TRAFFIC IMPACT STUDY

FOR THE

UNITED AUBURN INDIAN COMMUNITY SCHOOL PROJECT

Placer County, CA

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INTRODUCTION

Study Purpose and Project Description

This traffic impact study presents an analysis of the traffic / transportation related impacts of the proposed **United Auburn Indian Community (UAIC) School Project.** The proposed project is a private school that would be located on a 16-acre portion of a 43-acre site in Placer County along Taylor Road just east of the limits of the Town of Loomis. Figure 1 presents the regional location of the project site. Figure 2 presents the project site plan.

The project involves relocation and expansion of school activities that currently occur at a location on Indian Hill Road to a site that was previously used as an events center. Regular school activities and occasional special events are anticipated. A small tribal cultural center is also planned. The previous uses improved site access on Taylor Road to Placer County standards, and this access will continue to be used.

Overall Analysis Approach

This traffic impact study presents an analysis of traffic operations under the following four (4) scenarios:

- Existing Conditions (February, June and December 2017 data)
- Existing Conditions Plus proposed UAIC School Project
- Cumulative Conditions Without the Project
- Cumulative Conditions Plus proposed UAIC School

Cumulative conditions are a long-term background condition which includes future year forecasts of traffic volumes based on the Town of Loomis' version of the Placer County regional travel demand forecasting model and assumes future development of surrounding land uses expected by the Year 2030. An Alternative Cumulative scenario was investigated which address conditions without the proposed Village at Loomis development and its associated roadway improvements.

Study Area / Time Periods

The choice of study time periods and analysis locations are unique to the UAIC project. In addition to evaluating impacts during the p.m. peak hour required under Placer County guidelines, the traffic impact analysis addresses locations along routes that may be used by

project traffic during the periods before and after the school day (i.e., a.m. peak hour and afternoon peak hour

The physical study area was identified in consultation with Placer County Department of Public Works and Facilities (DPWF) and Town of Loomis Department of Public Works staff based on their understanding of the project and knowledge of the circulation system. In this unique case, while private driveways are not typically included for analysis under Placer County guidelines, the existing Del Oro High School driveways were included in the analysis because their operation is a major factor in traffic conditions occurring during the a.m. and afternoon peak periods.

Study area intersections include the following locations:

1. Taylor Road / Rock Springs Road / English Colony Way (Placer County)
2. Taylor Road / Penryn Road (Placer County)
3. Taylor Road / Project Access (Placer County)
4. Taylor Road / Rippey Road –North (Town of Loomis)
5. Taylor Road / East Del Oro driveway (Private - Town of Loomis)
6. Taylor Road / Central Del Oro driveway (Private - Town of Loomis)
7. Taylor Road / West Del Oro driveway (Private - Town of Loomis)
8. Taylor Road / King Road (Town of Loomis)
9. Taylor Road / Webb Street (Town of Loomis)
10. Taylor Road / Horseshoe Bar Road (Town of Loomis)

The analysis addresses weekday conditions and potential impacts during three time periods:

1. A.M. peak hour (7:00 to 9:00 a.m.)
2. Afternoon peak hour of school activity (2:00 to 3:30 p.m.)
3. P.M. peak hour (4:00 to 6:00 p.m.)

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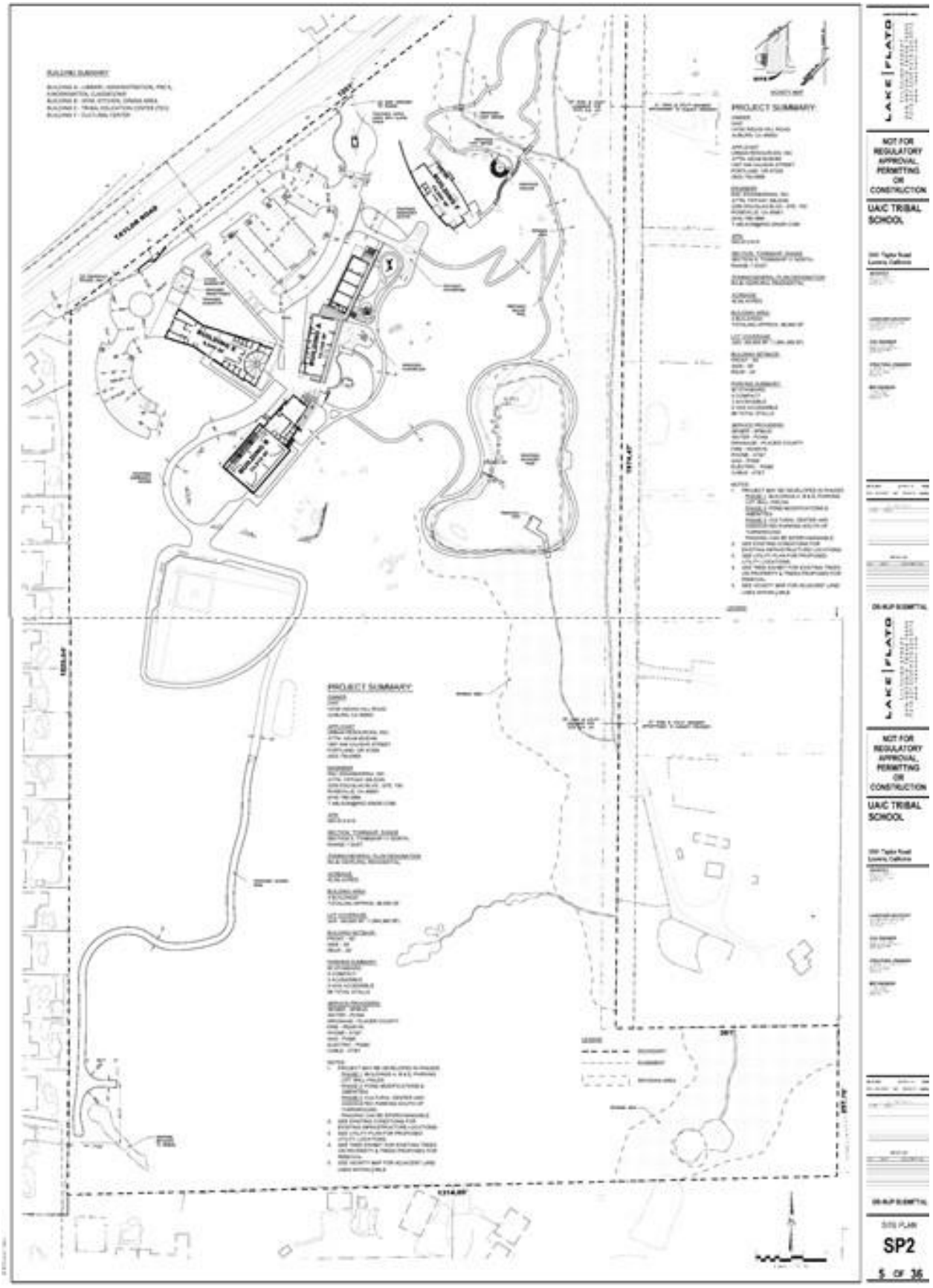
VICINITY MAP

figure 1



SITE PLAN

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figure 2

EXISTING SETTING

Study Area

The limits of the study area were identified through discussions with Placer County and Town of Loomis' response to the Notice of Preparation based on their understanding of the project, knowledge of the study area and the results of other recent traffic studies.

Roadways. The following is a description of the physical characteristics of roadways that provide access to the proposed project site as well as available daily traffic volume information that helps describe the character of each road.

Interstate 80 (I-80) is a principal arterial that is the primary east-west route through Placer County. I-80 will link the project site with the Auburn area to the east and with the Sacramento metropolitan area with the west via interchanges with Penryn Road and Horseshoe Bar Road. In the area of the project I-80 is a 6-lane controlled access freeway. The posted speed limit is 65 mph in the area of the project.

The California Department of Transportation (Caltrans) monitors the volume of traffic on its facilities on an annual basis. The most recent traffic counts published by Caltrans indicate that in 2015 I-80 carried an *Annual Average Daily Traffic (AADT)* volume of 96,600 vehicles per day west of Horseshoe Bar Road, 89,300 ADT between Horseshoe Bar Road and 84,700 ADT east of the Penryn Road interchange. Caltrans data indicates that trucks comprise 6% of the daily traffic on this portion of Interstate 80.

The project's access is on Taylor Road.

Taylor Road. Taylor Road is a major arterial street that runs parallel to Interstate 80 and links Loomis with the City of Rocklin to the west and with the communities of Penryn and Newcastle to the east. The Placer County General Plan designates Taylor Road as a Rural Arterial in the area east of the Town limits, while the Loomis Circulation Element identifies Taylor Road as an Arterial street.

Taylor Road is generally a two-lane road, but incremental half section widening has occurred in Loomis as development has proceeded. In the area of this project Taylor Road has one travel lane in each direction, and separate turn lanes exist at most intersections. Parking is permitted along Taylor Road through downtown Loomis but is prohibited in the general area of the project in Placer County. The posted speed limit on Taylor Road is 50 mph in the area of the project east of the Town limits. The speed limits drops to 40 mph in the Town of Loomis and a 25 mph school zone is posted near Del Oro HS. Traffic counts conducted in 2014 for the Town of Loomis' Circulation Element Update indicated that Taylor Road carried an *Average Daily Traffic (ADT)* volume of 16,354 vehicles per day between Horseshoe Bar Road and King Road, with volume dropping to 7,380 ADT between King Road and the northern Town limits in the area of the proposed project.

Taylor Road links the project area to other streets of regional importance via the intersections addressed in the analysis.

Penryn Road. Penryn Road is a north south road than links Taylor Road with Interstate 80 and King Road to the south. Penryn Road is designated a Rural Collector in the Placer County General Plan Circulation Element (Table 1-7). Penryn Road is a two-lane road with separate left turn lanes or Two-Way Left-Turn (TWLT) lane at key intersections.

English Colony Way– Rock Springs Road. English Colony Way is a two lane east-west roadway that links Sierra College Blvd with Taylor Road in the unincorporated community of Penryn. The General Plan identifies English Colony Way as a Rural Collector street. Rock Springs Road extends southeasterly from the Taylor Road / English Colony Way intersection to Auburn Folsom Road. This two-lane road is designated a Rural Collector in the General Plan.

King Road. King Road is an east-west arterial road that provides access to Loomis and the rural areas of Placer County surrounding the Town. King Road originates at an intersection on Sierra College Blvd in western Loomis and continues easterly across Taylor Road, over Interstate 80 and ultimately to an intersection on Auburn Folsom Road. King Road is designated an Arterial street in the Loomis Circulation Element, and a Rural Arterial in the Placer County General Plan. King Road is a two lane road with auxiliary turn lanes at major intersections. Traffic counts made for the Town of Loomis Circulation Element Update in 2014 indicated that King Road carried 5,493 ADT west of Taylor Road and 4,866 ADT east of Taylor Road.

Rippey Road. Rippey Road is a two-lane local street that runs parallel to and north of Taylor Road in between that street and the UPRR. Rippey Road originates at an intersection on Taylor Road just east of King Road and continues northeasterly to another connection to Taylor Road just west of the Town limits. From that point Rippey Road extends into Placer County to an intersection on Penryn Road. The posted speed limit on Rippey Road is 25 mph in Loomis. Traffic counts conducted for the Town of Loomis Circulation Element update in 2014 indicated that Rippey Road carried 798 ADT.

The quality of traffic flow in urban areas is often governed by the capacity of major intersections. Seven existing intersections are addressed in this analysis:

The **Taylor Road / English Colony Way / Rock Springs Road intersection** is controlled by an all-way stop. Taylor Road has separate left turn lanes at this location and separated westbound and southbound right turn lanes are provided. The intersection has an overhead flashing beacon.

The **Taylor Road / Penryn Road intersection** is controlled by stop signs on the northbound Penryn Road and private southbound approaches. A separate westbound left turn lane is provided on Taylor Road.

The **Taylor Road / Rippey Road intersection** involves a short connection that links the two parallel roads. Rippey Road is only 65 feet from Taylor Road (centerline to centerline) in this area. The intersection on Taylor Road is controlled by stop signs on the connection. The

connection has a separated left turn lane right turn lanes that are very short. The Rippey Road connection is controlled by stop signs on the westbound approach to Taylor Road. There are no auxiliary lanes at this location. Traffic at an adjoining connection to Rippey Road is shown in the analysis but Level of Service was not addressed at this minor location.

Del Oro High School has three private connections to Taylor Road that have an effect on travel along the arterial street.

The **Taylor Road / East Del Oro HS access intersection** is the private link to the school's northern parking lot. This intersection is controlled by a stop sign on the school exit. A separate westbound left turn lane is available. Review of traffic counts conducted at the school indicates that 28% and 25% of the total inbound and outbound school traffic at the three connections uses this intersection in the a.m. and p.m. peak hour, respectively.

The **Taylor Road / Central Del Oro HS access intersection** is the private connection to the school's drop-off area adjoining the performing arts center and to the northern portion of the campus. A traffic circle for school drop-off begins only 70 feet from Taylor Road. This intersection also provides access to the Loomis Baptist Church parking lot, and a crosswalk is marked across Taylor Road on the east side of the intersection. The intersection is controlled by stop signs on the school and church exits. A separate westbound left turn lane is striped on Taylor Road, and the eastbound approach is striped with a TWLT lane that continues westerly beyond the school. 24% and 7% of the total school traffic on Taylor Road uses this intersection during the a.m. and p.m. peak hours, respectively.

The **Taylor Road / West Del Oro HS access intersection** is the private route to the school's primary parking and drop-off areas. This "tee" intersection is controlled by stop signs on the school exit. The TWLT lane on Taylor Road continues through this intersection. The school exit has separate left turn and right turn lanes. Another on-site intersection is located 120 feet from Taylor Road (centerline to centerline) and southbound traffic from Taylor Road is not controlled at this intersection. A crosswalk is striped across the school access. 48% and 70% of the total school traffic on Taylor Road uses this intersection during the a.m. and p.m. peak hours, respectively.

The **Taylor Road / King Road intersection** is a signalized intersection with auxiliary turn lanes on each approach. Crosswalks are marked on each leg of the intersection. Loomis Grammar School is located on the southeast corner of the intersection.

The **Taylor Road / Webb Street intersection** is controlled by stop signs on the northbound and southbound Webb Street approaches. Separate left turn lanes exist on Taylor Road at the intersection, and the westbound Taylor Road approach has a separate right turn lane. Other approaches are single lanes. Current traffic controls limit the southbound Webb Street approach to right-turns-only. Crosswalks are striped across both Webb Street approaches as well as the eastern Taylor Road leg. The southbound Webb Street approach is marked "right turn only", although some traffic does make illegal turns.

The **Taylor Road / Horseshoe Bar Road intersection** is controlled by a traffic signal. The Taylor Road approaches have separate left turn lanes, and right turn lane is provided on the eastbound approach. The two-lane northbound Horseshoe Bar Road approach is configured with a combined thru+left turn lane and a separate right turn lane with overlap phasing. Crosswalks are striped across all four legs of the intersection.

Traffic Operational Analysis Methodology

The following is a description of the methods used in the analysis presented in this traffic impact study:

Intersection Level of Service Analysis Procedures. Level of Service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project-related traffic impacts. Level of Service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions.

Consistent with procedures described in the Caltrans' *Guide for the Preparation of Traffic Impact Studies* (CA DOT, 2002) and direction from the Town of Loomis and Placer County, signalized intersections and un-signalized intersections were analyzed using methods presented in the *Highway Capacity Manual 2010* (HCM 2010).

The characteristics associated with the various LOS for intersections are presented in Table 1. At signalized intersections, the overall LOS is based on the average length of delays for all motorists at the intersection. At two-way stop-sign-controlled un-signalized intersections, a LOS is calculated for all motorists yielding the right of way and the weighted average of those delays is the evaluation criteria under Placer County methodology.

It is important to note that HCM procedures evaluate traffic flow by comparing traffic volumes to the capacity of intersections but other factors can have a bearing on the traffic conditions that may be observed at any location. For example, traffic can be delayed by causes beyond an intersection and that congestion can create queues that extend back from the cause to an intersection. Under such a condition, the intersection may be reported to operate well based on volume and capacity while the delays observed in the field may be indicative of a poor Level of Service. These conditions typically occur during the peak periods near schools.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersections	Unsignalized Intersection
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec or v/c <0.60	Little or no delay. Delay ≤ 10 sec/veh
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec or v/c >0.60 and <0.70	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec or v/c >0.70 and <0.80	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec or v/c >0.80 and <0.90	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec or v/c/ >0.90 and <1.00	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec or v/c >1.00	Intersection blocked by external causes. Delay > 50 sec/veh
Source: *Highway Capacity Manual, 2010 and TRB Circular No. 212*		

Daily Traffic Volumes / Roadway Segment Level of Service

The quality of traffic flow on County roads can also be determined based on the daily traffic volumes and generalized Level of Service thresholds. The Placer County General Plan EIR includes daily traffic volume thresholds that can be used to identify general operating Levels of Service on County streets and highways. Table 2 identifies these thresholds.

TABLE 2
EVALUATION CRITERIA FOR ROADWAY SEGMENT LEVEL OF SERVICE

Roadway Capacity Class	Maximum Daily Traffic Volume Per Lane Level of Service				
	A	B	C	D	E
1. Freeway – Level Terrain	6,300	10,620	13,680	17,740	18,000
2. Freeway – Rolling terrain	5,290	8,920	11,650	14,070	15,120
3. Freeway – Mountainous Terrain	3,400	5,740	7,490	9,040	9,720
4. Arterial – High Access Control	6,000	7,000	8,000	9,000	10,000
5. Arterial – Moderate Access Control	5,400	6,300	7,200	8,100	9,000
6. Arterial – Low Access Control	4,500	5,250	6,000	6,870	7,500
7. Rural 2-lane Highway – Level terrain	1,500	2,950	4,800	7,750	12,500
8. Rural 2-lane highway – Rolling terrain	800	2,100	3,800	5,700	10,500
9. Rural 2-lane road – Mountainous Terrain	400	1,200	2,100	3,400	7,000

Taylor Road is designated a Rural Arterial in the General Plan Circulation Element. This roadway has relatively occasional access points, and for this analysis is assumed to have "moderate" access controls. This data suggests that Taylor Road in the vicinity of the project can carry 7,200 ADT per lane at the minimum LOS C standard.

Minimum Level of Service Thresholds and Significance Criteria

In this traffic impact study, the significance of the proposed project's impact on traffic operating conditions is based on a determination of whether project generated traffic results in roadway or intersection operating conditions below acceptable standards as defined by Placer County and the Town of Loomis. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would significantly worsen an already unacceptable LOS without the project.

Placer County Level of Service Criteria. Level of Service policies for this area of the County are as defined in the Placer County General Plan and have been used for this traffic impact study to identify acceptable LOS and evaluate impacts outside of the limits of the Town of Loomis. General Plan Policy 3.A.7 prescribes minimum Level of Service standards:

The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS), or as otherwise specified in a community or specific plan.

a. LOS "C" on rural roadways, except within one-half mile of state highways where the standard shall be LOS "D".

Loomis Level of Service Criteria. The Town of Loomis Circulation Element Update identified the Town's policies on Level of Service.

Level of Service Policy: *In order to minimize congestion, maintain Level of Service C on all roads and intersections within the Town of Loomis. Level of Service D may be allowed in conjunction with development approved within the Town as an exception to this standard, at the intersections of King and Taylor, Horseshoe Bar Road and Taylor, Horseshoe Bar Road and I-80, Sierra College and Brace Road, and Webb and Taylor, when:*

1. The deficiency is substantially caused by "through" traffic, which neither begins nor ends in Loomis, and is primarily generated by non-residents; or

2. The deficiency will be temporary (less than three years), and a fully-funded plan is in place to provide the improvements needed to remedy the substandard condition.

The Town's LOS policy permits acceptance of LOS D conditions under certain circumstances. For this analysis it has been assumed that the Town will not elect to accept conditions in excess of LOS C.

Placer County Standards of Significance. Placer County has adopted a methodology for determining the significance of traffic impacts within the context of the Level of Service goals established by the General Plan and local community plans. This methodology is noted below.

Roadway Segment Assessment Methodology:

A project may be considered to exceed the minimum LOS policies if;

1) *A roadway segment operating at or above the established Placer County policy without the project will decrease to an unacceptable LOS with the project; or*
2) *A roadway segment currently operating below the applicable established policy will experience an increase in V/C (volume to capacity) ratio of 0.05 or greater; or*
3) *A roadway segment currently operating below the established acceptable LOS Policy experiences an increase in ADT of 100 or more project generated trips, per lane.*

Signalized Intersections Assessment Methodology:

A project may be considered to exceed the minimum LOS policies if;

1) *An intersection operating at or above the established Placer County policies without the project will decrease to an unacceptable LOS with the project; or*
2) *An intersection currently operating below the acceptable LOS established policy will experience an increase in V/C (volume to capacity) ratio of 0.05 (5%) or greater; or*
3) *An intersection currently operating below the established acceptable LOS policy will experience an increase in overall average intersection delay of 4 seconds or greater.*

Un-signalized Intersection Assessment Methodology:

A project may be considered to exceed the minimum LOS policies if;

1) *An all-way stop or side street controlled intersection which currently operates at or above the established Placer County policies without the project will deteriorate to an unacceptable LOS with the project and cause the intersection to meet MUTCD traffic signal warrant(s) ; or*
2) *An all-way stop or side street controlled intersection which currently operates below the established acceptable LOS policy and meets MUTCD signal warrant(s) will experience an overall increase of 2.5 seconds or more with the project.*

Further consideration will be given in situations where the existing level of service is just above or at the approved minimum level of service and any increase in vehicle trips, or even daily fluctuations in traffic, will deteriorate the level of service to an unacceptable level. In such cases, it may be determined by the County that part (2) or (3) of the above exceptions is more applicable and should be used to analyze a proposed project's impacts.

It is important to note that Placer County traffic operational analysis requirements and methodologies of assessment apply to the intersections of public roads. The Levels of Service occurring at private driveways are not considered to be an impact significance criteria. Thus, information regarding the operation of Del Oro HS's access on Taylor Road has not normally been included in traffic studies prepared for projects in Placer County or in the Town of Loomis but is offered herein due to the unique circumstances of a new school operating in the area adjoining an existing school.

Town of Loomis Standards of Significance. The significance of traffic impacts in Loomis is identified in the General Plan Circulation Element and GPU EIR.

Significance Criteria. The Loomis General Plan also contains thresholds based on the volume of traffic on individual roadway segments. Measured in terms of the Volume / Capacity ratio (V/C), unsatisfactory conditions occur when the v/c ratio exceeds 0.80 (Exceeds LOS C). The Town of Loomis assumes that a significant traffic impact occurs when the minimum segment Level of Service is exceeded and the project increases the volume by more than 5%. The criteria applied at intersections were reviewed. The most recent document prepared for a Loomis project is the Draft Environmental Impact Report prepared for the Village at Loomis project. Review of the Transportation Element of that document indicates that while the Town has not adopted a measure for determining the significance of project impacts at intersections when background conditions exceed the minimums standard, any increase in delay where un-satisfactory Level of Service is the background condition was deemed significant.

The Town of Loomis General Plan does not speak to private driveways as a significance criteria. Review of recent Town documents, including the Circulation Element Update and the Village at Loomis EIR, indicates that private driveway connections have not been included in the analysis. As such, information regarding the Del Oro HS connections to Taylor Road has been included but is not considered to be impact significance criteria.

Planned Improvements / Funding Sources

Placer County Traffic Impact Fee Program and CIP. In April 1996, the Placer County Board of Supervisors adopted the Countywide Traffic Impact Fee Program, requiring new development within the County to mitigate impacts to the roadway system by paying traffic impact fees. The fees collected through this program, in addition to other funding sources, make it possible for the County to construct roads and other transportation facilities and improvements needed to accommodate new development. The County's fee program and Capital Improvement program is divided into eleven districts. The UAIC School project is included in the Newcastle / Horseshoe Bar / Penryn Benefit District. The Horseshoe Bar / Penryn CIP includes the following projects in the area of the project:

- English Colony Way / Taylor Road: Signalize ($505,300 in fee program)
- English Colony Way – Sierra College Blvd to Taylor Road: Realign / Widen for Shoulders and Bike Lanes ($3,072,000 in fee program)
- Penryn Road / Taylor Road: Signalize/ Intersection Improvements ($505,300 in fee program)
- Taylor Road – Town of Loomis Boundary to Plan Boundary: Construct Bike Lanes / Shoulders ($254,500 in other funding sources)

Town of Loomis Traffic Impact Fee and CIP. The existing Town of Loomis Traffic Impact Mitigation Fee Program addresses some study area roads, however some of these improvements will need to be reconsidered based on the Town's recent Circulation Element Update. For example, the fee program identifies a portion of the cost of a traffic signal at the Barton Road / Rocklin Road intersection. The Circulation Element now suggests a roundabout be installed instead. The Town's current General Plan Circulation Element identifies Rocklin Road as an ultimate four lane facility, while the draft element suggests a three lane facility will be adequate.

The Town of Loomis 2016 – 2021 CIP includes the following improvements in the general area of the proposed project:

(2016-2017)

- Taylor Road from Horseshoe Bar Road to Oak Street: Town Center Implementation Plan Phase 1: $1,810,444
- Webb Street from Taylor Road to UPPR: Reconstruction: ($220,000)

(2017-2018)

- Taylor Road – Oak Street to Circle Drive: Overlay ($290,000)

(2018-2019)

- Taylor Road – Horseshoe Bar Road to King Road: Town Center Implementation Plan Phase II ($860,000)

(2019-2020)

- None

(2020-2021)

- None

(Future improvements funding not identified)

- Taylor Road / Sierra College Blvd: Overlay ($280,000)
- Sidewalk from Sunrise Loomis Subdivision to Del Oro HS ($65,000)
- Taylor Road / Horseshoe Bar Road: Modifications ($180,000)
- Taylor Road – Alice Fruitshed to Feedstore: Bike lanes ($85,000)
- Taylor Road / Del Oro HS: Signalization ($375,000)
- Library Drive, Laird Street, Webb Street, Horseshoe Bar Road, Angelo Ct and Rippey Road: Asphalt Treatments ($360,000)
- Taylor Road – Horseshoe Bar Road to Taylor Road: Town Center Implementation plan Phase III ($1,500,000)
- Bikeway Master Plan: various ($2,250,000)
- Circulation Element: Various Improvements ($82,000,000)

Existing Traffic Conditions and Levels of Service

The following is a description of existing traffic operating conditions.

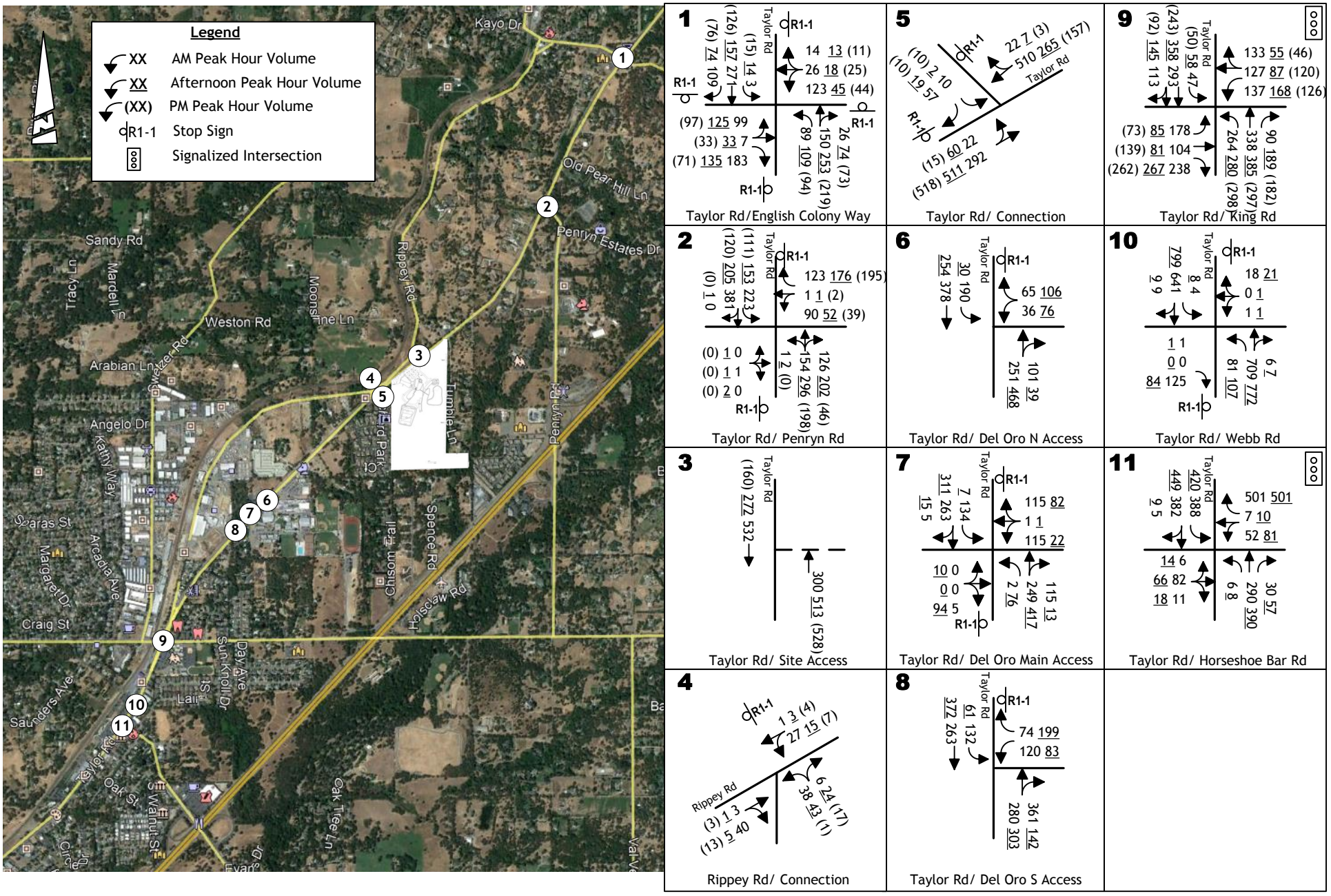
Existing Peak Hour Traffic Volumes. This analysis addresses existing traffic conditions occurring during the time periods when employees and students would be traveling to and from the project. The analysis included the typical a.m. peak commute hours (i.e., 7:00 to 9:00 a.m.) and the afternoon periods of school traffic (i.e., 2:00 to 3:30 p.m.). These time periods capture typical travel to and from schools in Loomis. New traffic counts were conducted for this study during a.m. and afternoon peak hours on January 31, 2017 and March 8, 2017 (refer to appendix for traffic count worksheets). Weekday p.m. peak hour data was later collected in June 2017 with the exception of data at the Taylor Road / King Road intersection which was taken from the Town's Village at Loomis DEIR. To address Town of Loomis comments on the NOP new traffic counts were conducted at the Taylor Road intersections with Horseshoe Bar Road and Webb Street on December 12, 2017. Traffic count data was collected in 15-minute increments within each time period, and the contiguous one-hour periods with the highest volumes within the two-hour data collection period were used in this traffic impact study as the peak hours. With the exception of June p.m. peak hour data, area schools were in session when traffic counts were conducted, and that data was consistent with information from other locations on Taylor Road.

Figure 3 presents the existing lane configurations at intersections and the peak hour traffic volumes at the study intersections.

It is important to note that the volume of traffic in the study area varies greatly during time periods outside of the actual 60 minute peak hour. Table 3 identifies the volume of traffic at three locations during 15 minute periods in the morning and in the afternoon. In the morning the highest volume occurred at 7:15 to 8:15 a.m., and the traffic volumes at these locations after 8:00 a.m. were appreciably lower. Thus as will be noted later in this report, while some students will arrive early and be served breakfast, the 8:45 a.m. start of the school day at UAIC School falls well beyond the peak 60 minute period. Alternatively, the highest afternoon volumes occurred from 2:30 to 3:30 p.m. The UAIC School's 2:45 end of day falls within the afternoon peak hour on Taylor Road.

