	1583	1774	982	749
Grp Volume(v), veh/h	222	1124	0	16	1012	1065	462	415	28	253	0	869
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1794	1774	1863	1583	1774	0	1731
Q Serve(g_s), s	19.5	38.5	0.0	2.2	88.0	88.0	41.0	45.9	2.9	33.9	0.0	75.0
Cycle Q Clear(g_c), s	19.5	38.5	0.0	2.2	88.0	88.0	41.0	45.9	2.9	33.9	0.0	75.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	144	2208	688	24	649	658	303	620	527	267	0	541
V/C Ratio(X)	1.54	0.51	0.00	0.66	1.56	1.62	1.52	0.67	0.05	0.95	0.00	1.61
Avail Cap(c_a), veh/h	144	2208	688	47	649	658	303	620	527	296	0	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	110.3	49.3	0.0	117.8	76.0	76.0	99.5	68.8	54.4	100.9	0.0	82.5
Incr Delay (d2), s/veh	274.6	0.2	0.0	26.5	259.3	285.8	252.1	5.7	0.2	36.5	0.0	281.6
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	20.6	18.1	0.0	1.2	89.8	95.9	41.3	24.6	1.3	19.4	0.0	78.2
LnGrp Delay(d),s/veh	384.8	49.5	0.0	144.4	335.3	361.8	351.6	74.4	54.6	137.5	0.0	364.1
LnGrp LOS	F	D		F	F	F	F	E	D	F		F
Approach Vol, veh/h		1346			2093			905			1122	
Approach Delay, s/veh		104.8			347.3			215.3			313.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.2	83.8	7.8	108.2	45.0	79.0	24.0	92.0
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	40.0	76.0	6.4	101.1	41.0	75.0	19.5	88.0
Max Q Clear Time (g_c+I1), s	35.9	47.9	4.2	40.5	43.0	77.0	21.5	90.0
Green Ext Time (p_c), s	0.3	10.7	0.0	49.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	258.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Future Volume (veh/h)	222	1124	674	16	1844	233	462	415	28	253	493	376
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	222	1124	0	16	1844	233	462	415	28	253	493	376
Adj No. of Lanes	1	3	1	1	2	0	2	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	1975	615	24	1044	129	1004	503	34	148	287	376
Arrive On Green	0.07	0.39	0.00	0.01	0.33	0.33	0.29	0.29	0.29	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1583	1774	3171	392	3442	1726	116	621	1210	1583
Grp Volume(v), veh/h	222	1124	0	16	1012	1065	462	0	443	746	0	376
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1794	1721	0	1842	1832	0	1583
Q Serve(g_s), s	17.5	41.6	0.0	2.2	79.0	79.0	26.4	0.0	53.8	57.0	0.0	57.0
Cycle Q Clear(g_c), s	17.5	41.6	0.0	2.2	79.0	79.0	26.4	0.0	53.8	57.0	0.0	57.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.06	0.34		1.00
Lane Grp Cap(c), veh/h	129	1975	615	24	582	590	1004	0	537	435	0	376
V/C Ratio(X)	1.72	0.57	0.00	0.66	1.74	1.80	0.46	0.00	0.82	1.71	0.00	1.00
Avail Cap(c_a), veh/h	129	1975	615	47	582	590	1004	0	537	435	0	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	111.3	57.6	0.0	117.8	80.5	80.5	69.5	0.0	79.3	91.5	0.0	91.5
Incr Delay (d2), s/veh	352.7	0.4	0.0	26.5	338.8	368.6	1.5	0.0	13.4	331.3	0.0	46.4
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	21.3	19.6	0.0	1.2	93.5	99.6	12.8	0.0	29.4	68.9	0.0	29.8
LnGrp Delay(d),s/veh	464.0	58.0	0.0	144.4	419.3	449.1	71.1	0.0	92.7	422.8	0.0	137.9
LnGrp LOS	F	E		F	F	F	E		F	F		F
Approach Vol, veh/h		1346			2093			905			1122	
Approach Delay, s/veh		125.0			432.4			81.7			327.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		74.0	7.8	97.2		61.0	22.0	83.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		70.0	6.3	90.2		57.0	17.5	79.0
Max Q Clear Time (g_c+I1), s		55.8	4.2	43.6		59.0	19.5	81.0
Green Ext Time (p_c), s		3.8	0.0	39.6		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	277.0
HCM 2010 LOS	F

HCM 2010 Signalized Intersection Summary
13: Driveway/Lake Perris Drive

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	994	0	0	1587	29	0	0	0	11	0	24
Future Volume (veh/h)	38	994	0	0	1587	29	0	0	0	11	0	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	38	994	0	0	1587	29	0	0	0	11	0	24
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	3153	0	2	2870	1273	0	2	0	13	0	29
Arrive On Green	0.03	0.89	0.00	0.00	0.81	0.81	0.00	0.00	0.00	0.03	0.00	0.03
Sat Flow, veh/h	1774	3632	0	1774	3539	1570	0	1863	0	515	0	1124
Grp Volume(v), veh/h	38	994	0	0	1587	29	0	0	0	35	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1570	0	1863	0	1639	0	0
Q Serve(g_s), s	2.0	4.1	0.0	0.0	14.8	0.3	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	4.1	0.0	0.0	14.8	0.3	0.0	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	0.31		0.69
Lane Grp Cap(c), veh/h	59	3153	0	2	2870	1273	0	2	0	43	0	0
V/C Ratio(X)	0.65	0.32	0.00	0.00	0.55	0.02	0.00	0.00	0.00	0.82	0.00	0.00
Avail Cap(c_a), veh/h	305	6683	0	92	6259	2776	0	368	0	307	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.9	0.8	0.0	0.0	3.1	1.8	0.0	0.0	0.0	46.6	0.0	0.0
Incr Delay (d2), s/veh	11.3	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	30.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.0	0.0	0.0	7.1	0.1	0.0	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	57.2	0.9	0.0	0.0	3.3	1.8	0.0	0.0	0.0	77.0	0.0	0.0
LnGrp LOS	E	A			A	A				E		
Approach Vol, veh/h		1032			1616			0			35	
Approach Delay, s/veh		2.9			3.3			0.0			77.0	
Approach LOS		A			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	89.6		6.5	7.7	81.9
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		19.0	5.0	181.5		18.0	16.5	170.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	6.1		4.0	4.0	16.8
Green Ext Time (p_c), s		0.0	0.0	63.3		0.1	0.0	61.2

Intersection Summary	
HCM 2010 Ctrl Delay	4.1
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	631	201	569	434	158	176	1646	626	296	1908	29
Future Volume (veh/h)	35	631	201	569	434	158	176	1646	626	296	1908	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	35	631	201	569	434	158	176	1646	626	296	1908	29
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	470	150	384	923	333	148	1469	457	227	1720	26
Arrive On Green	0.03	0.18	0.18	0.22	0.36	0.36	0.08	0.29	0.29	0.13	0.33	0.33
Sat Flow, veh/h	1774	2643	841	1774	2550	920	1774	5085	1583	1774	5161	78
Grp Volume(v), veh/h	35	422	410	569	300	292	176	1646	626	296	1253	684
Grp Sat Flow(s),veh/h/ln	1774	1770	1714	1774	1770	1700	1774	1695	1583	1774	1695	1849
Q Serve(g_s), s	1.8	16.0	16.0	19.5	11.7	11.9	7.5	26.0	26.0	11.5	30.0	30.0
Cycle Q Clear(g_c), s	1.8	16.0	16.0	19.5	11.7	11.9	7.5	26.0	26.0	11.5	30.0	30.0
Prop In Lane	1.00		0.49	1.00		0.54	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	57	315	305	384	641	616	148	1469	457	227	1130	616
V/C Ratio(X)	0.61	1.34	1.34	1.48	0.47	0.47	1.19	1.12	1.37	1.31	1.11	1.11
Avail Cap(c_a), veh/h	118	315	305	384	641	616	148	1469	457	227	1130	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	37.0	37.0	35.3	22.1	22.1	41.3	32.0	32.0	39.3	30.0	30.0
Incr Delay (d2), s/veh	10.0	173.9	175.4	229.7	0.5	0.6	134.3	63.9	179.4	165.8	61.8	70.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	23.0	22.4	34.0	5.8	5.7	9.2	20.8	34.1	16.0	23.7	27.2
LnGrp Delay(d),s/veh	53.0	210.9	212.4	265.0	22.6	22.7	175.5	95.9	211.4	205.0	91.8	100.2
LnGrp LOS	D	F	F	F	C	C	F	F	F	F	F	F
Approach Vol, veh/h		867			1161			2448			2233	
Approach Delay, s/veh		205.2			141.4			131.1			109.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	30.0	24.0	20.0	12.0	34.0	7.4	36.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	11.5	26.0	19.5	16.0	7.5	30.0	6.0	29.5
Max Q Clear Time (g_c+I1), s	13.5	28.0	21.5	18.0	9.5	32.0	3.8	13.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9

Intersection Summary	
HCM 2010 Ctrl Delay	135.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	708	357	605	801	92	301	765	590	291	581	238
Future Volume (veh/h)	372	708	357	605	801	92	301	765	590	291	581	238
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	372	708	357	605	801	92	301	765	590	291	581	238
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	686	320	680	1239	142	376	1074	481	362	1060	474
Arrive On Green	0.13	0.20	0.20	0.20	0.27	0.27	0.11	0.30	0.30	0.11	0.30	0.30
Sat Flow, veh/h	3442	3390	1583	3442	4631	529	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	372	708	357	605	585	308	301	765	590	291	581	238
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1769	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	9.4	18.0	18.0	15.2	13.6	13.7	7.6	17.1	27.0	7.3	12.2	11.0
Cycle Q Clear(g_c), s	9.4	18.0	18.0	15.2	13.6	13.7	7.6	17.1	27.0	7.3	12.2	11.0
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	686	320	680	907	474	376	1074	481	362	1060	474
V/C Ratio(X)	0.82	1.03	1.11	0.89	0.65	0.65	0.80	0.71	1.23	0.80	0.55	0.50
Avail Cap(c_a), veh/h	557	686	320	716	907	474	414	1074	481	368	1060	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	35.5	35.5	34.7	28.8	28.9	38.7	27.5	31.0	38.9	26.1	25.7
Incr Delay (d2), s/veh	7.7	42.8	84.6	12.8	1.6	3.1	9.9	4.0	119.6	12.0	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	12.5	15.4	8.4	6.5	7.1	4.1	8.9	27.7	4.1	6.1	4.9
LnGrp Delay(d),s/veh	45.2	78.3	120.1	47.6	30.4	32.0	48.6	31.5	150.6	50.9	26.7	26.5
LnGrp LOS	D	F	F	D	C	C	D	C	F	D	C	C
Approach Vol, veh/h		1437			1498			1656			1110	
Approach Delay, s/veh		80.1			37.7			77.0			33.0	
Approach LOS		F			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	31.0	22.1	22.0	14.2	30.6	16.3	27.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	9.5	27.0	18.5	18.0	10.7	25.8	14.4	22.1
Max Q Clear Time (g_c+I1), s	9.3	29.0	17.2	20.0	9.6	14.2	11.4	15.7
Green Ext Time (p_c), s	0.0	0.0	0.4	0.0	0.1	8.3	0.4	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	58.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	158	75	540	65	118	33	2098	447	156	2279	20
Future Volume (veh/h)	27	158	75	540	65	118	33	2098	447	156	2279	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	27	158	75	540	65	118	33	2098	447	156	2279	20
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	200	201	413	50	411	57	1448	297	136	2012	18
Arrive On Green	0.13	0.13	0.13	0.26	0.26	0.26	0.03	0.34	0.34	0.08	0.39	0.39
Sat Flow, veh/h	270	1579	1583	1592	192	1583	1774	4231	869	1774	5199	46
Grp Volume(v), veh/h	185	0	75	605	0	118	33	1665	880	156	1485	814
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1783	0	1583	1774	1695	1709	1774	1695	1855
Q Serve(g_s), s	8.2	0.0	3.7	22.0	0.0	5.1	1.6	29.0	29.0	6.5	32.8	32.8
Cycle Q Clear(g_c), s	8.2	0.0	3.7	22.0	0.0	5.1	1.6	29.0	29.0	6.5	32.8	32.8
Prop In Lane	0.15		1.00	0.89		1.00	1.00		0.51	1.00		0.02
Lane Grp Cap(c), veh/h	235	0	201	463	0	411	57	1160	585	136	1312	718
V/C Ratio(X)	0.79	0.00	0.37	1.31	0.00	0.29	0.58	1.44	1.50	1.15	1.13	1.13
Avail Cap(c_a), veh/h	349	0	299	463	0	411	105	1160	585	136	1312	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	33.9	31.4	0.0	25.1	40.5	27.9	27.9	39.1	26.0	26.0
Incr Delay (d2), s/veh	7.0	0.0	1.1	153.1	0.0	0.4	9.2	201.0	235.7	121.9	69.5	76.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	1.7	30.4	0.0	2.2	0.9	45.8	51.8	7.7	27.8	31.9
LnGrp Delay(d),s/veh	42.9	0.0	35.1	184.5	0.0	25.5	49.7	228.9	263.5	161.1	95.5	102.8
LnGrp LOS	D		D	F		C	D	F	F	F	F	F
Approach Vol, veh/h		260			723			2578			2455	
Approach Delay, s/veh		40.6			158.5			238.4			102.1	
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	11.0	33.0		14.8	7.2	36.8		26.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	6.5	29.0		16.0	5.0	30.5		22.0
Max Q Clear Time (g_c+I1), s	8.5	31.0		10.2	3.6	34.8		24.0
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	164.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	412	82	181	89	53	60	73	856	70	119	984	415
Future Volume (veh/h)	412	82	181	89	53	60	73	856	70	119	984	415
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	412	82	181	89	53	60	73	856	70	119	984	415
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	506	295	264	115	149	133	93	1607	719	153	1189	495
Arrive On Green	0.15	0.17	0.17	0.06	0.08	0.08	0.05	0.45	0.45	0.09	0.49	0.49
Sat Flow, veh/h	3442	1770	1583	1774	1770	1583	1774	3539	1583	1774	2439	1015
Grp Volume(v), veh/h	412	82	181	89	53	60	73	856	70	119	710	689
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1684
Q Serve(g_s), s	8.6	3.0	8.0	3.7	2.1	2.7	3.0	13.0	1.9	4.9	25.6	26.4
Cycle Q Clear(g_c), s	8.6	3.0	8.0	3.7	2.1	2.7	3.0	13.0	1.9	4.9	25.6	26.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	506	295	264	115	149	133	93	1607	719	153	863	821
V/C Ratio(X)	0.81	0.28	0.69	0.77	0.36	0.45	0.78	0.53	0.10	0.78	0.82	0.84
Avail Cap(c_a), veh/h	579	438	392	241	381	341	131	1607	719	298	928	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	27.1	29.2	34.2	32.1	32.4	34.8	14.6	11.6	33.3	16.3	16.5
Incr Delay (d2), s/veh	7.8	0.5	3.2	10.5	1.4	2.4	17.8	1.3	0.3	8.3	5.7	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	1.5	3.7	2.1	1.1	1.3	1.9	6.6	0.9	2.7	13.8	13.6
LnGrp Delay(d),s/veh	38.6	27.6	32.3	44.7	33.6	34.8	52.6	15.9	11.9	41.6	22.1	23.4
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		675			202			999			1518	
Approach Delay, s/veh		35.6			38.8			18.3			24.2	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	37.8	9.3	16.4	8.4	40.2	15.4	10.3
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	32.0	10.1	18.4	5.5	39.0	12.5	16.0
Max Q Clear Time (g_c+I1), s	6.9	15.0	5.7	10.0	5.0	28.4	10.6	4.7
Green Ext Time (p_c), s	0.1	13.3	0.1	1.3	0.0	7.9	0.3	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	462	107	831	173	0	0	0	0	881	9	385
Future Volume (veh/h)	0	462	107	831	173	0	0	0	0	881	9	385
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	462	107	831	173	0				881	9	385
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	588	135	503	1907	0				634	6	572
Arrive On Green	0.00	0.21	0.21	0.47	0.90	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	2952	658	1774	3632	0				1757	18	1583
Grp Volume(v), veh/h	0	285	284	831	173	0				890	0	385
Grp Sat Flow(s),veh/h/ln	0	1770	1747	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	13.7	13.9	25.5	0.5	0.0				32.5	0.0	18.5
Cycle Q Clear(g_c), s	0.0	13.7	13.9	25.5	0.5	0.0				32.5	0.0	18.5
Prop In Lane	0.00		0.38	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	364	359	503	1907	0				641	0	572
V/C Ratio(X)	0.00	0.78	0.79	1.65	0.09	0.00				1.39	0.00	0.67
Avail Cap(c_a), veh/h	0	364	359	503	1907	0				641	0	572
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.8	33.9	23.7	2.1	0.0				28.8	0.0	24.3
Incr Delay (d2), s/veh	0.0	15.4	16.2	294.8	0.0	0.0				184.4	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.3	8.3	53.5	0.2	0.0				48.7	0.0	8.5
LnGrp Delay(d),s/veh	0.0	49.3	50.1	318.5	2.1	0.0				213.1	0.0	27.4
LnGrp LOS		D	D	F	A					F		C
Approach Vol, veh/h		569			1004						1275	
Approach Delay, s/veh		49.7			264.0						157.0	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			30.0	23.0		37.0		53.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			25.5	18.5		32.5		48.5
Max Q Clear Time (g_c+I1), s			27.5	15.9		34.5		2.5
Green Ext Time (p_c), s			0.0	1.2		0.0		5.3