TABLE 3
PEAK PERIOD TRAFFIC VOLUMES

	Location								
	Taylor Rd / Penryn Rd Intersection			**Taylor Rd East of Del Oro HS's east access**			**Taylor Rd / King Rd Intersection**		
Time period	**15 min Vol**	**Highest hour**	**Volume during UAIC School start / end**	**15 min vol**	**Highest hour**	**Volume during UAIC School start / end**	**15 min Vol**	**Highest hour**	**Volume during UAIC School start / end**
7:00 to 7:15 a.m.	131			90			369		
7:15 to 7:30 a.m.	251			208			558		
7:30 to 7:45 a.m.	445	1,100		408	884		568	2,062	
7:45 to 8:00 a.m.	243			178			503		
8:00 to 8:15 a.m.	161			62			433		
8:15 to 8:30 a.m.	169			79			440		
8:30 to 8:45 a.m.	129		129	68		68	311		311
8:45 to 9:00 a.m.	120			68			255		
2:00 to 2:15 p.m.	153			98			313		
2:15 to 2:30 p.m.	189			106			400		
2:30 to 2:45 p.m.	211			133			547		
2:45 to 3:00 p.m.	312	1,092	312	263	858	263	526	2,158	526
3:00 to 3:15 a.m.	339			319			588		
3:15 to 3:30 p.m.	230			143			497		
		Observed time period of "traffic peak hour"							
		Time period when proposed project will be generating greatest share of its traffic							



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EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 3

Existing Intersection Levels of Service. Table 4 presents a summary of existing a.m. and afternoon peak hour LOS at the study intersections. Level of Service calculation worksheets are included in the Appendix.

The signalized study intersection at **King Road / Taylor Road** operates at LOS D in the morning peak hour. These conditions exceed the general LOS C standard but may be permitted under Town Circulation Element policy. Observation of conditions in the field reveals that motorists may experience delays that are longer at various times within the peak hour due to factors that are not related to the capacity of this intersection. In the morning the capacity of the Del Oro HS driveways constrains arriving traffic, while in the afternoon the capacity of the Horseshoe Bar Road / Taylor Road intersection is the constraint.

The signalized **Taylor Road / Horseshoe Bar Road intersection** operates at LOS D in the afternoon. These conditions exceed the Town's general LOS C standard but may be permitted under Town Circulation Element policy.

Current Levels of Service are below the minimum threshold at many un-signalized intersections. In Placer County, the **Taylor Road / Penryn Road intersection** operates with an overall Level of Service of LOS F in the morning peak hour. In Loomis, all of the un-signalized intersections providing access to Del Oro High School operate with delays in the morning that are indicative of LOS F. Conditions are somewhat better in the afternoon peak hour, but the study intersections at Del Oro HS in Loomis operate at LOS D to LOS F at that time.

The northbound approach at the **Taylor Road / Webb Street intersection** operates at LOS D in the p.m. peak hour. While LOS D exceeds the LOS C minimum, the current Level of Service is the result of a limited number of left turns (1 in the p.m. peak hour) which disproportionately affect the length of average delay. LOS D may be accepted at this intersection under Circulation Element policy.

TABLE 4
EXISTING CONDITIONS
INTERSECTION LEVELS OF SERVICE

No.	Intersection	Control	Minimum LOS	AM Peak Hour (7:15 to 8:30 a.m.)		Afternoon Peak Hour (2:30 to 3:30 p.m.)		PM Peak Hour (4:30 to 5:30 p.m.)		Peak Hour Traffic Signal Warrants Met?
				Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1	Taylor Rd / English Colony Way	All-Way Stop	C	22.2	C	20.7	C	15.4	C	Yes
2	Taylor Rd / Penryn Rd (overall)	NB/SB Stop	C	**(203.2)**	**(F)**	(17.0)	(C)	(11.4)	(B)	Yes
	Westbound left turn			9.8	A	9.6	A	8.2	A	
	Northbound approach			406.3	F	21.9	C	12.9	B	
3	Taylor Rd / Rippey Rd Southbound approach	SB Stop	C	21.3	C	13.8	B	13.2	B	No
5	Taylor Rd / East Del Oro Northbound approach	NB Stop	C	245.9	F	73.9	F	n.a.		No
6	Taylor Rd / Central Del Oro	NB / SB Stop	C							No
	Northbound approach			375.4	F	45.1	E			
	Southbound approach			10.6	B	21.4	C			
7	Taylor Rd / West Del Oro Northbound approach	NB Stop	C	106.3	F	29.3	D			Yes
8	Taylor Rd / King Rd	Signal	C	**41.3**	**D***	25.2	C	20.7	C	n.a.
9	Taylor Road / Webb Street	NB/SB Stop	C							No
	Northbound approach			18.8	C	23.5	C	**30.1**	**D***	
	Southbound approach			18.1	C	20.7	C	18.4	C	
10	Taylor Road / HBR	Signal	C	28.8	C	**37.6**	**D***	33.3	C	n.a.

Bold values are conditions at public road intersections in excess of applicable minimum Levels of Service. Conditions at Del Oro HS driveways are for information only and are not significance criteria. (*) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection
The overall average intersection control delay is reported in seconds per vehicle for signalized and all-way stop controlled locations. For side street stop controlled intersections, Placer County uses the overall weighted average control delay for movements yielding the right-of-way. For side-street stop controlled intersections in the Town of Loomis, the average control delay for the movement with the greatest delay is reported.

Traffic Signal Warrants. The volume of traffic occurring at the un-signalized study area intersections under existing conditions was compared to MUTCD Warrant 3 (Peak Hour Volume) to determine whether a traffic signal might already be justified. The choice of rural or urban warrants are predicated on travel speed (i.e., <40 mph or > 40 mph). Based on the speed limit, intersections within Loomis town limits are "urban", and the locations in the unincorporated area of the County are "rural".

Today the volume of traffic occurring at the two Placer County intersections on Taylor Road satisfies peak hour warrants for signalization during all the peak periods. Traffic signals at both locations are included in the Newcastle / Horseshoe Bar / Penryn fee program.

The volume of traffic at Del Oro's main western access also satisfies peak hour warrants for signalization. The Town of Loomis CIP identifies a traffic signal at Del Oro HS, but lists this location as "future improvement – funding not identified".

Roadway Segment Level of Service. Current daily traffic volumes on Taylor Road in the area of the project are reported to 7,380 ADT based on Loomis counts. This volume is indicative of LOS A conditions based on Placer County General Plan thresholds.

Traffic Safety Issues. Observation of traffic conditions in the study area identified two potential concerns, both of which relate to peak period traffic at Del Oro HS.

First, ***the flow of traffic into Del Oro HS*** has a major effect on travel along Taylor Road. While the off-site circulation system theoretically has the capacity to deliver current traffic volumes, on-site constraints delay incoming traffic. As a result, the queue of arriving inbound traffic extends westerly along Taylor Road to and sometimes through the King Road intersection. To an appreciable degree the on-site constraints relate to the capacity of the main western exit. Thus, changes to Taylor Road itself or to more distance intersections such as King Road / Taylor Road would have minimal effect on the flow of traffic to the school. As noted earlier the Town of Loomis CIP identifies an unfunded traffic signal at is location. This traffic control would increase exiting capacity, which in turn could allow more vehicles to enter the site and reduce congestion.

Secondly, peak period traffic conditions at the Taylor Road / Rippey Road intersection are an issue due to the ***short distance between Taylor Road and Rippey Road*** in this area. The alignment of the intersection invites eastbound traffic to turn left from Taylor Road and make a broad right turn directly onto eastbound Rippey Road across painted median areas with relatively little slowing. During peak periods an appreciable number of motorists make left turns from eastbound Taylor Road to westbound Rippey Road, and no left turn lane is available. This is a bypass route for students leaving Del Oro HS due to the existing conditions on Taylor Road (i.e., right turns from school exit, left turn onto Rippey Road and return to westbound Taylor Road just east of King Road). Occasionally eastbound left turns are stopped to wait for westbound traffic, and at that time an appreciable queue of eastbound through traffic can be created. According to Town staff, the combination of short spacing and absence of a left turn lane has led to collisions between westbound traffic and turning vehicles. However, Placer County staff have

reviewed the recent collision history for the intersection, and that review indicates that the collision frequency at this location is not appreciably higher than that occurring at other locations on similar roads. Consistent with the Placer County Traffic Accident Analysis System (TAAS) methodologies the most recent 3 years of available collision data at the intersection was reviewed (i.e., January 2014 thru December 2016). Town of Loomis staff provided one (1) collision report that met the study criteria. While the County does not typically maintain records outside of its own jurisdiction, the close proximity of this intersection to the Town / County border meant that there were two (2) additional collision reports available. Upon closer review of the collision data it has been concluded that only two of the three collisions were attributable to the intersection. This resulted in a collision rate of 0.22 crashes per million entering vehicles. The comparable Caltrans Collision rate based on statewide data (i.e., *2014 Collision Data: Tee intersection, Stop and Yield control, rural*) for this type of intersection is 0.16 collisions per million entering vehicles.

The collisions both occurred during daylight hours and involved vehicles traveling eastbound on Taylor Road. One collision involved a distracted driver who was traveling at an unsafe speed who rear ended a slowed car waiting on a vehicle turning left onto Rippey Road. The other collision was a sideswipe where the driver began a left turn onto the incorrect YIELD leg of the Rippey Road connection, turned back onto Taylor Road and collided with another vehicle. As both collisions involved, either directly or indirectly, a vehicle turning left from Taylor Road onto Rippey Road, the Town could consider installing a left turn restriction which would alleviate the Town's safety concern.

The need for a left turn lane can be considered by review of AASHTO guidelines for left turn channelization, as noted in Table 5. This table identifies the volume of traffic in the direction opposing the left turn. For example, in the afternoon there are 272 westbound vehicles on Taylor Road, and this value falls between 200 and 400 vph in table's left hand column. The advancing volume, including left turns, is then identified and entered in the column that best represents the percentage of traffic turning left at that time. In this case left turns are 11% of the advancing volume, and the value is placed in the 10% column. At this point it can be determined if the advancing volume exceeds the table's requirement. In this case 571 vph exceeds the 390 to 470 vph range needed to justify a lane for 200 to 400 opposing vehicles. Thus the combination of advancing and opposing traffic occurring in the afternoon peak period following the end of the school day reaches the level that satisfies these guidelines. However, the volumes occurring in the a.m. peak hour and p.m. peak hour do not satisfy this requirement.

TABLE 5
TRAFFIC VOLUMES JUSTIFYING LEFT TURN LANES
AT TAYLOR ROAD / RIPPEY ROAD CONNECTION

Opposing Volume (veh/hr)	Advancing Volume (veh/hr)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
532	*314 (4%)*	-	-	-
400	510	380	275	245
272	-	**571 (11%)**	-	-
200	640	470	350	305
160	*533 (3%)*		-	-
100	720	515	390	340

Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2012.*
Existing AM Peak Hour at Taylor Road / Rippey Road Connection – Not Satisfied
Existing Afternoon Peak Hour at Taylor Road / Rippey Road Connection - *Satisfied*
Existing PM Peak Hour at Taylor Road / Rippey Road Connection – Not Satisfied

Potential safety improvements were considered at the request of the Town of Loomis during the study scoping process. The Town of Loomis CIP does not address this location, and the traffic impact analysis accompanying the Circulation Element Update did not identify this location as a problem.

A left turn restriction could be installed through signage (if only limited during high school peak(s)), or other full time measures could be installed.

Theoretically a separate left turn lane could be installed on Taylor Road, and this treatment would generally be consistent with the Town's plan for Taylor Road improvements. However a 10-12 foot high cut-bank exists on the south side of Taylor Road at this location. Thus, widening Taylor Road to the south away from the existing structures to create a left turn lane could require extensive earthwork and retaining walls, as well as relocation of utility poles. In addition, Rippey Road is used by large trucks, and any intersection changes would need to continue to accommodate truck turning requirements. This requirement and the existing structure in this area would make it difficult to shift westbound travel lanes to the north to create a separate left turn lane.

The town has not included this intersection in any of their recent documents or their CIP. Installing a left-turn restriction would mitigate Town's concerns.

Alternative Transportation Modes

Public Transit. Public transit service in the unincorporated areas of Placer County is provided by two agencies.

- Placer County Transit (PCT) provides both fixed route and demand-responsive transit service to the study area. PCT's *Taylor Road Shuttle* links Loomis, Penryn, Auburn and Sierra College in Rocklin. This route stops within Loomis at the downtown multi-modal center, and other stops are signed along Taylor Road. Service is provided between 6:30 a.m. and 4:15 p.m. Monday –Friday with four stops per day. Detailed information regarding the route, bus-stops and schedules is available at http://www.placer.ca.gov/works/pct/hwy49.htm.

Other transit opportunities include:

- Placer Commuter Express is a ticket based bus service traveling from convenient stops (including Auburn Station) along the Interstate 80 corridor from Colfax into Downtown Sacramento.

- Dial-A-Ride is a demand-response transportation system providing curb-to-curb service to the general public six days a week (excluding Sunday) in the communities of Auburn (Highway 49) and Rocklin/Loomis. The project site lies within the Dial-A-Ride service area.

- Auburn Light Rail Express Route is a fixed route transit service which connects Auburn Station to Sacramento Light Rail. The route operates Monday through Friday with one-hour headways and two-hour headways on Saturdays. This route passes the site on Taylor Road and stop at the Penryn Park & Ride and at the Loomis Multi-Modal Center at the train station.

Pedestrian Facilities. Pedestrian facilities are limited in the rural areas of Placer County. While sidewalks have been created along Taylor Road within the limits of the Town of Loomis, in the unincorporated area of the County pedestrians make use of the paved shoulder area along Taylor Road in the immediate area of the project.

Bicycle Facilities. The *Placer County Regional Bikeway Plan* provides information regarding the regional system of bikeways for transportation and recreation purposes. The regional bikeway plan was accepted by the Placer County Transportation Planning Agency (PCTPA) Board in August of 2001, and adopted by the Placer County Board of Supervisors in September of 2002. The *Placer County Regional Bikeway Plan* establishes a system of ultimate bikeways within the Auburn area and includes the following system classifications:

"Class I Bike Path – Provides a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal crossflows by motorists. Caltrans standards call for Class I bikeways to have 8 feet (2.4 meters) of pavements with 2 foot (0.6 meters) graded shoulders on either side, for a total right-of-way of 12 feet (3.6 meters). These bikeways must also be at least 5 feet (1.5 meters) from the edge of a paved roadway."

"Class II Bike Lane – Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicular parking and cross flows by pedestrians permitted. Caltrans standards generally require a 4 foot (1.2 meters) bike lane with a 6-inch (150 mm) white stripe separating the roadway from the bike lane."

"Class III Bike Lane – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Roadways designated as Class III bike routes should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Other than a street sign, there are not special markings required for a Class III bike route."

The 2011 Placer County Bike Map notes the presence of the following facilities in this general area. Today the portion of Taylor Road east of the Loomis Town limits is designated a Class II bike lane. The 2010 Loomis Bike Transportation Plan indicates that Taylor Road is a Class II bikeway from the downtown core to the Town limits. The plan suggests that a separated Class I path will also be developed along Taylor Road.

PROJECT CHARACTERISTICS

The development and operation of the UAIC School Project will attract automobile traffic to the project site. This report section describes the characteristics of project-related traffic.

UAIC currently operates a school on Indian Hill Road near Auburn Folsom Road. Information regarding the new school has been developed in consultation with the project proponents based on their current operation and planned operational strategies.

The proposed project includes buildings associated with the educational process, as well as a small cultural center. The cultural center occupies roughly 14,000 sf but a large portion of the facility will not be open to the public and will be reserved for Tribal member use. Only 3,000 square feet of the current design is publicly accessible space (reception area, gift shop, gallery/theater, and exhibit space). It is anticipated that 4-6 staff members will be on site during normal business hours and that 30 tribal members may visit per week. Some of those 30 will be persons coming to the property for the adult education activities".

The site may host special events, which would be generally consistent with activity at the prior use on the site. The project site was last occupied by a bed & breakfast / events center. Events at the school site could occur after hours and on weekends but no earlier than 7:00 a.m. or later than 10:00 p.m. These events could hold up to approximately 200 people, although some students and staff may already be on school property.

Project Characteristics

Site Access. The project will take access via an existing access to Taylor Road at an existing driveway roughly 900 feet east of the Rippey Road intersection and 3,200 feet west of the Penryn Road intersection. This intersection is opposite and roughly 50 feet offset from an existing driveway serving a small motel. The intersection already satisfies Plate 116 requirements for acceleration and deceleration tapers.

Project Operational Characteristics. The proposed school project will involve the following activities that relate to regular vehicular travel:

TABLE 6
PROJECT CHARACTERISTICS

Activity	Existing School in Auburn	Proposed Project
Staff and Students		
Pre K-8 enrollment	57	100
Adult Education Average Daily Attendance	5-10 per event	10-15 per event
Adult Classes	2-3 per month	4 per week
Education and Support Staff	38	35
Cultural Staff	0	6
Transportation		
Students bussed	51 (90%)	90 (90%)
Number of bus routes	8	9
Schedules		
Students arriving in morning peak hour	57	100
Students leaving at traditional end of day	37	65
Students leaving after extended day	20	35

The travel associated with these activities has been isolated by time period in order to establish trip generation forecasts for the two school travel periods and for daily and p.m. peak hour conditions. The trip generation summary is presented in Table 7. As shown, the proposed project is projected to regularly generate 254 daily trips with 78 trips in the a.m. peak hour, 41 trips in the hour at the end of the school day and 63 trips in the p.m. peak hour on those days when adult education classes ended at a time that may generate p.m. peak hour traffic.

For comparison, standard trip generation rates for private schools published by the Institute of Transportation Engineers (ITE) were used to identify trip generation for a typical school of this size. These rates and the accompanying forecast for a regular 100 student private school are also included in Table 7. As shown the forecasts would be 248 daily trips, with 90 trips in the a.m. peak hour, 60 trips in the afternoon hour and 17 trips in the p.m. peak hour traffic.

Special Events

The project site may occasionally be used to host special events. Up to 200 persons may be in attendance. Assuming standard automobile occupancy rates for public events (i.e., 2.5 attendees per vehicle), roughly 80 inbound trips could occur before an event and 80 trips could occur in the period thereafter. The extent to which these trips are focused into a specific hour would depend on the event schedule and the nature of activities. "Open house" type activities would spread trips across a broad time period, and some inbound and outbound trips might occur concurrently. An event with a designated starting time would tend to attract nearly all inbound trips into a single hour, but exiting trips would fall into subsequent hours. For this analysis a "worse case" p.m. peak hour analysis was conducted that assumes that a 200 person event begins at a time within the typical weekday p.m. peak hour (i.e., 4:00 to 6:00 p.m.)

TABLE 7
TRIP GENERATION FORECASTS

Description	Quantity	Mode	Occ Rate	Vehicles	Vehicle Trips									
					daily	AM Peak Hour (7:00 to 9:00 a.m.)			Afternoon Peak Hour (2:30 to 3:30)			PM Peak Hour (4:00 to 6:00 p.m.)		
						In	Out	Total	In	Out	Total	In	Out	Total
Proposed Project														
PreK – 8 students	5	auto	1.25	4	16	4	4	8	2	2	4	2	2	4
	90	van	12.0	9	72	9	9	18	9	9	18	9	9	18
Pre K < 2 yrs	5	auto	1.25	4	16	4	4	8	0	0	0	0	0	0
Adult Education	15	auto	1.25	12	24	0	0	0	0	0	0	0	12	12
Ed Staff	35	auto	1.00	35	70	35	0	35	0	15	15	0	20	20
Misc. trips	10	auto		10	20	1	1	2	1	1	2	1	1	2
Cultural Center staff	6	auto	1.00	6	12	6	0	6	0	0	0	0	6	6
Cultural Center visitor	12	auto	1.00	12	24	1	0	1	1	1	2	0	1	1
Total					***254***	***60***	***18***	***78***	***13***	***28***	***41***	***12***	***51***	***63***
Comparison to Typical Private School														
Private School (K-8)	student	n.a.	n.a.	n.a.	2.48	55%	45%	0.90	47%	53%	0.60	43%	57%	0.17
	100 students				248			90			60			17
Special Event Traffic														
Attendees	200	auto	2.5	80	160	0	0	0	0	0	0	80	0	80

Trip Distribution. Having determined the number of trips that may be generated by the proposed project, it is necessary to identify the directional distribution of project traffic in order to assign these trips to the study area street system. This was accomplished by considering the location of student and staff residences relative to the proposed project's location.

Automobile traffic generated by employees and visitors could originate throughout Placer County, and most of this traffic would be expected to be from the west via Interstate 80 using the Penryn Road interchange. The overall allocation of project trips to the study area circulation system is identified in Table 8.

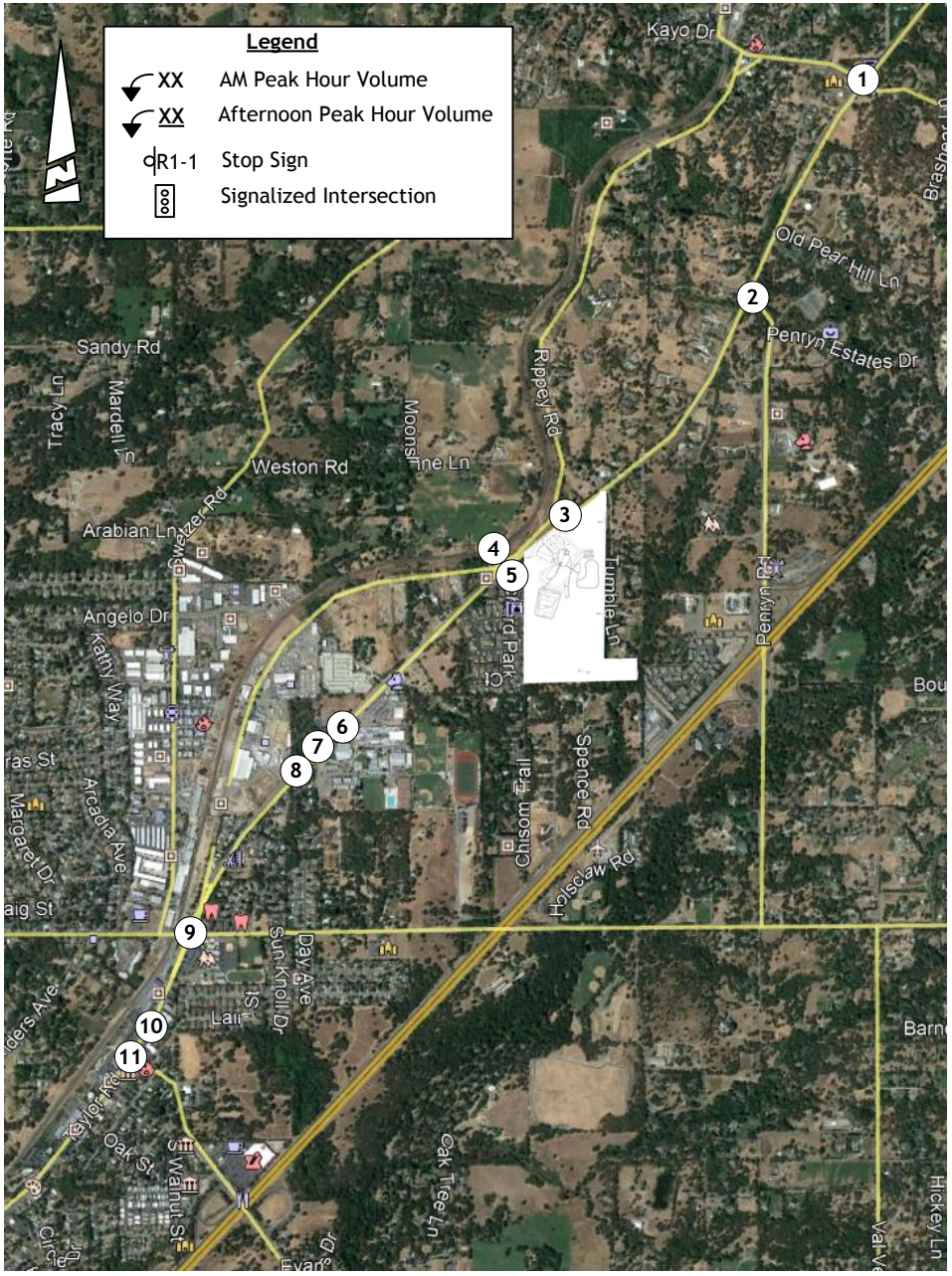
TABLE 8
DIRECTIONAL TRIP DISTRIBUTION

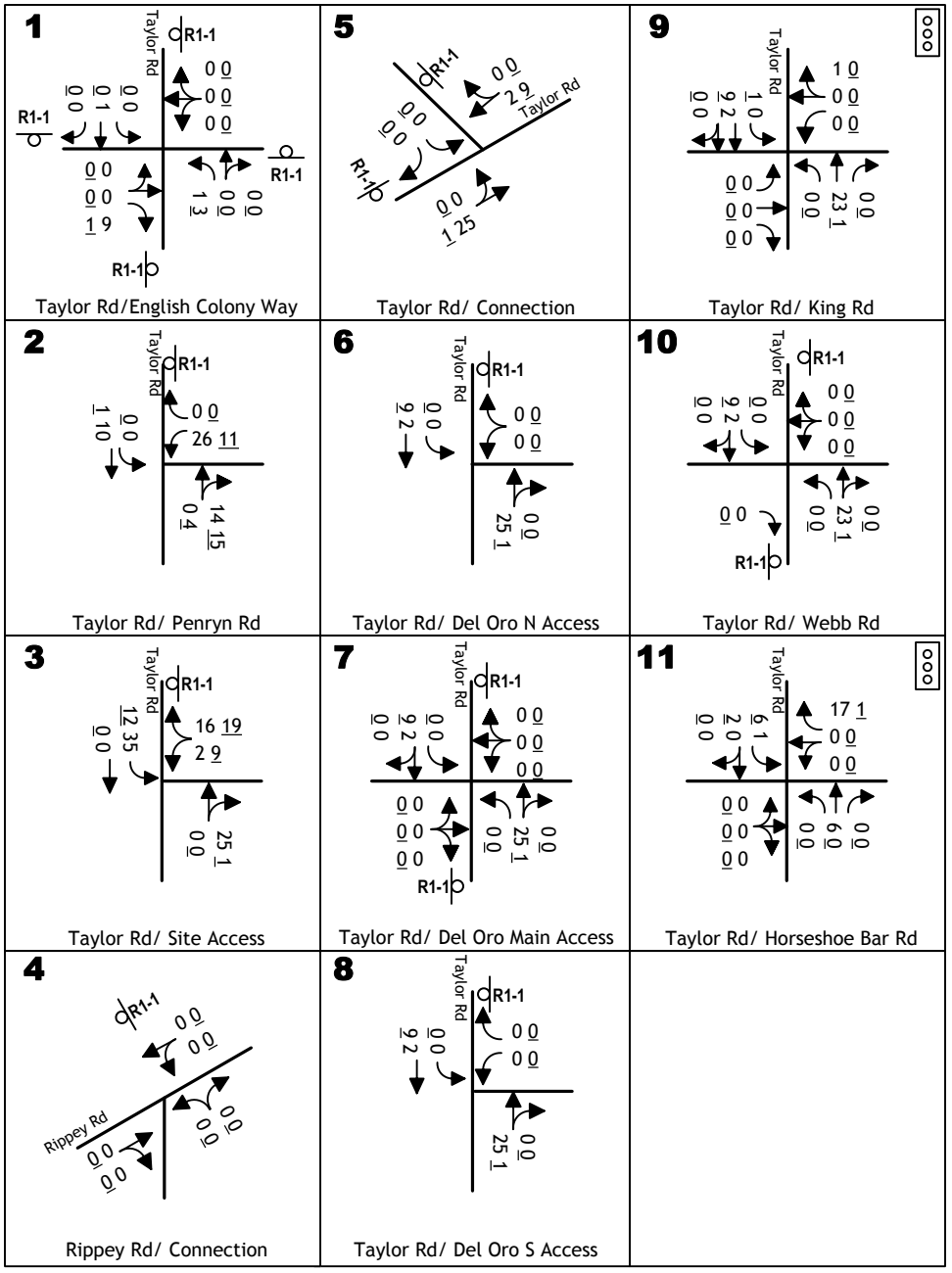
Direction	Route	Percentage of Total Trips				
		Staff	**Bussed Students**	**Non-bussed Students Adult Students**	**Special Event**	**Misc**
East	Interstate 80	26%	100%*	60%	40%	50%
	Taylor Road beyond English Colony	2%	0%	0%	5%	0%
West	Interstate 80	38%	0%	15%	40%	50%
	Taylor Road beyond King Road	14%	0%	5%	5%	0%
North	English Colony Way	18%	0%	15%	5%	0%
South	King Road to Auburn Folsom Road	2%	0%	5%	5%	0%
	Total	100%	100%	100%	100%	100%
(*) all vans will use the I-80 / Penryn Road interchange						

Trip Assignment

Trips that would be generated by the proposed project were assigned to the study area street system at the project access according to the regional distribution assumptions noted above. It is important to note that UAIC can direct its vans to use specific routes. In this case, vans would be directed to use the Penryn Road interchange for all travel involving Interstate 80. However, while UAIC can direct staff to avoid using specific routes, parents and staff driving their own vehicles will still have choices among competing routes, as would persons attending special events.

Figure 4 presents the resulting project trip assignment under regular operation during the a.m. and afternoon peak hours. Figure 5 presents the project trip assignment in the p.m. peak hour under regular and "worst case" conditions with a special event.





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PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS – AM AND AFTERNOON

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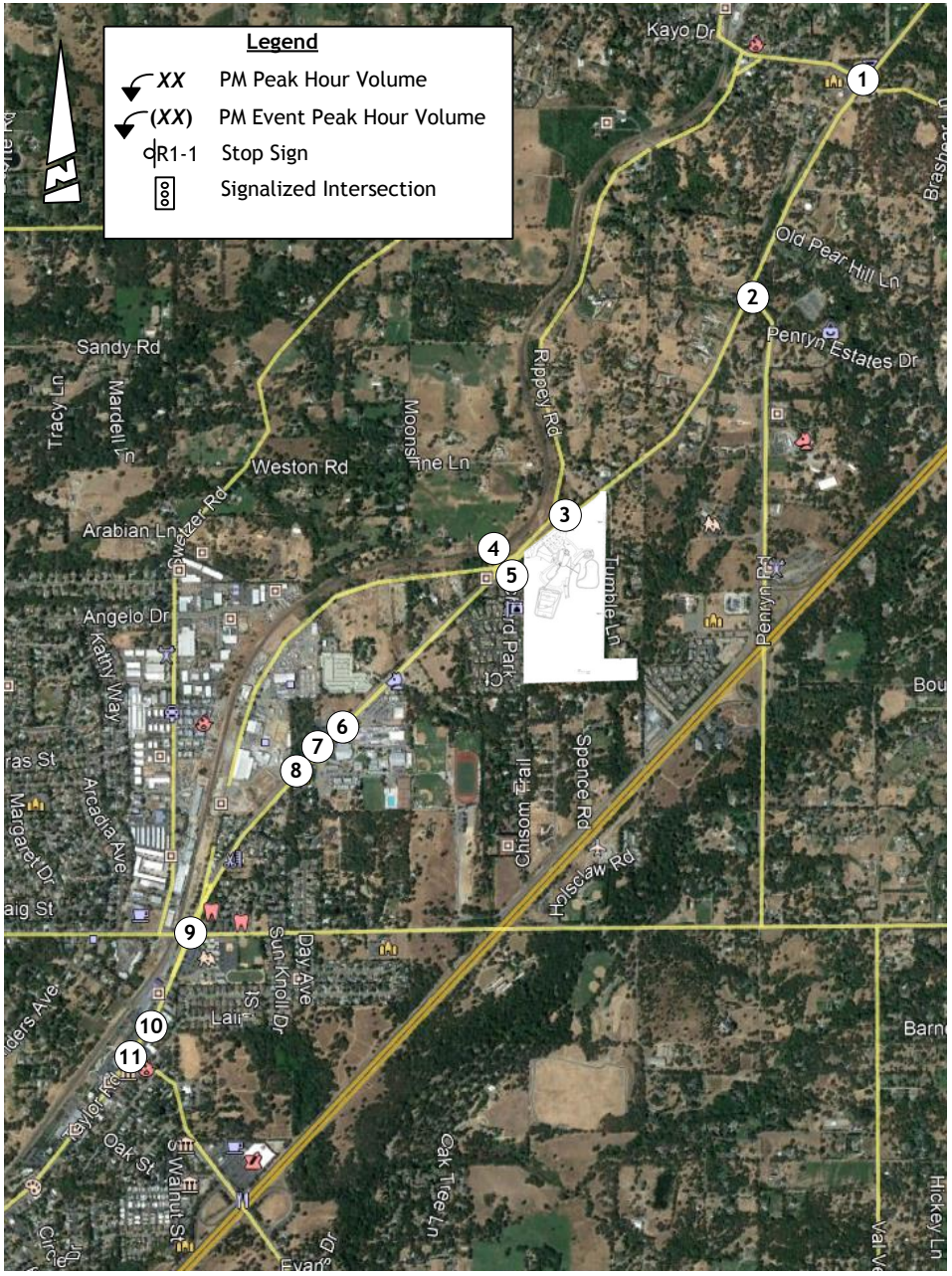
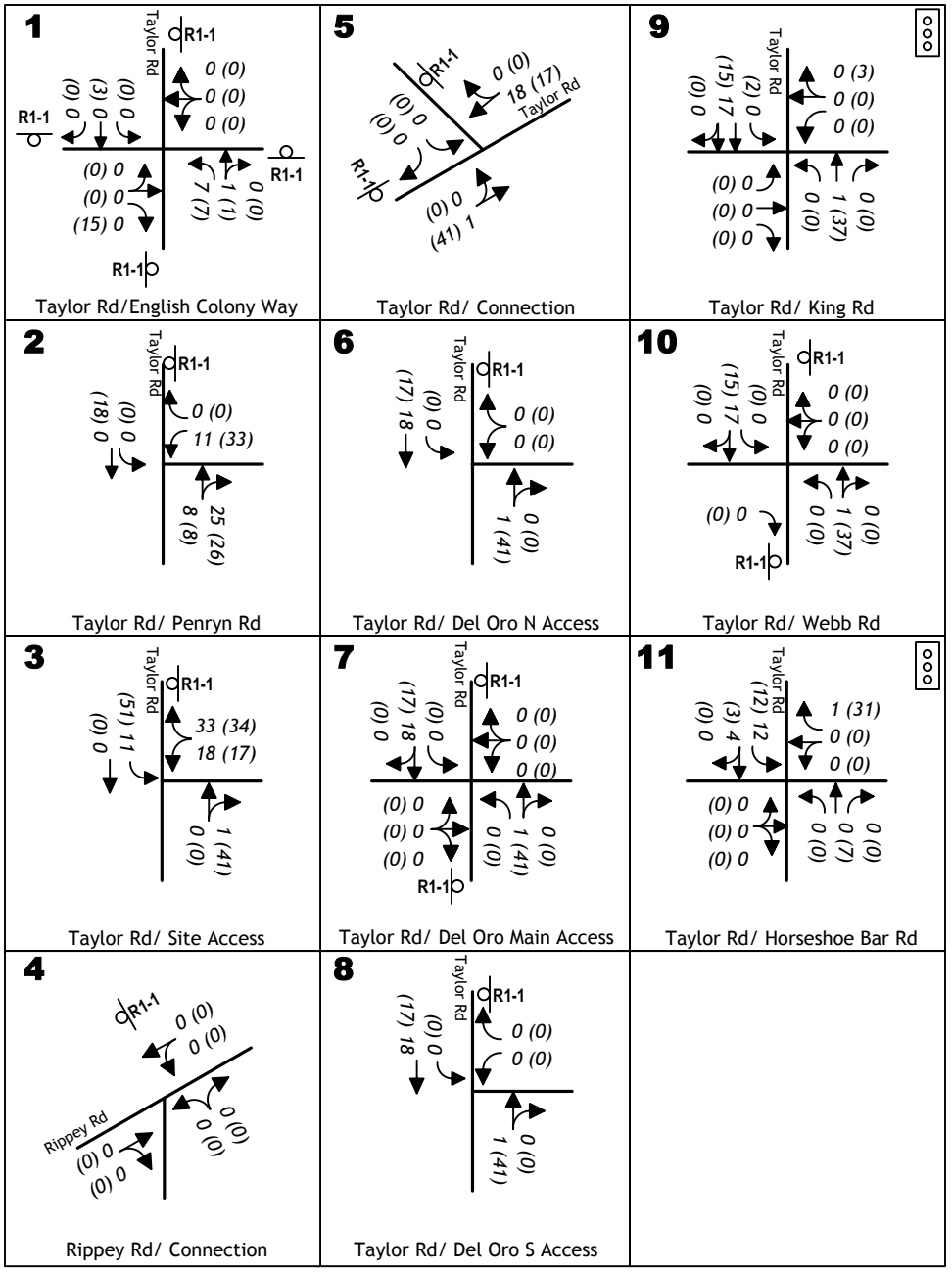
figure 4





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PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS – PM PEAK HOUR

6260-21 RA 6/7/2018

figure 5

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

This report section identifies traffic conditions that are expected with development of the project alone. While it is likely that project traffic will not coincide with the peak period morning travel to and from Del Oro HS, this assessment conservatively assumes project trips will occur during the peak 15 minute of the background peak hour, as is the standard practice for traffic impact analysis under Caltrans guidelines.

Existing Plus Project Traffic Conditions

The trips accompanying development of the project were superimposed onto the current background traffic volumes to create the "Existing plus Project" traffic volumes presented in Figures 6 and 7. These volumes were then used to calculate the intersection Levels of Service presented in the tables which follow.

Existing Plus Project Impacts to Traffic Operations. Table 9 identifies the a.m., afternoon and p.m. peak hour Level of Service occurring at study area intersections with the addition of project traffic.

The project will perpetuate the existing LOS F conditions and lengthen delays in the a.m. peak hour at **the Taylor Road / Penryn Road intersection.** Because the Level of Service at these locations is already deficient, the significance of the project's impact is based on the County's Methodology of Assessment. In this case traffic signal warrants are satisfied, and the addition of project trips will increase the length of average delay by more than the allowable 2.5 second increment. ***The project's impact to this intersection is significant.***

Mitigation. The project proponents shall cause a traffic signal to be installed at the Taylor Road / Penryn Road intersection. A traffic signal will deliver LOS C. As noted earlier, Placer County's adopted fee program and CIP include a traffic signal at this location. Thus, the project would receive fee credits and reimbursement towards the cost of this improvement.

Installing a traffic signal at this intersection would also involve addressing the adjoining North Penryn Road connection and the access to a residence that occurs in the intersection. North Penryn Road links Taylor Road with English Colony Way, and while there are some residences along the route its apparent function during peak traffic hours is as a bypass to the all-way stop at Taylor Road / English Colony Way. Preliminary operational analysis indicates that it should be possible to perpetuate eastbound left turns onto North Penryn Road. If it was found to be necessary to prohibit left turns on to North Penryn Road and limit this intersection to right-turns-only, traffic would be diverted to the Taylor Road / English Colony Way intersection. That location would, however, continue to operate at LOS C (delay 23.6 seconds), which satisfies the County's minimum standard. Today the affected residence has access via two driveways, and it is likely that this will need to be consolidated into a single driveway that is wide enough to accommodate inbound and outbound flow.

In Loomis, as shown, the Levels of Service at the signalized **Taylor Road / King Road** intersection will remain at LOS D in the a.m. peak hour. LOS D exceeds the Town's LOS C goal but LOS D can be accepted under Town Circulation element policy. The project's trips do not increase the average delay at the intersection, and as a result the project's impact is not significant.

The Levels of Service at the signalized **Taylor Road / Horseshoe Bar Road intersection** will remain at LOS C in the a.m. peak hour with and without the project, and project trips will cause the intersection to operate at LOS D in the p.m. peak hour. LOS D exceeds the Town's LOS C goal but LOS D can be accepted under Town Circulation Element policy. Because the project adds traffic to an intersection that exceeds LOS C and causes the intersection to operate at LOS D in the p.m. peak hour, the project's impact is significant. Measures to improve the Level of Service at this location include completion of other portions of the circulation system that are included in the Town Circulation Element Update. For example, the construction of the Doc Barnes Extension from Horseshoe Bar Road to King Road and the Webb Street extension from Taylor Road to Horseshoe Bar Road would reduce traffic on Taylor Road and improve the Level of Service at Taylor Road intersections. These street improvements are included in the Village at Loomis project and partially funded by the Town's Fee program. However, there is no guarantee that the Village at Loomis project will be approved and install these improvements, and Placer County has no control over the Town's fee program. ***Thus, this impact is significant and unavoidable.***

The addition of project peak hour trips would theoretically exacerbate the long delays at the **Taylor Road / Del Oro HS access intersections** that occur in the morning and afternoon. As a practical matter, because most of the UAIC school's morning travel falls outside of the beginning of Del Oro's school day, it is unlikely that UAIC staff or UAIC student travel will coincide with peak conditions near Del Oro HS. While conditions at the intersections near Del Oro HS exceed the Town of Loomis LOS C standard with and without the project, the Town of Loomis GP does not include LOS criteria for private driveway connections. A review of recent Town documents indicates that the Town has not included the private Del Oro HS driveway connections as part of their traffic impact analysis documents. As such, operations at the private Del Oro HS driveway connections with Taylor Road are not considered to be a significant impact.

The addition of project trips will increase the volume of traffic through the **Taylor Road / Webb Street intersection,** and the northbound approach will continue to operate at LOS D in the p.m. peak hour. Because LOS D exceeds the LOS C goal and the project's trips increase delay, the project's impact is significant.

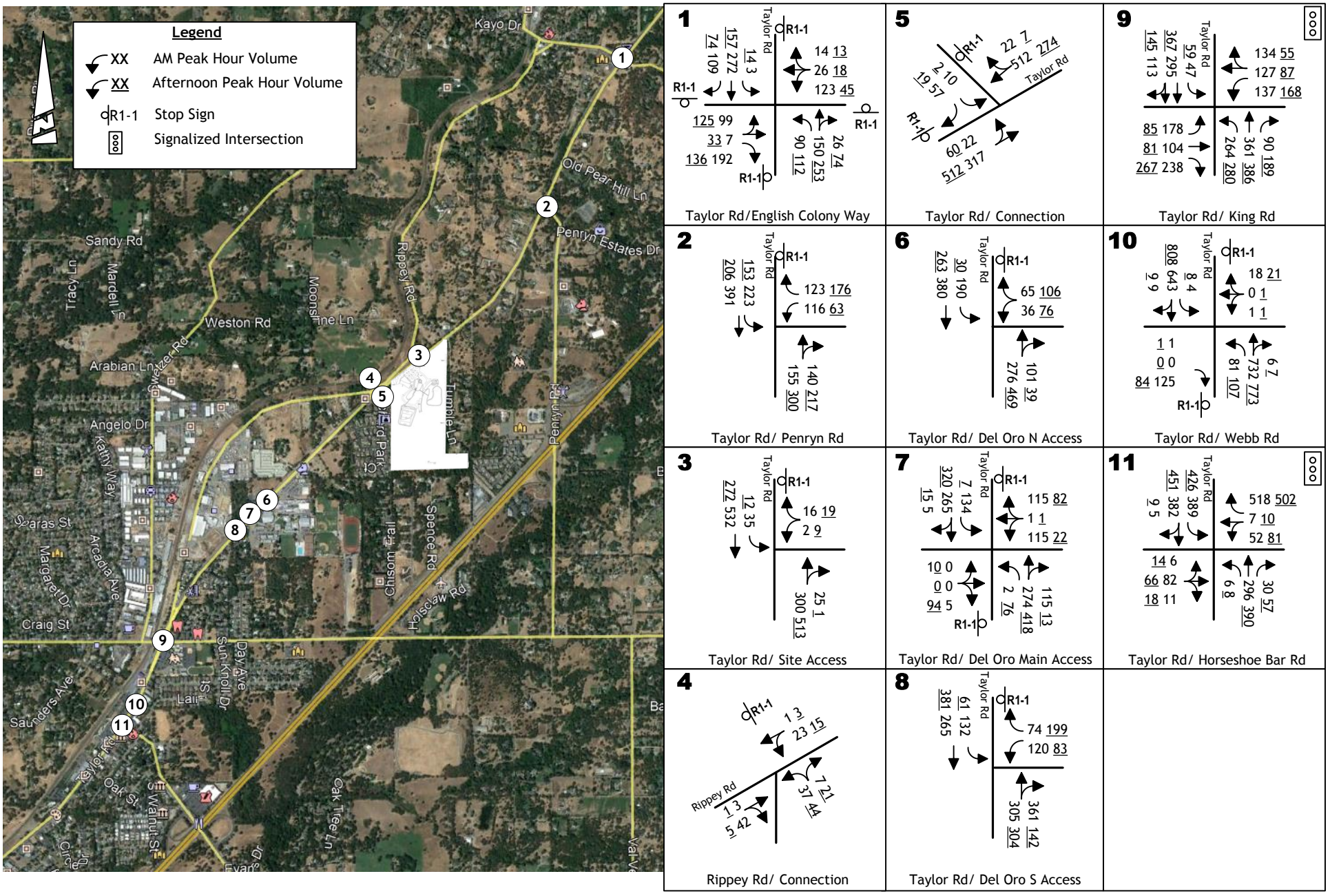
Measures to improve the operation of the intersection include construction of new streets to reduce the volume of traffic on Taylor Road and installation of a traffic signal at this location. For example, the construction of the Doc Barnes Extension from Horseshoe Bar Road to King Road and the Webb Street extension from Taylor Road to Horseshoe Bar Road would reduce traffic on Taylor Road and improve the Level of Service at Taylor Road intersections. These streets and a traffic signal at the Webb Street intersection are included in the Village at Loomis project and partially funded by the Town's Fee program. However, there is no guarantee that the Village at Loomis project will be approved and install these improvements, and Placer County

has no control over the Town's fee program. ***Thus, this impact is significant and unavoidable.***

Traffic Signal Warrants. As noted earlier, the volumes at three existing intersections already satisfy traffic signal warrants. The addition of project traffic doesn't result in any additional un-signalized intersections carrying volumes that satisfy peak hour warrants.

Roadway Segment LOS. Table 10 identifies the Roadway Segment Level of Service occurring on the segments of Taylor Road east and west of the site with the addition of project daily trips. As shown, the Levels of Service at each location will remain within the adopted minimum standard. Thus, the project's impact to the overall traffic flow on Taylor Road is not significant.

Safety. The project will add a small amount of traffic through the Taylor Road / Rippey Road intersection, although no project traffic is anticipated on Rippey Road itself. Project traffic represents an increase of 3% of the current traffic in the a.m. peak hour (27/913=3%), 2% of the current traffic in the afternoon peak hour (12/864=2%) and 3% of the p.m. peak hour traffic (21/713 = 3%). The addition of project trips is not anticipated to have a noticeable effect on the frequency or severity of collisions at the Taylor Road/Rippey Road intersection, and the project's impact is not significant. As noted earlier, the Town could elect to limit left turns to address this issue.



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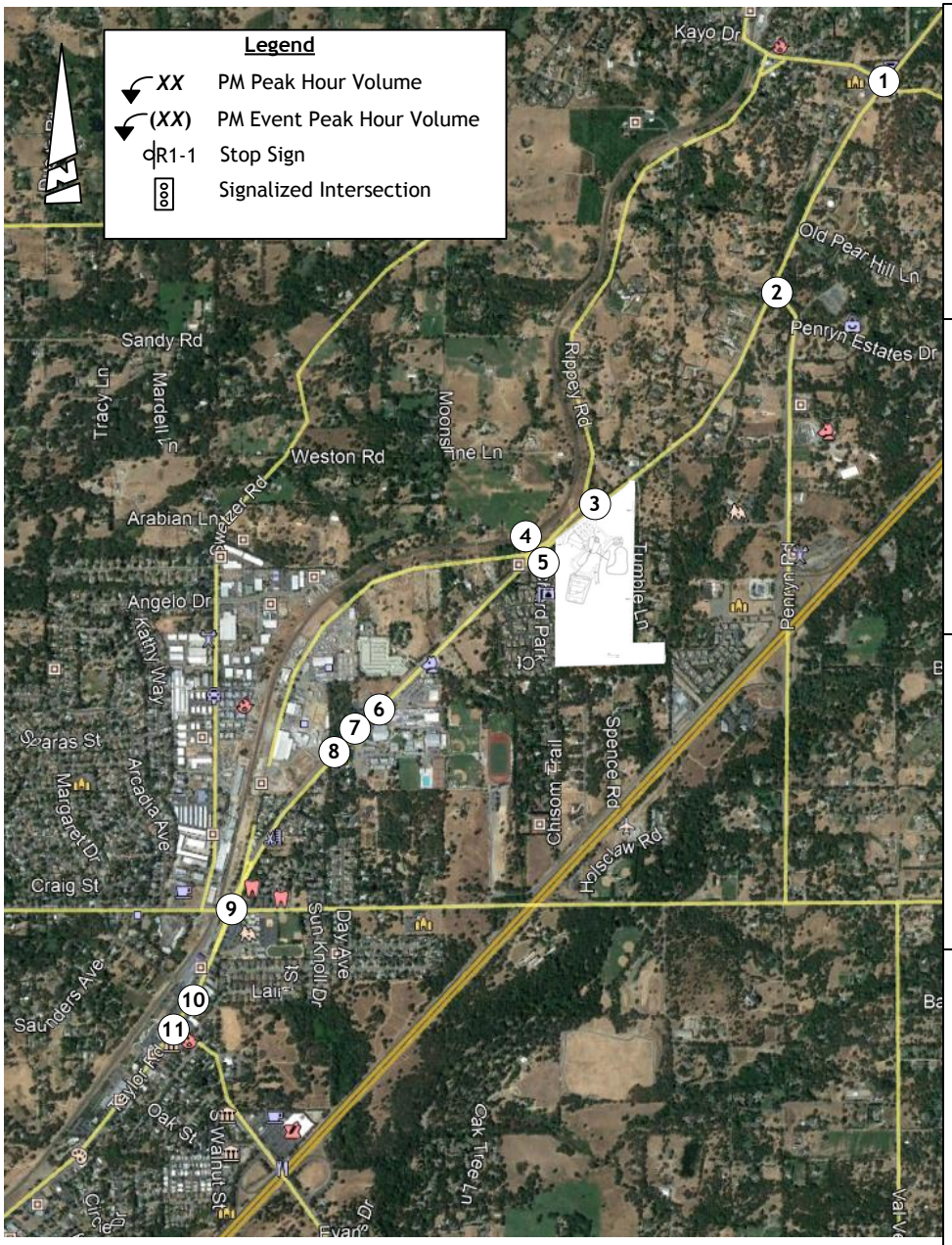
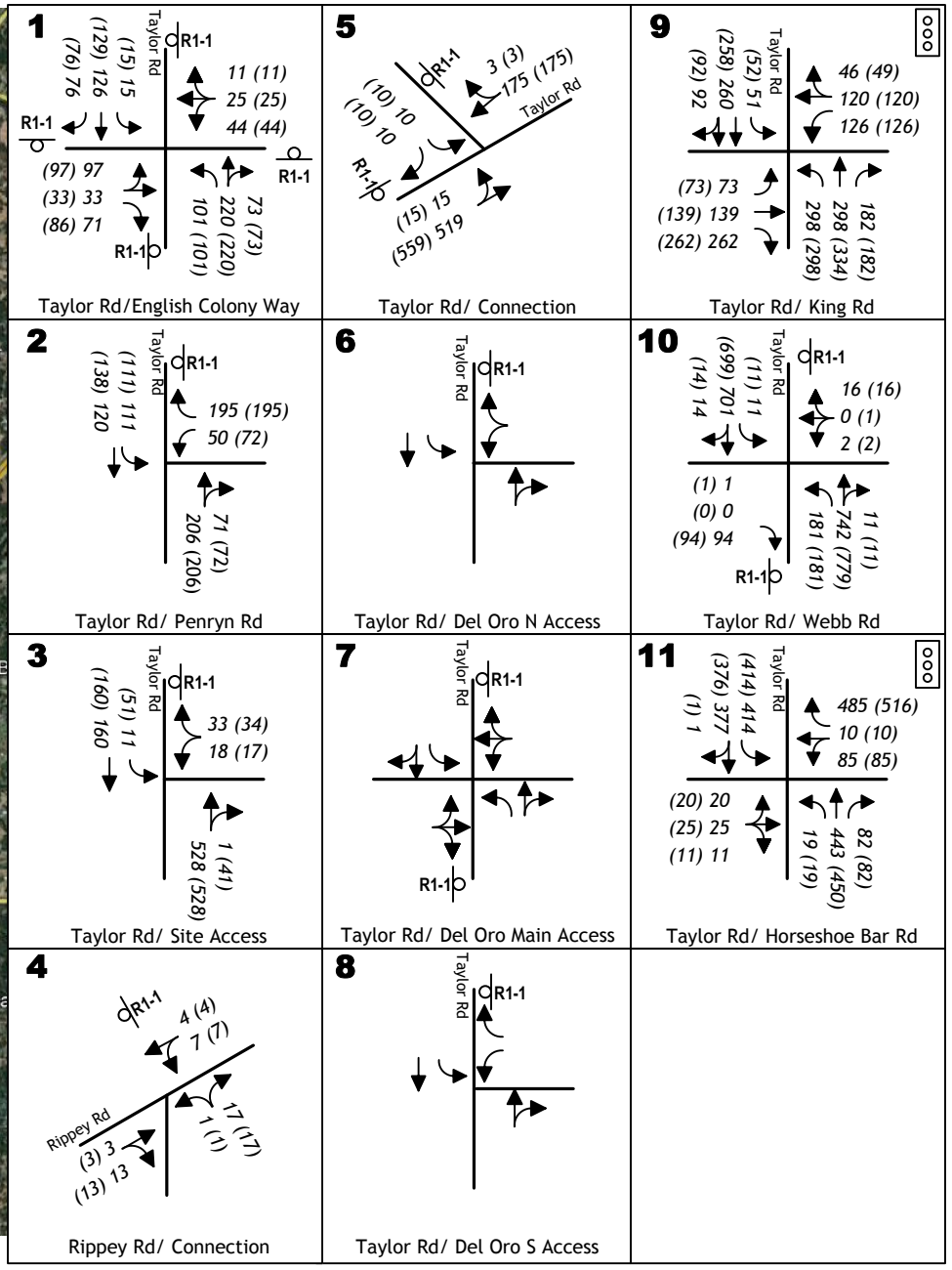
EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS – AM AND AFTERNOON

figure 6





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EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS – PM PEAK HOUR

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figure 7

TABLE 9
EXISTING PLUS PROJECT CONDITIONS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

No.	Intersection	Control	AM Peak Hour (7:15 to 8:30 a.m.)				Afternoon Peak Hour (2:30 to 3:30 p.m.)				PM Peak Hour (4:30 to 5:30 p.m.)					
			Existing		Plus Project		Existing		Plus Project		Existing		Plus Project			
													Regular		Worst Case	
			Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS
1	Taylor Rd / English Colony Way	All-Way Stop	22.2	C	22.8	C	20.7	C	20.8	C	15.4	C	15.5	C	15.6	C
2	Taylor Rd / Penryn Rd	NB/SB Stop														
	(overall)		**(203.2)**	**(F)**	**(356.4)**	**(F)**	(17.0)	(C)	(19.4)	(C)	(11.4)	(A)	(12.0)	(B)	(13.0)	B
	Westbound left turn		9.8	A	9.9	A	9.6	A	9.8	A	8.2	A	8.3	A	8.3	A
	Northbound approach		406.3	F	679.4	F	21.9	C	25.6	D	12.9	B	13.7	B	14.9	B
3	Taylor Rd / Access	NB Stop														
	(overall)		-	-	(9.2)	(A)	-	-	(13.5)	(B)	-	-	(14.5)	(A)	(13.3)	(B)
	Northbound approach				11.3	B			15.4	C			15.7	C	17.3	C
	Westbound left turn				8.1	A			8.9	A			8.9	A	9.3	A
4	Taylor Rd / Rippey Rd	SB Stop														
	Southbound approach		21.3	C	21.8	C	13.9	B	14.0	B	13.2	B	13.4	B	13.9	B
5	Taylor Rd / East Del Oro	NB Stop														
	Northbound approach		245.9	F	298.6	F	73.9	F	77.4	F	-					
6	Taylor Rd / Central Del Oro	NB/SB Stop														
	Northbound approach		375.4	F	428.7	F	45.1	E	47.2	E						
	Southbound approach		10.6	B	10.6	B	21.4	C	22.0	C						
7	Taylor Rd / West Del Oro	NB Stop														
	Northbound approach		106.3	F	120.3	F	29.3	D	29.9	D						
8	Taylor Rd / King Rd	Signal	41.3	D*	41.3	D*	25.2	C	25.4	C	20.7	C	24.3	C	24.1	C
9	Taylor Road / Webb Street	NB / SB Stop														
	Northbound approach		18.8	C	19.4	C	23.5	C	23.6	C	**30.1**	**D***	**31.4**	**D***	**32.9**	**D***
	Southbound approach		18.1	C	18.3	C	20.7	C	21.1	C	18.4	C	18.8	C	18.9	C
10	Taylor Road / HBR	Signal	28.8	C	29.4	C	**37.6**	**D***	**38.5**	**D***	33.3	C	**36.0**	**D***	**37.0**	**D***

Bold values are conditions in excess of applicable minimum Levels of Service **Highlighted** Values area a significant impact. Conditions at Del Oro HS driveways are for information only and are not significance criteria.

(*) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection. The overall average intersection control delay is reported in seconds per vehicle for signalized and all-way stop controlled locations. For side street stop controlled intersections, Placer County uses the overall weighted average control delay for movements yielding the right-of-way. For side-street stop controlled intersections in the Town of Loomis, the average control delay for the movement with the greatest delay is reported.

TABLE 10
EXISTING PLUS PROJECT ROADWAY SEGMENT
LEVEL OF SERVICE ON TAYLOR ROAD

Location	Lanes	Minimum LOS	Volume Threshold	Existing		Existing Plus Project		
				Daily Volume	Level of Service	Daily Volume		Level of Service
						Project Only	Total	
West of Access	2	C	14,400	7,380	A	70	7,450	A
East of Access	2	C	14,400	7,380	A	184	7,564	A

Access Design

Sight Distance. The proposed access has already been improved to Plate 116 standards which include provisions for sight distance that is commensurate with the design speed of the road. In this case, the design speed of 55 mph on Taylor Road which requires corner sight distance of 605 feet. This sight distance is available.

Need for Left Turn Lane Channelization. The methodology employed by Caltrans and local agencies was used to quantitatively determine whether a left turn lane may be justified in this case. The American Association of State Transportation and Highway Officials (AASHTO) have identified guidelines for the installation of left turn lanes in their publication *A Policy on Geometric Design of Highways and Streets*. These guidelines, which are presented in their Exhibit 9-75 and Table 11, base the need for a left turn lane on the volume of traffic on the mainline road and the relative percentage of that traffic that turns. These criteria are applicable to intersections where the major street traffic proceeds freely and side street traffic is controlled by stop signs and would indicate whether the interference caused by vehicles waiting to turn justifies a separate turn lane.

The need for a left turn lane would be based on the volume occurring in the a.m. peak hour because background traffic is the greatest at that time and the highest number of left turns will occur. At that time the project could generate 35 left turns per hour into the site. These left turns represent 6% of the advancing westbound volume (567 vehicles). As noted in Table 11, the total opposing eastbound traffic volume (i.e., 325 vehicles per hour) would require 430 to 550 advancing vehicles with left turns in the range of 5% to justify a left turn lane at 50 mph. Therefore, because the advancing volume of 567 vehicles exceeds this volume range a left turn lane could be justified under these criteria.

A similar evaluation was conducted for conditions during the afternoon peak and p.m. peak hour. In the afternoon peak hour the project could generate 12 left turns per hour into the site. These left turns represent 4% of the total advancing westbound volume (284 vehicles). As noted in Table 11, justifying a left turn lane with the expected total opposing eastbound traffic volume (i.e., 514 vehicles per hour) would require 350 to 430 advancing vehicles with left turns in the

range of 5% to justify a left turn lane at 50 mph, or 290 to 365 opposing vehicles at 60 mph. The advancing volume forecast (284) falls below that range for speeds of 50 and 60 mph. Therefore, a left turn lane is not justified under these criteria.

The project could generate 11 left turns per hour into the site in the regular p.m. peak hour. These left turns represent 6% of the advancing westbound volume (171 vehicles). As noted in Table 11, the total opposing eastbound traffic volume (i.e., 529 vehicles per hour) would require 350 to 430 advancing vehicles with left turns in the range of 5% to justify a left turn lane at 50 mph, or 290 to 365 opposing vehicles at 60 mph. The forecast advancing volume of 171 falls below either of those ranges. Therefore, a left turn lane is not justified under these criteria during that time period.

When an event occurs the project could generate 51 left turns per hour into the site in the p.m. peak hour. These left turns represent 24% of the advancing westbound volume (211 vehicles). As noted in Table 11, the total opposing eastbound traffic volume (i.e., 569 vehicles per hour) would require 195 to 240 advancing vehicles with left turns in the range of 20% to justify a left turn lane at 50 mph, or 160 to 200 opposing vehicles at 60 mph. The forecast advancing volume of 211 exceeds either of those ranges. Therefore, a left turn lane could be justified under these criteria during that time period.

Satisfying AASHTO guidelines is just one factor considered by Placer County in determining whether to install a separate left turn lane. Other factors may include available sight distance, available shoulder area and the duration of peak traffic. Today the sight distance for approaching vehicles traveling on Taylor Road is good, and following motorists have a clear view of traffic slowing to use the site access. Taylor Road is also equipped with paved shoulders that would provide maneuvering room for following vehicles as well. In this case, the project's regular traffic would be concentrated into relatively short time periods, and as a result the turn lane would not be needed for most of the day. The absence of a left turn lane is not a significant safety impact, and a left turn lane is therefore not recommended.

It is possible that special events occurring during peak traffic periods may create more unusual circumstances that justify action since other motorists may not be expecting these conditions. This is a ***significant safety impact*** that can be mitigated.

While widening the roadway to create left turn lane is not needed, other safety related measures such as temporary advance warning signs that inform background traffic of the events would be applicable. These measures should be a part of a *Traffic Management Plan (TMP)* to be submitted for Placer County approval and implemented when identified events of a specific size and schedule occur. With this mitigation the impact is not significant.

TABLE 11
TRAFFIC VOLUMES JUSTIFYING LEFT TURN LANES
AT TAYLOR ROAD ACCESS

Opposing Volume (veh/hr)	Advancing Volume (veh/hr)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
50-mph operating speed				
800	280	210	165	135
600	350	260	195	170
569	-	-	*211 (24%)*	-
529	*171 (6%)*	-	-	-
514	284 (4%)	-	-	-
400	430	320	240	210
325	567 (6%)	-	-	-
200	550	400	300	270
100	615	445	335	295
60-mph operating speed				
800	230	170	125	115
600	290	210	160	140
569	-	-	211 (24%)	-
529	171 (6%)	-	-	-
514	284 (4%)		-	-
400	365	270	200	175
325	567 (6%)	330	250	215
200	450		-	-
100	505	370	275	240

Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2004.*

AM Peak Hour Existing Plus Project volume at Taylor Road Access *Satisfied*

Afternoon Peak hour Existing Plus Project volume at Taylor Road Access *– Not Satisfied*

PM Peak hour Existing Plus Project volume at Taylor Road Access- *Not Satisfied*

PM Peak Hour – Existing Plus Event volume at Taylor Road Access - *Satisfied*

Impacts to Alternative Transportation Modes

Pedestrian Facilities. Due to its rural location and the distances involved from the project to student and employee residences which are closer to Auburn, this project is unlikely to attract pedestrians as part of the day to day travel associated with the school. As discussed under trip distribution, nearly all students originate at locations beyond the Loomis area and are bussed to the site. As part of its frontage improvements the project will perpetuate paved shoulders that can be used by pedestrians. Thus, the project's impact on pedestrians is not significant.

Bicycle Facilities. Similarly, the distances involved between the site employee and student residences make appreciable bicycle use unlikely. As noted earlier, as part of previous frontage improvements the project access satisfies Plate 116 improvement standards in a manner that accommodates bicyclists, and the volume of project traffic accessing Taylor Road at the access is

too small to result in appreciable conflicts between automobiles and bicyclists. The project does not result in any unsafe condition for bicyclists and does not conflict with planned bicycle facilities identified in adopted plans. Thus, the project's impact on bicycles is not significant.

Transit. Because the bus route runs by the site the project could theoretically result in result in employees who elect to use of Placer Transit's Taylor Road shuttle. While no current employees reside in areas that are readily served by Placer Transit, this could change in the future. However, it is unlikely that the resulting transit demand would be large to be judged to be significant nor enough to justify a designated transit stop or improvements that would accompany a stop, like a covered shelter.