Intersection Summary	
HCM 2010 Ctrl Delay	173.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	927	0	0	947	1228	48	4	342	0	0	0
Future Volume (veh/h)	379	927	0	0	947	1228	48	4	342	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	379	927	0	0	947	1228	48	4	342			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	306	2477	0	0	845	756	329	27	317			
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.48	0.20	0.20	0.20			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1644	137	1583			
Grp Volume(v), veh/h	379	927	0	0	947	1228	52	0	342			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1781	0	1583			
Q Serve(g_s), s	15.5	0.0	0.0	0.0	43.0	43.0	2.2	0.0	18.0			
Cycle Q Clear(g_c), s	15.5	0.0	0.0	0.0	43.0	43.0	2.2	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	306	2477	0	0	845	756	356	0	317			
V/C Ratio(X)	1.24	0.37	0.00	0.00	1.12	1.62	0.15	0.00	1.08			
Avail Cap(c_a), veh/h	306	2477	0	0	845	756	356	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.53	0.53	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	23.5	23.5	29.7	0.0	36.0			
Incr Delay (d2), s/veh	122.5	0.2	0.0	0.0	69.5	286.6	0.2	0.0	73.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	17.9	0.1	0.0	0.0	37.2	78.9	1.1	0.0	14.3			
LnGrp Delay(d),s/veh	152.0	0.2	0.0	0.0	93.0	310.1	29.9	0.0	109.6			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		1306			2175			394				
Approach Delay, s/veh		44.3			215.5			99.0				
Approach LOS		D			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.5		67.5			20.0	47.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			15.5	43.0
Max Q Clear Time (g_c+I1), s		20.0		2.0			17.5	45.0
Green Ext Time (p_c), s		0.0		51.6			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	146.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	126	407	29	170	90	105	1649	8	122	2142	553
Future Volume (veh/h)	336	126	407	29	170	90	105	1649	8	122	2142	553
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	365	137	442	32	185	98	114	1792	9	122	2142	553
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	1248	559	54	455	231	108	1799	9	148	1865	581
Arrive On Green	0.18	0.35	0.35	0.03	0.20	0.20	0.06	0.34	0.34	0.08	0.37	0.37
Sat Flow, veh/h	1774	3539	1583	1774	2275	1154	1774	5222	26	1774	5085	1583
Grp Volume(v), veh/h	365	137	442	32	142	141	114	1163	638	122	2142	553
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1659	1774	1695	1858	1774	1695	1583
Q Serve(g_s), s	16.5	2.3	22.6	1.6	6.3	6.7	5.5	30.8	30.8	6.1	33.0	30.6
Cycle Q Clear(g_c), s	16.5	2.3	22.6	1.6	6.3	6.7	5.5	30.8	30.8	6.1	33.0	30.6
Prop In Lane	1.00		1.00	1.00		0.70	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	325	1248	559	54	354	332	108	1168	640	148	1865	581
V/C Ratio(X)	1.12	0.11	0.79	0.59	0.40	0.42	1.05	1.00	1.00	0.83	1.15	0.95
Avail Cap(c_a), veh/h	325	1248	559	101	354	332	108	1168	640	148	1865	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	36.8	19.6	26.2	43.1	31.3	31.5	42.2	29.4	29.4	40.6	28.5	27.7
Incr Delay (d2), s/veh	87.1	0.2	10.9	8.9	3.1	3.6	101.0	25.4	34.7	3.6	67.6	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.9	1.2	11.6	0.9	3.4	3.4	5.7	18.5	21.9	3.1	27.0	14.1
LnGrp Delay(d),s/veh	123.8	19.8	37.1	52.0	34.4	35.1	143.8	54.9	64.1	44.2	96.1	32.1
LnGrp LOS	F	B	D	D	C	D	F	D	E	D	F	C
Approach Vol, veh/h		944			315			1915			2817	
Approach Delay, s/veh		68.1			36.5			63.3			81.3	
Approach LOS		E			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	35.0	7.3	35.7	10.0	37.0	21.0	22.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	7.5	31.0	5.1	29.4	5.5	33.0	16.5	18.0
Max Q Clear Time (g_c+I1), s	8.1	32.8	3.6	24.6	7.5	35.0	18.5	8.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1424	574	548	1255	0	0	0	0	1320	1	474
Future Volume (veh/h)	0	1424	574	548	1255	0	0	0	0	1320	1	474
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1424	574	548	1255	0				1321	0	474
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	964	364	325	2183	0				1005	0	449
Arrive On Green	0.00	0.38	0.38	0.37	1.00	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	2608	950	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	973	1025	548	1255	0				1321	0	474
Grp Sat Flow(s),veh/h/ln	0	1770	1695	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.5	34.5	16.5	0.0	0.0				25.5	0.0	25.5
Cycle Q Clear(g_c), s	0.0	34.5	34.5	16.5	0.0	0.0				25.5	0.0	25.5
Prop In Lane	0.00		0.56	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	678	650	325	2183	0				1005	0	449
V/C Ratio(X)	0.00	1.43	1.58	1.68	0.58	0.00				1.31	0.00	1.06
Avail Cap(c_a), veh/h	0	678	650	325	2183	0				1005	0	449
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.8	27.8	28.5	0.0	0.0				32.3	0.0	32.3
Incr Delay (d2), s/veh	0.0	204.1	266.9	309.4	0.1	0.0				148.5	0.0	58.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	55.2	64.2	35.9	0.0	0.0				33.2	0.0	18.3
LnGrp Delay(d),s/veh	0.0	231.9	294.7	337.9	0.1	0.0				180.7	0.0	90.5
LnGrp LOS		F	F	F	A					F		F
Approach Vol, veh/h		1998			1803						1795	
Approach Delay, s/veh		264.1			102.8						156.9	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			21.0	39.0		30.0		60.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			16.5	34.5		25.5		55.5
Max Q Clear Time (g_c+I1), s			18.5	36.5		27.5		2.0
Green Ext Time (p_c), s			0.0	0.0		0.0		45.2

Intersection Summary	
HCM 2010 Ctrl Delay	177.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	620	2122	0	0	1373	1433	431	8	370	0	0	0
Future Volume (veh/h)	620	2122	0	0	1373	1433	431	8	370	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	620	2122	0	0	1373	1433	437	0	370			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	345	2477	0	0	809	719	710	0	317			
Arrive On Green	0.39	1.00	0.00	0.00	0.46	0.46	0.20	0.00	0.20			
Sat Flow, veh/h	1774	3632	0	0	1869	1578	3548	0	1583			
Grp Volume(v), veh/h	620	2122	0	0	1367	1439	437	0	370			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1584	1774	0	1583			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	41.0	41.0	10.1	0.0	18.0			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	41.0	41.0	10.1	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	345	2477	0	0	806	722	710	0	317			
V/C Ratio(X)	1.80	0.86	0.00	0.00	1.70	1.99	0.62	0.00	1.17			
Avail Cap(c_a), veh/h	345	2477	0	0	806	722	710	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	0.0	0.0	0.0	24.5	24.5	32.8	0.0	36.0			
Incr Delay (d2), s/veh	359.9	0.4	0.0	0.0	318.4	452.1	1.6	0.0	104.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	42.9	0.1	0.0	0.0	91.2	108.5	5.1	0.0	17.0			
LnGrp Delay(d),s/veh	387.4	0.4	0.0	0.0	342.9	476.6	34.4	0.0	140.4			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		2742			2806			807				
Approach Delay, s/veh		87.9			411.5			83.0				
Approach LOS		F			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.5		67.5			22.0	45.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			17.5	41.0
Max Q Clear Time (g_c+I1), s		20.0		2.0			19.5	43.0
Green Ext Time (p_c), s		0.0		60.7			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	230.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	457	395	399	216	1321	518	544	802	149	842	871	607
Future Volume (veh/h)	457	395	399	216	1321	518	544	802	149	842	871	607
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	457	395	399	216	1321	518	544	802	149	842	871	607
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	440	2002	623	247	1216	473	523	823	368	796	1103	493
Arrive On Green	0.13	0.39	0.39	0.07	0.34	0.34	0.15	0.23	0.23	0.23	0.31	0.31
Sat Flow, veh/h	3442	5085	1583	3442	3604	1401	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	457	395	399	216	1242	597	544	802	149	842	871	607
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1615	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	30.7	12.3	49.0	14.9	81.0	81.0	36.5	54.0	19.1	55.5	53.9	74.8
Cycle Q Clear(g_c), s	30.7	12.3	49.0	14.9	81.0	81.0	36.5	54.0	19.1	55.5	53.9	74.8
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	440	2002	623	247	1144	545	523	823	368	796	1103	493
V/C Ratio(X)	1.04	0.20	0.64	0.87	1.09	1.10	1.04	0.97	0.40	1.06	0.79	1.23
Avail Cap(c_a), veh/h	440	2002	623	320	1144	545	523	823	368	796	1103	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	104.7	47.8	59.0	110.3	79.5	79.5	101.7	91.4	78.0	92.2	75.4	82.6
Incr Delay (d2), s/veh	53.1	0.0	2.2	18.7	52.9	67.1	49.9	25.8	3.3	48.3	3.9	120.3
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	17.9	5.8	21.8	7.8	46.4	46.4	21.0	29.3	8.7	31.8	27.0	49.3
LnGrp Delay(d),s/veh	157.7	47.9	61.2	129.0	132.4	146.6	151.7	117.2	81.3	140.6	79.4	202.9
LnGrp LOS	F	D	E	F	F	F	F	F	F	F	E	F
Approach Vol, veh/h		1251			2055			1495			2320	
Approach Delay, s/veh		92.3			136.2			126.2			133.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	60.0	59.8	21.7	98.5	41.0	78.8	35.2	85.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	55.5	55.8	22.3	89.4	36.5	74.8	30.7	81.0
Max Q Clear Time (g_c+I1), s	57.5	56.0	16.9	51.0	38.5	76.8	32.7	83.0
Green Ext Time (p_c), s	0.0	0.0	0.3	25.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	125.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	2691	50	20	1435	53	22	9	52	102	5	125
Future Volume (veh/h)	92	2691	50	20	1435	53	22	9	52	102	5	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	2691	50	20	1435	53	22	9	52	102	5	125
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	3312	1031	39	3055	113	42	122	104	108	192	163
Arrive On Green	0.07	0.65	0.65	0.02	0.61	0.61	0.02	0.07	0.07	0.06	0.10	0.10
Sat Flow, veh/h	1774	5085	1583	1774	5034	186	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	92	2691	50	20	966	522	22	9	52	102	5	125
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1830	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.6	35.3	1.0	1.0	14.1	14.1	1.1	0.4	2.9	5.2	0.2	6.9
Cycle Q Clear(g_c), s	4.6	35.3	1.0	1.0	14.1	14.1	1.1	0.4	2.9	5.2	0.2	6.9
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	3312	1031	39	2057	1110	42	122	104	108	192	163
V/C Ratio(X)	0.78	0.81	0.05	0.52	0.47	0.47	0.53	0.07	0.50	0.94	0.03	0.76
Avail Cap(c_a), veh/h	203	3312	1031	99	2057	1110	106	373	317	108	375	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.09	0.09	0.09	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	41.4	11.6	5.6	43.5	9.7	9.7	43.4	39.5	40.6	42.1	36.3	39.3
Incr Delay (d2), s/veh	6.5	1.4	0.1	1.0	0.1	0.1	10.0	0.3	3.7	67.4	0.1	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	16.6	0.5	0.5	6.6	7.1	0.7	0.2	1.3	4.6	0.1	3.3
LnGrp Delay(d),s/veh	47.9	13.0	5.7	44.5	9.8	9.9	53.4	39.7	44.3	109.5	36.3	46.5
LnGrp LOS	D	B	A	D	A	A	D	D	D	F	D	D
Approach Vol, veh/h		2833			1508			83			232	
Approach Delay, s/veh		14.0			10.3			46.2			74.0	
Approach LOS		B			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	10.4	6.5	63.1	6.6	13.8	10.5	59.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	18.0	5.0	43.5	5.4	18.1	10.3	38.2
Max Q Clear Time (g_c+I1), s	7.2	4.9	3.0	37.3	3.1	8.9	6.6	16.1
Green Ext Time (p_c), s	0.0	0.5	0.0	6.2	0.0	0.4	0.1	21.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	104	60	156	43	300	16	1086	187	187	1699	23
Future Volume (veh/h)	35	104	60	156	43	300	16	1086	187	187	1699	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	104	60	156	43	300	16	1086	187	187	1699	23
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	240	139	245	404	343	32	1534	263	223	2199	30
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.02	0.51	0.51	0.13	0.62	0.62
Sat Flow, veh/h	1033	1110	640	1217	1863	1583	1774	3022	519	1774	3575	48
Grp Volume(v), veh/h	35	0	164	156	43	300	16	635	638	187	840	882
Grp Sat Flow(s),veh/h/ln	1033	0	1750	1217	1863	1583	1774	1770	1771	1774	1770	1854
Q Serve(g_s), s	2.5	0.0	7.3	11.4	1.7	16.5	0.8	24.8	25.0	9.3	31.3	31.5
Cycle Q Clear(g_c), s	4.2	0.0	7.3	18.7	1.7	16.5	0.8	24.8	25.0	9.3	31.3	31.5
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	285	0	379	245	404	343	32	898	899	223	1088	1140
V/C Ratio(X)	0.12	0.00	0.43	0.64	0.11	0.87	0.49	0.71	0.71	0.84	0.77	0.77
Avail Cap(c_a), veh/h	285	0	379	245	404	343	101	898	899	286	1088	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	30.5	38.6	28.3	34.1	43.8	17.0	17.1	38.4	12.7	12.7
Incr Delay (d2), s/veh	0.2	0.0	0.8	3.3	0.1	14.4	11.1	4.7	4.7	15.8	5.3	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.6	4.1	0.9	8.6	0.5	13.2	13.2	5.5	16.8	17.6
LnGrp Delay(d),s/veh	30.1	0.0	31.2	41.9	28.3	48.5	54.8	21.7	21.8	54.2	18.0	17.9
LnGrp LOS	C		C	D	C	D	D	C	C	D	B	B
Approach Vol, veh/h		199			499			1289			1909	
Approach Delay, s/veh		31.1			44.7			22.1			21.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	50.2		24.0	6.1	59.9		24.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	42.5		19.5	5.1	51.9		19.5
Max Q Clear Time (g_c+I1), s	11.3	27.0		9.3	2.8	33.5		20.7
Green Ext Time (p_c), s	0.2	14.2		2.2	0.0	16.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	326	76	13	363	65	72	249	10	108	381	187
Future Volume (veh/h)	286	326	76	13	363	65	72	249	10	108	381	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	286	326	76	14	395	71	78	271	11	117	414	203
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	949	218	29	492	88	100	1316	53	148	940	456
Arrive On Green	0.18	0.33	0.33	0.02	0.16	0.16	0.06	0.38	0.38	0.08	0.41	0.41
Sat Flow, veh/h	1774	2859	658	1774	3003	535	1774	3467	140	1774	2313	1122
Grp Volume(v), veh/h	286	200	202	14	231	235	78	138	144	117	316	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1747	1774	1770	1768	1774	1770	1838	1774	1770	1665
Q Serve(g_s), s	14.1	7.7	7.9	0.7	11.3	11.5	3.9	4.7	4.8	5.8	11.6	11.8
Cycle Q Clear(g_c), s	14.1	7.7	7.9	0.7	11.3	11.5	3.9	4.7	4.8	5.8	11.6	11.8
Prop In Lane	1.00		0.38	1.00		0.30	1.00		0.08	1.00		0.67
Lane Grp Cap(c), veh/h	327	587	580	29	290	290	100	672	698	148	719	676
V/C Ratio(X)	0.87	0.34	0.35	0.48	0.80	0.81	0.78	0.21	0.21	0.79	0.44	0.45
Avail Cap(c_a), veh/h	463	678	670	99	315	314	168	672	698	246	719	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	22.7	22.7	43.9	36.2	36.3	41.9	18.8	18.8	40.5	19.3	19.4
Incr Delay (d2), s/veh	10.0	0.3	0.3	11.8	12.6	13.7	12.1	0.7	0.7	9.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	3.8	3.8	0.4	6.5	6.7	2.2	2.4	2.5	3.2	5.7	5.5
LnGrp Delay(d),s/veh	45.7	22.9	23.0	55.7	48.8	49.9	54.0	19.5	19.5	49.6	19.7	19.8
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	B	B
Approach Vol, veh/h		688			480			360			734	
Approach Delay, s/veh		32.4			49.6			26.9			24.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	38.2	6.0	33.9	9.6	40.6	21.1	18.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	21.0	5.0	34.5	8.5	25.0	23.5	16.0
Max Q Clear Time (g_c+I1), s	7.8	6.8	2.7	9.9	5.9	13.8	16.1	13.5
Green Ext Time (p_c), s	0.1	4.8	0.0	5.4	0.0	4.2	0.5	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	137	0	0	0	216	844	0	1	1282	104
Future Volume (veh/h)	60	0	137	0	0	0	216	844	0	1	1282	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	0	137	0	0	0	235	917	0	1	1393	113
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	0	173	0	204	0	315	2655	0	2	2336	1045
Arrive On Green	0.11	0.00	0.11	0.00	0.00	0.00	0.09	0.75	0.00	0.00	0.66	0.66
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	60	0	137	0	0	0	235	917	0	1	1393	113
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	3.6	0.0	7.6	0.0	0.0	0.0	6.0	7.9	0.0	0.1	19.9	2.4
Cycle Q Clear(g_c), s	3.6	0.0	7.6	0.0	0.0	0.0	6.0	7.9	0.0	0.1	19.9	2.4
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	0	173	0	204	0	315	2655	0	2	2336	1045
V/C Ratio(X)	0.26	0.00	0.79	0.00	0.00	0.00	0.75	0.35	0.00	0.41	0.60	0.11
Avail Cap(c_a), veh/h	331	0	281	0	331	0	440	2655	0	99	2336	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	39.1	0.0	0.0	0.0	39.9	3.8	0.0	44.9	8.6	5.6
Incr Delay (d2), s/veh	0.6	0.0	7.8	0.0	0.0	0.0	4.4	0.4	0.0	84.5	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	1.4	0.0	3.7	0.0	0.0	0.0	3.0	4.0	0.0	0.1	9.6	1.0
LnGrp Delay(d),s/veh	37.8	0.0	46.8	0.0	0.0	0.0	44.3	4.1	0.0	129.4	9.0	5.6
LnGrp LOS	D		D				D	A		F	A	A
Approach Vol, veh/h		197			0			1152			1507	
Approach Delay, s/veh		44.1			0.0			12.3			8.8	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	71.5		13.9	12.7	63.4		13.9
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.0	56.5		16.0	11.5	50.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	9.9		9.6	8.0	21.9		0.0
Green Ext Time (p_c), s	0.0	30.3		0.3	0.3	21.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Future Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	219	1806	0	24	1144	128	229	208	11	141	329	188
Adj No. of Lanes	1	3	1	1	2	0	0	1	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	2210	688	31	1070	120	230	209	383	131	305	376
Arrive On Green	0.12	0.43	0.00	0.02	0.33	0.33	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1583	1774	3210	359	951	864	1583	551	1285	1583
Grp Volume(v), veh/h	219	1806	0	24	630	642	437	0	11	470	0	188
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1799	1815	0	1583	1835	0	1583
Q Serve(g_s), s	28.5	74.7	0.0	3.2	80.0	80.0	57.7	0.0	1.3	57.0	0.0	24.7
Cycle Q Clear(g_c), s	28.5	74.7	0.0	3.2	80.0	80.0	57.7	0.0	1.3	57.0	0.0	24.7
Prop In Lane	1.00		1.00	1.00		0.20	0.52		1.00	0.30		1.00
Lane Grp Cap(c), veh/h	211	2210	688	31	590	600	439	0	383	436	0	376
V/C Ratio(X)	1.04	0.82	0.00	0.78	1.07	1.07	1.00	0.00	0.03	1.08	0.00	0.50
Avail Cap(c_a), veh/h	211	2210	688	54	590	600	439	0	383	436	0	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	105.8	59.5	0.0	117.4	80.0	80.0	90.9	0.0	69.5	91.5	0.0	79.2
Incr Delay (d2), s/veh	72.7	2.5	0.0	33.0	56.4	57.2	42.0	0.0	0.1	65.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.2	35.5	0.0	1.9	48.4	49.4	34.1	0.0	0.6	36.9	0.0	10.9
LnGrp Delay(d),s/veh	178.5	62.0	0.0	150.4	136.4	137.2	132.9	0.0	69.6	157.2	0.0	80.2
LnGrp LOS	F	E		F	F	F	F		E	F		F
Approach Vol, veh/h		2025			1296			448			658	
Approach Delay, s/veh		74.6			137.0			131.4			135.2	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		62.0	8.7	108.3		61.0	33.0	84.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		58.0	7.3	101.2		57.0	28.5	80.0
Max Q Clear Time (g_c+I1), s		59.7	5.2	76.7		59.0	30.5	82.0
Green Ext Time (p_c), s		0.0	0.0	21.3		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	107.6
HCM 2010 LOS	F

HCM 2010 Signalized Intersection Summary
12: Evans Road & Ramona Expwy

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Future Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	219	1806	0	24	1144	128	229	208	11	141	329	188
Adj No. of Lanes	1	3	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	2410	750	31	1157	129	245	617	33	156	336	192
Arrive On Green	0.13	0.47	0.00	0.02	0.36	0.36	0.14	0.35	0.35	0.09	0.30	0.30
Sat Flow, veh/h	1774	5085	1583	1774	3210	359	1774	1754	93	1774	1114	637
Grp Volume(v), veh/h	219	1806	0	24	630	642	229	0	219	141	0	517
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1799	1774	0	1846	1774	0	1750
Q Serve(g_s), s	29.2	69.2	0.0	3.2	84.4	84.8	30.5	0.0	20.8	18.8	0.0	69.9
Cycle Q Clear(g_c), s	29.2	69.2	0.0	3.2	84.4	84.8	30.5	0.0	20.8	18.8	0.0	69.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.05	1.00		0.36
Lane Grp Cap(c), veh/h	233	2410	750	31	637	648	245	0	649	156	0	527
V/C Ratio(X)	0.94	0.75	0.00	0.78	0.99	0.99	0.93	0.00	0.34	0.90	0.00	0.98
Avail Cap(c_a), veh/h	242	2410	750	66	637	648	245	0	649	223	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	102.8	51.2	0.0	116.8	75.8	76.0	101.8	0.0	56.9	107.9	0.0	82.7
Incr Delay (d2), s/veh	41.4	1.3	0.0	32.9	32.4	33.0	42.6	0.0	1.4	27.8	0.0	33.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	32.7	0.0	1.9	47.0	48.2	17.9	0.0	10.9	10.4	0.0	38.9
LnGrp Delay(d),s/veh	144.2	52.6	0.0	149.8	108.3	108.9	144.4	0.0	58.4	135.6	0.0	116.6
LnGrp LOS	F	D		F	F	F	F		E	F		F
Approach Vol, veh/h		2025			1296			448			658	
Approach Delay, s/veh		62.5			109.4			102.3			120.7	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	87.9	8.7	117.1	37.0	75.9	35.8	90.0
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	30.0	75.0	8.9	109.6	33.0	72.0	32.5	86.0
Max Q Clear Time (g_c+I1), s	20.8	22.8	5.2	71.2	32.5	71.9	31.2	86.8
Green Ext Time (p_c), s	0.2	5.2	0.0	31.2	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.9
HCM 2010 LOS	F

HCM 2010 Signalized Intersection Summary
12: Evans Road & Ramona Expwy

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Future Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	219	1806	0	24	1144	128	229	208	11	141	329	188
Adj No. of Lanes	1	3	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	2410	750	31	1157	129	245	655	557	156	336	192
Arrive On Green	0.13	0.47	0.00	0.02	0.36	0.36	0.14	0.35	0.35	0.09	0.30	0.30
Sat Flow, veh/h	1774	5085	1583	1774	3210	359	1774	1863	1583	1774	1114	637
Grp Volume(v), veh/h	219	1806	0	24	630	642	229	208	11	141	0	517
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1799	1774	1863	1583	1774	0	1750
Q Serve(g_s), s	29.2	69.2	0.0	3.2	84.4	84.8	30.5	19.5	1.1	18.8	0.0	69.9
Cycle Q Clear(g_c), s	29.2	69.2	0.0	3.2	84.4	84.8	30.5	19.5	1.1	18.8	0.0	69.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	233	2410	750	31	637	648	245	655	557	156	0	527
V/C Ratio(X)	0.94	0.75	0.00	0.78	0.99	0.99	0.93	0.32	0.02	0.90	0.00	0.98
Avail Cap(c_a), veh/h	242	2410	750	66	637	648	245	655	557	223	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	102.8	51.2	0.0	116.8	75.8	76.0	101.8	56.5	50.5	107.9	0.0	82.7
Incr Delay (d2), s/veh	41.4	1.3	0.0	32.9	32.4	33.0	42.6	1.3	0.1	27.8	0.0	33.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	32.7	0.0	1.9	47.0	48.2	17.9	10.3	0.5	10.4	0.0	38.9
LnGrp Delay(d),s/veh	144.2	52.6	0.0	149.8	108.3	108.9	144.4	57.8	50.6	135.6	0.0	116.6
LnGrp LOS	F	D		F	F	F	F	E	D	F		F
Approach Vol, veh/h		2025			1296			448			658	
Approach Delay, s/veh		62.5			109.4			101.9			120.7	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	87.9	8.7	117.1	37.0	75.9	35.8	90.0
Change Period (Y+Rc), s	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.0
Max Green Setting (Gmax), s	30.0	75.0	8.9	109.6	33.0	72.0	32.5	86.0
Max Q Clear Time (g_c+I1), s	20.8	21.5	5.2	71.2	32.5	71.9	31.2	86.8
Green Ext Time (p_c), s	0.2	5.1	0.0	31.2	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Future Volume (veh/h)	219	1806	705	24	1144	128	229	208	11	141	329	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	219	1806	0	24	1144	128	229	208	11	141	329	188
Adj No. of Lanes	1	3	1	1	2	0	2	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	2210	688	31	1070	120	832	424	22	131	305	376
Arrive On Green	0.12	0.43	0.00	0.02	0.33	0.33	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1583	1774	3210	359	3442	1754	93	551	1285	1583
Grp Volume(v), veh/h	219	1806	0	24	630	642	229	0	219	470	0	188
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1770	1799	1721	0	1846	1835	0	1583
Q Serve(g_s), s	28.5	74.7	0.0	3.2	80.0	80.0	13.0	0.0	24.5	57.0	0.0	24.7
Cycle Q Clear(g_c), s	28.5	74.7	0.0	3.2	80.0	80.0	13.0	0.0	24.5	57.0	0.0	24.7
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.05	0.30		1.00
Lane Grp Cap(c), veh/h	211	2210	688	31	590	600	832	0	446	436	0	376
V/C Ratio(X)	1.04	0.82	0.00	0.78	1.07	1.07	0.28	0.00	0.49	1.08	0.00	0.50
Avail Cap(c_a), veh/h	211	2210	688	54	590	600	832	0	446	436	0	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	105.8	59.5	0.0	117.4	80.0	80.0	73.9	0.0	78.3	91.5	0.0	79.2
Incr Delay (d2), s/veh	72.7	2.5	0.0	33.0	56.4	57.2	0.8	0.0	3.8	65.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.2	35.5	0.0	1.9	48.4	49.4	6.3	0.0	13.0	36.9	0.0	10.9
LnGrp Delay(d),s/veh	178.5	62.0	0.0	150.4	136.4	137.2	74.7	0.0	82.1	157.2	0.0	80.2
LnGrp LOS	F	E		F	F	F	E		F	F		F
Approach Vol, veh/h		2025			1296			448			658	
Approach Delay, s/veh		74.6			137.0			78.4			135.2	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		62.0	8.7	108.3		61.0	33.0	84.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		58.0	7.3	101.2		57.0	28.5	80.0
Max Q Clear Time (g_c+I1), s		26.5	5.2	76.7		59.0	30.5	82.0
Green Ext Time (p_c), s		2.0	0.0	21.3		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	102.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1744	0	0	1001	3	0	0	0	1125	0	1689
Future Volume (veh/h)	22	1744	0	0	1001	3	0	0	0	1125	0	1689
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	22	1744	0	0	1001	3	0	0	0	1125	0	0
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1171	0	1	1036	453	0	1	0	1121	0	0
Arrive On Green	0.02	0.33	0.00	0.00	0.29	0.29	0.00	0.00	0.00	0.63	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3539	1546	0	1863	0	1774	0	0
Grp Volume(v), veh/h	22	1744	0	0	1001	3	0	0	0	1125	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1546	0	1863	0	1774	0	0
Q Serve(g_s), s	2.7	71.2	0.0	0.0	60.0	0.3	0.0	0.0	0.0	136.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	71.2	0.0	0.0	60.0	0.3	0.0	0.0	0.0	136.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	30	1171	0	1	1036	453	0	1	0	1121	0	0
V/C Ratio(X)	0.73	1.49	0.00	0.00	0.97	0.01	0.00	0.00	0.00	1.00	0.00	0.00
Avail Cap(c_a), veh/h	41	1171	0	41	1069	467	0	152	0	1121	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	105.3	72.0	0.0	0.0	75.0	53.9	0.0	0.0	0.0	39.6	0.0	0.0
Incr Delay (d2), s/veh	33.9	225.0	0.0	0.0	19.5	0.0	0.0	0.0	0.0	27.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	71.4	0.0	0.0	32.1	0.1	0.0	0.0	0.0	75.0	0.0	0.0
LnGrp Delay(d),s/veh	139.1	297.0	0.0	0.0	94.5	53.9	0.0	0.0	0.0	67.3	0.0	0.0
LnGrp LOS	F	F			F	D				F		
Approach Vol, veh/h		1766			1004			0			1125	
Approach Delay, s/veh		295.1			94.4			0.0			67.3	
Approach LOS		F			F						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		0.0	0.0	75.2		140.0	8.2	67.0
Change Period (Y+Rc), s		4.0	4.5	4.0		4.0	4.5	4.0
Max Green Setting (Gmax), s		17.5	5.0	65.0		136.0	5.0	65.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	73.2		138.0	4.7	62.0
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	177.5
HCM 2010 LOS	F

APPENDIX H
LOS Operations Worksheets – Future with Project Construction Conditions (Full Closure)

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	586	120	1050	806	175	251	1482	1152	189	1111	82
Future Volume (veh/h)	63	586	120	1050	806	175	251	1482	1152	189	1111	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	63	586	120	1050	806	175	251	1482	1152	189	1111	82
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	521	106	522	1234	268	168	1356	422	128	1182	87
Arrive On Green	0.05	0.18	0.18	0.29	0.43	0.43	0.09	0.27	0.27	0.07	0.24	0.24
Sat Flow, veh/h	1774	2929	598	1774	2893	628	1774	5085	1583	1774	4834	356
Grp Volume(v), veh/h	63	353	353	1050	493	488	251	1482	1152	189	779	414
Grp Sat Flow(s),veh/h/ln	1774	1770	1757	1774	1770	1752	1774	1695	1583	1774	1695	1800
Q Serve(g_s), s	3.2	16.0	16.0	26.5	19.9	19.9	8.5	24.0	24.0	6.5	20.3	20.3
Cycle Q Clear(g_c), s	3.2	16.0	16.0	26.5	19.9	19.9	8.5	24.0	24.0	6.5	20.3	20.3
Prop In Lane	1.00		0.34	1.00		0.36	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	81	315	312	522	755	747	168	1356	422	128	829	440
V/C Ratio(X)	0.78	1.12	1.13	2.01	0.65	0.65	1.50	1.09	2.73	1.48	0.94	0.94
Avail Cap(c_a), veh/h	142	315	312	522	755	747	168	1356	422	128	829	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	37.0	37.0	31.8	20.5	20.5	40.8	33.0	33.0	41.8	33.4	33.4
Incr Delay (d2), s/veh	14.7	88.4	90.2	461.3	2.0	2.0	252.8	53.9	784.5	251.0	18.3	28.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	15.5	15.6	79.8	10.1	10.0	15.9	17.9	102.4	12.1	11.5	13.6
LnGrp Delay(d),s/veh	57.2	125.4	127.2	493.1	22.5	22.6	293.5	86.9	817.5	292.7	51.7	61.9
LnGrp LOS	E	F	F	F	C	C	F	F	F	F	D	E
Approach Vol, veh/h		769			2031			2885			1382	
Approach Delay, s/veh		120.6			265.8			396.6			87.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	28.0	31.0	20.0	13.0	26.0	8.6	42.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	6.5	24.0	26.5	16.0	8.5	22.0	7.2	35.3
Max Q Clear Time (g_c+I1), s	8.5	26.0	28.5	18.0	10.5	22.3	5.2	21.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	268.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	591	1093	432	265	1115	137	416	1049	911	186	372	445
Future Volume (veh/h)	591	1093	432	265	1115	137	416	1049	911	186	372	445
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	591	1093	432	265	1115	137	416	1049	911	186	372	445
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	516	960	379	283	918	113	491	1435	642	191	1127	504
Arrive On Green	0.15	0.27	0.27	0.08	0.20	0.20	0.14	0.41	0.41	0.06	0.32	0.32
Sat Flow, veh/h	3442	3586	1417	3442	4590	564	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	591	1033	492	265	823	429	416	1049	911	186	372	445
Grp Sat Flow(s),veh/h/ln	1721	1695	1613	1721	1695	1763	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	13.5	24.1	24.1	6.9	18.0	18.0	10.6	22.5	36.5	4.9	7.2	24.0
Cycle Q Clear(g_c), s	13.5	24.1	24.1	6.9	18.0	18.0	10.6	22.5	36.5	4.9	7.2	24.0
Prop In Lane	1.00		0.88	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	908	432	283	678	353	491	1435	642	191	1127	504
V/C Ratio(X)	1.14	1.14	1.14	0.94	1.21	1.22	0.85	0.73	1.42	0.97	0.33	0.88
Avail Cap(c_a), veh/h	516	908	432	283	678	353	532	1435	642	191	1127	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	33.0	33.0	41.1	36.0	36.0	37.6	22.6	26.8	42.4	23.4	29.1
Incr Delay (d2), s/veh	86.0	75.6	86.9	36.9	109.6	120.2	11.5	3.3	197.5	57.0	0.2	16.6
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	12.6	20.8	21.1	4.7	18.7	20.5	5.8	11.6	51.0	3.8	3.5	12.8
LnGrp Delay(d),s/veh	124.3	108.6	119.9	77.9	145.6	156.2	49.1	25.9	224.2	99.4	23.5	45.7
LnGrp LOS	F	F	F	E	F	F	D	C	F	F	C	D
Approach Vol, veh/h		2116			1517			2376			1003	
Approach Delay, s/veh		115.6			136.8			106.0			47.4	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	40.5	11.9	28.1	17.3	32.7	18.0	22.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	5.0	36.5	7.4	24.1	13.9	27.6	13.5	18.0
Max Q Clear Time (g_c+I1), s	6.9	38.5	8.9	26.1	12.6	26.0	15.5	20.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	1.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	107.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	191	82	730	152	231	76	2558	1127	157	2034	14
Future Volume (veh/h)	32	191	82	730	152	231	76	2558	1127	157	2034	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	191	82	730	152	231	76	2558	1127	157	2034	14
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	231	231	393	82	420	97	1209	467	113	1789	12
Arrive On Green	0.15	0.15	0.15	0.27	0.27	0.27	0.05	0.33	0.33	0.06	0.34	0.34
Sat Flow, veh/h	265	1584	1583	1480	308	1583	1774	3613	1394	1774	5211	36
Grp Volume(v), veh/h	223	0	82	882	0	231	76	2378	1307	157	1323	725
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1789	0	1583	1774	1695	1617	1774	1695	1856
Q Serve(g_s), s	10.1	0.0	4.0	23.0	0.0	10.9	3.7	29.0	29.0	5.5	29.7	29.7
Cycle Q Clear(g_c), s	10.1	0.0	4.0	23.0	0.0	10.9	3.7	29.0	29.0	5.5	29.7	29.7
Prop In Lane	0.14		1.00	0.83		1.00	1.00		0.86	1.00		0.02
Lane Grp Cap(c), veh/h	270	0	231	475	0	420	97	1135	541	113	1164	637
V/C Ratio(X)	0.83	0.00	0.36	1.86	0.00	0.55	0.78	2.10	2.41	1.39	1.14	1.14
Avail Cap(c_a), veh/h	342	0	292	475	0	420	102	1135	541	113	1164	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	33.3	31.8	0.0	27.4	40.4	28.8	28.8	40.6	28.4	28.4
Incr Delay (d2), s/veh	12.5	0.0	0.9	393.9	0.0	1.5	30.0	496.1	642.3	222.4	72.5	79.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	1.8	63.2	0.0	4.9	2.6	91.6	109.3	9.6	25.5	29.2
LnGrp Delay(d),s/veh	48.4	0.0	34.3	425.7	0.0	28.9	70.5	524.9	671.1	263.0	100.9	108.4
LnGrp LOS	D		C	F		C	E	F	F	F	F	F
Approach Vol, veh/h		305			1113			3761			2205	
Approach Delay, s/veh		44.6			343.3			566.5			114.9	
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	10.0	33.0		16.6	9.3	33.7		27.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.5	29.0		16.0	5.0	29.5		23.0
Max Q Clear Time (g_c+I1), s	7.5	31.0		12.1	5.7	31.7		25.0
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	376.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1180	213	308	99	148	91	246	920	167	146	251	681
Future Volume (veh/h)	1180	213	308	99	148	91	246	920	167	146	251	681
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1180	213	308	99	148	91	246	920	167	146	251	681
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1119	671	600	127	271	157	258	920	412	157	360	322
Arrive On Green	0.32	0.38	0.38	0.07	0.13	0.13	0.15	0.26	0.26	0.09	0.20	0.20
Sat Flow, veh/h	3442	1770	1583	1774	2158	1253	1774	3539	1583	1774	1770	1583
Grp Volume(v), veh/h	1180	213	308	99	120	119	246	920	167	146	251	681
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1642	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	27.5	7.2	12.7	4.6	5.4	5.8	11.6	22.0	7.4	6.9	11.1	17.2
Cycle Q Clear(g_c), s	27.5	7.2	12.7	4.6	5.4	5.8	11.6	22.0	7.4	6.9	11.1	17.2
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1119	671	600	127	222	206	258	920	412	157	360	322
V/C Ratio(X)	1.05	0.32	0.51	0.78	0.54	0.58	0.95	1.00	0.41	0.93	0.70	2.12
Avail Cap(c_a), veh/h	1119	688	616	222	335	310	258	920	412	157	360	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	18.6	20.3	38.6	34.7	34.9	35.9	31.3	25.9	38.3	31.3	33.7
Incr Delay (d2), s/veh	42.6	0.3	0.7	9.9	2.0	2.6	43.4	29.6	3.0	51.0	5.8	512.6
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	19.5	3.5	5.7	2.6	2.8	2.8	8.8	14.4	3.6	5.6	6.0	53.2
LnGrp Delay(d),s/veh	71.2	18.8	20.9	48.5	36.7	37.5	79.2	60.9	28.9	89.3	37.1	546.3
LnGrp LOS	F	B	C	D	D	D	E	E	C	F	D	F
Approach Vol, veh/h		1701			338			1333			1078	
Approach Delay, s/veh		55.5			40.4			60.3			365.8	
Approach LOS		E			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	26.0	10.6	36.1	16.8	21.2	32.0	14.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	7.5	22.0	10.6	32.9	12.3	17.2	27.5	16.0
Max Q Clear Time (g_c+I1), s	8.9	24.0	6.6	14.7	13.6	19.2	29.5	7.8
Green Ext Time (p_c), s	0.0	0.0	0.1	4.3	0.0	0.0	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	131.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	514	58	379	329	0	0	0	0	1512	4	271
Future Volume (veh/h)	0	514	58	379	329	0	0	0	0	1512	4	271
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	514	58	379	329	0				1512	4	271
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	695	78	227	1396	0				895	2	800
Arrive On Green	0.00	0.22	0.22	0.21	0.66	0.00				0.51	0.51	0.51
Sat Flow, veh/h	0	3301	361	1774	3632	0				1770	5	1583
Grp Volume(v), veh/h	0	283	289	379	329	0				1516	0	271
Grp Sat Flow(s),veh/h/ln	0	1770	1799	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	13.4	13.5	11.5	3.4	0.0				45.5	0.0	9.2
Cycle Q Clear(g_c), s	0.0	13.4	13.5	11.5	3.4	0.0				45.5	0.0	9.2
Prop In Lane	0.00		0.20	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	383	390	227	1396	0				897	0	800
V/C Ratio(X)	0.00	0.74	0.74	1.67	0.24	0.00				1.69	0.00	0.34
Avail Cap(c_a), veh/h	0	383	390	227	1396	0				897	0	800
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.9	32.9	35.4	9.9	0.0				22.3	0.0	13.3
Incr Delay (d2), s/veh	0.0	12.0	12.0	304.1	0.0	0.0				315.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	8.0	24.7	1.6	0.0				100.5	0.0	4.0
LnGrp Delay(d),s/veh	0.0	44.8	44.9	339.5	9.9	0.0				337.6	0.0	13.5
LnGrp LOS		D	D	F	A					F		B
Approach Vol, veh/h		572			708						1787	
Approach Delay, s/veh		44.9			186.4						288.5	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			16.0	24.0		50.0		40.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			11.5	19.5		45.5		35.5
Max Q Clear Time (g_c+I1), s			13.5	15.5		47.5		5.4
Green Ext Time (p_c), s			0.0	2.0		0.0		6.3