LONG TERM CUMULATIVE CONDITIONS

This section of this traffic study describes operating conditions under long-term background scenarios that are representative of conditions occurring twenty years in the future. The Long Term Cumulative conditions reflect development of future land uses and implementation of transportation improvement projects in the area as forecast by the Town of Loomis' regional travel demand forecasting model.

The Cumulative No Project scenario establishes a baseline condition for identifying long-term project-related impacts. While the project site was last used as a Bed & Breakfast / Events Center, the No Project condition assumes that the proposed project is not constructed and that the site remains vacant. The Cumulative plus Project condition assumes that site is developed as proposed.

One development proposal, the Village at Loomis, is under consideration by the Town of Loomis while this report is being prepared. Its land use characteristics differ from those identified under the Town's General Plan. The Village at Loomis would construct elements of the Town's Circulation Element for which funding has not been identified nor guaranteed. For these reasons, the cumulative alternative addresses an Alternative Cumulative Scenario without the Village at Loomis and its associated roadway improvements.

Background Traffic Volume Forecasts

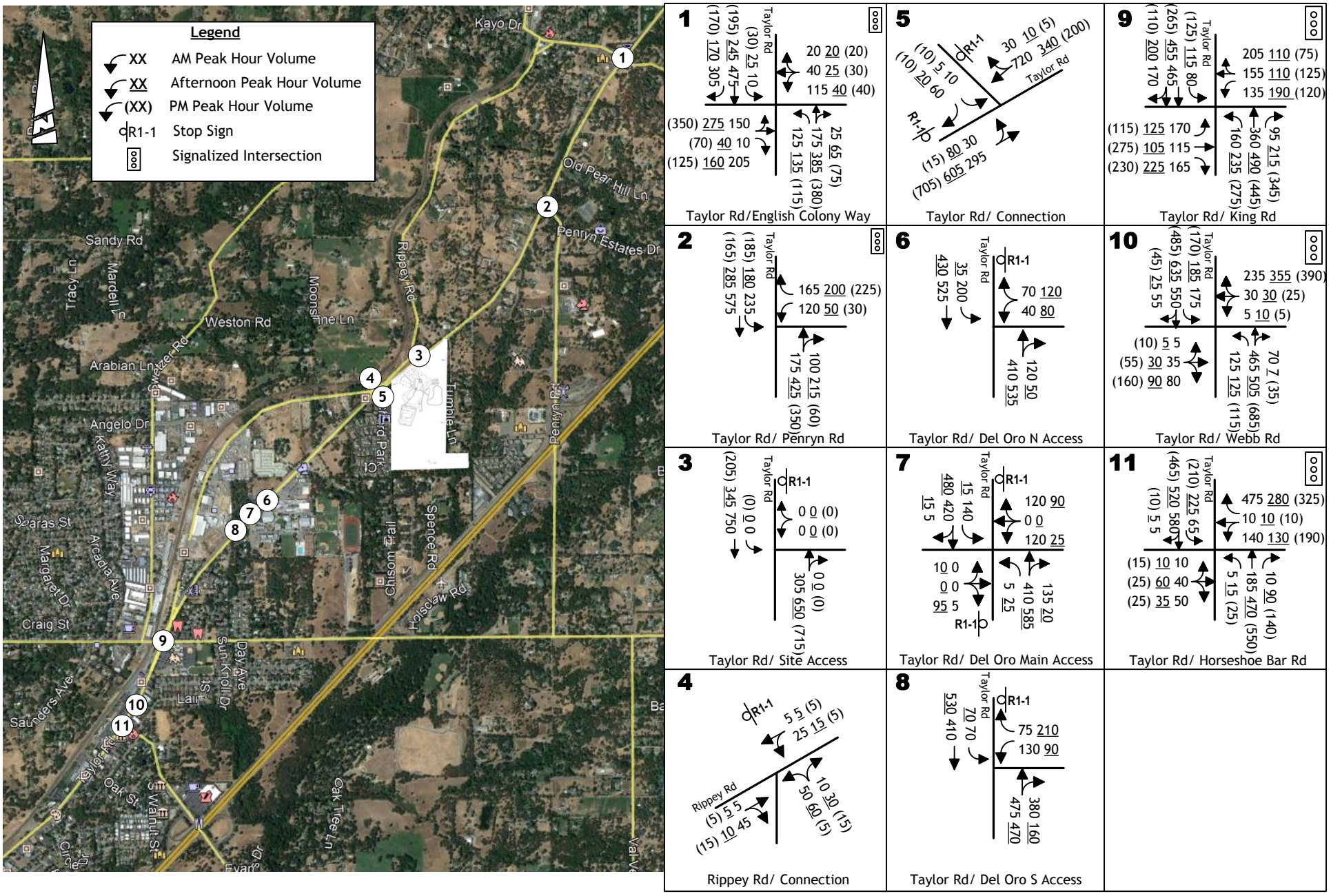
Land Use. Cumulative traffic volumes were created using the version of the Loomis regional travel demand forecasting model created for *The Village at Loomis Draft Environmental Impact Report.* As requested by Town staff, the model version selected includes build out of The Village at Loomis project.

The Town of Loomis' traffic model was originally created by DKS Associates as one of two models derived from the original Placer County regional traffic model. The model encompasses the multi-county SACOG area and reflects development inside and outside of the Town of Loomis. Recent and planned development in the communities adjoining Loomis is reflected in the model's long term land use assumptions.

An Alternative Cumulative Scenario was analyzed assuming that the Village at Loomis is not approved and developed. For that alternative, Placer County staff considered development permitted under the Town of Loomis General Plan as well as the land use assumed for the Village at Loomis site in the Town's traffic model. The traffic model's year 2030 land use set includes 433 single family residences and 211.6 ksf of retail on The Village at Loomis. Review of the maximum buildout potential for the site derived from residential density and non-residential intensity indicates that development under these assumptions could be allowed based on General Plan land use designations. Based on this review the alternative cumulative background condition assumes future traffic model land uses.

Development of this site without The Village at Loomis but with land uses permitted under the General Plan would not necessarily be accompanied by the streets contemplated in The Village proposal, and Placer County staff considered how access may be achieved given the status of the Town's CIP and traffic fee program. Without The Village at Loomis completion of the Doc Barnes Extension from Horseshoe Bar Road to King Road the Webb Street Extension is not certain. Thus, while it is likely that the individual parcels within The Village site that are developed may be linked by local streets, there is no guarantee that these connecting streets would provide through routes for other public traffic. Thus, this analysis assumes development under the General Plan will be able to access King Road, Horseshoe Bar Road and Webb Street, but that no through traffic will occur across The Village at Loomis site.

Methodology. The modified model was run with and without The Village at Loomis development and its streets to create a.m. and p.m. peak hour segment volume forecasts for study area roadways under the Cumulative No Project and Alternative Cumulative No Project condition. These forecasts were compared to the base model (Year 2008) forecasts, and the incremental change in daily and peak hour traffic was identified. These increments were added to baseline volumes to create adjusted future forecasts as well as growth rates for individual roadway segments based on this comparison. These growth rates were then applied to the current a.m., afternoon and p.m. peak hour turning movement counts at each study intersection, and the results were balanced using the techniques contained in *Transportation Research Board's (TRB's) NCHRP report 255, Highway Data for Urbanized Area Project Planning and Design*. Figure 8 identifies the resulting long term peak hour traffic volume projections for Cumulative No Project conditions that included The Village at Loomis, while Figures 9 and 10 illustrate Cumulative plus Project volumes created by adding the UAIC School Project's trips.



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CUMULATIVE WITHOUT PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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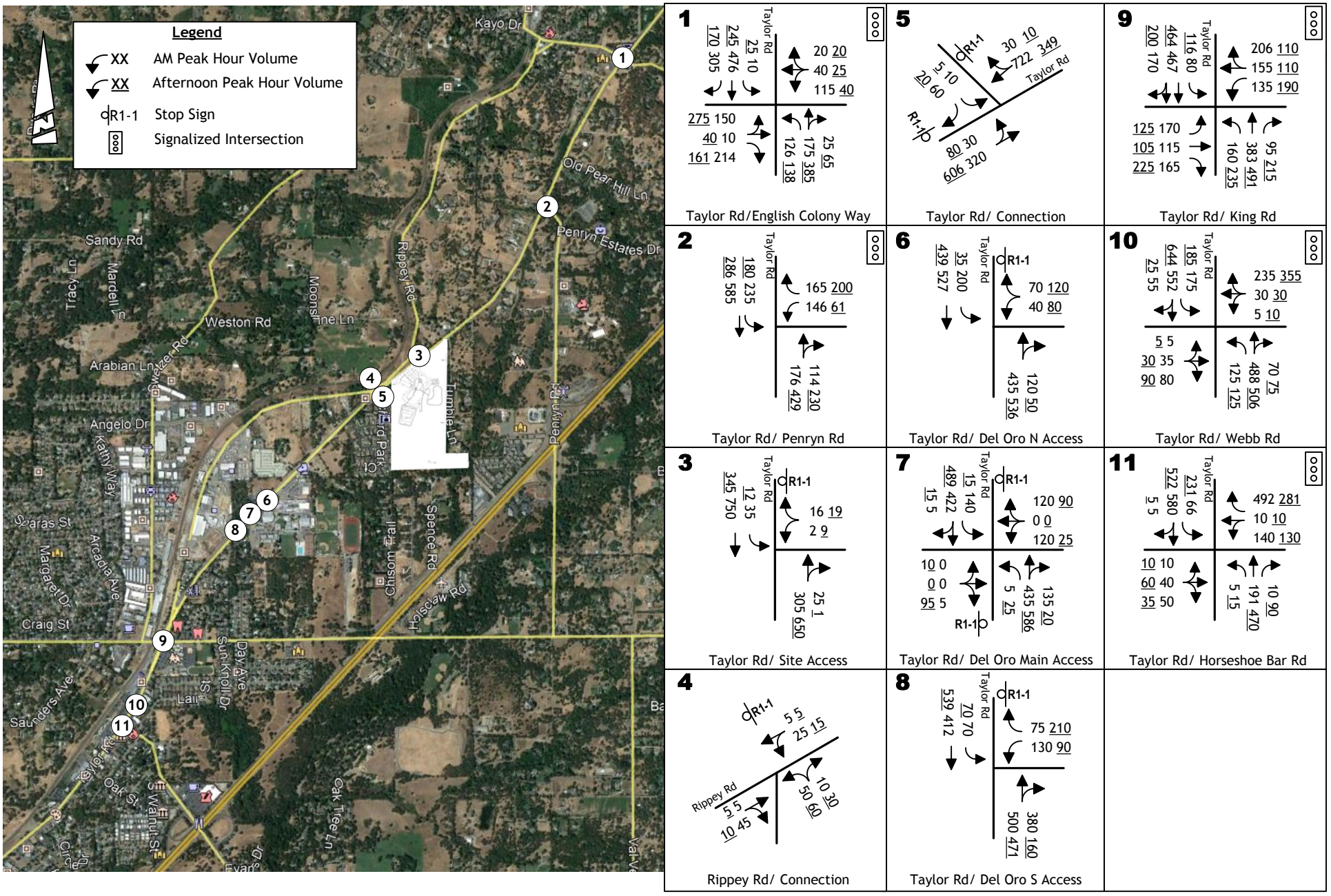
figure 8



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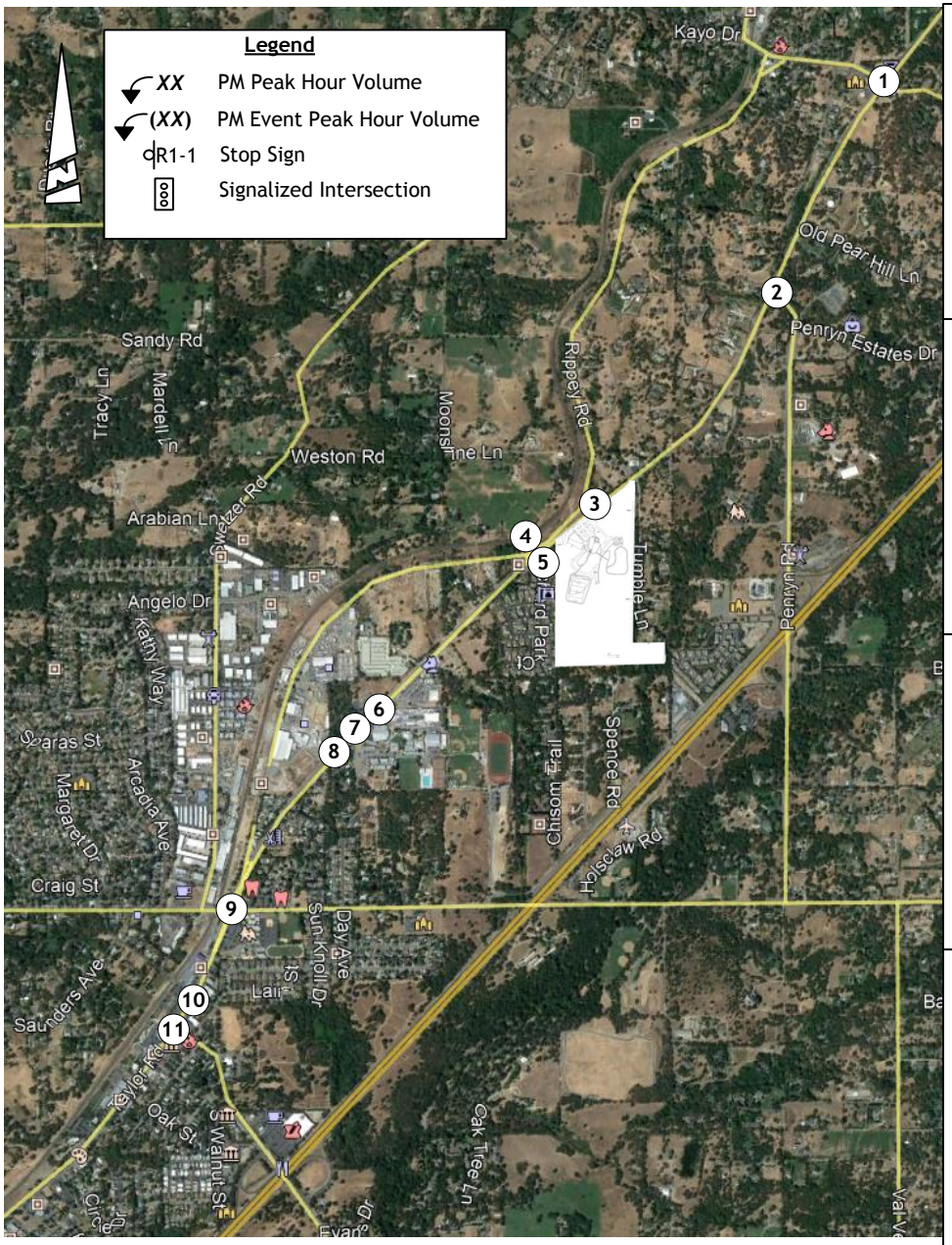
CUMULATIVE PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS – AM AND AFTERNOON

figure 9



1 Taylor Rd/English Colony Way

Taylor Rd: (30) 30, (198) 195, (170) 170; 20 (20), 30 (30), 40 (40); (350) 350, (70) 70, (140) 125; 75 (75), 381 (381), 122 (122)

5 Taylor Rd/ Connection

R1-1: 5 (5), 218 (217); Taylor Rd; (10) 10, (10) 10; R1-1; (15) 15, (746) 706

9 Taylor Rd/ King Rd

Taylor Rd: (127) 126, (280) 282, (110) 110; 75 (78), 125 (125), 120 (120); (115) 115, (275) 275, (230) 230; 345 (345), 446 (482), 275 (275)

2 Taylor Rd/ Penryn Rd

Taylor Rd: R1-1; (185) 185, (183) 165; 225 (225), 41 (63); 85 (86), 358 (358)

6 Taylor Rd/ Del Oro N Access

Taylor Rd: R1-1

10 Taylor Rd/ Webb Rd

Taylor Rd: (170) 170, (500) 502, (45) 45; 390 (390), 25 (25), 5 (5); (10) 10, (55) 55, (160) 160; 35 (35), 686 (722), 115 (115)

3 Taylor Rd/ Site Access

Taylor Rd: R1-1; (51) 11, (205) 205; 33 (34), 18 (17); 1 (41), 715 (715)

7 Taylor Rd/ Del Oro Main Access

Taylor Rd: R1-1; R1-1

11 Taylor Rd/ Horseshoe Bar Rd

Taylor Rd: (222) 222, (468) 469, (10) 10; 325 (356), 10 (10), 190 (190); (15) 15, (25) 25, (25) 25; 140 (140), 550 (557), 25 (25)

4 Rippey Rd/ Connection

R1-1: 5 (5), 5 (5); Rippey Rd; 15 (15), 5 (5); (5) 5, (15) 15

8 Taylor Rd/ Del Oro S Access

Taylor Rd: R1-1

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CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS – PM PEAK HOUR

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figure 10

Background Roadway Improvements

Placer County Improvements. Regional roadway improvements are anticipated under the Newcastle / Horseshoe Bar / Penryn Area Benefit District within the Placer County Traffic Impact Fee Program, as noted in Table 12. These improvements have been assumed to be installed.

TABLE 12
COUNTYWIDE CAPITAL IMPROVEMENT PROGRAMS

Street / Intersection	Segment	Description of Improvements
NEWCASTLE / HORSESHOE BAR / PENRYN AREA BENEFIT DISTRICT		
English Colony Way	Taylor Road intersection	Signalize
English Colony Way	Sierra College Blvd to Taylor Road	Widen for shoulders and bike lanes
Penryn Road	Taylor Road intersection	Signalize / Intersection Improvements
Taylor Road	Loomis Town limits to Plan Boundary	Bike Lanes and Shoulders

Improvements within the Town of Loomis. This analysis makes alternative assumptions for improvements within the Town of Loomis depending on the presence of The Village at Loomis.

The cumulative background with The Village at Loomis assumes improvements in Loomis that are reasonably certain based on funding through the Town's fee program or their inclusion in the proposed Village at Loomis DEIR project description. These include:

- Doc Barnes Extension from Horseshoe Bar Road to King Road
- Webb Street extension from Taylor Road to Library Drive
- Traffic signal at Taylor Road / Webb Street intersection
- Roundabout at Horseshoe Bar Road / Webb Street / Library Drive intersection

Under the Alternative Cumulative background condition without The Village at Loomis, these improvements are not assumed.

As noted earlier, the Town of Loomis CIP identifies a traffic signal at Del Oro High School access, but no funding has been identified for the signal. Because funding is uncertain, this improvement has not been assumed to be completed in this analysis under either scenario.

Cumulative No Project Levels of Service With the Village at Loomis

Cumulative No Project Intersection Levels of Service. Table 13 displays a.m. afternoon and p.m. peak hour LOS at each study intersection under Cumulative No Project conditions. As shown, under Cumulative No Project conditions, the study intersections in Placer County will operate at LOS C, which satisfies the County's minimum LOS standard.

In Loomis, the signalized **King Road / Taylor Road intersection** will operate at LOS D in the a.m. and p.m. peak hours, which exceeds the LOS C minimum but can be accepted by the Town's Circulation Element. No additional intersection improvements are planned at this location by the Town.

The signalized **Taylor Road / Webb Street intersection** is projected to operate at LOS D in the p.m. peak hour, which exceeds the Town's LOS C minimum. To improve the Level of Service it would be necessary to widen the Webb Street approaches to provide separate right turn lanes. This improvement is identified as a mitigation in the Village at Loomis DEIR.

The un-signalized study intersections in the Town of Loomis would operate with Levels of Service which do not satisfy the minimum LOS C threshold identified for these locations. The deficient locations are described in the text which follows:

At the **Taylor Road / Rippey Road connection intersection** the southbound approach is projected to operate at E in the a.m. peak hour and LOS D in the afternoon. These conditions would not satisfy the Town's minimum LOS C standard.

The projected traffic volumes at this intersection do not satisfy peak hour traffic signal warrants, and no improvements to this intersection are included in the Town of Loomis CIP or fee program. To improve the Level of Service at this intersection it would be necessary to eliminate left turn access from the connection onto Taylor Road, or install a traffic signal or roundabout intersection. While the feasibility of either improvement has not been established, with these improvements the intersection would operate at LOS C or better during the a.m., afternoon and p.m. peak hours. Alternatively, relocating the connection from Rippey Road onto Taylor Road to a different location might improve safety but would not necessarily reduce the average length of delays.

The **Taylor Road intersections with Del Oro HS access** are projected to operate at LOS F during the morning and afternoon peak periods under Cumulative conditions. The Town of Loomis CIP notes that the main western access could be signalized, and a traffic signal with a separate eastbound right turn lane could yield conditions that satisfy the LOS C minimum. It is possible that internal circulation system changes may be made at the school when the intersection is signalized and these changes may improve access at the two remaining locations.

Cumulative No Project Traffic Signal Warrants. If the volume of traffic on Taylor Road increases as suggested by the Town of Loomis traffic model, then both the western and central Del Oro HS access intersections would satisfy peak hour warrants in the a.m. peak hour.

Cumulative No Project Roadway Segment Levels of Service. Table 14 displays daily traffic volumes on Taylor Road east and west of the project access under long term Cumulative conditions. Current traffic volumes which were reported to be 7,380 ADT are projected to increase to 11,055. However, based on the Placer County GP LOS thresholds, these volumes remain indicative of LOS B conditions without improvements.

TABLE 13
CUMULATIVE PLUS PROJECT CONDITIONS WITH THE VILLAGE AT LOOMIS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

No.	Intersection	Control	AM Peak Hour (7:15 to 8:30 a.m.)				Afternoon Peak Hour (2:30 to 3:30 p.m.)				PM Peak Hour (4:30 to 5:30 p.m.)					
			No Project		Plus Project		No Project		Plus Project		No Project		Plus Project			
													Regular		Event	
			Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS
1	Taylor Rd / English Colony Way	Signal	22.5	C	23.3	C	24.1	C	24.2	C	28.5	C	28.8	C	28.8	C
2	Taylor Rd / Penryn Rd*	Signal	18.1	B	31.6	C	15.5	C	29.2	C	20.2	C	20.8	C	21.3	C
3	Taylor Rd / Access	NB Stop	-	-	(9.4)	(A)	-	-	(16.5)	(C)	-	-	(19.4)	(B)	(17.5)	(C)
	(overall)															
	NB approach				12.0	B			19.5	C			21.5	C	24.5	C
4	Taylor Rd / Rippey Rd SB approach	SB Stop	**39.3**	**E**	**40.3**	**E**	**25.7**	**D**	**26.4**	**D**	16.4	C	16.8	C	17.6	C
5	Taylor Rd / East Del Oro NB approach	NB Stop	>999	F	>999	F	287.6	F	301.4	F	-					
6	Taylor Rd / Central Del Oro	NB/SB Stop														
	NB approach		>999	F	>999	F	231.8	F	253.5	F						
	SB approach		12.6	B	12.6	B	54.3	F	57.3	F						
7	Taylor Rd / West Del Oro NB approach	NB Stop	250.2	F	285.4	F	130.6	F	135.8	F						
8	Taylor Rd / King Rd	Signal	**53.9**	**D****	**54.4**	**D****	34.8	C	**35.2**	**D****	**39.9**	**D****	**40.3**	**D****	**40.2**	**D****
9	Taylor Road / Webb Street	Signal	29.3	C	29.3	C	34.8	C	**35.0**	**D****	**40.8**	**D****	**40.7**	**D****	**44.7**	**D****
10	Taylor Road / HBR	Signal	27.0	C	27.8	C	28.3	C	28.5	C	29.2	C	29.9	C	30.5	C

Bold values are conditions at public road intersections in excess of applicable minimum Levels of Service. **Highlighted** Values are a significant impact. (*) based on Simtraffic simulation analysis. Conditions at Del Oro HS driveways are for information only and are not significance criteria. (**) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection.

The overall average intersection control delay is reported in seconds per vehicle for signalized and all-way stop controlled locations. For side street stop controlled intersections, Placer County uses the overall weighted average control delay for movements yielding the right-of-way. For side-street stop controlled intersections in the Town of Loomis, the average control delay for the movement with the greatest delay is reported.

TABLE 14
CUMULATIVE PLUS PROJECT
ROADWAY SEGMENT LEVEL OF SERVICE
ON TAYLOR ROAD

Location	Lanes	Minimum LOS	Volume Threshold	Existing		Cumulative		Cumulative Plus Project		
				Daily Volume	Level of Service	Daily Volume	Level of Service	Daily Volume		Level of Service
								Project Only	Total	
With The Village at Loomis										
West of Access	2	C	14,400	7,380	A	11,055	B	70	11,125	B
East of Access	2	C	14,400	7,380	A	11,055	B	184	11,239	B
Alternative Cumulative Without The Village at Loomis										
West of Access	2	C	14,400	7,380	A	10,955	B	70	11,025	B
East of Access	2	C	14,400	7,380	A	10,955	B	184	11,139	B

Cumulative Plus Project Levels of Service With The Village at Loomis

Cumulative Plus Project Intersection Levels of Service. The UAIC School project will add a small amount of traffic to study area intersections under long term cumulative conditions. As shown in Table 13, the addition of project trips will not change the Level of Service at the two signalized study area intersections in Placer County, and anticipated conditions remain within the minimum LOS C standard at both locations. Thus, the project's cumulative impact at these locations is not significant.

In Loomis, the signalized **King Road / Taylor Road intersection** will continue to operate at LOS D in the a.m. and p.m. peak hours with and without the project, and the project will cause the intersection to operate at LOS D in the afternoon. While the minimum LOS C standard is exceeded, LOS D can be accepted under the policies contained in the Loomis Circulation Element. However, because the Town of Loomis may not elect to accept LOS D, the project's impact at this location is significant.

Measures to improve the Level of Service at this intersection would include installation of additional community-wide improvements that are described in the Town of Loomis Circulation Element but not funded. For example, the Swetzer Road extension from Sierra College Blvd across Webb Street to King Road would alter local travel patterns, and with that improvement the Village at Loomis DEIR indicates that long term conditions at the King Road / Taylor Road intersection would meet the Town's LOS C standard in the p.m. peak hour but LOS D would remain in the a.m. peak hour. However, because these improvements are not funded and Placer County has no control over the construction or funding for this improvement, there is no guarantee that improvements will be installed and ***the project's impact is significant and unavoidable.***

The project will add traffic to the signalized **Taylor Road / Webb Street intersection** which is projected to operate at LOS D in the p.m. peak hour with and without the project, and project trips will cause the intersection to operate at LOS D in the afternoon. LOS D exceeds the Town's minimum LOS C standard but can be accepted under the Circulation Element. Measures to improve the Level of Service at this location include widening the Webb Street approaches to provide separate right turn lanes. This improvement is a mitigation measure in the Village at Loomis DEIR. However, because the Town of Loomis may not choose to accept LOS D, because there is no guarantee that The Village at Loomis will be approved and install the improvement and because Placer County does not control funding for this improvement, there is no guarantee that mitigation will be installed, and ***the project's impact is significant and unavoidable.***

The project will add traffic to the other un-signalized Taylor Road intersections in the Town of Loomis, and while Levels of Service will not change, delays for motorists waiting to turn onto Taylor Road may increase. The un-signalized Taylor Road / Del Oro HS access intersections will operate at LOS F with and without the project. However, impacts to private driveways are not significance criteria under Town of Loomis policy, nor have the intersections been addressed in other studies prepared for the Town.

The project will add traffic to the un-signalized **Taylor Road / Rippey Road intersection** which will operate at LOS E in the a.m. peak hour and LOS D in the afternoon with and without the project. The Town of Loomis has not adopted significance criteria for situations at intersections where background traffic conditions already exceed their minimum standard, but any change in delay has been judged a significant impact in other Loomis traffic studies. Based on Town of Loomis precedent, the impact is judged to be significant.

Improvement options would remain as discussed under No project conditions. However, improvements are not funded and are not in the Town's impact fee program. It also appears that no development project in Loomis has been required to participate in the costs of improvements at this location. Because there is no guarantee that mitigation will be installed, ***the UAIC project's cumulative impact to the Taylor Road / Rippey Road intersection is significant and unavoidable.***

Cumulative Plus Project Roadway Segment Levels of Service. Table 14 also displays daily traffic volumes and Levels of Service on Taylor Road under long term Cumulative conditions. As shown, Taylor Road is projected to operate at LOS B with the project. As LOS B satisfies the County's minimum LOS C standard, the project's impact is not significant and no mitigation is required.

Alternative Cumulative No Project Levels of Service Without the Village at Loomis

Figure 11 presents cumulative background traffic volumes assuming that The Village at Loomis project does not proceed and associated roadways are not constructed.

Alternative Cumulative No Project Intersection Levels of Service. Table 15 displays a.m., afternoon and p.m. peak hour LOS at each study intersection under the Alternative Cumulative No Project conditions. As shown, under Alternative Cumulative No Project conditions, the study intersections in Placer County will operate at LOS C, which satisfies the County's minimum LOS standard.

In Loomis, the signalized **King Road / Taylor Road intersection** will operate at LOS E in the a.m. peak hour and LOS D in the afternoon and p.m. peak hour, which exceeds the LOS C minimum. LOS D can be accepted by the Town's Circulation Element. No additional intersection improvements are planned at this location by the Town, and improving conditions at this location would require implementation of unfunded Circulation Element improvements.

The un-signalized **Taylor Road / Webb Street intersection** is projected to operate at LOS F during all time periods, which exceeds the Town's LOS C minimum. To improve the Level of Service it would be necessary to limit both of the Webb Street approaches to right turn only or to implement unfunded improvements included in Circulation Element, including signalization of the intersection. However, without other improvements to reduce the volume of Taylor Road traffic, the operation of closely spaced signals at Horseshoe Bar Road and Webb Street could be problematic due to queueing.

The **Taylor Road / Horseshoe Bar Road intersection** is projected to operate at LOS D in the a.m. and afternoon peak hour and LOS E in the p.m. peak hour. Both of these conditions exceed the minimum LOS C threshold, although LOS D can be accepted by the Town. No local intersection improvements are anticipated, and improving the Level of Service at this intersection would require implementing unfunded Circulation Element improvements such as the Webb Street extension and the Doc Barnes Extension.

Conditions at the other un-signalized study intersections in the Town of Loomis would be similar to those associated with the cumulative conditions that include The Village at Loomis These intersections operate with Levels of Service which do not satisfy the minimum LOS C threshold identified for these locations. The deficient locations are described in the text which follows:

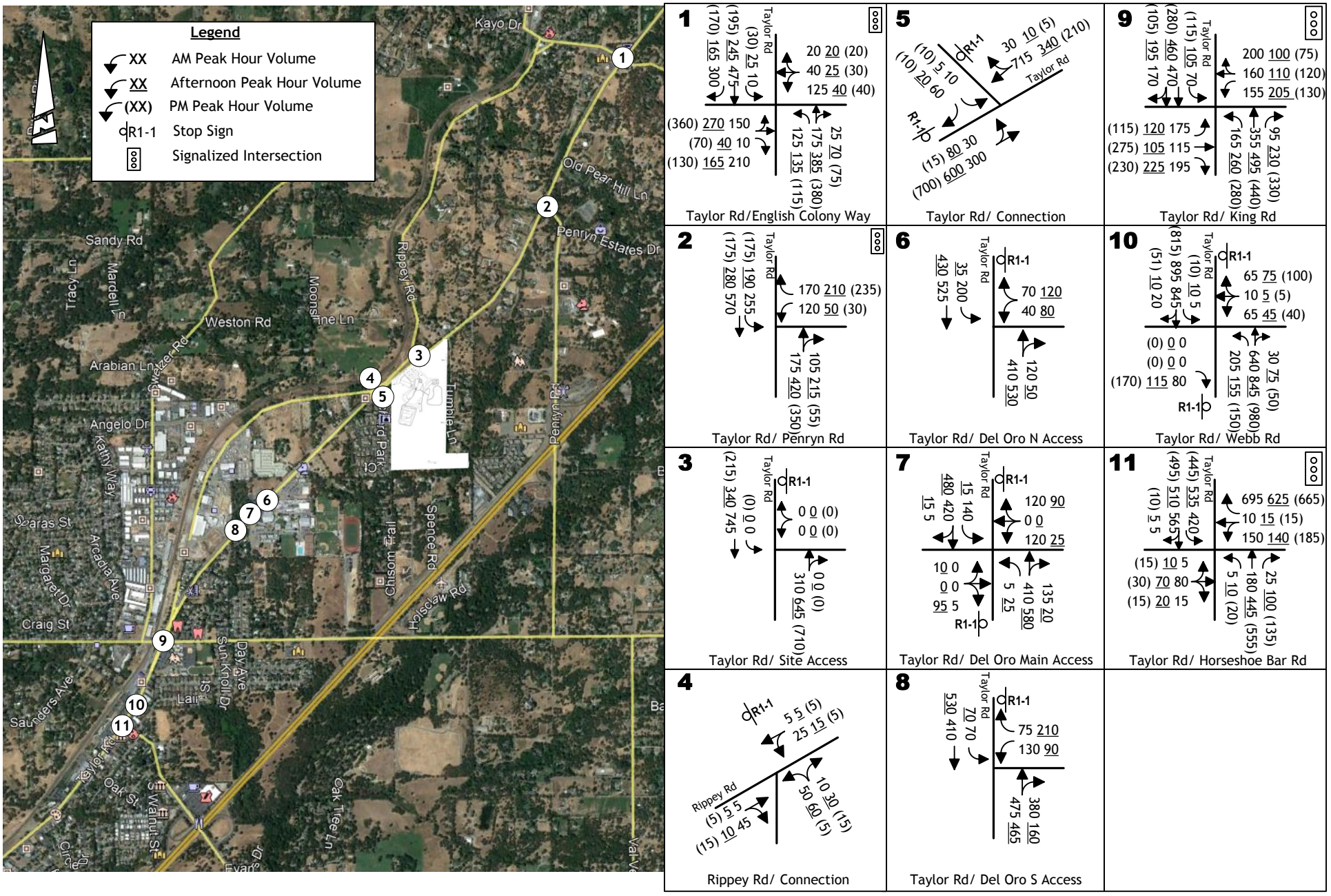
At the **Taylor Road / Rippey Road connection intersection** the southbound approach is projected to operate at E in the a.m. peak hour and LOS D in the afternoon. These conditions would not satisfy the Town's minimum LOS C standard.