Intersection Summary	
HCM 2010 Ctrl Delay	219.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	1754	0	0	585	735	124	3	717	0	0	0
Future Volume (veh/h)	271	1754	0	0	585	735	124	3	717	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	271	1754	0	0	585	735	124	3	717			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	270	1829	0	0	556	498	665	16	607			
Arrive On Green	0.30	1.00	0.00	0.00	0.31	0.31	0.38	0.38	0.38			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1734	42	1583			
Grp Volume(v), veh/h	271	1754	0	0	585	735	127	0	717			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1776	0	1583			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	28.3	28.3	4.3	0.0	34.5			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	28.3	28.3	4.3	0.0	34.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	270	1829	0	0	556	498	681	0	607			
V/C Ratio(X)	1.00	0.96	0.00	0.00	1.05	1.48	0.19	0.00	1.18			
Avail Cap(c_a), veh/h	270	1829	0	0	556	498	681	0	607			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.58	0.58	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	31.3	0.0	0.0	0.0	30.9	30.9	18.4	0.0	27.7			
Incr Delay (d2), s/veh	42.6	9.0	0.0	0.0	52.3	225.0	0.1	0.0	97.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.8	2.3	0.0	0.0	21.8	43.4	2.1	0.0	31.5			
LnGrp Delay(d),s/veh	73.9	9.0	0.0	0.0	83.2	255.9	18.6	0.0	125.5			
LnGrp LOS	F	A			F	F	B		F			
Approach Vol, veh/h		2025			1320			844				
Approach Delay, s/veh		17.7			179.3			109.4				
Approach LOS		B			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		39.0		51.0			18.2	32.8
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		34.5		46.5			13.7	28.3
Max Q Clear Time (g_c+I1), s		36.5		2.0			15.7	30.3
Green Ext Time (p_c), s		0.0		37.4			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	492	362	159	8	206	235	267	3168	26	302	2069	345
Future Volume (veh/h)	492	362	159	8	206	235	267	3168	26	302	2069	345
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	535	393	173	9	224	255	290	3443	28	302	2069	345
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1199	536	20	354	317	168	1908	15	168	1865	581
Arrive On Green	0.15	0.34	0.34	0.01	0.20	0.20	0.09	0.37	0.37	0.09	0.37	0.37
Sat Flow, veh/h	1774	3539	1583	1774	1770	1583	1774	5203	42	1774	5085	1583
Grp Volume(v), veh/h	535	393	173	9	224	255	290	2240	1231	302	2069	345
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1695	1855	1774	1695	1583
Q Serve(g_s), s	13.5	7.4	7.3	0.5	10.4	13.8	8.5	33.0	33.0	8.5	33.0	15.9
Cycle Q Clear(g_c), s	13.5	7.4	7.3	0.5	10.4	13.8	8.5	33.0	33.0	8.5	33.0	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	266	1199	536	20	354	317	168	1243	680	168	1865	581
V/C Ratio(X)	2.01	0.33	0.32	0.45	0.63	0.81	1.73	1.80	1.81	1.80	1.11	0.59
Avail Cap(c_a), veh/h	266	1199	536	99	354	317	168	1243	680	168	1865	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.3	22.1	22.1	44.2	33.0	34.3	40.8	28.5	28.5	40.8	28.5	23.1
Incr Delay (d2), s/veh	467.8	0.7	1.6	13.9	7.6	17.7	352.6	364.2	370.0	363.3	50.2	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	41.2	3.7	3.4	0.3	5.8	7.6	20.6	78.2	86.7	21.0	24.0	6.9
LnGrp Delay(d),s/veh	506.0	22.9	23.7	58.1	40.6	52.0	393.4	392.7	398.5	404.0	78.7	23.2
LnGrp LOS	F	C	C	E	D	D	F	F	F	F	F	C
Approach Vol, veh/h		1101			488			3761			2716	
Approach Delay, s/veh		257.8			46.9			394.6			107.8	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	37.0	5.5	34.5	13.0	37.0	18.0	22.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.5	33.0	5.0	26.5	8.5	33.0	13.5	18.0
Max Q Clear Time (g_c+I1), s	10.5	35.0	2.5	9.4	10.5	35.0	15.5	15.8
Green Ext Time (p_c), s	0.0	0.0	0.0	5.9	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	258.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1165	391	400	1509	0	0	0	0	1304	3	534
Future Volume (veh/h)	0	1165	391	400	1509	0	0	0	0	1304	3	534
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1165	391	400	1509	0				1306	0	534
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	946	311	306	2065	0				1124	0	501
Arrive On Green	0.00	0.36	0.36	0.34	1.00	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	2712	862	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	780	776	400	1509	0				1306	0	534
Grp Sat Flow(s),veh/h/ln	0	1770	1711	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	32.5	32.5	15.5	0.0	0.0				28.5	0.0	28.5
Cycle Q Clear(g_c), s	0.0	32.5	32.5	15.5	0.0	0.0				28.5	0.0	28.5
Prop In Lane	0.00		0.50	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	639	618	306	2065	0				1124	0	501
V/C Ratio(X)	0.00	1.22	1.26	1.31	0.73	0.00				1.16	0.00	1.07
Avail Cap(c_a), veh/h	0	639	618	306	2065	0				1124	0	501
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.8	28.8	29.5	0.0	0.0				30.8	0.0	30.8
Incr Delay (d2), s/veh	0.0	112.7	128.4	141.4	0.2	0.0				83.1	0.0	58.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	35.8	37.3	19.5	0.1	0.0				26.9	0.0	20.6
LnGrp Delay(d),s/veh	0.0	141.5	157.1	170.9	0.2	0.0				113.9	0.0	89.4
LnGrp LOS		F	F	F	A					F		F
Approach Vol, veh/h		1556			1909						1840	
Approach Delay, s/veh		149.3			36.0						106.8	
Approach LOS		F			D						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			20.0	37.0		33.0		57.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			15.5	32.5		28.5		52.5
Max Q Clear Time (g_c+I1), s			17.5	34.5		30.5		2.0
Green Ext Time (p_c), s			0.0	0.0		0.0		39.7

Intersection Summary	
HCM 2010 Ctrl Delay	93.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	2081	0	0	1347	1639	566	3	541	0	0	0
Future Volume (veh/h)	390	2081	0	0	1347	1639	566	3	541	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	390	2081	0	0	1347	1639	568	0	541			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	227	2379	0	0	875	783	808	0	361			
Arrive On Green	0.26	1.00	0.00	0.00	0.49	0.49	0.23	0.00	0.23			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	390	2081	0	0	1347	1639	568	0	541			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	11.5	0.0	0.0	0.0	44.5	44.5	13.2	0.0	20.5			
Cycle Q Clear(g_c), s	11.5	0.0	0.0	0.0	44.5	44.5	13.2	0.0	20.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	227	2379	0	0	875	783	808	0	361			
V/C Ratio(X)	1.72	0.87	0.00	0.00	1.54	2.09	0.70	0.00	1.50			
Avail Cap(c_a), veh/h	227	2379	0	0	875	783	808	0	361			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.5	0.0	0.0	0.0	22.8	22.8	31.9	0.0	34.8			
Incr Delay (d2), s/veh	325.9	0.5	0.0	0.0	248.5	496.5	2.8	0.0	239.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	26.1	0.2	0.0	0.0	82.0	127.3	6.8	0.0	32.9			
LnGrp Delay(d),s/veh	359.4	0.5	0.0	0.0	271.2	519.2	34.7	0.0	273.9			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		2471			2986			1109				
Approach Delay, s/veh		57.1			407.4			151.4				
Approach LOS		E			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		25.0		65.0			16.0	49.0
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		20.5		60.5			11.5	44.5
Max Q Clear Time (g_c+I1), s		22.5		2.0			13.5	46.5
Green Ext Time (p_c), s		0.0		58.3			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	232.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	778	1435	214	153	2402	898	1154	1758	138	920	508	945
Future Volume (veh/h)	778	1435	214	153	2402	898	1154	1758	138	920	508	945
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	778	1435	214	153	2402	898	1154	1758	138	920	508	945
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	2177	678	183	1352	451	609	1077	482	495	959	429
Arrive On Green	0.12	0.43	0.43	0.05	0.36	0.36	0.18	0.30	0.30	0.14	0.27	0.27
Sat Flow, veh/h	3442	5085	1583	3442	3772	1259	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	778	1435	214	153	2130	1170	1154	1758	138	920	508	945
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1641	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	29.5	53.9	21.4	10.6	86.0	86.0	42.5	73.0	15.9	34.5	29.3	65.0
Cycle Q Clear(g_c), s	29.5	53.9	21.4	10.6	86.0	86.0	42.5	73.0	15.9	34.5	29.3	65.0
Prop In Lane	1.00		1.00	1.00		0.77	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	423	2177	678	183	1215	588	609	1077	482	495	959	429
V/C Ratio(X)	1.84	0.66	0.32	0.84	1.75	1.99	1.89	1.63	0.29	1.86	0.53	2.20
Avail Cap(c_a), veh/h	423	2177	678	242	1215	588	609	1077	482	495	959	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	105.3	54.7	45.4	112.6	77.0	77.0	98.8	83.5	63.6	102.8	74.5	87.5
Incr Delay (d2), s/veh	386.7	0.7	0.3	17.4	342.3	451.8	408.2	289.1	1.5	394.5	0.6	549.3
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	36.8	25.4	9.5	5.5	98.1	112.8	54.8	79.0	7.2	43.5	14.5	93.9
LnGrp Delay(d),s/veh	491.9	55.4	45.6	130.0	419.3	528.8	507.0	372.6	65.1	497.3	75.1	636.8
LnGrp LOS	F	E	D	F	F	F	F	F	E	F	E	F
Approach Vol, veh/h		2427			3453			3050			2373	
Approach Delay, s/veh		194.5			443.6			409.5			462.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.0	77.0	17.2	106.8	47.0	69.0	34.0	90.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	34.5	73.0	16.9	98.6	42.5	65.0	29.5	86.0
Max Q Clear Time (g_c+I1), s	36.5	75.0	12.6	55.9	44.5	67.0	31.5	88.0
Green Ext Time (p_c), s	0.0	0.0	0.2	42.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	384.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	2072	41	89	3132	350	39	3	100	263	8	63
Future Volume (veh/h)	194	2072	41	89	3132	350	39	3	100	263	8	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	194	2072	41	89	3132	350	39	3	100	263	8	63
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	2843	885	104	2543	274	61	163	139	168	275	234
Arrive On Green	0.07	0.56	0.56	0.06	0.55	0.55	0.03	0.09	0.09	0.09	0.15	0.15
Sat Flow, veh/h	1774	5085	1583	1774	4661	503	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	194	2072	41	89	2247	1235	39	3	100	263	8	63
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1774	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.5	27.3	1.1	4.5	49.1	49.1	2.0	0.1	5.5	8.5	0.3	3.2
Cycle Q Clear(g_c), s	6.5	27.3	1.1	4.5	49.1	49.1	2.0	0.1	5.5	8.5	0.3	3.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	2843	885	104	1850	968	61	163	139	168	275	234
V/C Ratio(X)	1.51	0.73	0.05	0.85	1.21	1.28	0.64	0.02	0.72	1.57	0.03	0.27
Avail Cap(c_a), veh/h	128	2843	885	104	1850	968	120	373	317	168	422	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.34	0.34	0.34	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	41.8	14.8	9.0	42.0	20.4	20.4	42.9	37.5	40.0	40.8	32.8	34.1
Incr Delay (d2), s/veh	235.0	0.2	0.0	19.7	98.5	126.9	10.4	0.0	6.8	283.0	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	11.5	12.7	0.5	2.8	47.9	57.8	1.1	0.1	2.7	17.3	0.2	1.4
LnGrp Delay(d),s/veh	276.8	14.9	9.0	61.7	118.9	147.3	53.3	37.6	46.8	323.8	32.9	34.7
LnGrp LOS	F	B	A	E	F	F	D	D	D	F	C	C
Approach Vol, veh/h		2307			3571			142			334	
Approach Delay, s/veh		36.8			127.3			48.4			262.3	
Approach LOS		D			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	12.4	9.8	54.8	7.6	17.8	11.0	53.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	18.0	5.3	40.2	6.1	20.4	6.5	39.0
Max Q Clear Time (g_c+I1), s	10.5	7.5	6.5	29.3	4.0	5.2	8.5	51.1
Green Ext Time (p_c), s	0.0	0.4	0.0	10.9	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	99.8
HCM 2010 LOS	F

HCM Signalized Intersection Capacity Analysis
12: Evans Road & Ramona Expwy

5/31/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1115	967	16	2077	0	925	0	28	0	0	0
Future Volume (vph)	0	1115	967	16	2077	0	925	0	28	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.97		1.00			
Frt		1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)		5085	1583	1770	3539		3433		1583			
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)		5085	1583	1770	3539		3433		1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1115	967	16	2077	0	925	0	28	0	0	0
RTOR Reduction (vph)	0	0	368	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	0	1115	599	16	2077	0	925	0	9	0	0	0
Turn Type		NA	Perm	Prot	NA		Prot		Perm			Perm
Protected Phases		4		3	8		2			6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)		137.5	137.5	3.8	145.8		68.0		68.0			
Effective Green, g (s)		137.5	137.5	3.8	145.8		68.0		68.0			
Actuated g/C Ratio		0.62	0.62	0.02	0.66		0.31		0.31			
Clearance Time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		3152	981	30	2326		1052		485			
v/s Ratio Prot		0.22		0.01	c0.59		c0.27					
v/s Ratio Perm			0.38						0.01			
v/c Ratio		0.35	0.61	0.53	0.89		0.88		0.02			
Uniform Delay, d1		20.5	25.8	108.1	31.5		73.0		53.6			
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2		0.1	1.1	17.0	4.8		10.5		0.1			
Delay (s)		20.6	26.9	125.1	36.4		83.5		53.7			
Level of Service		C	C	F	D		F		D			
Approach Delay (s)		23.5			37.0			82.6			0.0	
Approach LOS		C			D			F			A	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	221.8	Sum of lost time (s)	16.5
Intersection Capacity Utilization	90.5%	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 (veh/h)	16	39	22	179	136	650	16	1323	77	67	764	32
Future Volume (veh/h)	16	39	22	179	136	650	16	1323	77	67	764	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	39	22	179	136	650	16	1323	77	67	764	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	417	235	547	693	589	32	1460	85	86	1591	67
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.02	0.43	0.43	0.05	0.46	0.46
Sat Flow, veh/h	686	1120	632	1336	1863	1583	1774	3400	198	1774	3462	145
Grp Volume(v), veh/h	16	0	61	179	136	650	16	687	713	67	390	406
Grp Sat Flow(s),veh/h/ln	686	0	1751	1336	1863	1583	1774	1770	1828	1774	1770	1837
Q Serve(g_s), s	1.5	0.0	2.0	9.1	4.4	33.5	0.8	32.6	32.8	3.4	13.8	13.8
Cycle Q Clear(g_c), s	5.9	0.0	2.0	11.1	4.4	33.5	0.8	32.6	32.8	3.4	13.8	13.8
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	301	0	652	547	693	589	32	760	785	86	813	844
V/C Ratio(X)	0.05	0.00	0.09	0.33	0.20	1.10	0.49	0.90	0.91	0.78	0.48	0.48
Avail Cap(c_a), veh/h	301	0	652	547	693	589	101	760	785	104	813	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.11	0.11	0.11	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	18.4	22.0	19.1	28.2	43.8	24.0	24.0	42.3	16.9	16.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	49.8	11.1	16.3	16.3	25.8	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.0	3.3	2.3	22.6	0.5	19.3	20.0	2.3	7.2	7.4
LnGrp Delay(d),s/veh	21.2	0.0	18.4	22.0	19.1	78.0	54.8	40.3	40.3	68.2	18.9	18.8
LnGrp LOS	C		B	C	B	F	D	D	D	E	B	B
Approach Vol, veh/h		77			965			1416			863	
Approach Delay, s/veh		19.0			59.3			40.4			22.7	
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	8.9	43.1		38.0	6.1	45.9		38.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.3	37.7		33.5	5.1	37.9		33.5
Max Q Clear Time (g_c+I1), s	5.4	34.8		7.9	2.8	15.8		35.5
Green Ext Time (p_c), s	0.0	2.6		4.6	0.0	15.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	320	28	14	802	189	176	296	22	208	302	386
Future Volume (veh/h)	232	320	28	14	802	189	176	296	22	208	302	386
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	232	320	28	15	872	205	191	322	24	226	328	420
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1425	124	31	854	201	224	717	53	260	415	372
Arrive On Green	0.15	0.43	0.43	0.02	0.30	0.30	0.13	0.21	0.21	0.15	0.23	0.23
Sat Flow, veh/h	1774	3295	287	1774	2846	669	1774	3341	248	1774	1770	1583
Grp Volume(v), veh/h	232	171	177	15	542	535	191	170	176	226	328	420
Grp Sat Flow(s),veh/h/ln	1774	1770	1812	1774	1770	1745	1774	1770	1819	1774	1770	1583
Q Serve(g_s), s	11.5	5.5	5.5	0.8	27.0	27.0	9.5	7.5	7.6	11.2	15.7	21.1
Cycle Q Clear(g_c), s	11.5	5.5	5.5	0.8	27.0	27.0	9.5	7.5	7.6	11.2	15.7	21.1
Prop In Lane	1.00		0.16	1.00		0.38	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	266	765	784	31	531	523	224	380	391	260	415	372
V/C Ratio(X)	0.87	0.22	0.23	0.49	1.02	1.02	0.85	0.45	0.45	0.87	0.79	1.13
Avail Cap(c_a), veh/h	270	765	784	99	531	523	227	380	391	266	415	372
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	16.0	16.1	43.8	31.5	31.5	38.5	30.7	30.7	37.6	32.3	34.4
Incr Delay (d2), s/veh	23.9	0.1	0.1	11.4	44.5	45.0	25.1	3.8	3.7	24.8	9.9	86.9
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	7.4	2.7	2.8	0.5	19.7	19.5	6.2	4.1	4.2	7.2	8.8	18.2
LnGrp Delay(d),s/veh	61.3	16.2	16.2	55.2	76.0	76.5	63.6	34.5	34.5	62.3	42.2	121.3
LnGrp LOS	E	B	B	E	F	F	E	C	C	E	D	F
Approach Vol, veh/h		580			1092			537			974	
Approach Delay, s/veh		34.2			76.0			44.8			81.0	
Approach LOS		C			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	23.3	6.1	42.9	15.9	25.1	18.0	31.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	13.5	18.8	5.0	35.7	11.5	20.8	13.7	27.0
Max Q Clear Time (g_c+I1), s	13.2	9.6	2.8	7.5	11.5	23.1	13.5	29.0
Green Ext Time (p_c), s	0.0	4.6	0.0	11.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	0	174	0	0	0	352	1227	0	4	671	232
Future Volume (veh/h)	225	0	174	0	0	0	352	1227	0	4	671	232
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	225	0	174	0	0	0	383	1334	0	4	729	252
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	346	0	298	0	351	0	472	2362	0	9	1895	848
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.14	0.67	0.00	0.01	0.54	0.54
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	225	0	174	0	0	0	383	1334	0	4	729	252
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	13.8	0.0	9.0	0.0	0.0	0.0	9.7	18.1	0.0	0.2	10.8	7.9
Cycle Q Clear(g_c), s	13.8	0.0	9.0	0.0	0.0	0.0	9.7	18.1	0.0	0.2	10.8	7.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	0	298	0	351	0	472	2362	0	9	1895	848
V/C Ratio(X)	0.65	0.00	0.58	0.00	0.00	0.00	0.81	0.56	0.00	0.43	0.38	0.30
Avail Cap(c_a), veh/h	456	0	422	0	497	0	631	2362	0	101	1895	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	33.3	0.0	0.0	0.0	37.7	8.0	0.0	44.6	12.2	11.6
Incr Delay (d2), s/veh	2.1	0.0	1.8	0.0	0.0	0.0	5.9	1.0	0.0	27.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	4.1	0.0	0.0	0.0	5.0	9.0	0.0	0.2	5.3	3.5
LnGrp Delay(d),s/veh	37.3	0.0	35.1	0.0	0.0	0.0	43.6	9.0	0.0	72.5	12.4	11.7
LnGrp LOS	D		D				D	A		E	B	B
Approach Vol, veh/h		399			0			1717			985	
Approach Delay, s/veh		36.3			0.0			16.7			12.5	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	64.1		21.0	16.9	52.2		21.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.1	48.4		24.0	16.5	37.0		24.0
Max Q Clear Time (g_c+I1), s	2.2	20.1		15.8	11.7	12.8		0.0
Green Ext Time (p_c), s	0.0	19.9		1.1	0.6	17.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
1: Perris Boulevard & Iris Avenue