The projected traffic volumes at this intersection do not satisfy peak hour traffic signal warrants, and no improvements to this intersection are included in the Town of Loomis CIP or fee program. To improve the Level of Service at this intersection it would be necessary to eliminate left turn access from the connection onto Taylor Road, or install a traffic signal or roundabout intersection. While the feasibility of either improvement has not been established, with these improvements the intersection would operate at LOS C or better during the a.m., afternoon and p.m. peak hours. Alternatively, relocating the connection from Rippey Road onto Taylor Road to a different location might improve safety but would not necessarily reduce the average length of delays.

The **Taylor Road intersections with Del Oro HS access** are projected to operate at LOS F during the morning and afternoon peak periods under the Alternative Cumulative conditions. The Town of Loomis CIP notes that the main western access could be signalized, and a traffic signal with a separate eastbound right turn lane could yield conditions that satisfy the LOS C minimum. It is possible that internal circulation system changes may be made at the school when the intersection is signalized and these changes may improve access at the two remaining locations.

Alternative Cumulative No Project Traffic Signal Warrants. If the volume of traffic on Taylor Road increases as suggested by the Town of Loomis traffic model, then both the western and central Del Oro HS access intersections would satisfy peak hour warrants in the a.m. peak hour. The Taylor Road / Webb Street intersection would also satisfy peak hour traffic signal warrants.

Alternative Cumulative No Project Roadway Segment Levels of Service. Table 15 displays daily traffic volumes on Taylor Road east and west of the project access under the Alternative Cumulative conditions. Current traffic volumes which were reported to be 7,380 ADT are projected to increase to 10,955. However, based on the Placer County GP LOS thresholds, these volumes remain indicative of LOS B conditions without improvements.



ALTERNATIVE CUMULATIVE WITHOUT PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6260-21 RA 6/7/2018

figure 11

TABLE 15
ALTERNATIVE CUMULATIVE PLUS PROJECT CONDITIONS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

No.	Intersection	Control	AM Peak Hour (7:15 to 8:30 a.m.)				Afternoon Peak Hour (2:30 to 3:30 p.m.)				PM Peak Hour (4:30 to 5:30 p.m.)					
			No Project		Plus Project		No Project		Plus Project		No Project		Plus Project			
													Regular		Event	
			Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS	Ave Delay (sec/veh)	LOS
1	Taylor Rd / English Colony Way	Signal	20.7	C	21.4	C	24.2	C	24.1	C	30.0	C	30.3	C	30.3	C
2	Taylor Rd / Penryn Rd*	Signal	19.9	C	33.0	C	18.7	C	27.7	C	19.6	C	21.2	C	21.2	C
3	Taylor Rd / Access	NB Stop	-		(10.9)	(B)	-		(16.5)	(C)	-		(19.4)	(C)	(17.5)	(C)
	(overall)															
	NB approach				17.1	C			19.5	C			21.5	C	24.5	C
4	Taylor Rd / Rippey Rd	SB Stop														
	SB approach		**39.3**	**E**	**40.3**	**E**	**25.7**	**D**	**26.4**	**D**	16.4	C	16.8	C	17.6	C
5	Taylor Rd / East Del Oro	NB Stop														
	NB approach		**>999**	**F**	**>999**	**F**	**287.6**	**F**	**301.4**	**F**						
6	Taylor Rd / Central Del Oro	NB/SB Stop														
	NB approach		12.6	B	12.6	B	**54.3**	**F**	**57.3**	**F**						
	SB approach		**<999**	**F**	**>999**	**F**	**231.8**	**F**	**253.5**	**F**						
7	Taylor Rd / West Del Oro	NB Stop														
	NB approach		**260.2**	**F**	**285.4**	**F**	**130.6**	**F**	**135.8**	**F**						
8	Taylor Rd / King Rd	Signal	**60.3**	**E**	**60.6**	**E**	**40.1**	**D****	**40.5**	**D****	**38.8**	**D****	**39.3**	**D****	**39.0**	**D****
9	Taylor Rd / Webb Street	NB/SB Stop														
	NB approach		**>999**	**F**	**>999**	**F**	**>999**	**F**	**>999**	**F**	**>999**	**F**	**>999**	**F**	**>999**	**F**
	SB Approach		16.7	C	16.7	C	**25.3**	**D****	**25.7**	**D****	**28.3**	**D****	**30.0**	**D****	**30.2**	**D****
10	Taylor Rd / HBR	Signal	**39.0**	**D****	**41.0**	**D****	**46.4**	**D****	**46.5**	**D****	**51.3**	**E**	**51.9**	**E**	**68.7**	**E**

Bold values are conditions at public road intersections in excess of applicable minimum Levels of Service **Highlighted** Values are a significant impact. (*) based on Simtraffic simulation analysis. Conditions at Del Oro HS driveways are for information only and are not significance criteria. (**) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection.

The overall average intersection control delay is reported in seconds per vehicle for signalized and all-way stop controlled locations. For side street stop controlled intersections, Placer County uses the overall weighted average control delay for movements yielding the right-of-way. For side-street stop controlled intersections in the Town of Loomis, the average control delay for the movement with the greatest delay is reported.

Alternative Cumulative Plus Project Levels of Service Without the Village at Loomis

Figures 12 and 13 present Alternative Cumulative Plus Project traffic volumes at study area intersections.

Alternative Cumulative Plus Project Intersection Levels of Service. The UAIC School project will add a small amount of traffic to study area intersections under long term Alternative Cumulative conditions. As shown in Table 15, the addition of project trips will not change the Level of Service at the two signalized study area intersections in Placer County, and anticipated conditions remain within the minimum LOS C standard at both locations. Thus, the project's cumulative impact at these locations is not significant.

In Loomis, the signalized **King Road / Taylor Road intersection** will continue to operate at LOS E in the a.m. peak hour and LOS D in the afternoon and p.m. peak hours with and without the project. While the minimum LOS C standard is exceeded, LOS D can be accepted under the policies contained in the Loomis Circulation Element. However, because a.m. conditions reach LOS E and the length of delays are increased the project's cumulative impact at this location is significant.

Measures to improve the Level of Service at this intersection would include installation of unfunded community-wide improvements that are described in the Town of Loomis Circulation Element. For example, the Doc Barns Extension and the Swetzer Road extension from Sierra College Blvd across Webb Street to King Road would alter local travel patterns and improve the Level of Service. However, because these improvements are not funded and Placer County has no control over the construction or funding for this improvement, there is no guarantee that improvements will be installed and ***the project's cumulative impact is significant and unavoidable.***

The project will add traffic and lengthen delays at the **Taylor Road / Horseshoe Bar Road intersection** which is projected to operate at LOS D in the a.m. and afternoon peak hour and LOS E in the p.m. peak hour. Both of these conditions exceed the minimum LOS C threshold, although LOS D can be accepted by the Town. No local intersection improvements are anticipated, and improving the Level of Service at this intersection would require implementing unfunded Circulation Element improvements such as the Webb Street extension and the Doc Barnes Extension. However, because these improvements are not funded and Placer County has no control over the construction or funding for this improvement, there is no guarantee that improvements will be installed and ***the project's cumulative impact is significant and unavoidable.***

The project will add traffic and lengthen delays at the un-signalized **Taylor Road / Webb Street intersection** which is projected to operate at LOS F. LOS F exceeds the Town's minimum LOS C standard. Measures to improve the Level of Service at this location include limiting both of the Webb Street approaches to right turn only or to implement unfunded improvements included in Circulation Element, including signalization of the intersection. However, because these

improvements are not funded and Placer County has no control over the construction or funding for this improvement, there is no guarantee that improvements will be installed and ***the project's cumulative impact is significant and unavoidable.***

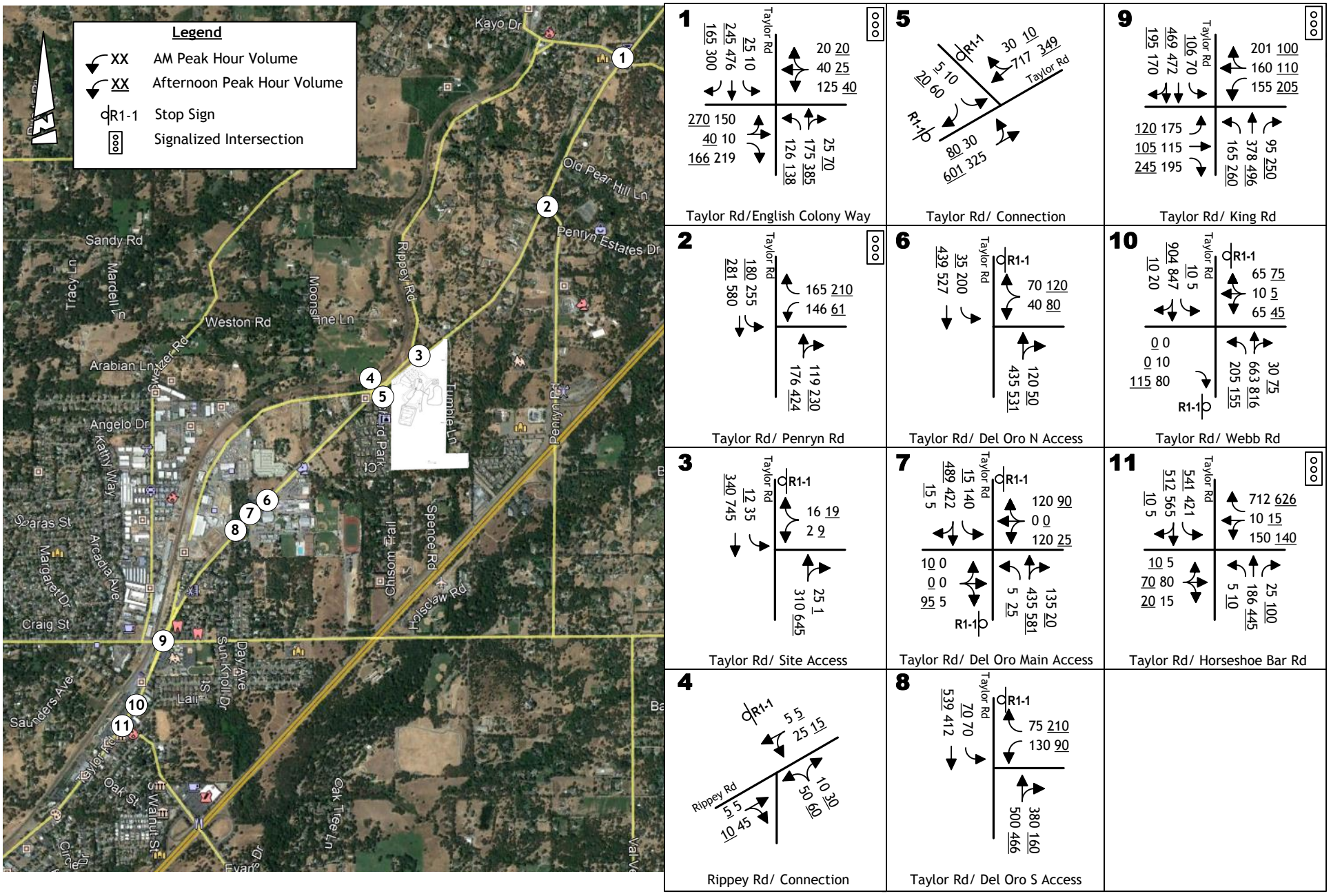
The project will add traffic to the other un-signalized Taylor Road intersections in the Town of Loomis, and while Levels of Service will not change, delays for motorists waiting to turn onto Taylor Road may increase. The un-signalized Taylor Road / Del Oro HS access intersections will operate at LOS F with and without the project. However, impacts to private driveways are not significance criteria under Town of Loomis policy, nor have the intersections been addressed in other studies prepared for the Town.

The project will add traffic to the un-signalized **Taylor Road / Rippey Road intersection** which will operate at LOS E in the a.m. peak hour and LOS D in the afternoon with and without the project. The Town of Loomis has not adopted significance criteria for situations at intersections where background traffic conditions already exceed their minimum standard, but any change in delay has been judged a significant impact in other Loomis traffic studies. Based on Town of Loomis precedent, the impact is judged to be significant.

Improvement options would remain as discussed under the Cumulative No Project conditions. However, improvements are not funded and are not in the Town's impact fee program. It also appears that no development project in Loomis has been required to participate in the costs of improvements at this location. There is no fee program to ensure that the balance of the cost of the improvement would be funded. Because there is no guarantee that mitigation will be installed, ***the project's cumulative impact to the Taylor Road / Rippey Road intersection is significant and unavoidable.***

Alternative Cumulative Plus Project Traffic Signal Warrants. If the volume of traffic on Taylor Road increases as suggested by the Town of Loomis traffic model with project trips, then both the western and central Del Oro HS access intersections would satisfy peak hour warrants in the a.m. peak hour. The Taylor Road / Webb Street intersection would also satisfy peak hour traffic signal warrants. No additional locations satisfy warrants with project traffic.

Alternative Cumulative Plus Project Roadway Segment Levels of Service. Table 15 also displays daily traffic volumes and Levels of Service on Taylor Road under long term Cumulative conditions. As shown, Taylor Road is projected to operate at LOS B with the project. As LOS B satisfies the County's minimum LOS C standard, the project's impact is not significant and no mitigation is required.



ALTERNATIVE CUMULATIVE PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS – AM AND AFTERNOON

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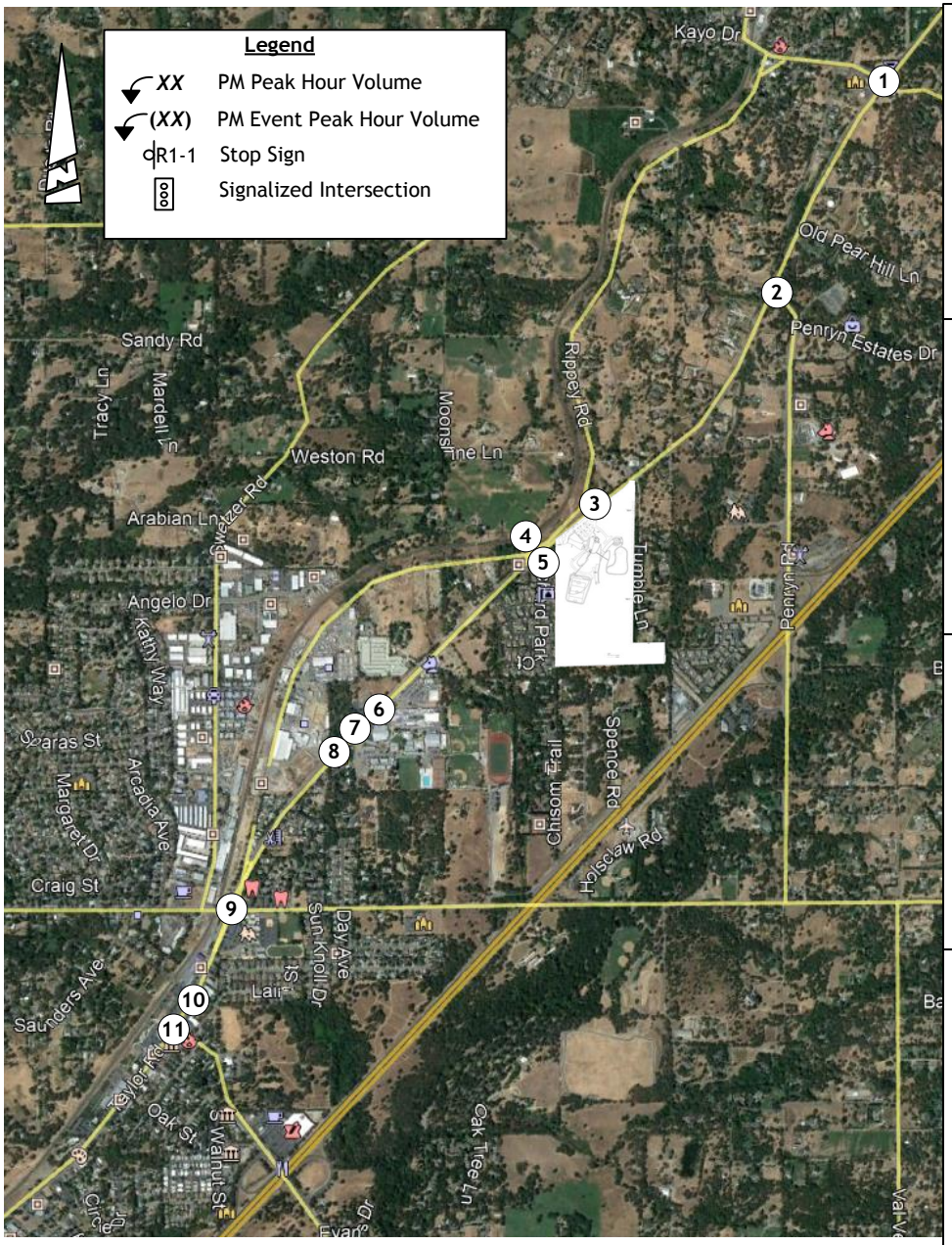
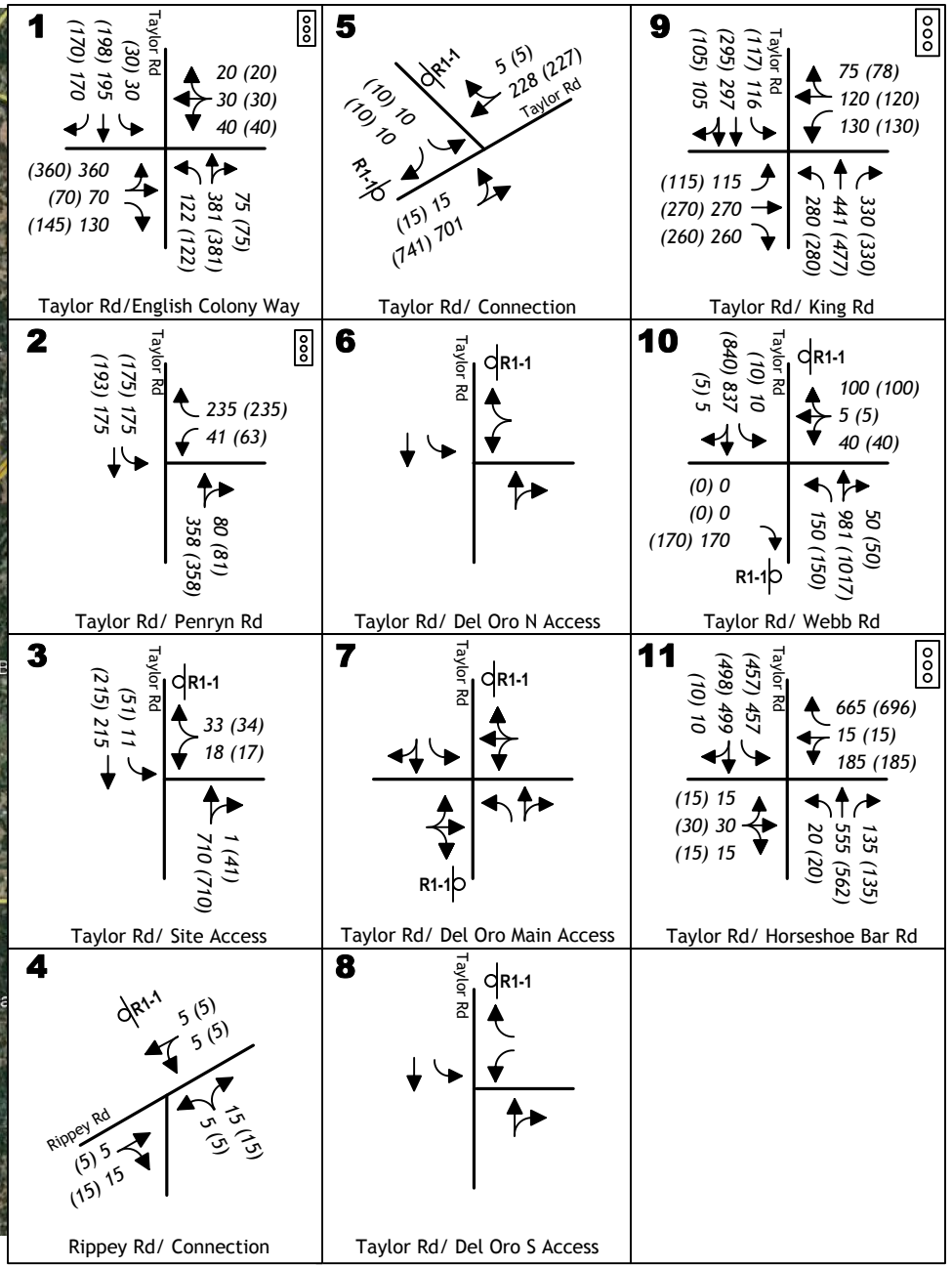
Transportation Engineers

6260-21 RA 6/7/2018

figure 12





ALTERNATIVE CUMULATIVE PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS – PM PEAK HOUR

KD Anderson & Associates, Inc.
Transportation Engineers

6260-21 RA 6/7/2018

figure 13

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APPENDICES

(under separate cover)

TECHNICAL APPENDIX 1 of 3

FOR

UNITED AUBURN INDIAN COMMUNITY SCHOOL PROJECT
TRAFFIC IMPACT ANALYSIS
Placer County, CA

Prepared For:

RANEY PLANNING & MANAGEMENT
1501 Sports Drive
Sacramento, CA 95834

Prepared By:

KD Anderson & Associates, Inc.
3853 Taylor Road, Suite G
Loomis, CA 95650
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June 25, 2018

5765-21

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

5765-21

File Name : 17-08163-001
Date : 12/12/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					Horseshoe Bar Rd Westbound					Taylor Rd Northbound					Horseshoe Bar Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	115	44	0	0	159	13	1	107	0	121	1	48	6	0	55	0	8	1	0	9	344	0
7:15	76	66	1	0	143	5	0	142	0	147	0	86	6	0	92	3	12	1	0	16	398	0
7:30	103	67	0	0	170	10	3	140	0	153	2	65	6	0	73	0	27	2	0	29	425	0
7:45	99	107	0	0	206	13	3	118	0	134	1	79	7	0	87	3	24	4	0	31	458	0
Total	393	284	1	0	678	41	7	507	0	555	4	278	25	0	307	6	71	8	0	85	1625	0
8:00	99	93	2	0	194	14	0	117	0	131	2	63	9	0	74	3	19	2	0	24	423	0
8:15	87	115	3	0	205	15	1	126	0	142	1	83	8	0	92	0	12	3	0	15	454	0
8:30	66	92	0	0	158	15	1	72	0	88	0	45	8	0	53	0	2	3	0	5	304	0
8:45	71	66	1	0	138	8	1	72	0	81	0	59	8	0	67	2	5	0	0	7	293	0
Total	323	366	6	0	695	52	3	387	0	442	3	250	33	0	286	5	38	8	0	51	1474	0
14:00	53	77	0	0	130	24	1	107	0	132	4	106	24	0	134	1	5	4	0	10	406	0
14:15	75	75	2	0	152	21	2	131	0	154	5	108	21	0	134	1	7	1	0	9	449	0
14:30	110	108	3	0	221	19	1	119	0	139	1	95	15	0	111	3	22	5	0	30	501	0
14:45	99	104	0	0	203	26	4	143	0	173	3	99	16	0	118	2	8	2	0	12	506	0
Total	337	364	5	0	706	90	8	500	0	598	13	408	76	0	497	7	42	12	0	61	1862	0
15:00	111	110	4	0	225	20	3	126	0	149	2	82	14	0	98	7	25	8	0	40	512	0
15:15	100	127	2	0	229	16	2	113	0	131	2	114	12	0	128	2	11	3	0	16	504	0
15:30	97	92	3	0	192	23	1	114	0	138	3	118	16	0	137	5	6	1	0	12	479	0
15:45	100	104	0	0	204	17	5	127	0	149	3	90	22	0	115	4	9	4	0	17	485	0
Total	408	433	9	0	850	76	11	480	0	567	10	404	64	0	478	18	51	16	0	85	1980	0
16:00	107	77	0	0	184	24	4	131	0	159	3	113	12	0	128	5	8	4	0	17	488	0
16:15	96	112	0	0	208	18	3	111	0	132	7	116	19	0	142	7	3	2	0	12	494	0
16:30	120	98	0	0	218	28	1	119	0	148	7	100	20	0	127	3	6	3	0	12	505	0
16:45	79	86	1	0	166	15	2	124	0	141	2	114	31	0	147	5	8	2	0	15	469	0
Total	402	373	1	0	776	85	10	485	0	580	19	443	82	0	544	20	25	11	0	56	1956	0
17:00	90	91	0	0	181	17	1	117	0	135	5	109	26	0	140	3	5	2	0	10	466	0
17:15	96	93	1	0	190	15	4	148	0	167	3	105	10	0	118	6	7	1	0	14	489	0
17:30	77	90	1	0	168	12	3	135	0	150	2	104	12	0	118	4	7	2	0	13	449	0
17:45	97	90	0	0	187	24	2	127	0	153	2	90	17	0	109	8	2	6	0	16	465	0
Total	360	364	2	0	726	68	10	527	0	605	12	408	65	0	485	21	21	11	0	53	1869	0
Grand Total	2223	2184	24	0	4431	412	49	2886	0	3347	61	2191	345	0	2597	77	248	66	0	391	10766	0
Apprch %	50.2%	49.3%	0.5%	0.0%		12.3%	1.5%	86.2%	0.0%		2.3%	84.4%	13.3%	0.0%		19.7%	63.4%	16.9%	0.0%			
Total %	20.6%	20.3%	0.2%	0.0%	41.2%	3.8%	0.5%	26.8%	0.0%	31.1%	0.6%	20.4%	3.2%	0.0%	24.1%	0.7%	2.3%	0.6%	0.0%	3.6%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Horseshoe Bar Rd Westbound					Taylor Rd Northbound					Horseshoe Bar Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	103	67	0	0	170	10	3	140	0	153	2	65	6	0	73	0	27	2	0	29	425
7:45	99	107	0	0	206	13	3	118	0	134	1	79	7	0	87	3	24	4	0	31	458
8:00	99	93	2	0	194	14	0	117	0	131	2	63	9	0	74	3	19	2	0	24	423
8:15	87	115	3	0	205	15	1	126	0	142	1	83	8	0	92	0	12	3	0	15	454
Total Volume	388	382	5	0	775	52	7	501	0	560	6	290	30	0	326	6	82	11	0	99	1760
% App Total	50.1%	49.3%	0.6%	0.0%		9.3%	1.3%	89.5%	0.0%		1.8%	89.0%	9.2%	0.0%		6.1%	82.8%	11.1%	0.0%		
PHF	.942	.830	.417	.000	.941	.867	.583	.895	.000	.915	.750	.873	.833	.000	.886	.500	.759	.688	.000	.798	.961

PM PEAK HOUR	Taylor Rd Southbound					Horseshoe Bar Rd Westbound					Taylor Rd Northbound					Horseshoe Bar Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	110	108	3	0	221	19	1	119	0	139	1	95	15	0	111	3	22	5	0	30	501
14:45	99	104	0	0	203	26	4	143	0	173	3	99	16	0	118	2	8	2	0	12	506
15:00	111	110	4	0	225	20	3	126	0	149	2	82	14	0	98	7	25	8	0	40	512
15:15	100	127	2	0	229	16	2	113	0	131	2	114	12	0	128	2	11	3	0	16	504
Total Volume	420	449	9	0	878	81	10	501	0	592	8	390	57	0	455	14	66	18	0	98	2023
% App Total	47.8%	51.1%	1.0%	0.0%		13.7%	1.7%	84.6%	0.0%		1.8%	85.7%	12.5%	0.0%		14.3%	67.3%	18.4%	0.0%		
PHF	.946	.884	.563	.000	.959	.779	.625	.876	.000	.855	.667	.855	.891	.000	.889	.500	.660	.563	.000	.613	.988

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-08163-001
Date : 12/12/2017

Bank 1 Count = Bikes & Peds

	Taylor Rd Southbound					Horseshoe Bar Rd Westbound					Taylor Rd Northbound					Horseshoe Bar Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	2
7:45	0	1	0	1	1	0	0	0	2	0	0	2	0	1	2	0	0	0	2	0	3	6
Total	0	2	0	1	2	0	0	0	3	0	0	3	0	1	3	0	0	0	3	0	5	8
8:00	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	1	5
8:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
8:45	0	1	0	0	1	0	0	0	5	0	0	0	0	4	0	0	0	0	0	0	1	9
Total	0	2	0	1	2	0	0	0	5	0	0	1	0	5	1	0	0	0	4	0	3	15
14:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	2	2	2
14:15	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0	6
14:30	0	1	0	0	1	0	1	0	3	1	0	0	0	0	0	0	0	0	6	0	2	9
14:45	0	2	0	6	2	0	0	0	2	0	0	0	0	2	0	0	0	0	1	0	2	11
Total	0	3	0	7	3	0	1	0	11	1	0	0	0	2	0	0	1	1	8	2	6	28
15:00	1	1	0	4	2	0	0	0	0	0	0	1	0	3	1	0	0	0	9	0	3	16
15:15	0	3	0	1	3	0	0	0	0	0	0	1	0	0	1	0	1	0	4	1	5	5
15:30	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	3	0	0	6
15:45	0	1	0	2	1	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	1	6
Total	1	5	0	7	6	0	0	0	3	0	0	2	0	6	2	0	1	0	17	1	9	33
16:00	0	1	0	6	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	0	1	13
16:15	0	1	3	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	6
16:30	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	3	3	9
16:45	0	0	0	3	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	5
Total	0	2	3	23	5	0	0	0	4	0	0	0	0	1	0	0	3	0	5	3	8	33
17:00	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
17:15	0	0	0	3	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	4
17:30	0	0	0	3	0	0	2	0	3	2	0	0	0	1	0	0	2	0	0	2	4	7
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	0	0	9	0	0	2	0	4	2	0	2	0	1	2	0	2	0	1	2	6	15
Grand Total	1	14	3	48	18	0	3	0	30	3	0	8	0	16	8	0	7	1	38	8	37	132
Apprch %	5.6%	77.8%	16.7%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	87.5%	12.5%				
Total %	2.7%	37.8%	8.1%		48.6%	0.0%	8.1%	0.0%		8.1%	0.0%	21.6%	0.0%		21.6%	0.0%	18.9%	2.7%		21.6%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Horseshoe Bar Rd Westbound					Taylor Rd Northbound					Horseshoe Bar Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1
7:45	0	1	0	1	1	0	0	0	2	0	0	2	0	1	2	0	0	0	2	0	3
8:00	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	1
8:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	2	0	0	0	3	0	0	3	0	2	3	0	0	0	7	0	5
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.500	.000		.500	.000	.000	.000		.000	.000	.375	.000		.375	.000	.000	.000		.000	.417