1/27/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	676	201	963	501	158	176	1646	880	296	1908	29
Future Volume (veh/h)	35	676	201	963	501	158	176	1646	880	296	1908	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	35	676	201	963	501	158	176	1646	880	296	1908	29
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	508	151	483	1138	357	128	1243	387	187	1434	22
Arrive On Green	0.03	0.19	0.19	0.27	0.43	0.43	0.07	0.24	0.24	0.11	0.28	0.28
Sat Flow, veh/h	1774	2691	800	1774	2653	832	1774	5085	1583	1774	5161	78
Grp Volume(v), veh/h	35	444	433	963	333	326	176	1646	880	296	1253	684
Grp Sat Flow(s),veh/h/ln	1774	1770	1722	1774	1770	1716	1774	1695	1583	1774	1695	1849
Q Serve(g_s), s	1.8	17.0	17.0	24.5	11.9	12.0	6.5	22.0	22.0	9.5	25.0	25.0
Cycle Q Clear(g_c), s	1.8	17.0	17.0	24.5	11.9	12.0	6.5	22.0	22.0	9.5	25.0	25.0
Prop In Lane	1.00		0.46	1.00		0.48	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	57	334	325	483	759	736	128	1243	387	187	942	514
V/C Ratio(X)	0.61	1.33	1.33	1.99	0.44	0.44	1.37	1.32	2.27	1.58	1.33	1.33
Avail Cap(c_a), veh/h	118	334	325	483	759	736	128	1243	387	187	942	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	36.5	36.5	32.8	18.1	18.1	41.8	34.0	34.0	40.3	32.5	32.5
Incr Delay (d2), s/veh	10.0	167.5	168.4	454.7	0.4	0.4	209.6	151.6	581.3	285.3	156.1	162.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	23.8	23.2	72.9	5.9	5.8	10.6	27.7	72.1	19.5	32.1	35.8
LnGrp Delay(d),s/veh	53.0	204.0	204.9	487.4	18.5	18.5	251.3	185.6	615.3	325.5	188.6	194.7
LnGrp LOS	D	F	F	F	B	B	F	F	F	F	F	F
Approach Vol, veh/h		912			1622			2702			2233	
Approach Delay, s/veh		198.6			296.9			329.8			208.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	26.0	29.0	21.0	11.0	29.0	7.4	42.6
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	9.5	22.0	24.5	17.0	6.5	25.0	6.0	35.5
Max Q Clear Time (g_c+I1), s	11.5	24.0	26.5	19.0	8.5	27.0	3.8	14.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2

Intersection Summary	
HCM 2010 Ctrl Delay	270.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	929	357	276	998	92	301	892	717	291	384	435
Future Volume (veh/h)	450	929	357	276	998	92	301	892	717	291	384	435
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	450	929	357	276	998	92	301	892	717	291	384	435
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	949	364	325	1001	92	375	1266	566	333	1223	547
Arrive On Green	0.15	0.26	0.26	0.09	0.21	0.21	0.11	0.36	0.36	0.10	0.35	0.35
Sat Flow, veh/h	3442	3619	1388	3442	4740	436	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	450	870	416	276	713	377	301	892	717	291	384	435
Grp Sat Flow(s),veh/h/ln	1721	1695	1618	1721	1695	1786	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	11.6	22.9	23.0	7.1	18.9	19.0	7.7	19.5	32.2	7.5	7.2	22.3
Cycle Q Clear(g_c), s	11.6	22.9	23.0	7.1	18.9	19.0	7.7	19.5	32.2	7.5	7.2	22.3
Prop In Lane	1.00		0.86	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	501	889	424	325	716	377	375	1266	566	333	1223	547
V/C Ratio(X)	0.90	0.98	0.98	0.85	1.00	1.00	0.80	0.70	1.27	0.87	0.31	0.79
Avail Cap(c_a), veh/h	501	889	424	325	716	377	409	1266	566	333	1223	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	33.0	33.0	40.1	35.5	35.5	39.2	24.8	28.9	40.1	21.6	26.6
Incr Delay (d2), s/veh	18.9	25.0	38.4	18.7	32.7	46.1	10.3	3.3	133.2	21.9	0.1	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	13.7	14.8	4.2	12.1	14.1	4.2	10.0	34.9	4.6	3.5	10.9
LnGrp Delay(d),s/veh	56.7	57.9	71.4	58.8	68.2	81.6	49.5	28.1	162.1	62.0	21.8	34.5
LnGrp LOS	E	E	E	E	E	F	D	C	F	E	C	C
Approach Vol, veh/h		1736			1366			1910			1110	
Approach Delay, s/veh		60.8			70.0			81.8			37.3	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	36.2	13.0	27.6	14.3	35.1	17.6	23.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	8.7	32.2	8.5	23.6	10.7	30.2	13.1	19.0
Max Q Clear Time (g_c+I1), s	9.5	34.2	9.1	25.0	9.7	24.3	13.6	21.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	4.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	158	75	604	65	118	33	2352	701	156	2673	20
Future Volume (veh/h)	27	158	75	604	65	118	33	2352	701	156	2673	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	27	158	75	604	65	118	33	2352	701	156	2673	20
Adj No. of Lanes	0	1	1	0	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	200	201	399	43	392	57	1456	396	115	2077	16
Arrive On Green	0.13	0.13	0.13	0.25	0.25	0.25	0.03	0.37	0.37	0.06	0.40	0.40
Sat Flow, veh/h	270	1579	1583	1609	173	1583	1774	3979	1082	1774	5207	39
Grp Volume(v), veh/h	185	0	75	669	0	118	33	1970	1083	156	1739	954
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1782	0	1583	1774	1695	1672	1774	1695	1856
Q Serve(g_s), s	8.2	0.0	3.7	21.0	0.0	5.1	1.6	31.0	31.0	5.5	33.8	33.8
Cycle Q Clear(g_c), s	8.2	0.0	3.7	21.0	0.0	5.1	1.6	31.0	31.0	5.5	33.8	33.8
Prop In Lane	0.15		1.00	0.90		1.00	1.00		0.65	1.00		0.02
Lane Grp Cap(c), veh/h	235	0	201	442	0	392	57	1240	611	115	1352	740
V/C Ratio(X)	0.79	0.00	0.37	1.51	0.00	0.30	0.58	1.59	1.77	1.36	1.29	1.29
Avail Cap(c_a), veh/h	349	0	299	442	0	392	105	1240	611	115	1352	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	33.9	31.9	0.0	25.9	40.5	26.9	26.9	39.6	25.5	25.5
Incr Delay (d2), s/veh	7.0	0.0	1.1	243.1	0.0	0.4	9.2	268.9	353.4	206.0	134.4	140.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	1.7	40.0	0.0	2.3	0.9	60.6	74.1	9.2	40.8	45.9
LnGrp Delay(d),s/veh	42.9	0.0	35.1	275.0	0.0	26.3	49.7	295.8	380.3	245.7	159.9	165.8
LnGrp LOS	D		D	F		C	D	F	F	F	F	F
Approach Vol, veh/h		260			787			3086			2849	
Approach Delay, s/veh		40.6			237.7			322.8			166.6	
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	10.0	35.0		14.8	7.2	37.8		25.0
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.5	31.0		16.0	5.0	31.5		21.0
Max Q Clear Time (g_c+I1), s	7.5	33.0		10.2	3.6	35.8		23.0
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	239.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	666	82	181	89	53	60	73	856	70	119	920	479
Future Volume (veh/h)	666	82	181	89	53	60	73	856	70	119	920	479
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	666	82	181	89	53	60	73	856	70	119	920	479
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	750	416	372	115	145	130	93	1409	631	151	976	500
Arrive On Green	0.22	0.23	0.23	0.06	0.08	0.08	0.05	0.40	0.40	0.09	0.43	0.43
Sat Flow, veh/h	3442	1770	1583	1774	1770	1583	1774	3539	1583	1774	2267	1161
Grp Volume(v), veh/h	666	82	181	89	53	60	73	856	70	119	715	684
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1658
Q Serve(g_s), s	14.7	2.9	7.7	3.9	2.2	2.8	3.2	15.0	2.2	5.2	30.2	31.3
Cycle Q Clear(g_c), s	14.7	2.9	7.7	3.9	2.2	2.8	3.2	15.0	2.2	5.2	30.2	31.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.70
Lane Grp Cap(c), veh/h	750	416	372	115	145	130	93	1409	631	151	762	714
V/C Ratio(X)	0.89	0.20	0.49	0.77	0.37	0.46	0.78	0.61	0.11	0.79	0.94	0.96
Avail Cap(c_a), veh/h	786	538	481	229	361	323	115	1409	631	206	768	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	24.0	25.9	36.1	34.0	34.3	36.7	18.7	14.8	35.1	21.3	21.6
Incr Delay (d2), s/veh	11.7	0.2	1.0	10.5	1.5	2.6	23.5	2.0	0.4	13.2	19.0	23.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	1.4	3.5	2.2	1.2	1.3	2.2	7.6	1.0	3.1	18.7	18.9
LnGrp Delay(d),s/veh	41.4	24.3	26.9	46.6	35.6	36.9	60.2	20.7	15.2	48.4	40.3	45.3
LnGrp LOS	D	C	C	D	D	D	E	C	B	D	D	D
Approach Vol, veh/h		929			202			999			1518	
Approach Delay, s/veh		37.1			40.8			23.2			43.2	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.2	9.6	22.4	8.6	37.7	21.6	10.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	9.1	30.0	10.1	23.8	5.1	34.0	17.9	16.0
Max Q Clear Time (g_c+I1), s	7.2	17.0	5.9	9.7	5.2	33.3	16.7	4.8
Green Ext Time (p_c), s	0.0	10.6	0.1	1.8	0.0	0.4	0.4	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	462	107	831	173	0	0	0	0	975	9	385
Future Volume (veh/h)	0	462	107	831	173	0	0	0	0	975	9	385
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	462	107	831	173	0				975	9	385
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	619	142	463	1868	0				655	6	589
Arrive On Green	0.00	0.22	0.22	0.44	0.88	0.00				0.37	0.37	0.37
Sat Flow, veh/h	0	2952	658	1774	3632	0				1759	16	1583
Grp Volume(v), veh/h	0	285	284	831	173	0				984	0	385
Grp Sat Flow(s),veh/h/ln	0	1770	1747	1774	1770	0				1775	0	1583
Q Serve(g_s), s	0.0	13.5	13.7	23.5	0.6	0.0				33.5	0.0	18.2
Cycle Q Clear(g_c), s	0.0	13.5	13.7	23.5	0.6	0.0				33.5	0.0	18.2
Prop In Lane	0.00		0.38	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	383	378	463	1868	0				661	0	589
V/C Ratio(X)	0.00	0.74	0.75	1.79	0.09	0.00				1.49	0.00	0.65
Avail Cap(c_a), veh/h	0	383	378	463	1868	0				661	0	589
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.9	33.0	25.4	2.6	0.0				28.3	0.0	23.4
Incr Delay (d2), s/veh	0.0	12.3	12.9	358.1	0.0	0.0				228.3	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.9	8.0	57.4	0.3	0.0				58.2	0.0	8.3
LnGrp Delay(d),s/veh	0.0	45.2	45.8	383.4	2.6	0.0				256.5	0.0	26.0
LnGrp LOS		D	D	F	A					F		C
Approach Vol, veh/h		569			1004						1369	
Approach Delay, s/veh		45.5			317.8						191.7	
Approach LOS		D			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			28.0	24.0		38.0		52.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			23.5	19.5		33.5		47.5
Max Q Clear Time (g_c+I1), s			25.5	15.7		35.5		2.6
Green Ext Time (p_c), s			0.0	1.6		0.0		5.3

Intersection Summary	
HCM 2010 Ctrl Delay	206.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	1021	0	0	947	1287	48	4	342	0	0	0
Future Volume (veh/h)	379	1021	0	0	947	1287	48	4	342	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	379	1021	0	0	947	1287	48	4	342			
Adj No. of Lanes	1	2	0	0	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	306	2477	0	0	845	756	329	27	317			
Arrive On Green	0.34	1.00	0.00	0.00	0.48	0.48	0.20	0.20	0.20			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1644	137	1583			
Grp Volume(v), veh/h	379	1021	0	0	947	1287	52	0	342			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1781	0	1583			
Q Serve(g_s), s	15.5	0.0	0.0	0.0	43.0	43.0	2.2	0.0	18.0			
Cycle Q Clear(g_c), s	15.5	0.0	0.0	0.0	43.0	43.0	2.2	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	306	2477	0	0	845	756	356	0	317			
V/C Ratio(X)	1.24	0.41	0.00	0.00	1.12	1.70	0.15	0.00	1.08			
Avail Cap(c_a), veh/h	306	2477	0	0	845	756	356	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.59	0.59	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	23.5	23.5	29.7	0.0	36.0			
Incr Delay (d2), s/veh	123.9	0.3	0.0	0.0	69.5	321.3	0.2	0.0	73.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	18.0	0.1	0.0	0.0	37.2	86.2	1.1	0.0	14.3			
LnGrp Delay(d),s/veh	153.4	0.3	0.0	0.0	93.0	344.8	29.9	0.0	109.6			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		1400			2234			394				
Approach Delay, s/veh		41.7			238.0			99.0				
Approach LOS		D			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.5		67.5			20.0	47.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			15.5	43.0
Max Q Clear Time (g_c+I1), s		20.0		2.0			17.5	45.0
Green Ext Time (p_c), s		0.0		53.8			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	156.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	220	407	29	229	173	105	2074	8	273	2449	553
Future Volume (veh/h)	336	220	407	29	229	173	105	2074	8	273	2449	553
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	365	239	442	32	249	188	114	2254	9	273	2449	553
Adj No. of Lanes	1	2	1	1	2	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1170	523	54	413	301	108	1743	7	207	1978	616
Arrive On Green	0.15	0.33	0.33	0.03	0.21	0.21	0.06	0.33	0.33	0.12	0.39	0.39
Sat Flow, veh/h	1774	3539	1583	1774	1958	1423	1774	5228	21	1774	5085	1583
Grp Volume(v), veh/h	365	239	442	32	224	213	114	1461	802	273	2449	553
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1612	1774	1695	1859	1774	1695	1583
Q Serve(g_s), s	13.5	4.4	23.3	1.6	10.3	10.8	5.5	30.0	30.0	10.5	35.0	29.5
Cycle Q Clear(g_c), s	13.5	4.4	23.3	1.6	10.3	10.8	5.5	30.0	30.0	10.5	35.0	29.5
Prop In Lane	1.00		1.00	1.00		0.88	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	266	1170	523	54	374	340	108	1130	620	207	1978	616
V/C Ratio(X)	1.37	0.20	0.84	0.59	0.60	0.63	1.05	1.29	1.29	1.32	1.24	0.90
Avail Cap(c_a), veh/h	266	1170	523	101	374	340	108	1130	620	207	1978	616
HCM Platoon Ratio	1.00	1.00	1.00	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	0.91	0.91	0.91	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.3	21.6	28.0	43.1	32.1	32.3	42.2	30.0	30.0	39.8	27.5	25.8
Incr Delay (d2), s/veh	189.3	0.4	15.3	8.9	6.3	7.7	101.0	138.6	144.0	146.7	107.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.6	2.2	12.3	0.9	5.7	5.5	5.7	35.7	40.1	13.6	36.0	13.1
LnGrp Delay(d),s/veh	227.5	22.0	43.3	52.0	38.4	39.9	143.8	168.6	174.0	186.5	135.2	27.7
LnGrp LOS	F	C	D	D	D	D	F	F	F	F	F	C
Approach Vol, veh/h		1046			469			2377			3275	
Approach Delay, s/veh		102.7			40.0			169.2			121.3	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	34.0	7.3	33.7	10.0	39.0	18.0	23.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	10.5	30.0	5.1	27.4	5.5	35.0	13.5	19.0
Max Q Clear Time (g_c+I1), s	12.5	32.0	3.6	25.3	7.5	37.0	15.5	12.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	129.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1424	574	548	1255	0	0	0	0	1414	1	474
Future Volume (veh/h)	0	1424	574	548	1255	0	0	0	0	1414	1	474
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1424	574	548	1255	0				1415	0	474
Adj No. of Lanes	0	2	0	1	2	0				2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	964	364	306	2143	0				1045	0	466
Arrive On Green	0.00	0.38	0.38	0.34	1.00	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	2608	950	1774	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	973	1025	548	1255	0				1415	0	474
Grp Sat Flow(s),veh/h/ln	0	1770	1695	1774	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.5	34.5	15.5	0.0	0.0				26.5	0.0	26.5
Cycle Q Clear(g_c), s	0.0	34.5	34.5	15.5	0.0	0.0				26.5	0.0	26.5
Prop In Lane	0.00		0.56	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	678	650	306	2143	0				1045	0	466
V/C Ratio(X)	0.00	1.43	1.58	1.79	0.59	0.00				1.35	0.00	1.02
Avail Cap(c_a), veh/h	0	678	650	306	2143	0				1045	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.8	27.8	29.5	0.0	0.0				31.8	0.0	31.8
Incr Delay (d2), s/veh	0.0	204.1	266.9	358.3	0.1	0.0				165.8	0.0	46.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	55.2	64.2	37.9	0.0	0.0				37.0	0.0	17.5
LnGrp Delay(d),s/veh	0.0	231.9	294.7	387.8	0.1	0.0				197.6	0.0	77.7
LnGrp LOS		F	F	F	A					F		F
Approach Vol, veh/h		1998			1803						1889	
Approach Delay, s/veh		264.1			117.9						167.5	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			20.0	39.0		31.0		59.0
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s			15.5	34.5		26.5		54.5
Max Q Clear Time (g_c+I1), s			17.5	36.5		28.5		2.0
Green Ext Time (p_c), s			0.0	0.0		0.0		44.4

Intersection Summary	
HCM 2010 Ctrl Delay	185.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	620	2216	0	0	1373	1492	431	8	370	0	0	0
Future Volume (veh/h)	620	2216	0	0	1373	1492	431	8	370	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	620	2216	0	0	1373	1492	437	0	370			
Adj No. of Lanes	1	2	0	0	2	0	2	0	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	345	2477	0	0	806	721	710	0	317			
Arrive On Green	0.39	1.00	0.00	0.00	0.46	0.46	0.20	0.00	0.20			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	3548	0	1583			
Grp Volume(v), veh/h	620	2216	0	0	1373	1492	437	0	370			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	41.0	41.0	10.1	0.0	18.0			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	41.0	41.0	10.1	0.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	345	2477	0	0	806	721	710	0	317			
V/C Ratio(X)	1.80	0.89	0.00	0.00	1.70	2.07	0.62	0.00	1.17			
Avail Cap(c_a), veh/h	345	2477	0	0	806	721	710	0	317			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	0.0	0.0	0.0	24.5	24.5	32.8	0.0	36.0			
Incr Delay (d2), s/veh	359.9	0.5	0.0	0.0	321.7	485.6	1.6	0.0	104.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	42.9	0.2	0.0	0.0	92.0	115.1	5.1	0.0	17.0			
LnGrp Delay(d),s/veh	387.4	0.5	0.0	0.0	346.2	510.1	34.4	0.0	140.4			
LnGrp LOS	F	A			F	F	C		F			
Approach Vol, veh/h		2836			2865			807				
Approach Delay, s/veh		85.1			431.6			83.0				
Approach LOS		F			F			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.5		67.5			22.0	45.5
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5
Max Green Setting (Gmax), s		18.0		63.0			17.5	41.0
Max Q Clear Time (g_c+I1), s		20.0		2.0			19.5	43.0
Green Ext Time (p_c), s		0.0		60.7			0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	237.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	741	554	399	216	1380	515	669	1114	149	1230	871	757
Future Volume (veh/h)	741	554	399	216	1380	515	669	1114	149	1230	871	757
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	741	554	399	216	1380	515	669	1114	149	1230	871	757
Adj No. of Lanes	2	3	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	538	1807	563	247	992	366	495	870	389	882	1268	567
Arrive On Green	0.16	0.36	0.36	0.07	0.27	0.27	0.14	0.25	0.25	0.26	0.36	0.36
Sat Flow, veh/h	3442	5085	1583	3442	3662	1352	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	741	554	399	216	1276	619	669	1114	149	1230	871	757
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1624	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	37.5	18.9	52.1	14.9	65.0	65.0	34.5	59.0	18.8	61.5	50.3	86.0
Cycle Q Clear(g_c), s	37.5	18.9	52.1	14.9	65.0	65.0	34.5	59.0	18.8	61.5	50.3	86.0
Prop In Lane	1.00		1.00	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	538	1807	563	247	918	440	495	870	389	882	1268	567
V/C Ratio(X)	1.38	0.31	0.71	0.87	1.39	1.41	1.35	1.28	0.38	1.39	0.69	1.33
Avail Cap(c_a), veh/h	538	1807	563	320	918	440	495	870	389	882	1268	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	101.2	56.0	66.7	110.3	87.5	87.5	102.8	90.5	75.3	89.3	65.5	77.0
Incr Delay (d2), s/veh	181.5	0.1	4.1	18.7	182.3	196.0	171.4	135.0	2.8	184.5	1.6	162.2
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	31.4	8.9	23.4	7.8	53.7	53.2	28.2	45.2	8.5	51.9	24.8	63.2
LnGrp Delay(d),s/veh	282.8	56.1	70.8	129.0	269.8	283.5	274.2	225.5	78.2	273.8	67.1	239.2
LnGrp LOS	F	E	E	F	F	F	F	F	E	F	E	F
Approach Vol, veh/h		1694			2111			1932			2858	
Approach Delay, s/veh		158.7			259.4			231.0			201.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	66.0	63.0	21.7	89.3	39.0	90.0	42.0	69.0
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	61.5	59.0	22.3	80.2	34.5	86.0	37.5	65.0
Max Q Clear Time (g_c+I1), s	63.5	61.0	16.9	54.1	36.5	88.0	39.5	67.0
Green Ext Time (p_c), s	0.0	0.0	0.3	20.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	214.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	2928	50	20	1651	195	22	9	52	225	5	125
Future Volume (veh/h)	158	2928	50	20	1651	195	22	9	52	225	5	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	158	2928	50	20	1651	195	22	9	52	225	5	125
Adj No. of Lanes	1	3	1	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	3119	971	39	2464	290	42	110	94	187	263	224
Arrive On Green	0.10	0.61	0.61	0.02	0.53	0.53	0.02	0.06	0.06	0.11	0.14	0.14
Sat Flow, veh/h	1774	5085	1583	1774	4614	543	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	158	2928	50	20	1212	634	22	9	52	225	5	125
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1767	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	7.9	47.2	1.1	1.0	23.3	23.5	1.1	0.4	2.9	9.5	0.2	6.6
Cycle Q Clear(g_c), s	7.9	47.2	1.1	1.0	23.3	23.5	1.1	0.4	2.9	9.5	0.2	6.6
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	3119	971	39	1811	944	42	110	94	187	263	224
V/C Ratio(X)	0.88	0.94	0.05	0.52	0.67	0.67	0.53	0.08	0.55	1.20	0.02	0.56
Avail Cap(c_a), veh/h	179	3119	971	99	1811	944	106	373	317	187	457	389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.84	0.84	0.84	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	39.9	15.9	6.9	43.5	15.2	15.2	43.4	40.0	41.2	40.3	33.3	36.0
Incr Delay (d2), s/veh	5.0	0.8	0.0	8.7	1.7	3.2	10.0	0.3	5.0	130.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	21.9	0.5	0.6	11.2	12.1	0.7	0.2	1.4	11.4	0.1	3.0
LnGrp Delay(d),s/veh	44.9	16.6	7.0	52.2	16.9	18.5	53.4	40.3	46.2	170.6	33.3	38.2
LnGrp LOS	D	B	A	D	B	B	D	D	D	F	C	D
Approach Vol, veh/h		3136			1866			83			355	
Approach Delay, s/veh		17.9			17.8			47.5			122.0	
Approach LOS		B			B			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	9.8	6.5	59.7	6.6	17.2	13.6	52.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	18.0	5.0	39.5	5.4	22.1	9.1	35.4
Max Q Clear Time (g_c+I1), s	11.5	4.9	3.0	49.2	3.1	8.6	9.9	25.5
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	0.5	0.0	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

HCM Signalized Intersection Capacity Analysis
12: Evans Road & Ramona Expwy

5/31/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1858	1013	24	1272	0	459	0	11	0	0	0
Future Volume (vph)	0	1858	1013	24	1272	0	459	0	11	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.97		1.00			
Frt		1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)		5085	1583	1770	3539		3433		1583			
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)		5085	1583	1770	3539		3433		1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1858	1013	24	1272	0	459	0	11	0	0	0
RTOR Reduction (vph)	0	0	313	0	0	0	0	0	8	0	0	0
Lane Group Flow (vph)	0	1858	700	24	1272	0	459	0	3	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot		Perm			Perm
Protected Phases	7	4		3	8		2			6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)		109.0	109.0	4.7	118.2		48.9		48.9			
Effective Green, g (s)		109.0	109.0	4.7	118.2		48.9		48.9			
Actuated g/C Ratio		0.62	0.62	0.03	0.68		0.28		0.28			
Clearance Time (s)		4.0	4.0	4.5	4.0		4.0		4.0			
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Lane Grp Cap (vph)		3165	985	47	2388		958		442			
v/s Ratio Prot		0.37		0.01	c0.36		c0.13					
v/s Ratio Perm			c0.44						0.00			
v/c Ratio		0.59	0.71	0.51	0.53		0.48		0.01			
Uniform Delay, d1		19.7	22.4	84.1	14.4		52.5		45.6			
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2		0.3	2.4	9.1	0.2		1.7		0.0			
Delay (s)		19.9	24.8	93.1	14.7		54.2		45.6			
Level of Service		B	C	F	B		D		D			
Approach Delay (s)		21.7			16.1			54.0			0.0	
Approach LOS		C			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	175.1	Sum of lost time (s)	16.5
Intersection Capacity Utilization	74.0%	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 (veh/h)	35	104	60	156	43	300	16	1086	187	187	1699	23
Future Volume (veh/h)	35	104	60	156	43	300	16	1086	187	187	1699	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	104	60	156	43	300	16	1086	187	187	1699	23
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	240	139	245	404	343	32	1534	263	223	2199	30
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.02	0.51	0.51	0.13	0.62	0.62
Sat Flow, veh/h	1033	1110	640	1217	1863	1583	1774	3022	519	1774	3575	48
Grp Volume(v), veh/h	35	0	164	156	43	300	16	635	638	187	840	882
Grp Sat Flow(s),veh/h/ln	1033	0	1750	1217	1863	1583	1774	1770	1771	1774	1770	1854
Q Serve(g_s), s	2.5	0.0	7.3	11.4	1.7	16.5	0.8	24.8	25.0	9.3	31.3	31.5
Cycle Q Clear(g_c), s	4.2	0.0	7.3	18.7	1.7	16.5	0.8	24.8	25.0	9.3	31.3	31.5
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.29	1.00		0.03
Lane Grp Cap(c), veh/h	285	0	379	245	404	343	32	898	899	223	1088	1140
V/C Ratio(X)	0.12	0.00	0.43	0.64	0.11	0.87	0.49	0.71	0.71	0.84	0.77	0.77
Avail Cap(c_a), veh/h	285	0	379	245	404	343	101	898	899	286	1088	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	30.5	38.6	28.3	34.1	43.8	17.0	17.1	38.4	12.7	12.7
Incr Delay (d2), s/veh	0.2	0.0	0.8	3.3	0.1	14.4	11.1	4.7	4.7	15.8	5.3	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.6	4.1	0.9	8.6	0.5	13.2	13.2	5.5	16.8	17.6
LnGrp Delay(d),s/veh	30.1	0.0	31.2	41.9	28.3	48.5	54.8	21.7	21.8	54.2	18.0	17.9
LnGrp LOS	C		C	D	C	D	D	C	C	D	B	B
Approach Vol, veh/h		199			499			1289			1909	
Approach Delay, s/veh		31.1			44.7			22.1			21.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	50.2		24.0	6.1	59.9		24.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	42.5		19.5	5.1	51.9		19.5
Max Q Clear Time (g_c+I1), s	11.3	27.0		9.3	2.8	33.5		20.7
Green Ext Time (p_c), s	0.2	14.2		2.2	0.0	16.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	326	76	13	363	65	72	249	10	108	381	187
Future Volume (veh/h)	286	326	76	13	363	65	72	249	10	108	381	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	286	326	76	14	395	71	78	271	11	117	414	203
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	949	218	29	492	88	100	1316	53	148	940	456
Arrive On Green	0.18	0.33	0.33	0.02	0.16	0.16	0.06	0.38	0.38	0.08	0.41	0.41
Sat Flow, veh/h	1774	2859	658	1774	3003	535	1774	3467	140	1774	2313	1122
Grp Volume(v), veh/h	286	200	202	14	231	235	78	138	144	117	316	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1747	1774	1770	1768	1774	1770	1838	1774	1770	1665
Q Serve(g_s), s	14.1	7.7	7.9	0.7	11.3	11.5	3.9	4.7	4.8	5.8	11.6	11.8
Cycle Q Clear(g_c), s	14.1	7.7	7.9	0.7	11.3	11.5	3.9	4.7	4.8	5.8	11.6	11.8
Prop In Lane	1.00		0.38	1.00		0.30	1.00		0.08	1.00		0.67
Lane Grp Cap(c), veh/h	327	587	580	29	290	290	100	672	698	148	719	676
V/C Ratio(X)	0.87	0.34	0.35	0.48	0.80	0.81	0.78	0.21	0.21	0.79	0.44	0.45
Avail Cap(c_a), veh/h	463	678	670	99	315	314	168	672	698	246	719	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	22.7	22.7	43.9	36.2	36.3	41.9	18.8	18.8	40.5	19.3	19.4
Incr Delay (d2), s/veh	10.0	0.3	0.3	11.8	12.6	13.7	12.1	0.7	0.7	9.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	3.8	3.8	0.4	6.5	6.7	2.2	2.4	2.5	3.2	5.7	5.5
LnGrp Delay(d),s/veh	45.7	22.9	23.0	55.7	48.8	49.9	54.0	19.5	19.5	49.6	19.7	19.8
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	B	B
Approach Vol, veh/h		688			480			360			734	
Approach Delay, s/veh		32.4			49.6			26.9			24.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	38.2	6.0	33.9	9.6	40.6	21.1	18.8
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	12.5	21.0	5.0	34.5	8.5	25.0	23.5	16.0
Max Q Clear Time (g_c+I1), s	7.8	6.8	2.7	9.9	5.9	13.8	16.1	13.5
Green Ext Time (p_c), s	0.1	4.8	0.0	5.4	0.0	4.2	0.5	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	137	0	0	0	216	844	0	1	1282	104
Future Volume (veh/h)	60	0	137	0	0	0	216	844	0	1	1282	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	60	0	137	0	0	0	235	917	0	1	1393	113
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	0	173	0	204	0	315	2655	0	2	2336	1045
Arrive On Green	0.11	0.00	0.11	0.00	0.00	0.00	0.09	0.75	0.00	0.00	0.66	0.66
Sat Flow, veh/h	1412	0	1583	0	1863	0	3442	3632	0	1774	3539	1583
Grp Volume(v), veh/h	60	0	137	0	0	0	235	917	0	1	1393	113
Grp Sat Flow(s),veh/h/ln	1412	0	1583	0	1863	0	1721	1770	0	1774	1770	1583
Q Serve(g_s), s	3.6	0.0	7.6	0.0	0.0	0.0	6.0	7.9	0.0	0.1	19.9	2.4
Cycle Q Clear(g_c), s	3.6	0.0	7.6	0.0	0.0	0.0	6.0	7.9	0.0	0.1	19.9	2.4
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	0	173	0	204	0	315	2655	0	2	2336	1045
V/C Ratio(X)	0.26	0.00	0.79	0.00	0.00	0.00	0.75	0.35	0.00	0.41	0.60	0.11
Avail Cap(c_a), veh/h	331	0	281	0	331	0	440	2655	0	99	2336	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	39.1	0.0	0.0	0.0	39.9	3.8	0.0	44.9	8.6	5.6
Incr Delay (d2), s/veh	0.6	0.0	7.8	0.0	0.0	0.0	4.4	0.4	0.0	84.5	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	1.4	0.0	3.7	0.0	0.0	0.0	3.0	4.0	0.0	0.1	9.6	1.0
LnGrp Delay(d),s/veh	37.8	0.0	46.8	0.0	0.0	0.0	44.3	4.1	0.0	129.4	9.0	5.6
LnGrp LOS	D		D				D	A		F	A	A
Approach Vol, veh/h		197			0			1152			1507	
Approach Delay, s/veh		44.1			0.0			12.3			8.8	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.6	71.5		13.9	12.7	63.4		13.9
Change Period (Y+Rc), s	4.5	4.0		4.0	4.5	4.0		4.0
Max Green Setting (Gmax), s	5.0	56.5		16.0	11.5	50.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	9.9		9.6	8.0	21.9		0.0
Green Ext Time (p_c), s	0.0	30.3		0.3	0.3	21.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Daily Traffic Volume Counts Technical Memorandum

KOA CORPORATION
PLANNING & ENGINEERING

1100 Corporate Center Dr., Suite 201
Monterey Park, CA 91754
t: 323-260-4703 f: 323-260-4705
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TECHNICAL MEMORANDUM

Date: January 22, 2016

To: Nicolle Ianelli Steiner - ESA

From: Brian A. Marchetti, AICP

Subject Review of Daily Traffic Volume Counts – DWR Lake Perris Emergency Release Facility (ERF) Project

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KOA conducted supplemental traffic counts, focusing on daily vehicles volumes on four area roadway segments. The volumes were collected to obtain an understanding of the peak to daily ratios of volumes, and how the project construction-related roadway closures and detours might affect peak/commute traffic periods versus mid-day and evening periods. The counts were conducted on Tuesday, January 12, 2016.

Table 1 provides a summary of the volumes collected.

TABLE 1 – DAILY VEHICLE TRAFFIC VOLUME SUMMARY

Location	7:00 a.m. to 9:00 a.m.	3:00 p.m. to 6:00 p.m.	ADT	AM Pct	PM Pct
Perris Blvd N/O Ramona Expressway	3,425	5,521	26,496	12.9%	20.8%
Evans Rd N/O Ramona Expressway	3,234	5,148	21,533	15.0%	23.9%
Ramona Expy E/O Perris Blvd	3,666	6,580	32,683	11.2%	20.1%
Ramona Expy W/O Perris Blvd	4,624	7,794	39,818	11.6%	19.6%

The highest average daily traffic (ADT) volume is present on Ramona Expressway, to the west of Perris Boulevard, at 39,818 vehicles. The lowest ADT volume is present on Evans Road, to the north of Ramona Expressway, at 21,533 vehicles.

The proportion of vehicle trips that fall within the morning peak time period of 7:00 a.m. to 9:00 a.m. as well as the evening peak time period of 3:00 p.m. to 6:00 p.m. ranges from 31.2 to 38.9 percent of the total daily volume. The total peak time period for both the morning and evening represents 5 out of 24 hours, or 20.8 percent of the day. This illustrates how traffic peaks during the commute periods of the day.

A further illustration of the traffic peaks in the area is provided by Table 2. The rows are hour-by-hour volume data, and the highlighted/ yellow rows identify the periods when the peak-period intersection counts were taken. There is a sizeable reduction in hourly volumes outside of peak times, particularly during the following timeframes:

- Before 7:00 a.m.
- From 9:00 .am. to 12:00 p.m. (noon)
- After 6:00 p.m.