PM PEAK HOUR	Taylor Rd Southbound					Horseshoe Bar Rd Westbound					Taylor Rd Northbound					Horseshoe Bar Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	0	1	0	0	1	0	1	0	3	1	0	0	0	0	0	0	0	0	6	0	2
14:45	0	2	0	6	2	0	0	0	2	0	0	0	0	2	0	0	0	0	1	0	2
15:00	1	1	0	4	2	0	0	0	0	0	0	1	0	3	1	0	0	0	9	0	3
15:15	0	3	0	1	3	0	0	0	0	0	0	1	0	0	1	0	1	0	4	1	5
Total Volume	1	7	0	11	8	0	1	0	5	1	0	2	0	5	2	0	1	0	20	1	12
% App Total	12.5%	87.5%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.583	.000		.667	.000	.250	.000		.250	.000	.500	.000		.500	.000	.250	.000		.250	.600

Prepared by National Data & Surveying Services

Taylor Rd & Horseshoe Bar Rd

Peak Hour Turning Movement Count

ID: 17-08163-001
City: Loomis

Day: Tuesday
Date: 12/12/2017

PEAK HOURS		COUNT PERIODS
07:30 AM - 08:30 AM		07:00 AM - 09:00 AM
NONE		NONE
02:30 PM - 03:30 PM		02:00 PM - 06:00 PM

Taylor Rd — SOUTHBOUND

AM	5	382	388	0	797	AM
NOON	0	0	0	0	0	NOON
PM	9	449	420	0	905	PM
	0	1	1	0		

Horseshoe Bar Rd — EASTBOUND

AM	NOON	PM		
18	0	27		
0	0	0	0	
6	0	14	0	
82	0	66	1	
11	0	18	0	
AM	NOON	PM		

Horseshoe Bar Rd — WESTBOUND

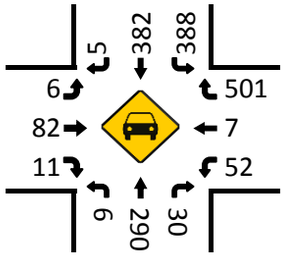
PM	NOON	AM		
501	0	501	1	
10	0	7	0.5	
81	0	52	0.5	
0	0	0	0	
543	0	500		
PM	NOON	AM		

Taylor Rd — NORTHBOUND

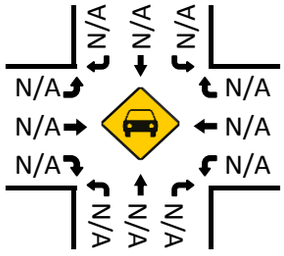
PM	548	0	8	390	57	PM
NOON	0	0	0	0	0	NOON
AM	445	0	6	290	30	AM
	0	1	1	1		

CONTROL			
Signalized			
TEV	1760	0	2023
	AM	NOON	PM
PHF	0.96		0.99

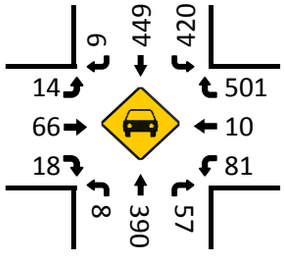
Total Vehicles (AM)



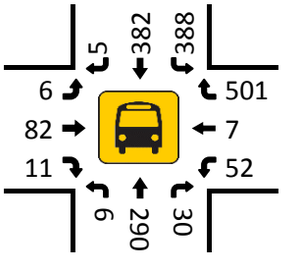
Total Vehicles (NOON)



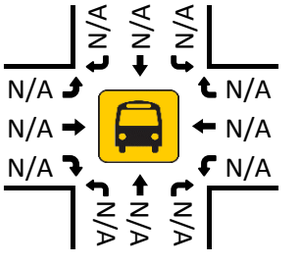
Total Vehicles (PM)



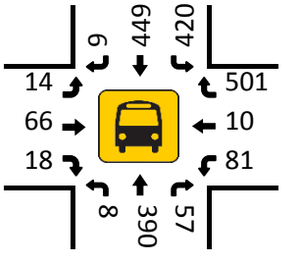
Total Vehicles (AM)



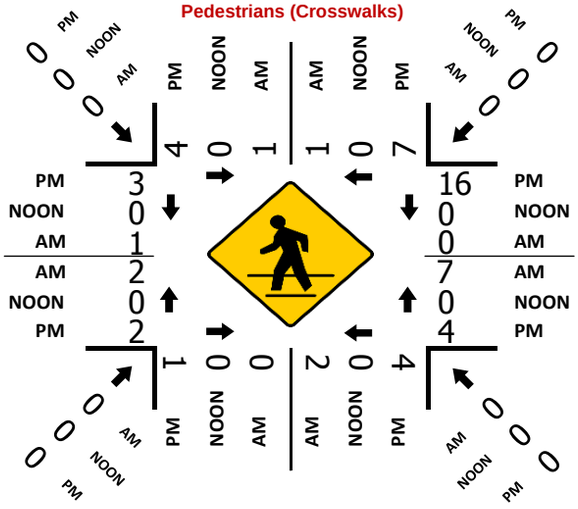
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

5765-21

File Name : 17-08163-002
Date : 12/12/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					Webb St Westbound					Taylor Rd Northbound					Webb St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	108	0	0	108	0	1	0	0	1	13	137	1	0	151	0	0	42	0	42	302	0
7:15	1	113	1	0	115	0	0	1	0	1	14	209	2	0	225	0	0	36	0	36	377	0
7:30	1	154	2	0	157	0	0	10	0	10	10	190	4	0	204	0	0	24	0	24	395	0
7:45	1	176	3	0	180	0	0	1	0	1	26	180	0	0	206	0	0	20	0	20	407	0
Total	3	551	6	0	560	0	1	12	0	13	63	716	7	0	786	0	0	122	0	122	1481	0
8:00	1	147	2	0	150	0	0	5	0	5	33	146	1	0	180	1	0	43	0	44	379	0
8:15	1	164	2	0	167	1	0	2	0	3	12	193	1	0	206	0	0	38	0	38	414	0
8:30	0	133	3	0	136	2	0	2	0	4	9	106	3	0	118	0	0	21	0	21	279	0
8:45	0	114	2	0	116	0	1	1	0	2	11	120	0	0	131	0	0	34	0	34	283	0
Total	2	558	9	0	569	3	1	10	0	14	65	565	5	0	635	1	0	136	0	137	1355	0
14:00	1	116	0	0	117	0	0	4	0	4	45	167	1	0	213	0	1	22	0	23	357	0
14:15	1	108	1	0	110	2	1	1	0	4	39	198	4	0	241	1	0	28	0	29	384	0
14:30	1	196	1	0	198	1	0	5	0	6	20	190	2	0	212	1	0	32	0	33	449	0
14:45	1	175	1	0	177	0	1	8	0	9	25	214	2	0	241	0	0	20	0	20	447	0
Total	4	595	3	0	602	3	2	18	0	23	129	769	9	0	907	2	1	102	0	105	1637	0
15:00	4	223	5	0	232	0	0	2	0	2	24	185	2	0	211	0	0	18	0	18	463	0
15:15	2	205	2	0	209	0	0	6	0	6	38	183	1	0	222	0	0	14	0	14	451	0
15:30	1	176	3	0	180	0	1	5	0	6	30	188	4	0	222	0	0	21	0	21	429	0
15:45	1	168	4	0	173	0	0	6	0	6	36	174	4	0	214	0	0	21	0	21	414	0
Total	8	772	14	0	794	0	1	19	0	20	128	730	11	0	869	0	0	74	0	74	1757	0
16:00	4	173	6	0	183	0	0	7	0	7	40	203	2	0	245	0	0	19	0	19	454	0
16:15	3	184	4	0	191	0	0	2	0	2	46	180	2	1	229	0	0	26	0	26	448	1
16:30	1	185	2	0	188	0	0	2	0	2	46	178	2	0	226	1	0	23	0	24	440	0
16:45	3	142	2	0	147	2	0	5	1	8	49	181	5	0	235	0	0	26	0	26	416	1
Total	11	684	14	0	709	2	0	16	1	19	181	742	11	1	935	1	0	94	0	95	1758	2
17:00	4	149	4	0	157	0	0	6	0	6	41	177	7	0	225	1	0	36	0	37	425	0
17:15	3	157	4	0	164	0	1	1	0	2	54	185	4	0	243	1	0	29	0	30	439	0
17:30	0	150	3	0	153	0	3	6	0	9	59	189	6	0	254	0	0	22	0	22	438	0
17:45	1	176	5	0	182	1	0	6	0	7	38	184	1	0	223	1	0	17	0	18	430	0
Total	8	632	16	0	656	1	4	19	0	24	192	735	18	0	945	3	0	104	0	107	1732	0
Grand Total	36	3792	62	0	3890	9	9	94	1	113	758	4257	61	1	5077	7	1	632	0	640	9720	2
Apprch %	0.9%	97.5%	1.6%	0.0%		8.0%	8.0%	83.2%	0.9%		14.9%	83.8%	1.2%	0.0%		1.1%	0.2%	98.8%	0.0%			
Total %	0.4%	39.0%	0.6%	0.0%	40.0%	0.1%	0.1%	1.0%	0.0%	1.2%	7.8%	43.8%	0.6%	0.0%	52.2%	0.1%	0.0%	6.5%	0.0%	6.6%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Webb St Westbound					Taylor Rd Northbound					Webb St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	154	2	0	157	0	0	10	0	10	10	190	4	0	204	0	0	24	0	24	395
7:45	1	176	3	0	180	0	0	1	0	1	26	180	0	0	206	0	0	20	0	20	407
8:00	1	147	2	0	150	0	0	5	0	5	33	146	1	0	180	1	0	43	0	44	379
8:15	1	164	2	0	167	1	0	2	0	3	12	193	1	0	206	0	0	38	0	38	414
Total Volume	4	641	9	0	654	1	0	18	0	19	81	709	6	0	796	1	0	125	0	126	1595
% App Total	0.6%	98.0%	1.4%	0.0%		5.3%	0.0%	94.7%	0.0%		10.2%	89.1%	0.8%	0.0%		0.8%	0.0%	99.2%	0.0%		
PHF	1.000	.911	.750	.000	.908	.250	.000	.450	.000	.475	.614	.918	.375	.000	.966	.250	.000	.727	.000	.716	.963

PM PEAK HOUR	Taylor Rd Southbound					Webb St Westbound					Taylor Rd Northbound					Webb St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	1	196	1	0	198	1	0	5	0	6	20	190	2	0	212	1	0	32	0	33	449
14:45	1	175	1	0	177	0	1	8	0	9	25	214	2	0	241	0	0	20	0	20	447
15:00	4	223	5	0	232	0	0	2	0	2	24	185	2	0	211	0	0	18	0	18	463
15:15	2	205	2	0	209	0	0	6	0	6	38	183	1	0	222	0	0	14	0	14	451
Total Volume	8	799	9	0	816	1	1	21	0	23	107	772	7	0	886	1	0	84	0	85	1810
% App Total	1.0%	97.9%	1.1%	0.0%		4.3%	4.3%	91.3%	0.0%		12.1%	87.1%	0.8%	0.0%		1.2%	0.0%	98.8%	0.0%		
PHF	.500	.896	.450	.000	.879	.250	.250	.656	.000	.639	.704	.902	.875	.000	.919	.250	.000	.656	.000	.644	.977

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-08163-002
Date : 12/12/2017

Bank 1 Count = Bikes & Peds

	Taylor Rd Southbound					Webb St Westbound					Taylor Rd Northbound					Webb St Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
7:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
7:45	0	0	0	2	0	0	0	0	3	0	1	1	0	0	2	0	0	0	3	0	2	8
Total	0	1	0	2	1	0	0	0	4	0	1	2	0	0	3	0	0	0	4	0	4	10
8:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	5
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	5
14:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
14:15	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	1	0	0	22
14:30	0	0	0	1	0	0	0	0	8	0	0	0	0	0	0	0	0	0	6	0	0	15
14:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
Total	0	0	0	4	0	0	0	0	29	0	0	0	0	0	0	0	0	0	9	0	0	42
15:00	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	6	0	4	6
15:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	1	5
15:30	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	4
15:45	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	6	1	2	8
Total	0	4	0	4	4	0	0	0	1	0	0	2	0	0	2	0	0	1	18	1	7	23
16:00	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	1	6
16:15	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	6	0	0	11
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
16:45	0	0	0	1	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	1	3
Total	0	1	0	3	1	0	0	0	6	0	0	1	0	1	1	0	0	0	13	0	2	23
17:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	6
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
17:30	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
17:45	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	6	0	0	0	0	3	0	0	1	0	0	1	0	0	0	5	0	1	14
Grand Total	0	9	0	19	9	0	0	0	43	0	1	6	0	1	7	0	0	1	54	1	17	117
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			14.3%	85.7%	0.0%			0.0%	0.0%	100.0%				
Total %	0.0%	52.9%	0.0%		52.9%	0.0%	0.0%	0.0%		0.0%	5.9%	35.3%	0.0%		41.2%	0.0%	0.0%	5.9%		5.9%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Webb St Westbound					Taylor Rd Northbound					Webb St Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
7:45	0	0	0	2	0	0	0	0	3	0	1	1	0	0	2	0	0	0	3	0	2
8:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	2	1	0	0	0	4	0	1	1	0	0	2	0	0	0	9	0	3
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			50.0%	50.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.250	.250	.000		.250	.000	.000	.000		.000	.375

PM PEAK HOUR	Taylor Rd Southbound					Webb St Westbound					Taylor Rd Northbound					Webb St Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	0	0	0	1	0	0	0	0	8	0	0	0	0	0	0	0	0	0	6	0	0
14:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
15:00	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	6	0	4
15:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	1
Total Volume	0	3	0	3	3	0	0	0	8	0	0	2	0	0	2	0	0	0	18	0	5
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.313

Prepared by National Data & Surveying Services

Taylor Rd & Webb St

Peak Hour Turning Movement Count

ID: 17-08163-002
City: Loomis

Day: Tuesday
Date: 12/12/2017

PEAK HOURS		COUNT PERIODS
07:30 AM - 08:30 AM		07:00 AM - 09:00 AM
NONE		NONE
02:30 PM - 03:30 PM		02:00 PM - 06:00 PM

Taylor Rd — SOUTHBOUND

AM	9	641	4	0	728	AM
NOON	0	0	0	0	0	NOON
PM	9	799	8	0	794	PM
	1	1	0	0		

Webb St — EASTBOUND

AM	NOON	PM	
90	0	117	
0	0	0	0
1	0	1	0
0	0	0	0
125	0	84	1
AM	NOON	PM	

Webb St — WESTBOUND

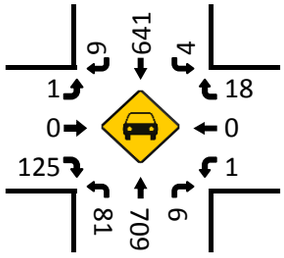
	PM	NOON	AM
0	21	0	18
1	1	0	0
0	1	0	1
0	0	0	0
	15	0	10
	PM	NOON	AM

Taylor Rd — NORTHBOUND

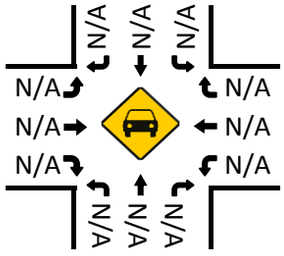
PM	884	0	107	772	7	PM
NOON	0	0	0	0	0	NOON
AM	767	0	81	709	6	AM
		0	0	1	0	

CONTROL			
2-Way Stop(EB/WB)			
TEV	1595	0	1810
	AM	NOON	PM
PHF	0.96		0.98

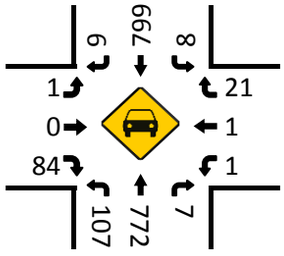
Total Vehicles (AM)



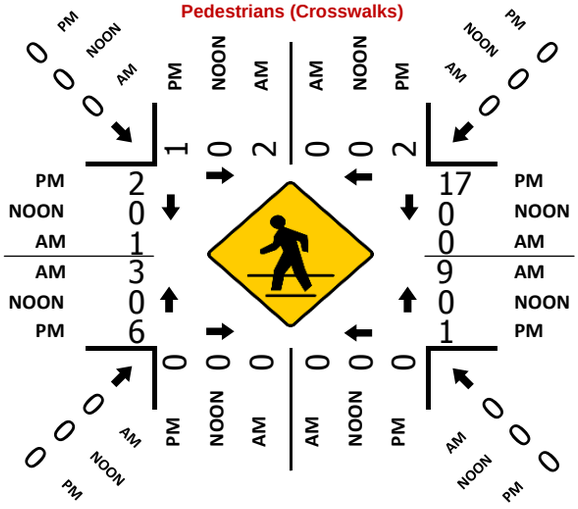
Total Vehicles (NOON)



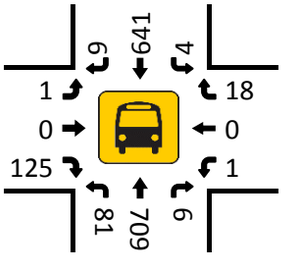
Total Vehicles (PM)



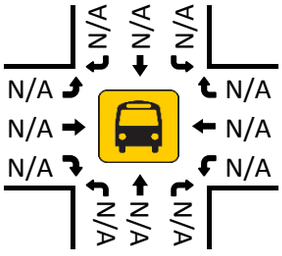
Pedestrians (Crosswalks)



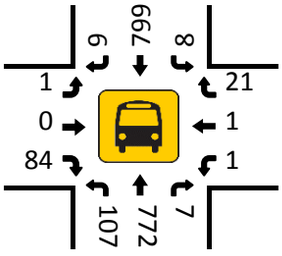
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data and Surveying Services

6260-21

City of Loomis
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7077-001 Taylor Rd & Penryn Rd
Date : 1/31/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					Penryn Rd Westbound					Taylor Rd Northbound					Penryn Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	30	50	0	0	80	11	0	13	0	24	0	18	8	0	26	0	0	1	0	1	131	0
7:15	44	113	0	0	157	23	0	18	0	41	1	31	21	0	53	0	0	0	0	0	251	0
7:30	60	194	0	0	254	47	0	30	0	77	0	59	55	0	114	0	0	0	0	0	445	0
7:45	61	49	0	0	110	15	0	33	0	48	0	41	43	0	84	0	1	0	0	1	243	0
Total	195	406	0	0	601	96	0	94	0	190	1	149	127	0	277	0	1	1	0	2	1070	0
8:00	58	25	0	0	83	5	1	42	0	48	0	23	7	0	30	0	0	0	0	0	161	0
8:15	63	28	0	0	91	9	0	31	0	40	1	29	6	0	36	0	1	1	0	2	169	0
8:30	53	21	0	0	74	6	0	16	0	22	0	31	2	0	33	0	0	0	0	0	129	0
8:45	35	30	0	0	65	7	1	21	0	29	0	17	8	0	25	0	1	0	0	1	120	0
Total	209	104	0	0	313	27	2	110	0	139	1	100	23	0	124	0	2	1	0	3	579	0
14:00	31	29	0	0	60	5	0	42	0	47	0	40	6	0	46	0	0	0	0	0	153	0
14:15	50	40	0	0	90	8	0	41	0	49	1	39	10	0	50	0	0	0	0	0	189	0
14:30	50	50	0	0	100	16	0	41	0	57	0	38	15	0	53	0	0	1	0	1	211	0
14:45	42	69	0	0	111	17	0	38	0	55	1	83	61	0	145	0	1	0	0	1	312	0
Total	173	188	0	0	361	46	0	162	0	208	2	200	92	0	294	0	1	1	0	2	865	0
15:00	34	52	1	0	87	9	1	32	0	42	0	108	101	0	209	1	0	0	0	1	339	0
15:15	27	34	0	0	61	10	0	65	0	75	1	67	25	0	93	0	0	1	0	1	230	0
Total	61	86	1	0	148	19	1	97	0	117	1	175	126	0	302	1	0	1	0	2	569	0
Grand Total	638	784	1	0	1423	188	3	463	0	654	5	624	368	0	997	1	4	4	0	9	3083	0
Apprch %	44.8%	55.1%	0.1%	0.0%		28.7%	0.5%	70.8%	0.0%		0.5%	62.6%	36.9%	0.0%		11.1%	44.4%	44.4%	0.0%			
Total %	20.7%	25.4%	0.0%	0.0%	46.2%	6.1%	0.1%	15.0%	0.0%	21.2%	0.2%	20.2%	11.9%	0.0%	32.3%	0.0%	0.1%	0.1%	0.0%	0.3%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Penryn Rd Westbound					Taylor Rd Northbound					Penryn Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	44	113	0	0	157	23	0	18	0	41	1	31	21	0	53	0	0	0	0	0	251
7:30	60	194	0	0	254	47	0	30	0	77	0	59	55	0	114	0	0	0	0	0	445
7:45	61	49	0	0	110	15	0	33	0	48	0	41	43	0	84	0	1	0	0	1	243
8:00	58	25	0	0	83	5	1	42	0	48	0	23	7	0	30	0	0	0	0	0	161
Total Volume	223	381	0	0	604	90	1	123	0	214	1	154	126	0	281	0	1	0	0	1	1100
% App Total	36.9%	63.1%	0.0%	0.0%		42.1%	0.5%	57.5%	0.0%		0.4%	54.8%	44.8%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.914	.491	.000	.000	.594	.479	.250	.732	.000	.695	.250	.653	.573	.000	.616	.000	.250	.000	.000	.250	.618

PM PEAK HOUR	Taylor Rd Southbound					Penryn Rd Westbound					Taylor Rd Northbound					Penryn Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	50	50	0	0	100	16	0	41	0	57	0	38	15	0	53	0	0	1	0	1	211
14:45	42	69	0	0	111	17	0	38	0	55	1	83	61	0	145	0	1	0	0	1	312
15:00	34	52	1	0	87	9	1	32	0	42	0	108	101	0	209	1	0	0	0	1	339
15:15	27	34	0	0	61	10	0	65	0	75	1	67	25	0	93	0	0	1	0	1	230
Total Volume	153	205	1	0	359	52	1	176	0	229	2	296	202	0	500	1	1	2	0	4	1092
% App Total	42.6%	57.1%	0.3%	0.0%		22.7%	0.4%	76.9%	0.0%		0.4%	59.2%	40.4%	0.0%		25.0%	25.0%	50.0%	0.0%		
PHF	.765	.743	.250	.000	.809	.765	.250	.677	.000	.763	.500	.685	.500	.000	.598	.250	.250	.500	.000	1.000	.805

Taylor Rd & Penryn Rd

Date: 1/31/2017

Day: Tuesday

Project #: 17-7077-001

6260-21

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	
PM Peak Hour	14:30 - 15:30

Peak Hour Summary

Southbound Approach

Taylor Rd

AM	0	381	223	0	277 AM
NOON	0	0	0	0	0 NOON
PM	1	205	153	0	473 PM

Eastbound Approach

Penryn Rd

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

Westbound Approach

	AM	NOON	PM
	123	0	176
	1	0	1
	90	0	52
	0	0	0
	350	0	356

CONTROL

Northbound Approach

AM	471	0	1	154	126 AM
NOON	0	0	0	0	0 NOON
PM	259	0	2	296	202 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	2:00 PM	3:30 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	604	214	471	2
NOON	0	0	0	0
PM	359	229	259	4
	277	350	281	1
	0	0	0	0
	473	356	500	4

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	881	564	752	3
NOON	0	0	0	0
PM	832	585	759	8

National Data and Surveying Services

6260-21

City of Loomis
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7077-002 Taylor Rd & Del Oro High School Northern Parking Lot
Date : 1/31/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					Del Oro High School Northern Parking Lot Westbound					Taylor Rd Northbound					Del Oro High School Northern Parking Lot Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	18	43	0	0	61	3	0	5	0	8	0	24	17	0	41	0	0	0	0	0	110	0
7:15	56	83	0	0	139	16	0	15	0	31	0	54	54	1	109	0	0	0	0	0	279	1
7:30	99	171	0	0	270	9	0	34	0	43	0	104	26	0	130	0	0	0	0	0	443	0
7:45	17	81	0	0	98	8	0	11	0	19	0	69	4	0	73	0	0	0	0	0	190	0
Total	190	378	0	0	568	36	0	65	0	101	0	251	101	1	353	0	0	0	0	0	1022	1
8:00	1	32	0	0	33	3	0	0	0	3	0	29	2	0	31	0	0	0	0	0	67	0
8:15	0	41	0	0	41	0	0	0	0	0	0	38	3	0	41	0	0	0	0	0	82	0
8:30	1	33	0	0	34	3	0	1	0	4	0	34	2	0	36	0	0	0	0	0	74	0
8:45	0	40	0	0	40	2	0	0	0	2	0	28	4	0	32	0	0	0	0	0	74	0
Total	2	146	0	0	148	8	0	1	0	9	0	129	11	0	140	0	0	0	0	0	297	0
14:00	0	48	0	0	48	0	0	0	0	0	0	50	1	0	51	0	0	0	0	0	99	0
14:15	2	43	0	1	46	3	0	1	0	4	0	60	1	0	61	0	0	0	0	0	111	1
14:30	11	55	0	0	66	7	0	4	0	11	0	63	11	0	74	0	0	0	0	0	151	0
14:45	9	71	0	0	80	30	0	51	0	81	0	132	14	1	147	0	0	0	0	0	308	1
Total	22	217	0	1	240	40	0	56	0	96	0	305	27	1	333	0	0	0	0	0	669	2
15:00	9	82	0	0	91	28	0	45	0	73	0	183	11	0	194	0	0	0	0	0	358	0
15:15	1	46	0	0	47	11	0	6	0	17	0	90	3	0	93	0	0	0	0	0	157	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	10	128	0	0	138	39	0	51	0	90	0	273	14	0	287	0	0	0	0	0	515	0
Grand Total	224	869	0	1	1094	123	0	173	0	296	0	958	153	2	1113	0	0	0	0	0	2503	3
Apprch %	20.5%	79.4%	0.0%	0.1%		41.6%	0.0%	58.4%	0.0%		0.0%	86.1%	13.7%	0.2%		0.0%	0.0%	0.0%	0.0%			
Total %	8.9%	34.7%	0.0%	0.0%	43.7%	4.9%	0.0%	6.9%	0.0%	11.8%	0.0%	38.3%	6.1%	0.1%	44.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Del Oro High School Northern Parking Lot Westbound					Taylor Rd Northbound					Del Oro High School Northern Parking Lot Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:00 to 08:00																					
Peak Hour For Entire Intersection Begins at 07:00																					
7:00	18	43	0	0	61	3	0	5	0	8	0	24	17	0	41	0	0	0	0	0	110
7:15	56	83	0	0	139	16	0	15	0	31	0	54	54	1	109	0	0	0	0	0	279
7:30	99	171	0	0	270	9	0	34	0	43	0	104	26	0	130	0	0	0	0	0	443
7:45	17	81	0	0	98	8	0	11	0	19	0	69	4	0	73	0	0	0	0	0	190
Total Volume	190	378	0	0	568	36	0	65	0	101	0	251	101	1	353	0	0	0	0	0	1022
% App Total	33.5%	66.5%	0.0%	0.0%		35.6%	0.0%	64.4%	0.0%		0.0%	71.1%	28.6%	0.3%		0.0%	0.0%	0.0%	0.0%		
PHF	.480	.553	.000	.000	.526	.563	.000	.478	.000	.587	.000	.603	.468	.250	.679	.000	.000	.000	.000	.000	.577

PM PEAK HOUR	Taylor Rd Southbound					Del Oro High School Northern Parking Lot Westbound					Taylor Rd Northbound					Del Oro High School Northern Parking Lot Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	11	55	0	0	66	7	0	4	0	11	0	63	11	0	74	0	0	0	0	0	151
14:45	9	71	0	0	80	30	0	51	0	81	0	132	14	1	147	0	0	0	0	0	308
15:00	9	82	0	0	91	28	0	45	0	73	0	183	11	0	194	0	0	0	0	0	358
15:15	1	46	0	0	47	11	0	6	0	17	0	90	3	0	93	0	0	0	0	0	157
Total Volume	30	254	0	0	284	76	0	106	0	182	0	468	39	1	508	0	0	0	0	0	974
% App Total	10.6%	89.4%	0.0%	0.0%		41.8%	0.0%	58.2%	0.0%		0.0%	92.1%	7.7%	0.2%		0.0%	0.0%	0.0%	0.0%		
PHF	.682	.774	.000	.000	.780	.633	.000	.520	.000	.562	.000	.639	.696	.250	.655	.000	.000	.000	.000	.000	.680

Taylor Rd & Del Oro High School Northern Parking L

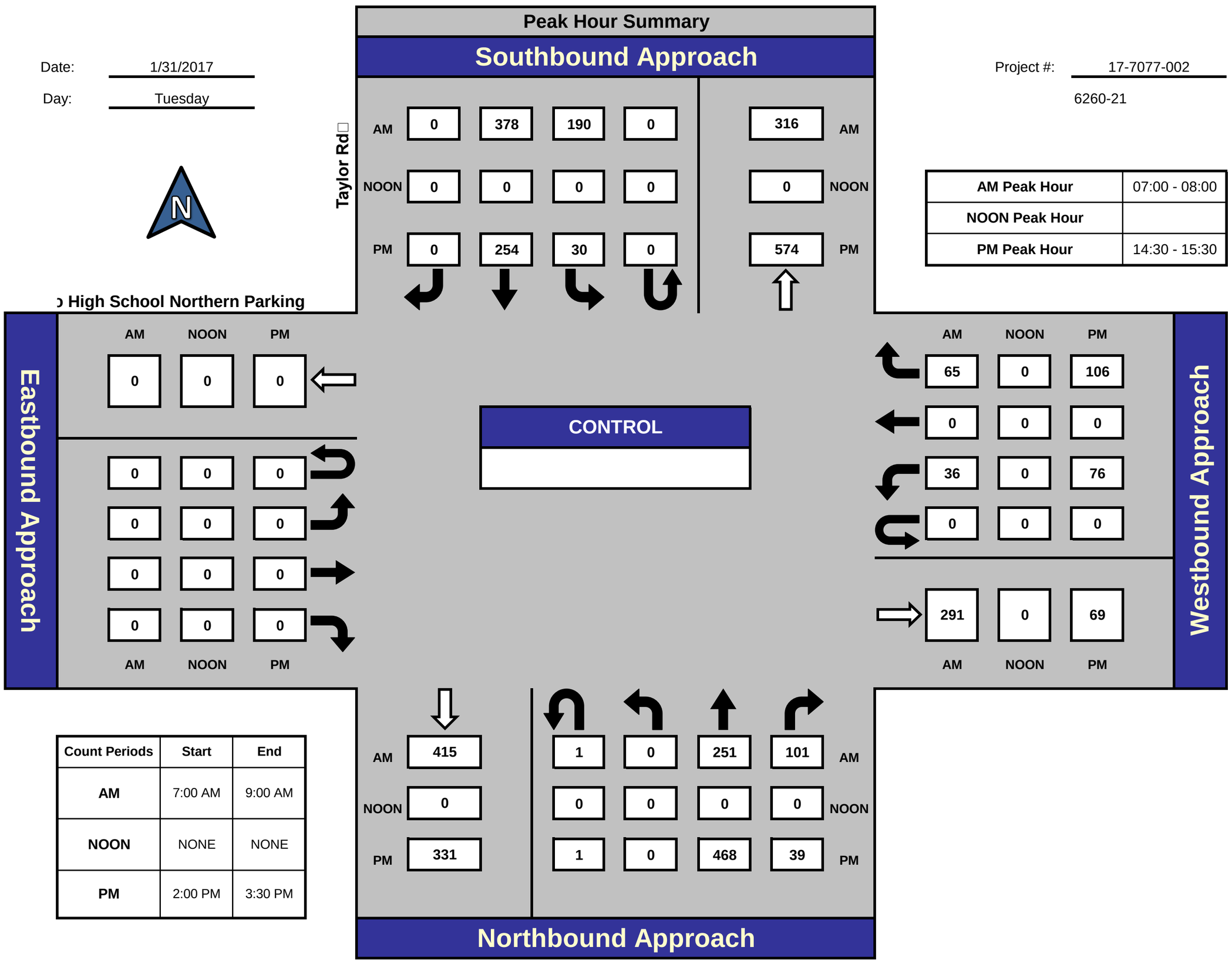
Date: 1/31/2017

Day: Tuesday

Project #: 17-7077-002

6260-21

AM Peak Hour	07:00 - 08:00
NOON Peak Hour	
PM Peak Hour	14:30 - 15:30



Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	2:00 PM	3:30 PM

Total Ins & Outs

	North Leg		
AM	568	316	AM
NOON	0	0	NOON
PM	284	574	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	0	0	101	0	182
0	0	0	291	0	69