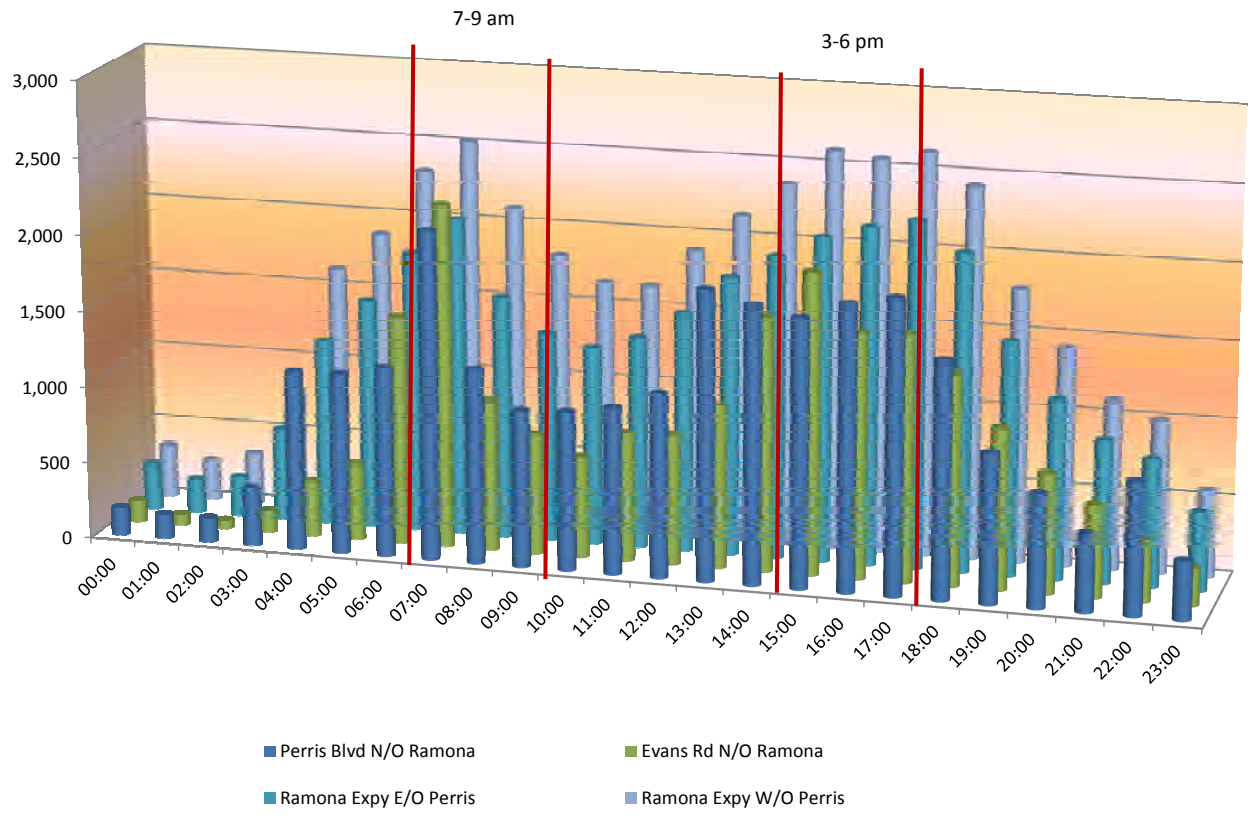
During these timeframes, the impacts of project construction activities, closures, and detours will have less of an impact on the area roadway system, as general traffic activity is lower during those times and lessened capacity at the affected locations will have less of an effect on traffic operations. Traffic studies focus on peak periods of the day, to analyze provided capacity during the most constrained periods. During the non-peak periods, such impacts would be lessened or would not be present at all, depending on the location.

TABLE 2 – DAILY VEHICLE VOLUME BY HOUR

Time of Day	Perris Blvd N/O Ramona	Evans Rd N/O Ramona	Ramona Expy E/O Perris	Ramona Expy W/O Perris
00:00	181	138	303	346
01:00	157	69	222	271
02:00	157	53	258	337
03:00	384	142	607	777
04:00	1,171	366	1,221	1,622
05:00	1,181	503	1,505	1,876
06:00	1,243	1,496	1,844	2,311
07:00	2,150	2,243	2,080	2,524
08:00	1,275	991	1,586	2,100
09:00	1,026	789	1,373	1,816
10:00	1,041	665	1,298	1,653
11:00	1,088	842	1,386	1,649
12:00	1,201	855	1,562	1,903
13:00	1,891	1,069	1,824	2,150
14:00	1,810	1,659	1,978	2,364
15:00	1,747	1,970	2,116	2,602
16:00	1,859	1,602	2201	2566
17:00	1,915	1,612	2263	2626
18:00	1,542	1,380	2076	2426
19:00	983	1,050	1527	1788
20:00	739	781	1171	1427
21:00	508	603	933	1109
22:00	862	406	837	1004
23:00	385	249	512	571
Totals	26,496	21,533	32,683	39,818

Figure 1 provides an illustration of the four roadway segment daily vehicle volumes in a bar graph. The peak periods analyzed through the collection of traffic counts are highlighted by the sections between the red lines. This illustrates the pronounced reduction in volumes outside of the peak periods.

FIGURE 1 – GRAPH OF ALL COLLECTED ADT VOLUMES



Traffic Volumes on Local Area Roadways

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Ramona Expressway
W/ Evans Road
72 Hour Directional Volume Counts

PERRAWEV
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start	05-Sep-13	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		44	176			32	165				
12:15		62	188			22	184				
12:30		49	176			30	203				
12:45		47	183	202	723	23	241	107	793	309	1516
01:00		38	181			17	197				
01:15		35	198			14	213				
01:30		27	240			17	233				
01:45		30	281	130	900	13	238	61	881	191	1781
02:00		35	267			18	202				
02:15		38	279			39	238				
02:30		26	299			28	217				
02:45		41	309	140	1154	41	**254**	126	911	266	2065
03:00		38	281			34	**247**				
03:15		19	241			64	**264**				
03:30		24	315			84	**266**				
03:45		35	324	116	1161	93	236	275	1013	391	2174
04:00		24	286			139	234				
04:15		24	295			178	228				
04:30		96	327			295	209				
04:45		87	362	231	1270	266	215	878	886	1109	2156
05:00		69	302			224	210				
05:15		88	**347**			247	213				
05:30		96	**372**			270	229				
05:45		92	**379**	345	1400	224	190	965	842	1310	2242
06:00		106	**310**			233	172				
06:15		114	289			346	173				
06:30		**168**	305			312	156				
06:45		**204**	266	592	1170	355	175	1246	676	1838	1846
07:00		**290**	233			**381**	160				
07:15		**225**	274			**461**	163				
07:30		165	210			**449**	158				
07:45		174	216	854	933	**413**	139	1704	620	2558	1553
08:00		170	227			315	140				
08:15		160	219			234	160				
08:30		130	229			247	118				
08:45		166	203	626	878	223	100	1019	518	1645	1396
09:00		143	184			203	104				
09:15		118	186			191	103				
09:30		155	164			218	112				
09:45		149	144	565	678	200	78	812	397	1377	1075
10:00		120	135			178	80				
10:15		138	122			188	78				
10:30		150	131			158	85				
10:45		170	157	578	545	183	71	707	314	1285	859
11:00		136	134			149	38				
11:15		172	90			164	44				
11:30		143	65			174	32				
11:45		164	80	615	369	145	47	632	161	1247	530
Total		4994	11181	4994	11181	8532	8012	8532	8012	13526	19193
Combined Total		16175		16175		16544		16544		32719	
AM Peak		06:30				07:00					
Vol.		887				1704					
P.H.F.		0.765				0.924					
PM Peak			05:15				02:45				
Vol.			1408				1031				
P.H.F.			0.929				0.969				
Percentage		30.9%	69.1%			51.6%	48.4%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Ramona Expressway
W/ Evans Road
72 Hour Directional Volume Counts

PERRAWEV
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	06-Sep-13 Fri	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		71	209			33	191				
12:15		58	196			24	191				
12:30		55	210			20	186				
12:45		48	228	232	843	30	218	107	786	339	1629
01:00		38	190			15	200				
01:15		35	206			25	198				
01:30		45	258			22	253				
01:45		29	313	147	967	17	242	79	893	226	1860
02:00		32	286			31	219				
02:15		33	316			31	267				
02:30		26	295			42	236				
02:45		42	332	133	1229	44	**285**	148	1007	281	2236
03:00		39	282			47	**306**				
03:15		38	334			67	**301**				
03:30		31	320			85	**250**				
03:45		37	320	145	1256	106	265	305	1122	450	2378
04:00		35	327			134	244				
04:15		28	337			192	247				
04:30		64	352			308	212				
04:45		90	331	217	1347	258	213	892	916	1109	2263
05:00		65	345			213	225				
05:15		83	**382**			207	234				
05:30		90	**338**			243	251				
05:45		90	**368**	328	1433	235	243	898	953	1226	2386
06:00		98	**356**			206	187				
06:15		127	324			297	203				
06:30		152	308			307	193				
06:45		**193**	259	570	1247	350	172	1160	755	1730	2002
07:00		**291**	258			**407**	142				
07:15		**240**	264			**437**	192				
07:30		**181**	242			**445**	159				
07:45		184	248	896	1012	**403**	175	1692	668	2588	1680
08:00		170	239			308	143				
08:15		165	223			237	137				
08:30		137	217			245	122				
08:45		147	221	619	900	227	151	1017	553	1636	1453
09:00		125	204			200	129				
09:15		144	187			218	131				
09:30		148	202			195	111				
09:45		131	189	548	782	236	124	849	495	1397	1277
10:00		154	189			208	117				
10:15		135	191			243	124				
10:30		163	178			166	136				
10:45		151	248	603	806	177	96	794	473	1397	1279
11:00		139	157			170	81				
11:15		167	163			204	65				
11:30		137	150			190	60				
11:45		169	107	612	577	199	67	763	273	1375	850
Total		5050	12399	5050	12399	8704	8894	8704	8894	13754	21293
Combined Total		17449		17449		17598		17598		35047	
AM Peak		06:45				07:00					
Vol.		905				1692					
P.H.F.		0.777				0.951					
PM Peak			05:15				02:45				
Vol.			1444				1142				
P.H.F.			0.945				0.933				
Percentage		28.9%	71.1%			49.5%	50.5%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Ramona Expressway
W/ Evans Road
72 Hour Directional Volume Counts

PERRAWEV
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	07-Sep-13 Sat	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		114	228			58	220				
12:15		79	260			35	226				
12:30		66	280			44	222				
12:45		70	239	329	1007	31	237	168	905	497	1912
01:00		65	242			33	244				
01:15		81	206			42	238				
01:30		49	258			29	250				
01:45		75	312	270	1018	26	238	130	970	400	1988
02:00		63	240			45	205				
02:15		46	262			34	216				
02:30		45	279			38	212				
02:45		49	237	203	1018	39	227	156	860	359	1878
03:00		40	272			33	207				
03:15		32	247			48	**234**				
03:30		37	253			40	**261**				
03:45		35	300	144	1072	47	**224**	168	926	312	1998
04:00		26	225			61	**275**				
04:15		31	300			88	229				
04:30		50	234			144	247				
04:45		46	256	153	1015	124	226	417	977	570	1992
05:00		49	275			94	249				
05:15		56	275			104	204				
05:30		68	260			119	222				
05:45		53	252	226	1062	95	193	412	868	638	1930
06:00		88	**303**			106	193				
06:15		73	**361**			133	161				
06:30		97	**315**			136	203				
06:45		79	**302**	337	1281	172	163	547	720	884	2001
07:00		109	260			168	182				
07:15		99	238			172	176				
07:30		128	197			183	194				
07:45		126	191	462	886	173	201	696	753	1158	1639
08:00		116	212			191	192				
08:15		117	181			220	180				
08:30		138	181			225	146				
08:45		173	200	544	774	234	135	870	653	1414	1427
09:00		173	183			219	142				
09:15		167	187			250	153				
09:30		182	201			252	163				
09:45		182	187	704	758	223	143	944	601	1648	1359
10:00		186	148			222	132				
10:15		**199**	160			217	135				
10:30		**212**	185			218	232				
10:45		**195**	229	792	722	205	341	862	840	1654	1562
11:00		**199**	175			**245**	177				
11:15		197	143			**259**	107				
11:30		209	125			**253**	91				
11:45		199	100	804	543	**207**	94	964	469	1768	1012
Total		4968	11156	4968	11156	6334	9542	6334	9542	11302	20698
Combined Total		16124		16124		15876		15876		32000	
AM Peak		10:15				11:00					
Vol.		805				964					
P.H.F.		0.949				0.931					
PM Peak			06:00				03:15				
Vol.			1281				994				
P.H.F.			0.887				0.904				
Percentage		30.8%	69.2%			39.9%	60.1%				
ADT/AADT		ADT 33,255		AADT 33,255							

Counts Unlimited, Inc.
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(951) 268-6268

City of Perris
Ramona Expressway
E/ Avalon Parkway
72 Hour Directional Volume Count

PERRAEAV
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	05-Sep-13 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		42	98			20	130				
12:15		32	112			13	106				
12:30		29	126			19	115				
12:45		27	110	130	446	13	144	65	495	195	941
01:00		16	107			16	118				
01:15		17	110			10	109				
01:30		14	139			12	145				
01:45		16	168	63	524	6	141	44	513	107	1037
02:00		16	174			8	133				
02:15		16	169			23	140				
02:30		14	139			14	143				
02:45		27	189	73	671	23	**157**	68	573	141	1244
03:00		23	203			27	**165**				
03:15		13	181			38	**146**				
03:30		12	178			43	**148**				
03:45		23	202	71	764	57	147	165	606	236	1370
04:00		13	**193**			79	149				
04:15		16	**199**			88	150				
04:30		42	**209**			138	125				
04:45		52	**229**	123	830	119	143	424	567	547	1397
05:00		36	181			111	125				
05:15		46	197			124	127				
05:30		70	216			150	169				
05:45		53	224	205	818	133	108	518	529	723	1347
06:00		51	181			108	95				
06:15		84	174			197	95				
06:30		114	164			166	86				
06:45		**133**	142	382	661	240	79	711	355	1093	1016
07:00		**149**	121			**327**	71				
07:15		**161**	146			**264**	95				
07:30		**158**	118			**254**	87				
07:45		109	127	577	512	**243**	72	1088	325	1665	837
08:00		88	90			171	72				
08:15		86	119			140	68				
08:30		89	120			164	60				
08:45		83	114	346	443	154	72	629	272	975	715
09:00		89	98			137	51				
09:15		75	116			133	51				
09:30		101	96			131	54				
09:45		77	75	342	385	121	35	522	191	864	576
10:00		76	67			112	46				
10:15		79	72			105	49				
10:30		75	63			113	49				
10:45		91	88	321	290	100	37	430	181	751	471
11:00		92	60			93	28				
11:15		109	45			88	22				
11:30		124	33			121	17				
11:45		122	36	447	174	92	24	394	91	841	265
Total		3080	6518	3080	6518	5058	4698	5058	4698	8138	11216
Combined Total		9598		9598		9756		9756		19354	
AM Peak		06:45				07:00					
Vol.		601				1088					
P.H.F.		0.933				0.832					
PM Peak			04:00				02:45				
Vol.			830				616				
P.H.F.			0.906				0.933				
Percentage		32.1%	67.9%			51.8%	48.2%				

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City of Perris
Ramona Expressway
E/ Avalon Parkway
72 Hour Directional Volume Count

PERRAEAV
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	06-Sep-13 Fri	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		49	116			21	128				
12:15		28	106			16	106				
12:30		29	140			20	104				
12:45		23	121	129	483	18	127	75	465	204	948
01:00		23	121			15	115				
01:15		24	146			15	118				
01:30		18	149			13	169				
01:45		16	177	81	593	13	148	56	550	137	1143
02:00		17	175			25	142				
02:15		16	155			20	**186**				
02:30		13	172			28	**155**				
02:45		29	200	75	702	32	**170**	105	653	180	1355
03:00		23	190			32	**191**				
03:15		18	235			38	167				
03:30		18	185			44	133				
03:45		24	209	83	819	64	136	178	627	261	1446
04:00		25	181			85	156				
04:15		17	**222**			91	134				
04:30		34	**219**			142	139				
04:45		58	**206**	134	828	114	134	432	563	566	1391
05:00		44	**204**			122	142				
05:15		48	221			109	124				
05:30		65	204			135	158				
05:45		45	207	202	836	113	129	479	553	681	1389
06:00		57	186			126	115				
06:15		78	173			171	130				
06:30		93	183			170	110				
06:45		**117**	139	345	681	**237**	88	704	443	1049	1124
07:00		**139**	120			**316**	56				
07:15		**182**	132			**272**	86				
07:30		**164**	145			**218**	79				
07:45		100	126	585	523	231	95	1037	316	1622	839
08:00		86	106			171	71				
08:15		89	125			146	68				
08:30		80	124			159	57				
08:45		70	108	325	463	146	73	622	269	947	732
09:00		88	85			122	81				
09:15		79	96			141	67				
09:30		93	87			122	61				
09:45		67	106	327	374	142	54	527	263	854	637
10:00		75	95			137	63				
10:15		91	110			145	72				
10:30		86	94			103	75				
10:45		88	116	340	415	108	48	493	258	833	673
11:00		90	77			97	36				
11:15		108	95			88	29				
11:30		109	76			126	42				
11:45		111	61	418	309	114	18	425	125	843	434
Total		3044	7026	3044	7026	5133	5085	5133	5085	8177	12111
Combined Total		10070		10070		10218		10218		20288	
AM Peak		06:45				06:45					
Vol.		602				1043					
P.H.F.		0.827				0.825					
PM Peak			04:15				02:15				
Vol.			851				702				
P.H.F.			0.958				0.919				
Percentage		30.2%	69.8%			50.2%	49.8%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Ramona Expressway
E/ Avalon Parkway
72 Hour Directional Volume Count

PERRAEAV
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	07-Sep-13 Sat	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		63	107			32	123				
12:15		33	106			15	122				
12:30		30	141			27	129				
12:45		31	114	157	468	14	128	88	502	245	970
01:00		32	125			23	127				
01:15		34	110			21	114				
01:30		24	115			23	130				
01:45		45	149	135	499	16	135	83	506	218	1005
02:00		26	116			33	103				
02:15		22	148			27	116				
02:30		24	139			17	109				
02:45		27	113	99	516	34	124	111	452	210	968
03:00		16	133			23	113				
03:15		12	130			25	125				
03:30		22	132			23	119				
03:45		20	145	70	540	26	121	97	478	167	1018
04:00		13	116			30	136				
04:15		21	160			49	108				
04:30		24	137			71	122				
04:45		26	135	84	548	58	124	208	490	292	1038
05:00		29	138			48	119				
05:15		29	119			61	112				
05:30		38	129			62	132				
05:45		32	112	128	498	54	109	225	472	353	970
06:00		45	135			46	**130**				
06:15		39	138			73	**146**				
06:30		37	105			80	**132**				
06:45		38	109	159	487	82	**130**	281	538	440	1025
07:00		52	106			99	103				
07:15		54	131			102	116				
07:30		51	104			98	91				
07:45		71	110	228	451	89	88	388	398	616	849
08:00		68	104			108	73				
08:15		54	98			113	83				
08:30		68	100			124	70				
08:45		87	98	277	400	131	70	476	296	753	696
09:00		74	97			99	63				
09:15		80	109			**133**	58				
09:30		75	119			**151**	70				
09:45		84	102	313	427	**121**	66	504	257	817	684
10:00		97	95			**126**	59				
10:15		81	**88**			113	68				
10:30		**110**	**163**			117	66				
10:45		**92**	**257**	380	603	98	53	454	246	834	849
11:00		**111**	**132**			120	58				
11:15		**103**	80			135	39				
11:30		93	68			136	41				
11:45		106	73	413	353	96	35	487	173	900	526
Total		2443	5790	2443	5790	3402	4808	3402	4808	5845	10598
Combined Total		8233		8233		8210		8210		16443	
AM Peak		10:30				09:15					
Vol.		416				531					
P.H.F.		0.937				0.879					
PM Peak			10:15				06:00				
Vol.			640				538				
P.H.F.			0.623				0.921				
Percentage		29.7%	70.3%			41.4%	58.6%				
ADT/AADT		ADT 18,695		AADT 18,695							