	South Leg	
AM	415	353
NOON	0	0
PM	331	508

Total Volume Per Leg

	North Leg
AM	884
NOON	0
PM	858

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	0	0	392	0	251

	South Leg
AM	768
NOON	0
PM	839

National Data and Surveying Services

6260-21

City of Loomis
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7077-003 Taylor Rd & Del Oro High School Drop Off/ Baptist Ch
Date : 1/31/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					Del Oro High School Drop Off/ Baptist Church Westbound					Taylor Rd Northbound					Del Oro High School Drop Off/ Baptist Church Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	9	32	0	0	41	11	0	8	0	19	1	42	14	0	57	0	0	1	0	1	118	0
7:15	40	72	0	0	112	30	0	27	0	57	0	86	41	0	127	0	0	0	0	0	296	0
7:30	59	101	3	0	163	45	0	54	0	99	1	73	38	0	112	0	0	2	0	2	376	0
7:45	26	58	2	0	86	29	1	26	0	56	0	48	22	0	70	0	0	2	0	2	214	0
Total	134	263	5	0	402	115	1	115	0	231	2	249	115	0	366	0	0	5	0	5	1004	0
8:00	4	47	0	0	51	4	0	3	0	7	0	30	2	0	32	0	0	0	0	0	90	0
8:15	1	44	0	0	45	3	0	0	0	3	0	34	1	0	35	0	0	0	0	0	83	0
8:30	0	41	0	0	41	6	0	0	0	6	0	34	3	0	37	0	0	0	0	0	84	0
8:45	2	31	0	0	33	1	0	1	0	2	0	31	0	0	31	0	0	0	0	0	66	0
Total	7	163	0	0	170	14	0	4	0	18	0	129	6	0	135	0	0	0	0	0	323	0
14:00	3	45	1	0	49	1	0	2	0	3	2	45	3	0	50	4	0	1	0	5	107	0
14:15	1	45	1	0	47	5	0	2	0	7	5	59	5	0	69	0	0	0	0	0	123	0
14:30	2	57	2	0	61	1	0	2	0	3	21	73	4	1	99	0	0	0	0	0	163	1
14:45	0	96	8	0	104	1	0	34	0	35	29	107	0	0	136	6	0	43	0	49	324	0
Total	6	243	12	0	261	8	0	40	0	48	57	284	12	1	354	10	0	44	0	54	717	1
15:00	0	106	4	0	110	7	1	35	0	43	25	158	1	1	185	3	0	45	0	48	386	1
15:15	5	52	1	0	58	13	0	11	0	24	1	79	8	0	88	1	0	6	0	7	177	0
Total	5	158	5	0	168	20	1	46	0	67	26	237	9	1	273	4	0	51	0	55	563	1
Grand Total	152	827	22	0	1001	157	2	205	0	364	85	899	142	2	1128	14	0	100	0	114	2607	2
Apprch %	15.2%	82.6%	2.2%	0.0%		43.1%	0.5%	56.3%	0.0%		7.5%	79.7%	12.6%	0.2%		12.3%	0.0%	87.7%	0.0%			
Total %	5.8%	31.7%	0.8%	0.0%	38.4%	6.0%	0.1%	7.9%	0.0%	14.0%	3.3%	34.5%	5.4%	0.1%	43.3%	0.5%	0.0%	3.8%	0.0%	4.4%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Del Oro High School Drop Off/ Baptist Church Westbound					Taylor Rd Northbound					Del Oro High School Drop Off/ Baptist Church Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:00 to 08:00																					
Peak Hour For Entire Intersection Begins at 07:00																					
7:00	9	32	0	0	41	11	0	8	0	19	1	42	14	0	57	0	0	1	0	1	118
7:15	40	72	0	0	112	30	0	27	0	57	0	86	41	0	127	0	0	0	0	0	296
7:30	59	101	3	0	163	45	0	54	0	99	1	73	38	0	112	0	0	2	0	2	376
7:45	26	58	2	0	86	29	1	26	0	56	0	48	22	0	70	0	0	2	0	2	214
Total Volume	134	263	5	0	402	115	1	115	0	231	2	249	115	0	366	0	0	5	0	5	1004
% App Total	33.3%	65.4%	1.2%	0.0%		49.8%	0.4%	49.8%	0.0%		0.5%	68.0%	31.4%	0.0%		0.0%	0.0%	100.0%	0.0%		
PHF	.568	.651	.417	.000	.617	.639	.250	.532	.000	.583	.500	.724	.701	.000	.720	.000	.000	.625	.000	.625	.668

PM PEAK HOUR	Taylor Rd Southbound					Del Oro High School Drop Off/ Baptist Church Westbound					Taylor Rd Northbound					Del Oro High School Drop Off/ Baptist Church Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	2	57	2	0	61	1	0	2	0	3	21	73	4	1	99	0	0	0	0	0	163
14:45	0	96	8	0	104	1	0	34	0	35	29	107	0	0	136	6	0	43	0	49	324
15:00	0	106	4	0	110	7	1	35	0	43	25	158	1	1	185	3	0	45	0	48	386
15:15	5	52	1	0	58	13	0	11	0	24	1	79	8	0	88	1	0	6	0	7	177
Total Volume	7	311	15	0	333	22	1	82	0	105	76	417	13	2	508	10	0	94	0	104	1050
% App Total	2.1%	93.4%	4.5%	0.0%		21.0%	1.0%	78.1%	0.0%		15.0%	82.1%	2.6%	0.4%		9.6%	0.0%	90.4%	0.0%		
PHF	.350	.733	.469	.000	.757	.423	.250	.586	.000	.610	.655	.660	.406	.500	.686	.417	.000	.522	.000	.531	.680

Taylor Rd & Del Oro High School Drop Off/ Baptist

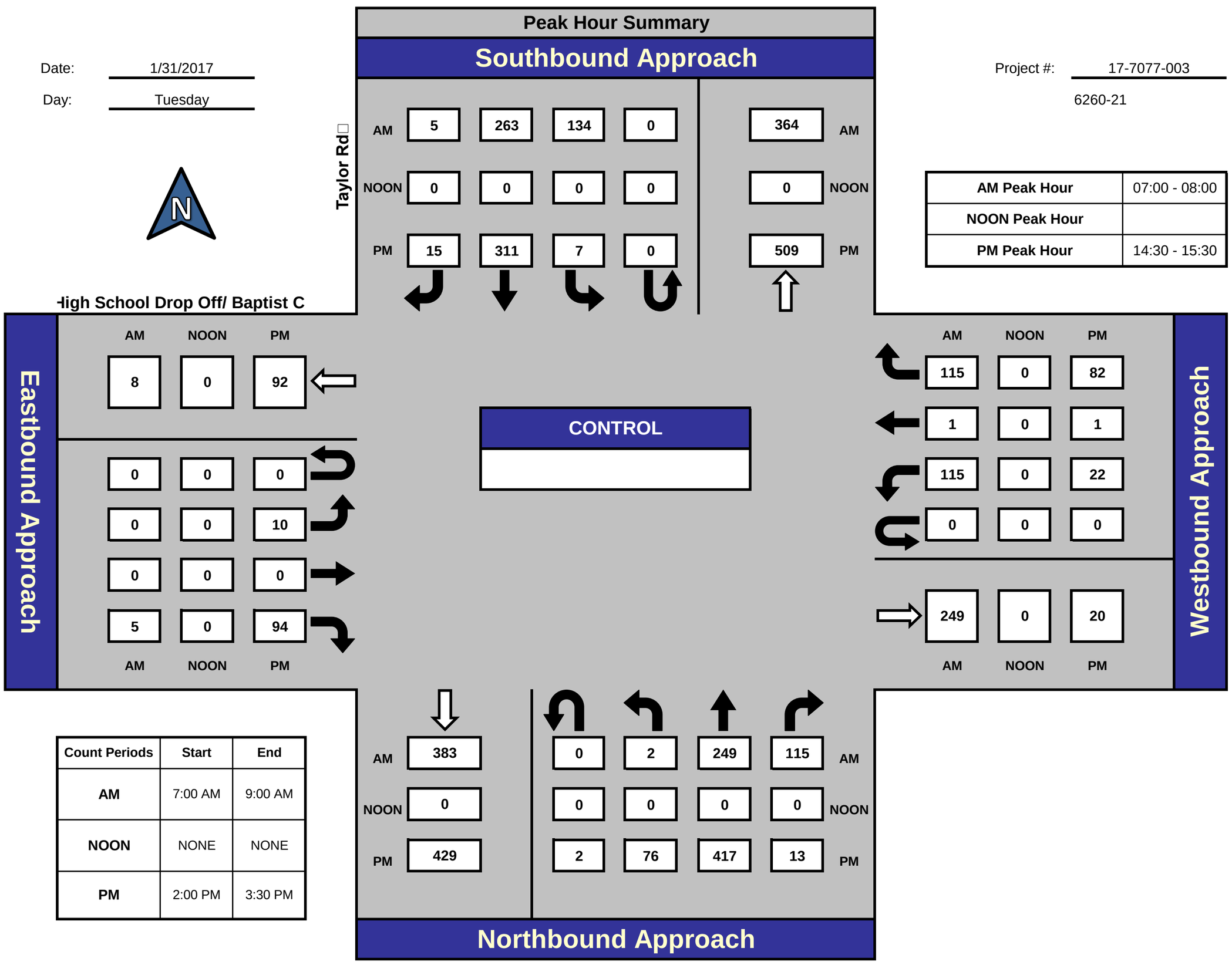
Date: 1/31/2017

Day: Tuesday

Project #: 17-7077-003

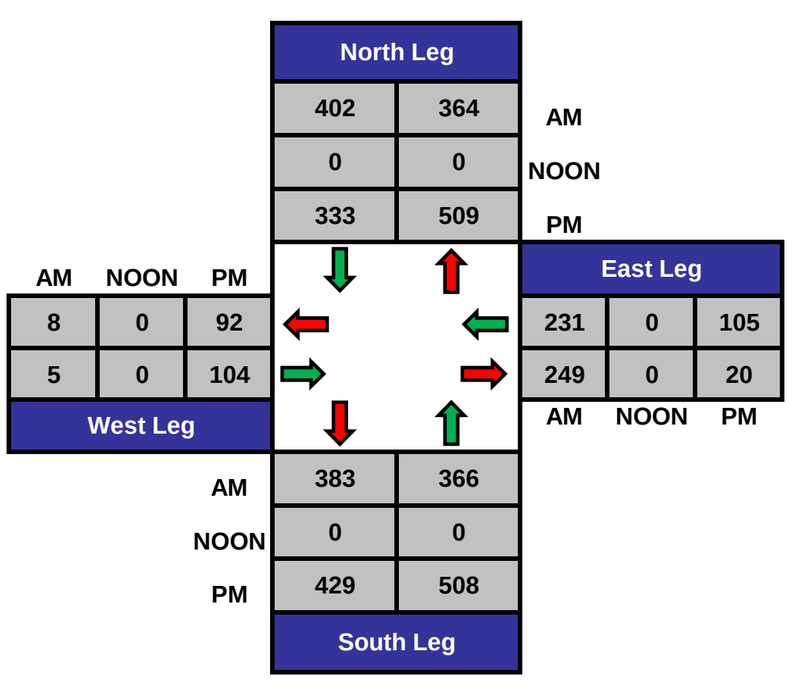
6260-21

AM Peak Hour	07:00 - 08:00
NOON Peak Hour	
PM Peak Hour	14:30 - 15:30

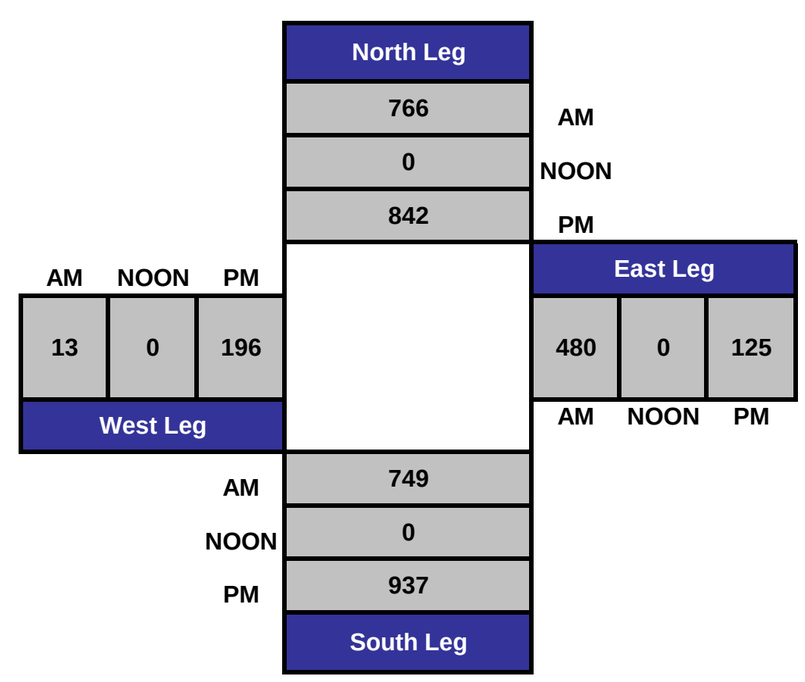


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	2:00 PM	3:30 PM

Total Ins & Outs



Total Volume Per Leg



National Data and Surveying Services

6260-21

City of Loomis
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7077-004 Taylor Rd & Del Oro High School Southern Parking Lo
Date : 1/31/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					Del Oro High School Southern Parking Lot Westbound					Taylor Rd Northbound					Del Oro High School Southern Parking Lot Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	13	34	0	0	47	10	0	2	0	12	0	44	59	0	103	0	0	0	0	0	162	0
7:15	30	74	0	0	104	38	0	19	0	57	0	118	118	0	236	0	0	0	0	0	397	0
7:30	66	80	0	0	146	36	0	37	0	73	0	70	113	0	183	0	0	0	0	0	402	0
7:45	23	75	0	0	98	36	0	16	0	52	0	48	71	0	119	0	0	0	0	0	269	0
Total	132	263	0	0	395	120	0	74	0	194	0	280	361	0	641	0	0	0	0	0	1230	0
8:00	6	33	0	0	39	5	0	3	0	8	0	32	17	0	49	0	0	0	0	0	96	0
8:15	5	37	0	0	42	9	0	4	0	13	0	41	19	0	60	0	0	0	0	0	115	0
8:30	4	31	0	0	35	9	0	6	0	15	0	27	10	0	37	0	0	0	0	0	87	0
8:45	5	38	0	0	43	1	0	6	0	7	0	27	10	0	37	0	0	0	0	0	87	0
Total	20	139	0	0	159	24	0	19	0	43	0	127	56	0	183	0	0	0	0	0	385	0
14:00	3	44	0	0	47	5	0	1	0	6	0	50	6	0	56	0	0	0	0	0	109	0
14:15	6	45	0	0	51	3	0	9	0	12	0	60	11	0	71	0	0	0	0	0	134	0
14:30	9	50	0	0	59	6	0	1	0	7	0	96	28	0	124	0	0	0	0	0	190	0
14:45	15	124	0	0	139	11	0	63	0	74	0	72	33	0	105	0	0	0	0	0	318	0
Total	33	263	0	0	296	25	0	74	0	99	0	278	78	0	356	0	0	0	0	0	751	0
15:00	23	139	0	0	162	11	0	107	0	118	0	77	49	0	126	0	0	0	0	0	406	0
15:15	14	59	0	0	73	55	0	28	0	83	0	58	32	0	90	0	0	0	0	0	246	0
Total	37	198	0	0	235	66	0	135	0	201	0	135	81	0	216	0	0	0	0	0	652	0
Grand Total	222	863	0	0	1085	235	0	302	0	537	0	820	576	0	1396	0	0	0	0	0	3018	0
Apprch %	20.5%	79.5%	0.0%	0.0%		43.8%	0.0%	56.2%	0.0%		0.0%	58.7%	41.3%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	7.4%	28.6%	0.0%	0.0%	36.0%	7.8%	0.0%	10.0%	0.0%	17.8%	0.0%	27.2%	19.1%	0.0%	46.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					Del Oro High School Southern Parking Lot Westbound					Taylor Rd Northbound					Del Oro High School Southern Parking Lot Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:00 to 08:00																					
Peak Hour For Entire Intersection Begins at 07:00																					
7:00	13	34	0	0	47	10	0	2	0	12	0	44	59	0	103	0	0	0	0	0	162
7:15	30	74	0	0	104	38	0	19	0	57	0	118	118	0	236	0	0	0	0	0	397
7:30	66	80	0	0	146	36	0	37	0	73	0	70	113	0	183	0	0	0	0	0	402
7:45	23	75	0	0	98	36	0	16	0	52	0	48	71	0	119	0	0	0	0	0	269
Total Volume	132	263	0	0	395	120	0	74	0	194	0	280	361	0	641	0	0	0	0	0	1230
% App Total	33.4%	66.6%	0.0%	0.0%		61.9%	0.0%	38.1%	0.0%		0.0%	43.7%	56.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.500	.822	.000	.000	.676	.789	.000	.500	.000	.664	.000	.593	.765	.000	.679	.000	.000	.000	.000	.000	.765

PM PEAK HOUR	Taylor Rd Southbound					Del Oro High School Southern Parking Lot Westbound					Taylor Rd Northbound					Del Oro High School Southern Parking Lot Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	9	50	0	0	59	6	0	1	0	7	0	96	28	0	124	0	0	0	0	0	190
14:45	15	124	0	0	139	11	0	63	0	74	0	72	33	0	105	0	0	0	0	0	318
15:00	23	139	0	0	162	11	0	107	0	118	0	77	49	0	126	0	0	0	0	0	406
15:15	14	59	0	0	73	55	0	28	0	83	0	58	32	0	90	0	0	0	0	0	246
Total Volume	61	372	0	0	433	83	0	199	0	282	0	303	142	0	445	0	0	0	0	0	1160
% App Total	14.1%	85.9%	0.0%	0.0%		29.4%	0.0%	70.6%	0.0%		0.0%	68.1%	31.9%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.663	.669	.000	.000	.668	.377	.000	.465	.000	.597	.000	.789	.724	.000	.883	.000	.000	.000	.000	.000	.714

Taylor Rd & Del Oro High School Southern Parking L

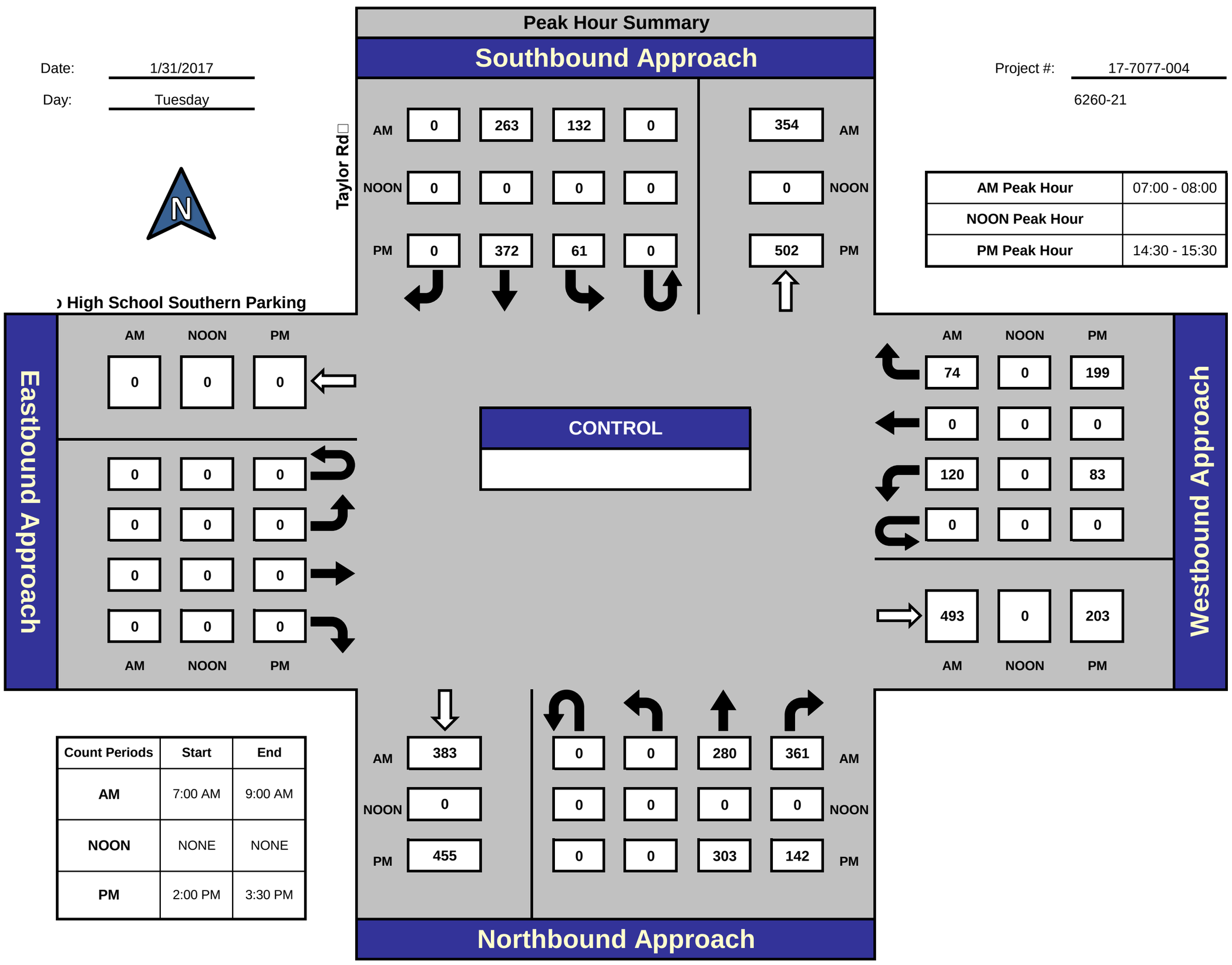
Date: 1/31/2017

Day: Tuesday

Project #: 17-7077-004

6260-21

AM Peak Hour	07:00 - 08:00
NOON Peak Hour	
PM Peak Hour	14:30 - 15:30



Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	2:00 PM	3:30 PM

Total Ins & Outs

	North Leg		East Leg		West Leg		South Leg	
AM	395	354	194	282	0	0	383	641
NOON	0	0	0	0	0	0	0	0
PM	433	502	493	203	0	0	455	445

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	749	687	0	1024
NOON	0	0	0	0
PM	935	485	0	900

National Data and Surveying Services

6260-21

City of Loomis
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7077-005 Taylor Rd & King Rd
Date : 1/31/2017

Unshifted Count = All Vehicles & Uturns

	Taylor Rd Southbound					King Rd Westbound					Taylor Rd Northbound					King Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	3	39	11	0	53	29	22	21	0	72	72	74	13	0	159	31	12	42	0	85	369	0
7:15	6	74	29	0	109	24	20	43	0	87	53	139	12	0	204	86	20	52	0	158	558	0
7:30	13	91	33	0	137	39	25	70	0	134	39	107	20	0	166	58	19	54	0	131	568	0
7:45	20	86	36	0	142	37	38	10	0	85	83	42	26	0	151	21	32	72	0	125	503	0
Total	42	290	109	0	441	129	105	144	0	378	247	362	71	0	680	196	83	220	0	499	1998	0
8:00	8	42	15	0	65	37	44	10	0	91	89	50	32	0	171	13	33	60	0	106	433	0
8:15	5	35	15	0	55	52	21	6	0	79	76	52	50	0	178	16	35	77	0	128	440	0
8:30	2	45	7	0	54	24	21	5	0	50	53	35	28	0	116	11	17	63	0	91	311	0
8:45	6	43	8	0	57	19	12	2	0	33	48	37	19	0	104	12	11	38	0	61	255	0
Total	21	165	45	0	231	132	98	23	0	253	266	174	129	0	569	52	96	238	0	386	1439	0
14:00	1	46	18	0	65	26	11	4	0	41	44	49	29	0	122	13	22	50	0	85	313	0
14:15	4	44	14	0	62	22	16	7	0	45	68	68	51	0	187	19	25	62	0	106	400	0
14:30	9	51	16	0	76	37	21	20	0	78	70	110	69	0	249	24	26	94	0	144	547	0
14:45	15	104	37	0	156	42	20	16	0	78	60	96	48	0	204	20	24	44	0	88	526	0
Total	29	245	85	0	359	127	68	47	0	242	242	323	197	0	762	76	97	250	0	423	1786	0
15:00	20	114	55	0	189	53	23	9	0	85	70	97	45	0	212	22	18	62	0	102	588	0
15:15	14	89	37	0	140	36	23	10	0	69	80	82	27	0	189	19	13	67	0	99	497	0
Total	34	203	92	0	329	89	46	19	0	154	150	179	72	0	401	41	31	129	0	201	1085	0
Grand Total	126	903	331	0	1360	477	317	233	0	1027	905	1038	469	0	2412	365	307	837	0	1509	6308	0
Apprch %	9.3%	66.4%	24.3%	0.0%		46.4%	30.9%	22.7%	0.0%		37.5%	43.0%	19.4%	0.0%		24.2%	20.3%	55.5%	0.0%			
Total %	2.0%	14.3%	5.2%	0.0%	21.6%	7.6%	5.0%	3.7%	0.0%	16.3%	14.3%	16.5%	7.4%	0.0%	38.2%	5.8%	4.9%	13.3%	0.0%	23.9%	100.0%	

AM PEAK HOUR	Taylor Rd Southbound					King Rd Westbound					Taylor Rd Northbound					King Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	6	74	29	0	109	24	20	43	0	87	53	139	12	0	204	86	20	52	0	158	558
7:30	13	91	33	0	137	39	25	70	0	134	39	107	20	0	166	58	19	54	0	131	568
7:45	20	86	36	0	142	37	38	10	0	85	83	42	26	0	151	21	32	72	0	125	503
8:00	8	42	15	0	65	37	44	10	0	91	89	50	32	0	171	13	33	60	0	106	433
Total Volume	47	293	113	0	453	137	127	133	0	397	264	338	90	0	692	178	104	238	0	520	2062
% App Total	10.4%	64.7%	24.9%	0.0%		34.5%	32.0%	33.5%	0.0%		38.2%	48.8%	13.0%	0.0%		34.2%	20.0%	45.8%	0.0%		
PHF	.588	.805	.785	.000	.798	.878	.722	.475	.000	.741	.742	.608	.703	.000	.848	.517	.788	.826	.000	.823	.908

PM PEAK HOUR	Taylor Rd Southbound					King Rd Westbound					Taylor Rd Northbound					King Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:30 to 15:30																					
Peak Hour For Entire Intersection Begins at 14:30																					
14:30	9	51	16	0	76	37	21	20	0	78	70	110	69	0	249	24	26	94	0	144	547
14:45	15	104	37	0	156	42	20	16	0	78	60	96	48	0	204	20	24	44	0	88	526
15:00	20	114	55	0	189	53	23	9	0	85	70	97	45	0	212	22	18	62	0	102	588
15:15	14	89	37	0	140	36	23	10	0	69	80	82	27	0	189	19	13	67	0	99	497
Total Volume	58	358	145	0	561	168	87	55	0	310	280	385	189	0	854	85	81	267	0	433	2158
% App Total	10.3%	63.8%	25.8%	0.0%		54.2%	28.1%	17.7%	0.0%		32.8%	45.1%	22.1%	0.0%		19.6%	18.7%	61.7%	0.0%		
PHF	.725	.785	.659	.000	.742	.792	.946	.688	.000	.912	.875	.875	.685	.000	.857	.885	.779	.710	.000	.752	.918

Taylor Rd & King Rd

Date: 1/31/2017

Day: Tuesday

Project #: 17-7077-005

6260-21

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	
PM Peak Hour	14:30 - 15:30

Peak Hour Summary

Southbound Approach

Taylor Rd

AM	113	293	47	0	649 AM
NOON	0	0	0	0	0 NOON
PM	145	358	58	0	525 PM

Eastbound Approach

King Rd

	AM	NOON	PM
	504	0	512
	0	0	0
	178	0	85
	104	0	81
	238	0	267

Westbound Approach

	AM	NOON	PM
	133	0	55
	127	0	87
	137	0	168
	0	0	0
	241	0	328

CONTROL

Northbound Approach

AM	668	0	264	338	90 AM
NOON	0	0	0	0	0 NOON
PM	793	0	280	385	189 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	2:00 PM	3:30 PM

Total Ins & Outs

	North Leg		
AM	453	649	AM
NOON	0	0	NOON
PM	561	525	PM

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
504	0	512	397	0	310
520	0	433	241	0	328

	South Leg
AM	668 692
NOON	0 0
PM	793 854

Total Volume Per Leg

	North Leg
AM	1102
NOON	0
PM	1086

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
1024	0	945	638	0	638

	South Leg
AM	1360
NOON	0
PM	1647

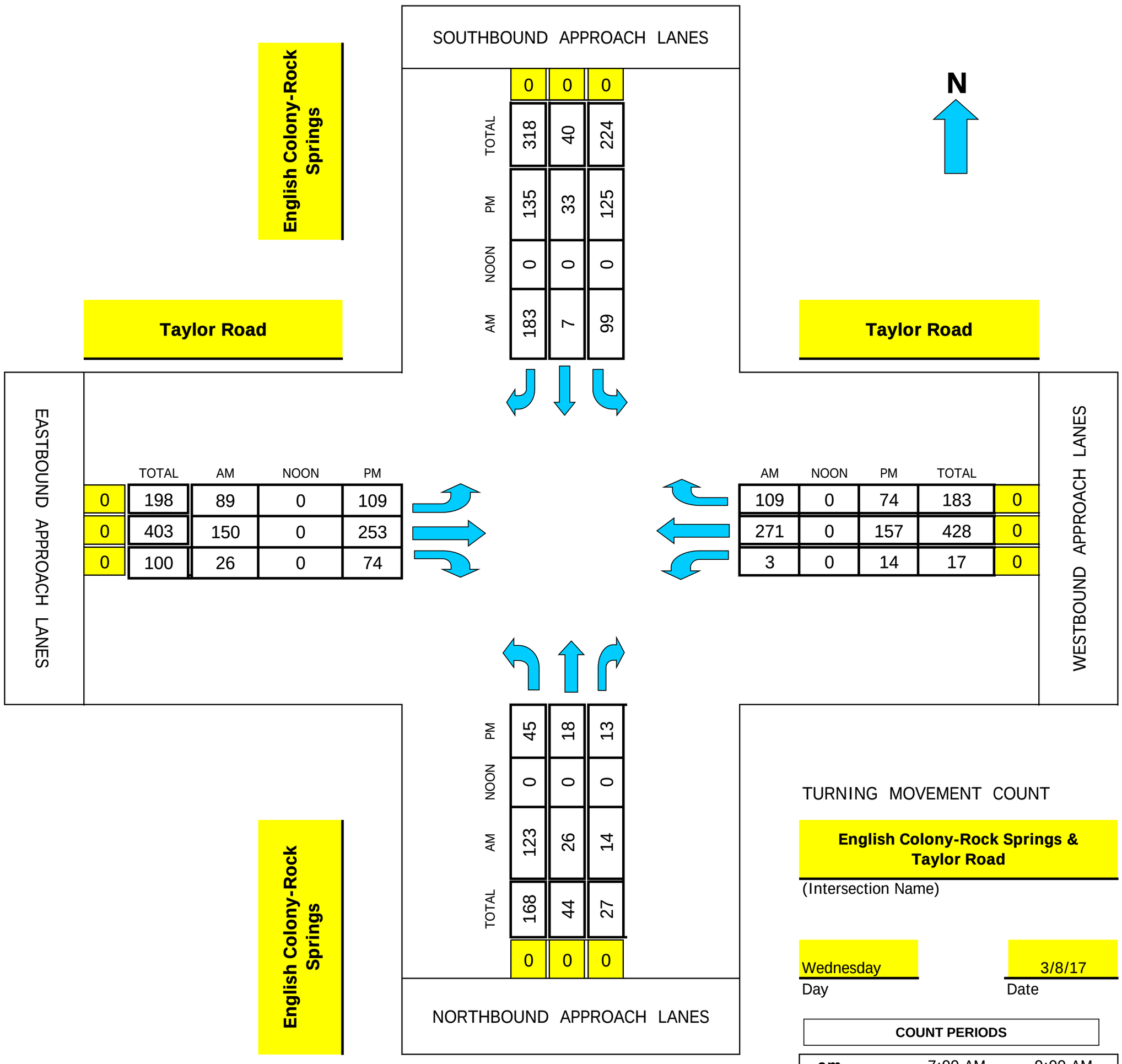
Intersection Turning Movement

Prepared by:

KD Anderson Associates, Inc.