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Lake Perris Drive
B/ Ramona Expressway - Gate B
72 Hour Directional Volume Counts

PERLPRAGB
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	05-Sep-13 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	12			0	15				
12:15		0	6			1	15				
12:30		0	8			0	6				
12:45		0	8	0	34	0	5	1	41	1	75
01:00		0	5			0	7				
01:15		0	**9**			2	7				
01:30		0	**12**			0	7				
01:45		1	**12**	1	38	0	11	2	32	3	70
02:00		0	**7**			1	10				
02:15		0	3			0	12				
02:30		1	5			1	8				
02:45		0	10	1	25	0	**14**	2	44	3	69
03:00		0	14			0	**14**				
03:15		0	10			0	**6**				
03:30		1	5			1	**32**				
03:45		0	7	1	36	0	11	1	63	2	99
04:00		0	8			0	6				
04:15		0	3			0	9				
04:30		1	9			0	14				
04:45		0	4	1	24	0	11	0	40	1	64
05:00		0	4			0	13				
05:15		4	4			0	7				
05:30		1	6			0	5				
05:45		16	3	21	17	1	4	1	29	22	46
06:00		10	4			5	2				
06:15		3	4			4	8				
06:30		6	8			1	5				
06:45		**19**	4	38	20	6	4	16	19	54	39
07:00		**17**	1			5	5				
07:15		**12**	0			9	2				
07:30		**15**	1			7	4				
07:45		13	2	57	4	3	14	24	25	81	29
08:00		6	0			1	8				
08:15		4	1			4	4				
08:30		6	1			3	0				
08:45		5	1	21	3	2	2	10	14	31	17
09:00		2	1			4	0				
09:15		3	1			3	1				
09:30		10	0			7	3				
09:45		10	0	25	2	5	0	19	4	44	6
10:00		11	0			3	1				
10:15		11	0			8	0				
10:30		15	0			9	0				
10:45		7	0	44	0	5	0	25	1	69	1
11:00		6	0			**6**	0				
11:15		5	1			**9**	1				
11:30		8	1			**10**	1				
11:45		12	0	31	2	**8**	0	33	2	64	4
Total		241	205	241	205	134	314	134	314	375	519
Combined Total		446		446		448		448		894	
AM Peak		06:45				11:00					
Vol.		63				33					
P.H.F.		0.829				0.825					
PM Peak			01:15				02:45				
Vol.			40				66				
P.H.F.			0.833				0.516				
Percentage		54.0%	46.0%			29.9%	70.1%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Lake Perris Drive
B/ Ramona Expressway - Gate B
72 Hour Directional Volume Counts

PERLPRAGB
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	06-Sep-13 Fri	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	6			0	11				
12:15		0	15			0	7				
12:30		1	16			1	6				
12:45		0	21	1	58	0	15	1	39	2	97
01:00		0	11			0	10				
01:15		0	9			3	7				
01:30		0	10			0	10				
01:45		1	12	1	42	0	10	3	37	4	79
02:00		0	11			1	12				
02:15		0	14			0	17				
02:30		0	13			0	18				
02:45		0	21	0	59	0	**18**	1	65	1	124
03:00		1	27			1	**19**				
03:15		0	15			0	**12**				
03:30		0	17			0	**33**				
03:45		1	9	2	68	1	13	2	77	4	145
04:00		0	8			0	16				
04:15		0	12			0	16				
04:30		0	15			0	11				
04:45		1	13	1	48	0	11	0	54	1	102
05:00		3	9			0	26				
05:15		2	15			0	19				
05:30		1	14			0	13				
05:45		5	14	11	52	1	8	1	66	12	118
06:00		10	16			3	9				
06:15		16	16			5	6				
06:30		9	**25**			0	9				
06:45		20	**24**	55	81	8	2	16	26	71	107
07:00		14	**22**			10	10				
07:15		13	**21**			9	9				
07:30		7	13			4	12				
07:45		12	11	46	67	3	20	26	51	72	118
08:00		5	19			2	4				
08:15		12	13			4	17				
08:30		11	9			6	9				
08:45		10	14	38	55	5	12	17	42	55	97
09:00		7	3			1	8				
09:15		7	2			6	7				
09:30		**21**	7			5	8				
09:45		**13**	6	48	18	6	8	18	31	66	49
10:00		**20**	4			9	10				
10:15		**20**	2			9	17				
10:30		8	2			6	12				
10:45		7	8	55	16	5	18	29	57	84	73
11:00		7	0			**5**	9				
11:15		11	0			**16**	10				
11:30		9	1			**7**	20				
11:45		11	0	38	1	**10**	16	38	55	76	56
Total		296	565	296	565	152	600	152	600	448	1165
Combined Total		861		861		752		752		1613	
AM Peak		09:30				11:00					
Vol.		74				38					
P.H.F.		0.881				0.594					
PM Peak			06:30				02:45				
Vol.			92				82				
P.H.F.			0.920				0.621				
Percentage		34.4%	65.6%			20.2%	79.8%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Lake Perris Drive
B/ Ramona Expressway - Gate B
72 Hour Directional Volume Counts

PERLPRAGB
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	07-Sep-13 Sat	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	37			1	19				
12:15		2	44			5	15				
12:30		0	56			3	8				
12:45		2	38	4	175	5	17	14	59	18	234
01:00		0	34			1	28				
01:15		0	20			4	24				
01:30		1	40			0	17				
01:45		0	40	1	134	1	20	6	89	7	223
02:00		0	27			0	17				
02:15		0	39			0	20				
02:30		0	43			0	21				
02:45		0	40	0	149	0	27	0	85	0	234
03:00		0	28			0	42				
03:15		0	23			0	25				
03:30		2	19			1	69				
03:45		0	32	2	102	1	69	2	205	4	307
04:00		1	32			0	69				
04:15		0	27			0	43				
04:30		1	23			0	57				
04:45		0	30	2	112	1	34	1	203	3	315
05:00		4	36			1	36				
05:15		10	42			0	36				
05:30		9	58			1	43				
05:45		11	96	34	232	3	21	5	136	39	368
06:00		16	**96**			1	19				
06:15		20	**159**			1	27				
06:30		22	**184**			2	24				
06:45		27	**185**	85	624	5	20	9	90	94	714
07:00		17	74			6	32				
07:15		22	74			4	39				
07:30		17	37			3	38				
07:45		20	17	76	202	4	73	17	182	93	384
08:00		28	18			8	68				
08:15		24	7			8	50				
08:30		26	4			4	20				
08:45		35	9	113	38	12	28	32	166	145	204
09:00		34	2			10	37				
09:15		38	7			7	47				
09:30		37	8			14	93				
09:45		35	6	144	23	15	36	46	213	190	236
10:00		26	4			15	43				
10:15		**57**	4			9	**39**				
10:30		**34**	4			12	**270**				
10:45		**40**	4	157	16	**16**	**335**	52	687	209	703
11:00		**29**	3			**25**	**66**				
11:15		30	3			**20**	20				
11:30		54	6			**13**	3				
11:45		34	1	147	13	12	12	70	101	217	114
Total		765	1820	765	1820	254	2216	254	2216	1019	4036
Combined Total		2585		2585		2470		2470		5055	
AM Peak		10:15				10:45					
Vol.		160				74					
P.H.F.		0.702				0.740					
PM Peak			06:00				10:15				
Vol.			624				710				
P.H.F.			0.843				0.530				
Percentage		29.6%	70.4%			10.3%	89.7%				
ADT/AADT		ADT 2,521		AADT 2,521							

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Evans Road
N/ Ramona Expressway
72 Hour Directional Volume Counts

PEREVNRA
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	05-Sep-13 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		17	86			16	88				
12:15		10	139			25	118				
12:30		18	110			24	144				
12:45		16	83	61	418	8	160	73	510	134	928
01:00		12	94			11	142				
01:15		10	120			11	119				
01:30		9	143			11	140				
01:45		6	180	37	537	5	183	38	584	75	1121
02:00		10	184			11	127				
02:15		12	150			9	173				
02:30		6	**255**			10	152				
02:45		12	**322**	40	911	11	**254**	41	706	81	1617
03:00		14	**263**			9	**448**				
03:15		3	**231**			13	**366**				
03:30		8	196			13	**195**				
03:45		15	187	40	877	24	213	59	1222	99	2099
04:00		15	179			28	218				
04:15		26	170			54	215				
04:30		43	192			107	207				
04:45		54	204	138	745	87	208	276	848	414	1593
05:00		29	182			51	206				
05:15		49	190			66	186				
05:30		42	216			77	236				
05:45		56	209	176	797	71	197	265	825	441	1622
06:00		88	141			87	158				
06:15		176	124			153	164				
06:30		**175**	132			210	159				
06:45		**287**	152	726	549	**207**	181	657	662	1383	1211
07:00		**486**	115			**302**	170				
07:15		**415**	116			**366**	135				
07:30		145	88			**389**	130				
07:45		152	115	1198	434	182	152	1239	587	2437	1021
08:00		162	122			163	111				
08:15		144	96			105	147				
08:30		114	102			98	122				
08:45		139	105	559	425	96	105	462	485	1021	910
09:00		133	119			75	132				
09:15		99	93			104	172				
09:30		120	84			110	109				
09:45		122	66	474	362	95	80	384	493	858	855
10:00		103	68			94	69				
10:15		82	66			84	50				
10:30		113	54			111	65				
10:45		130	65	428	253	96	61	385	245	813	498
11:00		88	52			122	37				
11:15		88	38			100	40				
11:30		81	26			98	30				
11:45		87	32	344	148	90	33	410	140	754	288
Total		4221	6456	4221	6456	4289	7307	4289	7307	8510	13763
Combined Total		10677		10677		11596		11596		22273	
AM Peak		06:30				06:45					
Vol.		1363				1264					
P.H.F.		0.701				0.812					
PM Peak			02:30				02:45				
Vol.			1071				1263				
P.H.F.			0.832				0.705				
Percentage		39.5%	60.5%			37.0%	63.0%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Evans Road
N/ Ramona Expressway
72 Hour Directional Volume Counts

PEREVNRA
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	06-Sep-13 Fri	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		21	104			27	127				
12:15		26	91			21	132				
12:30		24	101			17	115				
12:45		18	113	89	409	9	130	74	504	163	913
01:00		16	85			11	122				
01:15		18	80			17	101				
01:30		9	144			9	167				
01:45		3	192	46	501	7	176	44	566	90	1067
02:00		19	145			13	158				
02:15		7	178			14	151				
02:30		12	**254**			13	145				
02:45		11	**316**	49	893	14	**238**	54	692	103	1585
03:00		16	**266**			9	**456**				
03:15		7	**223**			11	**388**				
03:30		17	165			22	**214**				
03:45		13	172	53	826	32	184	74	1242	127	2068
04:00		21	154			33	159				
04:15		24	144			48	172				
04:30		37	159			119	159				
04:45		49	149	131	606	83	159	283	649	414	1255
05:00		32	162			47	163				
05:15		45	141			65	177				
05:30		36	183			61	177				
05:45		49	175	162	661	77	187	250	704	412	1365
06:00		88	162			80	155				
06:15		175	143			142	145				
06:30		**177**	152			182	164				
06:45		**290**	127	730	584	**214**	134	618	598	1348	1182
07:00		**439**	124			**309**	143				
07:15		**412**	132			**378**	136				
07:30		118	119			**357**	142				
07:45		152	116	1121	491	168	139	1212	560	2333	1051
08:00		143	107			125	117				
08:15		143	90			111	101				
08:30		124	100			95	112				
08:45		125	80	535	377	87	102	418	432	953	809
09:00		73	94			88	84				
09:15		103	81			89	106				
09:30		108	70			103	80				
09:45		109	76	393	321	92	111	372	381	765	702
10:00		90	69			85	93				
10:15		95	97			87	87				
10:30		104	104			96	80				
10:45		115	98	404	368	89	77	357	337	761	705
11:00		80	72			97	57				
11:15		93	74			125	52				
11:30		83	94			126	42				
11:45		94	74	350	314	103	101	451	252	801	566
Total		4063	6351	4063	6351	4207	6917	4207	6917	8270	13268
Combined Total		10414		10414		11124		11124		21538	
AM Peak		06:30				06:45					
Vol.		1318				1258					
P.H.F.		0.751				0.832					
PM Peak			02:30				02:45				
Vol.			1059				1296				
P.H.F.			0.838				0.711				
Percentage		39.0%	61.0%			37.8%	62.2%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
Evans Road
N/ Ramona Expressway
72 Hour Directional Volume Counts

PEREVNRA
Site Code: 999-13331
Date Start: 05-Sep-13
Date End: 07-Sep-13

Start Time	07-Sep-13 Sat	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		63	125			71	118				
12:15		36	129			34	137				
12:30		33	132			32	121				
12:45		30	104	162	490	27	125	164	501	326	991
01:00		41	104			25	108				
01:15		29	110			16	129				
01:30		32	103			21	115				
01:45		22	149	124	466	15	132	77	484	201	950
02:00		22	113			13	107				
02:15		22	114			12	123				
02:30		24	106			17	124				
02:45		23	120	91	453	23	150	65	504	156	957
03:00		16	112			14	126				
03:15		16	109			16	96				
03:30		9	102			19	118				
03:45		14	**139**	55	462	17	**128**	66	468	121	930
04:00		19	**136**			26	**143**				
04:15		13	**113**			34	**151**				
04:30		32	**108**			59	**120**				
04:45		18	125	82	482	47	121	166	535	248	1017
05:00		21	117			26	111				
05:15		13	131			33	104				
05:30		24	107			30	103				
05:45		25	106	83	461	32	122	121	440	204	901
06:00		28	110			38	110				
06:15		37	111			42	93				
06:30		58	109			32	126				
06:45		66	124	189	454	69	103	181	432	370	886
07:00		54	120			44	113				
07:15		48	104			54	115				
07:30		60	68			64	124				
07:45		92	97	254	389	89	92	251	444	505	833
08:00		91	94			96	103				
08:15		71	98			90	87				
08:30		95	91			91	97				
08:45		108	83	365	366	110	97	387	384	752	750
09:00		98	87			100	90				
09:15		101	79			93	93				
09:30		121	96			99	89				
09:45		88	78	408	340	76	85	368	357	776	697
10:00		105	65			92	84				
10:15		89	79			92	87				
10:30		96	106			112	79				
10:45		102	117	392	367	**104**	79	400	329	792	696
11:00		**113**	81			**116**	71				
11:15		**115**	65			**103**	63				
11:30		**103**	63			**119**	62				
11:45		**103**	37	434	246	104	51	442	247	876	493
Total		2639	4976	2639	4976	2688	5125	2688	5125	5327	10101
Combined Total		7615		7615		7813		7813		15428	
AM Peak		11:00				10:45					
Vol.		434				442					
P.H.F.		0.943				0.929					
PM Peak			03:45				03:45				
Vol.			496				542				
P.H.F.			0.832				0.897				
Percentage		34.7%	65.3%			34.4%	65.6%				
ADT/AADT		ADT 19,746		AADT 19,746							

Caltrans Traffic Volumes

Caltrans, *2013 Traffic Volumes on California State Highways* , 2014

Dist	Route	County		Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak AADT	Ahead AADT
8	60	RIV	R	12.064	RIVERSIDE, JCT. RTES. 215/91	11100	147000	143000	10000	140000	130000
8	60	RIV	R	12.212	EAST JCT. RTE. 215	10000	140000	130000	10400	145000	134000
8	60	RIV		13.307	DAY STREET	12400	145000	134000	12400	147000	136000
8	60	RIV		14.324	MORENO VALLEY, PIGEON PASS ROAD	12300	147000	136000	10900	131000	121000
8	60	RIV		15.338	MORENO VALLEY, HEACOCK STREET	10900	131000	121000	9500	114000	106000
8	**60**	**RIV**		**16.35**	**MORENO VALLEY, PERRIS BOULEVARD**	**9500**	**114000**	**106000**	**7200**	**91000**	**87000**
8	60	RIV		18.37	NASON STREET	7200	91000	87000	6300	80000	76000
8	60	RIV		19.2	MORENO BEACH DRIVE	6300	80000	76000	5200	66000	63000
8	60	RIV		20.37	REDLANDS BOULEVARD	5200	66000	63000	4500	57000	54000
8	60	RIV		21.369	EB ON FRM THEODORE STREET	4500	57000	54000	4500	57000	54000
8	60	RIV		22.101	GILMAN SPRINGS ROAD	5200	58000	54000	4400	49500	46000
8	60	RIV		27.979	JACKRABBIT TRAIL-END FREEWAY	4400	49500	46000	4400	49500	46000
8	60	RIV		30.495	JCT. RTE. 10	4500	51000	47000			

Caltrans, *2013 Traffic Volumes on California State Highways* , 2014

Dist	Route	County	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak AADT	Ahead AADT
8	74	RIV	25.748	PERRIS, SEVENTH STREET	2150	25000	24000	2250	27500	26500
8	**74**	**RIV**	**27.54**	**JCT. RTE. 215**	**1700**	**21700**	**21000**	**2100**	**26000**	**25000**
8	74	RIV	28.914	ETHANAC ROAD	2000	24700	24000	1950	25000	24500

Caltrans, *2013 Traffic Volumes on California State Highways* , 2014

Dist	Route	County		Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak AADT	Ahead AADT
8	215	RIV		22.76	PERRIS, ETHANAC ROAD	5800	77000	74000	5700	75000	72000
8	215	RIV		23.537	SOUTH JCT. RTE. 74	5700	75000	72000	7300	92000	88000
8	215	RIV		26.308	PERRIS, NORTH JCT. RTE. 74	7200	90000	88000	6700	84000	82000
8	215	RIV		27.23	PERRIS, D STREET	6700	84000	82000	8100	102000	99000
8	215	RIV	R	27.887	PERRIS, NUEVO ROAD	8100	102000	99000	8400	106000	103000
8	**215**	**RIV**	**R**	**30.93**	**RAMONA EXPRESSWAY**	**8400**	**106000**	**103000**	**9600**	**120000**	**117000**
8	215	RIV	R	32.33	OLEANDER AVENUE	9600	120000	117000	10200	127000	124000
8	215	RIV	R	34.17	VAN BUREN BOULEVARD	10200	127000	124000	9800	123000	120000
8	215	RIV	R	35.76	CACTUS AVENUE	9800	123000	120000	10300	129000	126000
8	215	RIV	R	36.419	ALLENSANDRO BOULEVARD	10300	129000	126000	10200	127000	124000
8	215	RIV	R	37.436	RIVERSIDE, EUCALYPTUS/EASTRIDGE AVE	10200	127000	124000	9800	122000	119000
8	215	RIV	R	38.339	JCT. RTE. 60 EAST	9800	122000	119000	11200	177000	170000