TMC Summary of English Colony-Rock Springs/ Taylor Road

Project #: 6260-21



	TOTAL	AM	NOON	PM
0	318	183	0	135
0	40	7	0	33
0	224	99	0	125

	TOTAL	AM	NOON	PM
0	198	89	0	109
0	403	150	0	253
0	100	26	0	74

	AM	NOON	PM	TOTAL
109	0	74	183	0
271	0	157	428	0
3	0	14	17	0

	TOTAL	AM	NOON	PM
0	168	123	0	45
0	44	26	0	18
0	27	14	0	13

TURNING MOVEMENT COUNT

English Colony-Rock Springs & Taylor Road

(Intersection Name)

Wednesday — Day

3/8/17 — Date

COUNT PERIODS

am	7:00 AM	-	9:00 AM
noon	11:00 AM	-	1:00 PM
pm	2:00 PM	-	3:15 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	230 PM

Intersection Turning Movement

Prepared by:

N-S STREET: English Colony-Rock Springs DATE: 3/8/17 LOCATION: Loomis

E-W STREET: Taylor Road DAY: WEDNESDAY PROJECT# 6260-21

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	25	2	0	12	2	47	16	10	6	1	56	17	194
7:15 AM	38	2	5	25	2	56	14	36	2	0	86	19	285
7:30 AM	48	3	4	26	2	40	17	54	9	1	112	27	343
7:45 AM	23	8	3	23	1	39	26	41	10	1	42	31	248
8:00 AM	14	13	2	25	2	48	32	19	5	1	31	32	224
8:15 AM	15	10	1	42	8	62	14	30	5	1	26	27	241
8:30 AM	9	4	1	17	5	25	11	20	4	1	26	14	137
8:45 AM	11	6	2	21	3	21	11	15	5	2	26	16	139
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	183	48	18	191	25	338	141	225	46	8	405	183	1811

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	123	26	14	99	7	183	89	150	26	3	271	109	1100
PEAK HR. FACTOR:		0.741			0.870			0.828			0.684		0.802

CONTROL:

Intersection Turning Movement

Prepared by:

N-S STREET: English Colony-Rock Springs DATE: 3/8/17 LOCATION: Loomis

E-W STREET: Taylor Road DAY: WEDNESDAY PROJECT# 6260-21

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM	9	5	2	13	3	32	27	29	11	3	29	21	184
2:15 PM	6	7	4	18	3	23	26	35	8	3	29	22	184
2:30 PM	11	6	4	35	11	53	22	42	11	3	32	21	251
2:45 PM	17	3	3	25	10	43	23	68	19	3	49	20	283
3:00 PM	8	5	4	37	6	25	45	92	34	4	45	19	324
3:15 PM	9	4	2	28	6	14	19	51	10	4	31	14	192
3:30 PM													
3:45 PM													
4:00 PM													
4:15 PM													
4:30 PM													
4:45 PM													
5:00 PM													
5:15 PM													
5:30 PM													
5:45 PM													
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 60	NT 30	NR 19	SL 156	ST 39	SR 190	EL 162	ET 317	ER 93	WL 20	WT 215	WR 117	TOTAL 1418

PM Peak Hr Begins at: 230 PM

PEAK VOLUMES =	45	18	13	125	33	135	109	253	74	14	157	74	1050
PEAK HR. FACTOR:		0.826			0.740			0.637			0.851		0.810

CONTROL:

Intersection	
Intersection Delay, s/veh	22.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	7	183	123	26	14	89	150	26	3	271	109
Future Vol, veh/h	99	7	183	123	26	14	89	150	26	3	271	109
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	124	9	229	154	33	18	111	188	33	4	339	136
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	17.6	22	18.8	28.2
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	93%	0%	75%	100%	0%	0%
Vol Thru, %	0%	85%	7%	0%	16%	0%	100%	0%
Vol Right, %	0%	15%	0%	100%	9%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	176	106	183	163	3	271	109
LT Vol	89	0	99	0	123	3	0	0
Through Vol	0	150	7	0	26	0	271	0
RT Vol	0	26	0	183	14	0	0	109
Lane Flow Rate	111	220	132	229	204	4	339	136
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.284	0.523	0.335	0.501	0.526	0.009	0.776	0.285
Departure Headway (Hd)	9.186	8.558	9.089	7.889	9.298	8.768	8.252	7.53
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	392	420	396	458	387	408	437	477
Service Time	6.942	6.313	6.842	5.641	7.057	6.52	6.004	5.281
HCM Lane V/C Ratio	0.283	0.524	0.333	0.5	0.527	0.01	0.776	0.285
HCM Control Delay	15.6	20.4	16.4	18.3	22	11.6	34.4	13.3
HCM Lane LOS	C	C	C	C	C	B	D	B
HCM 95th-tile Q	1.2	2.9	1.4	2.7	2.9	0	6.7	1.2

Intersection	
Int Delay, s/veh	81.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	90	1	123	1	154	126	223	381	0
Future Vol, veh/h	0	1	0	90	1	123	1	154	126	223	381	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	62	62	62	62	62	62	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	0	145	2	198	2	248	203	360	615	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1789	1790	615	1690	1689	350	615	0	0	451	0	0
Stage 1	1335	1335	-	354	354	-	-	-	-	-	-	-
Stage 2	454	455	-	1336	1335	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	63	81	491	~ 74	93	693	965	-	-	1109	-	-
Stage 1	189	223	-	663	630	-	-	-	-	-	-	-
Stage 2	586	569	-	189	223	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	55	491	~ 54	63	693	965	-	-	1109	-	-
Mov Cap-2 Maneuver	33	55	-	~ 54	63	-	-	-	-	-	-	-
Stage 1	188	151	-	661	628	-	-	-	-	-	-	-
Stage 2	416	567	-	~ 126	151	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	72.4	$ 406.3	0	3.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	965	-	-	55	54	693	1109	-	-
HCM Lane V/C Ratio	0.002	-	-	0.029	2.718	0.286	0.324	-	-
HCM Control Delay (s)	8.7	0	-	72.4	$ 938.8	12.3	9.8	-	-
HCM Lane LOS	A	A	-	F	F	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	15.2	1.2	1.4	-	-

Notes

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

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	40	38	6	27	1
Future Vol, veh/h	3	40	38	6	27	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	43	41	7	29	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	48	0	-	0	94	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1559	-	-	-	906	1025
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1559	-	-	-	904	1025
Mov Cap-2 Maneuver	-	-	-	-	904	-
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	973	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1559	-	-	-	908
HCM Lane V/C Ratio	0.002	-	-	-	0.034
HCM Control Delay (s)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	57	22	292	510	22
Future Vol, veh/h	10	57	22	292	510	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	95	37	487	850	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1430	869	887	0	-	0
Stage 1	869	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	148	351	763	-	-	-
Stage 1	410	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	138	351	763	-	-	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	383	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.3	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	763	-	138	351	-	-
HCM Lane V/C Ratio	0.048	-	0.121	0.271	-	-
HCM Control Delay (s)	10	0	34.6	19	-	-
HCM Lane LOS	A	A	D	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	1.1	-	-

Intersection	
Int Delay, s/veh	26.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	65	251	101	190	378
Future Vol, veh/h	36	65	251	101	190	378
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	112	433	174	328	652

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1828	520	0	0	607	0
Stage 1	520	-	-	-	-	-
Stage 2	1308	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	84	556	-	-	971	-
Stage 1	597	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 56	556	-	-	971	-
Mov Cap-2 Maneuver	~ 56	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	253	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	245.9	0	3.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	133	971	-
HCM Lane V/C Ratio	-	-	1.309	0.337	-
HCM Control Delay (s)	-	-	245.9	10.6	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	11.1	1.5	-

Notes

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

Intersection	
Int Delay, s/veh	87.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	5	115	1	115	2	249	115	134	263	5
Future Vol, veh/h	0	0	5	115	1	115	2	249	115	134	263	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	172	1	172	3	372	172	200	393	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1348	1347	397	1264	1264	458	400	0	0	544	0	0
Stage 1	797	797	-	464	464	-	-	-	-	-	-	-
Stage 2	551	550	-	800	800	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	128	151	652	~ 146	169	603	1159	-	-	1025	-	-
Stage 1	380	399	-	578	564	-	-	-	-	-	-	-
Stage 2	519	516	-	379	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	77	121	652	~ 122	136	603	1159	-	-	1025	-	-
Mov Cap-2 Maneuver	77	121	-	~ 122	136	-	-	-	-	-	-	-
Stage 1	379	321	-	576	562	-	-	-	-	-	-	-
Stage 2	369	514	-	302	320	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	$ 375.4	0	3.1
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1159	-	-	652	203	1025	-	-
HCM Lane V/C Ratio	0.003	-	-	0.011	1.698	0.195	-	-
HCM Control Delay (s)	8.1	-	-	10.6	$ 375.4	9.4	-	-
HCM Lane LOS	A	-	-	B	F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	23.3	0.7	-	-

Notes

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

Intersection	
Int Delay, s/veh	17.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	120	74	280	361	132	263
Future Vol, veh/h	120	74	280	361	132	263
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	96	364	469	171	342

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1283	599	0	0	833	0
Stage 1	599	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	182	502	-	-	800	-
Stage 1	549	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 143	502	-	-	800	-
Mov Cap-2 Maneuver	~ 143	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	106.3	0	3.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	143	502	800	-
HCM Lane V/C Ratio	-	-	1.09	0.191	0.214	-
HCM Control Delay (s)	-	-	163.3	13.9	10.7	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	8.5	0.7	0.8	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	104	238	137	127	133	264	338	90	47	293	113
Future Volume (veh/h)	178	104	238	137	127	133	264	338	90	47	293	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	196	114	262	151	140	146	290	371	99	52	322	124
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	382	325	177	163	170	470	689	586	293	679	257
Arrive On Green	0.11	0.21	0.21	0.10	0.20	0.20	0.26	0.37	0.37	0.16	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	836	872	1774	1863	1583	1774	2514	950
Grp Volume(v), veh/h	196	114	262	151	0	286	290	371	99	52	225	221
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1709	1774	1863	1583	1774	1770	1695
Q Serve(g_s), s	11.0	5.2	8.9	8.4	0.0	16.2	14.4	15.7	3.0	2.5	10.6	11.0
Cycle Q Clear(g_c), s	11.0	5.2	8.9	8.4	0.0	16.2	14.4	15.7	3.0	2.5	10.6	11.0
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	195	382	325	177	0	333	470	689	586	293	478	458
V/C Ratio(X)	1.00	0.30	0.81	0.85	0.00	0.86	0.62	0.54	0.17	0.18	0.47	0.48
Avail Cap(c_a), veh/h	195	577	491	177	0	513	470	689	586	293	478	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	33.7	12.1	44.3	0.0	38.9	32.3	24.8	10.8	35.9	30.5	30.6
Incr Delay (d2), s/veh	65.6	0.4	5.8	30.5	0.0	8.8	2.4	3.0	0.6	0.3	3.3	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	2.7	4.4	5.6	0.0	8.4	7.3	8.6	1.4	1.3	5.6	5.6
LnGrp Delay(d),s/veh	110.1	34.1	18.0	74.8	0.0	47.7	34.7	27.8	11.4	36.2	33.8	34.3
LnGrp LOS	F	C	B	E		D	C	C	B	D	C	C
Approach Vol, veh/h		572			437			760			498	
Approach Delay, s/veh		52.7			57.1			28.3			34.3	
Approach LOS		D			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	41.0	14.0	24.5	30.5	31.0	15.0	23.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	37.0	10.0	31.0	16.0	27.0	11.0	30.0
Max Q Clear Time (g_c+I1), s	4.5	17.7	10.4	10.9	16.4	13.0	13.0	18.2
Green Ext Time (p_c), s	0.0	2.5	0.0	1.5	0.0	2.3	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	2.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	125	1	0	18	81	709	6	4	641	9
Future Vol, veh/h	1	0	125	1	0	18	81	709	6	4	641	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	80	80	80	94	94	94	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	142	1	0	23	86	754	6	4	704	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1658	1649	709	1717	1651	757	714	0	0	760	0	0
Stage 1	717	717	-	929	929	-	-	-	-	-	-	-
Stage 2	941	932	-	788	722	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	78	99	434	71	99	408	886	-	-	852	-	-
Stage 1	421	434	-	321	346	-	-	-	-	-	-	-
Stage 2	316	345	-	384	431	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	68	89	434	44	89	408	886	-	-	852	-	-
Mov Cap-2 Maneuver	68	89	-	44	89	-	-	-	-	-	-	-
Stage 1	380	432	-	290	312	-	-	-	-	-	-	-
Stage 2	270	312	-	257	429	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	18.1	18.8	1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	886	-	-	284	416	852	-	-
HCM Lane V/C Ratio	0.097	-	-	0.084	0.344	0.005	-	-
HCM Control Delay (s)	9.5	-	-	18.8	18.1	9.2	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	1.5	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	6	82	11	52	7	501	6	290	30	388	382	5
Future Volume (veh/h)	6	82	11	52	7	501	6	290	30	388	382	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	9	124	17	55	7	527	7	326	34	422	415	5
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.66	0.66	0.66	0.95	0.95	0.95	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	12	162	22	336	43	757	13	376	320	471	845	10
Arrive On Green	0.11	0.11	0.11	0.21	0.21	0.21	0.01	0.20	0.20	0.27	0.46	0.46
Sat Flow, veh/h	109	1505	206	1582	201	1583	1774	1863	1583	1774	1837	22
Grp Volume(v), veh/h	150	0	0	62	0	527	7	326	34	422	0	420
Grp Sat Flow(s),veh/h/ln	1821	0	0	1784	0	1583	1774	1863	1583	1774	0	1859
Q Serve(g_s), s	6.0	0.0	0.0	2.1	0.0	16.0	0.3	12.7	1.3	17.3	0.0	11.9
Cycle Q Clear(g_c), s	6.0	0.0	0.0	2.1	0.0	16.0	0.3	12.7	1.3	17.3	0.0	11.9
Prop In Lane	0.06		0.11	0.89		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	195	0	0	379	0	757	13	376	320	471	0	855
V/C Ratio(X)	0.77	0.00	0.00	0.16	0.00	0.70	0.55	0.87	0.11	0.90	0.00	0.49
Avail Cap(c_a), veh/h	387	0	0	379	0	757	94	421	358	589	0	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.7	0.0	0.0	24.2	0.0	15.4	37.2	29.0	24.5	26.6	0.0	14.2
Incr Delay (d2), s/veh	6.2	0.0	0.0	0.2	0.0	2.8	31.5	15.9	0.1	14.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	1.1	0.0	9.1	0.3	8.2	0.6	10.3	0.0	6.2
LnGrp Delay(d),s/veh	38.9	0.0	0.0	24.4	0.0	18.2	68.7	45.0	24.6	40.7	0.0	14.6
LnGrp LOS	D			C		B	E	D	C	D		B
Approach Vol, veh/h		150			589			367			842	
Approach Delay, s/veh		38.9			18.8			43.5			27.7	
Approach LOS		D			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	24.0	19.2		12.1	4.5	38.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	25.0	17.0		16.0	4.0	38.0
Max Q Clear Time (g_c+I1), s		18.0	19.3	14.7		8.0	2.3	13.9
Green Ext Time (p_c), s		0.0	0.7	0.5		0.4	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	20.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	125	33	135	45	18	13	109	253	74	14	157	74
Future Vol, veh/h	125	33	135	45	18	13	109	253	74	14	157	74
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	154	41	167	56	22	16	135	312	91	17	194	91
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	15.6	14.3	28.6	14.7
HCM LOS	C	B	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	79%	0%	59%	100%	0%	0%
Vol Thru, %	0%	77%	21%	0%	24%	0%	100%	0%
Vol Right, %	0%	23%	0%	100%	17%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	327	158	135	76	14	157	74
LT Vol	109	0	125	0	45	14	0	0
Through Vol	0	253	33	0	18	0	157	0
RT Vol	0	74	0	135	13	0	0	74
Lane Flow Rate	135	404	195	167	94	17	194	91
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.294	0.805	0.446	0.33	0.23	0.041	0.427	0.183
Departure Headway (Hd)	7.856	7.18	8.234	7.118	8.833	8.442	7.929	7.21
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	456	505	437	503	405	423	454	496
Service Time	5.617	4.941	6.001	4.885	6.617	6.212	5.698	4.978
HCM Lane V/C Ratio	0.296	0.8	0.446	0.332	0.232	0.04	0.427	0.183
HCM Control Delay	13.9	33.5	17.5	13.4	14.3	11.6	16.5	11.6
HCM Lane LOS	B	D	C	B	B	B	C	B
HCM 95th-tile Q	1.2	7.6	2.2	1.4	0.9	0.1	2.1	0.7

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	2	52	1	176	2	296	202	153	205	1
Future Vol, veh/h	1	1	2	52	1	176	2	296	202	153	205	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	2	64	1	217	2	365	249	189	253	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1235	1250	254	1127	1126	490	254	0	0	614	0	0
Stage 1	632	632	-	494	494	-	-	-	-	-	-	-
Stage 2	603	618	-	633	632	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	153	173	785	182	205	578	1311	-	-	965	-	-
Stage 1	468	474	-	557	546	-	-	-	-	-	-	-
Stage 2	486	481	-	468	474	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	80	139	785	153	164	578	1311	-	-	965	-	-
Mov Cap-2 Maneuver	80	139	-	153	164	-	-	-	-	-	-	-
Stage 1	467	381	-	556	545	-	-	-	-	-	-	-
Stage 2	302	480	-	374	381	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.6	21.9	0	4.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1311	-	-	180	153	578	965	-	-
HCM Lane V/C Ratio	0.002	-	-	0.027	0.428	0.376	0.196	-	-
HCM Control Delay (s)	7.8	0	-	25.6	45.1	14.9	9.6	-	-
HCM Lane LOS	A	A	-	D	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.9	1.7	0.7	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	43	24	15	3
Future Vol, veh/h	1	5	43	24	15	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	8	72	40	25	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	112	0	-	0	104	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1478	-	-	-	894	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1478	-	-	-	893	965
Mov Cap-2 Maneuver	-	-	-	-	893	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1478	-	-	-	904
HCM Lane V/C Ratio	0.001	-	-	-	0.033
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	19	60	511	265	7
Future Vol, veh/h	2	19	60	511	265	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	32	100	852	442	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1500	448	454	0	-	0
Stage 1	448	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	134	611	1107	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	111	611	1107	-	-	-
Mov Cap-2 Maneuver	111	-	-	-	-	-
Stage 1	534	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1107	-	111	611	-	-
HCM Lane V/C Ratio	0.09	-	0.03	0.052	-	-
HCM Control Delay (s)	8.6	0	38.4	11.2	-	-
HCM Lane LOS	A	A	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.2	-	-

Intersection	
Int Delay, s/veh	14.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	106	468	39	30	254
Future Vol, veh/h	76	106	468	39	30	254
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	156	688	57	44	374

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1179	717	0	0	745	0
Stage 1	717	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	211	430	-	-	863	-
Stage 1	484	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	200	430	-	-	863	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	634	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	73.9	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	290	863	-
HCM Lane V/C Ratio	-	-	0.923	0.051	-
HCM Control Delay (s)	-	-	73.9	9.4	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	8.7	0.2	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	94	22	1	82	76	417	13	7	311	15
Future Vol, veh/h	10	0	94	22	1	82	76	417	13	7	311	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	138	32	1	121	112	613	19	10	457	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1396	1344	468	1404	1346	623	479	0	0	632	0	0
Stage 1	488	488	-	847	847	-	-	-	-	-	-	-
Stage 2	908	856	-	557	499	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	119	152	595	117	151	486	1083	-	-	951	-	-
Stage 1	561	550	-	357	378	-	-	-	-	-	-	-
Stage 2	330	374	-	515	544	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	81	135	595	82	134	486	1083	-	-	951	-	-
Mov Cap-2 Maneuver	81	135	-	82	134	-	-	-	-	-	-	-
Stage 1	503	544	-	320	339	-	-	-	-	-	-	-
Stage 2	221	335	-	391	538	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.4	45.1	1.3	0.2
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1083	-	-	370	236	951	-	-
HCM Lane V/C Ratio	0.103	-	-	0.413	0.654	0.011	-	-
HCM Control Delay (s)	8.7	-	-	21.4	45.1	8.8	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2	4.1	0	-	-

Intersection	
Int Delay, s/veh	7.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	199	303	142	61	372
Future Vol, veh/h	83	199	303	142	61	372
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	117	280	427	200	86	524

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1223	527	0	0	627	0
Stage 1	527	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	198	551	-	-	955	-
Stage 1	592	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	551	-	-	955	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.3	0	1.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	180	551	955	-
HCM Lane V/C Ratio	-	-	0.649	0.509	0.09	-
HCM Control Delay (s)	-	-	56	18.1	9.1	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	3.8	2.9	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	81	267	168	87	55	280	385	189	58	358	145
Future Volume (veh/h)	85	81	267	168	87	55	280	385	189	58	358	145
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	92	88	233	183	95	60	304	418	205	63	389	158
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	270	229	224	145	92	362	737	626	79	584	234
Arrive On Green	0.14	0.14	0.14	0.13	0.14	0.14	0.20	0.40	0.40	0.04	0.24	0.24
Sat Flow, veh/h	1774	1863	1583	1774	1069	675	1774	1863	1583	1774	2468	990
Grp Volume(v), veh/h	92	88	233	183	0	155	304	418	205	63	277	270
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1744	1774	1863	1583	1774	1770	1688
Q Serve(g_s), s	2.6	2.4	4.8	5.6	0.0	4.7	9.1	9.7	5.0	1.9	7.9	8.0
Cycle Q Clear(g_c), s	2.6	2.4	4.8	5.6	0.0	4.7	9.1	9.7	5.0	1.9	7.9	8.0
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	240	270	229	224	0	237	362	737	626	79	418	399
V/C Ratio(X)	0.38	0.33	1.02	0.82	0.00	0.65	0.84	0.57	0.33	0.79	0.66	0.68
Avail Cap(c_a), veh/h	240	1076	914	224	0	1007	448	1109	943	224	830	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	21.3	8.3	23.6	0.0	22.7	21.2	13.1	11.6	26.2	19.2	19.2
Incr Delay (d2), s/veh	1.0	0.7	31.8	20.4	0.0	3.0	11.3	0.7	0.3	16.0	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.2	4.9	4.0	0.0	2.4	5.6	5.1	2.2	1.3	4.1	4.0
LnGrp Delay(d),s/veh	22.9	22.0	40.3	44.0	0.0	25.8	32.5	13.7	11.9	42.2	21.0	21.2
LnGrp LOS	C	C	F	D		C	C	B	B	D	C	C
Approach Vol, veh/h		413			338			927			610	
Approach Delay, s/veh		32.5			35.6			19.5			23.3	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	25.9	11.0	12.0	15.3	17.1	11.5	11.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	3.9	11.7	7.6	6.8	11.1	10.0	4.6	6.7
Green Ext Time (p_c), s	0.0	3.3	0.0	1.3	0.3	3.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	84	1	1	21	107	772	7	8	799	9
Future Vol, veh/h	1	0	84	1	1	21	107	772	7	8	799	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	100	1	1	26	110	796	7	9	850	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1906	1896	855	1943	1898	800	860	0	0	803	0	0
Stage 1	873	873	-	1020	1020	-	-	-	-	-	-	-
Stage 2	1033	1023	-	923	878	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	52	70	358	49	69	385	781	-	-	821	-	-
Stage 1	345	368	-	285	314	-	-	-	-	-	-	-
Stage 2	281	313	-	323	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	42	60	358	31	59	385	781	-	-	821	-	-
Mov Cap-2 Maneuver	42	60	-	31	59	-	-	-	-	-	-	-
Stage 1	296	364	-	245	270	-	-	-	-	-	-	-
Stage 2	224	269	-	230	362	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	20.7	23.5	1.3	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	781	-	-	222	329	821	-	-
HCM Lane V/C Ratio	0.141	-	-	0.126	0.308	0.01	-	-
HCM Control Delay (s)	10.4	-	-	23.5	20.7	9.4	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.4	1.3	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	14	66	18	81	10	501	8	390	57	420	449	9
Future Volume (veh/h)	14	66	18	81	10	501	8	390	57	420	449	9
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	18	86	23	88	11	545	9	433	63	483	516	10
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	23	111	30	296	37	720	16	497	422	476	958	19
Arrive On Green	0.09	0.09	0.09	0.19	0.19	0.19	0.01	0.27	0.27	0.27	0.53	0.53
Sat Flow, veh/h	254	1214	325	1585	198	1583	1774	1863	1583	1774	1821	35
Grp Volume(v), veh/h	127	0	0	99	0	545	9	433	63	483	0	526
Grp Sat Flow(s),veh/h/ln	1793	0	0	1783	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	5.9	0.0	0.0	4.1	0.0	16.0	0.4	19.0	2.6	23.0	0.0	16.1
Cycle Q Clear(g_c), s	5.9	0.0	0.0	4.1	0.0	16.0	0.4	19.0	2.6	23.0	0.0	16.1
Prop In Lane	0.14		0.18	0.89		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	165	0	0	333	0	720	16	497	422	476	0	976
V/C Ratio(X)	0.77	0.00	0.00	0.30	0.00	0.76	0.56	0.87	0.15	1.01	0.00	0.54
Avail Cap(c_a), veh/h	335	0	0	333	0	720	83	630	536	476	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	0.0	30.0	0.0	19.4	42.3	30.0	24.0	31.4	0.0	13.4
Incr Delay (d2), s/veh	7.5	0.0	0.0	0.5	0.0	4.6	27.6	10.6	0.2	45.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	2.1	0.0	11.5	0.3	11.2	1.2	17.1	0.0	8.3
LnGrp Delay(d),s/veh	45.5	0.0	0.0	30.5	0.0	24.0	69.9	40.7	24.2	76.4	0.0	13.9
LnGrp LOS	D			C		C	E	D	C	F		B
Approach Vol, veh/h		127			644			505			1009	
Approach Delay, s/veh		45.5			25.0			39.1			43.8	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	27.0	26.8		11.9	4.8	49.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	23.0	29.0		16.0	4.0	48.0
Max Q Clear Time (g_c+I1), s		18.0	25.0	21.0		7.9	2.4	18.1
Green Ext Time (p_c), s		0.0	0.0	1.8		0.3	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	97	33	71	44	25	11	94	219	73	15	126	76
Future Vol, veh/h	97	33	71	44	25	11	94	219	73	15	126	76
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	41	88	54	31	14	116	270	90	19	156	94
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	13.1	12.9	18.9	12.1
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	75%	0%	55%	100%	0%	0%
Vol Thru, %	0%	75%	25%	0%	31%	0%	100%	0%
Vol Right, %	0%	25%	0%	100%	14%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	292	130	71	80	15	126	76
LT Vol	94	0	97	0	44	15	0	0
Through Vol	0	219	33	0	25	0	126	0
RT Vol	0	73	0	71	11	0	0	76
Lane Flow Rate	116	360	160	88	99	19	156	94
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.234	0.658	0.344	0.161	0.218	0.04	0.312	0.169
Departure Headway (Hd)	7.256	6.568	7.709	6.621	7.945	7.723	7.213	6.498
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	498	555	467	541	451	464	498	552
Service Time	4.956	4.268	5.456	4.368	5.698	5.469	4.958	4.243
HCM Lane V/C Ratio	0.233	0.649	0.343	0.163	0.22	0.041	0.313	0.17
HCM Control Delay	12.2	21	14.5	10.6	12.9	10.8	13.2	10.6
HCM Lane LOS	B	C	B	B	B	B	B	B
HCM 95th-tile Q	0.9	4.8	1.5	0.6	0.8	0.1	1.3	0.6

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	39	2	195	0	198	46	111	120	0
Future Vol, veh/h	0	0	0	39	2	195	0	198	46	111	120	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	48	2	241	0	244	57	137	148	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	816	723	148	695	695	273	148	0	0	301	0	0
Stage 1	422	422	-	273	273	-	-	-	-	-	-	-
Stage 2	394	301	-	422	422	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	296	352	899	357	366	766	1434	-	-	1260	-	-
Stage 1	609	588	-	733	684	-	-	-	-	-	-	-
Stage 2	631	665	-	609	588	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	185	314	899	327	326	766	1434	-	-	1260	-	-
Mov Cap-2 Maneuver	185	314	-	327	326	-	-	-	-	-	-	-
Stage 1	609	524	-	733	684	-	-	-	-	-	-	-
Stage 2	431	665	-	543	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.9	0	3.9
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1434	-	-	-	327	766	1260	-	-
HCM Lane V/C Ratio	-	-	-	-	0.155	0.314	0.109	-	-
HCM Control Delay (s)	0	-	-	0	18	11.8	8.2	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.5	1.3	0.4	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	1	17	7	4
Future Vol, veh/h	3	13	1	17	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	1	18	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	19	0	-	0	30	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1597	-	-	-	984	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1597	-	-	-	982	1071
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1597	-	-	-	1013
HCM Lane V/C Ratio	0.002	-	-	-	0.012
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	518	157	3
Future Vol, veh/h	10	10	15	518	157	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	640	194	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	874	196	198	0	-	0
Stage 1	196	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	320	845	1375	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	313	845	1375	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	504	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1375	-	313	845	-	-
HCM Lane V/C Ratio	0.013	-	0.039	0.015	-	-
HCM Control Delay (s)	7.7	0	17	9.3	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	139	262	126	120	46	298	297	182	50	243	92
Future Volume (veh/h)	73	139	262	126	120	46	298	297	182	50	243	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	87	165	250	154	146	56	307	306	188	53	259	98
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	308	262	196	221	85	374	649	552	75	455	168
Arrive On Green	0.10	0.17	0.17	0.11	0.17	0.17	0.21	0.35	0.35	0.04	0.18	0.18
Sat Flow, veh/h	1774	1863	1583	1774	1284	492	1774	1863	1583	1774	2533	935
Grp Volume(v), veh/h	87	165	250	154	0	202	307	306	188	53	179	178
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1776	1774	1863	1583	1774	1770	1698
Q Serve(g_s), s	2.2	3.9	4.1	4.1	0.0	5.1	7.9	6.1	4.2	1.4	4.4	4.6
Cycle Q Clear(g_c), s	2.2	3.9	4.1	4.1	0.0	5.1	7.9	6.1	4.2	1.4	4.4	4.6
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	184	308	262	196	0	306	374	649	552	75	318	305
V/C Ratio(X)	0.47	0.54	0.96	0.78	0.00	0.66	0.82	0.47	0.34	0.71	0.56	0.58
Avail Cap(c_a), veh/h	259	1242	1056	259	0	1184	518	1281	1089	259	959	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	18.3	6.0	20.8	0.0	18.6	18.1	12.2	11.6	22.7	18.0	18.0
Incr Delay (d2), s/veh	1.9	1.4	17.2	10.9	0.0	2.4	7.3	0.5	0.4	11.5	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.1	3.0	2.6	0.0	2.7	4.6	3.2	1.9	0.9	2.3	2.3
LnGrp Delay(d),s/veh	22.1	19.8	23.1	31.7	0.0	21.0	25.4	12.7	11.9	34.2	19.5	19.8
LnGrp LOS	C	B	C	C		C	C	B	B	C	B	B
Approach Vol, veh/h		502			356			801			410	
Approach Delay, s/veh		21.9			25.6			17.4			21.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	20.7	9.3	11.9	14.1	12.6	9.0	12.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	3.4	8.1	6.1	6.1	9.9	6.6	4.2	7.1
Green Ext Time (p_c), s	0.0	2.5	0.0	1.8	0.4	2.0	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	94	2	0	16	181	742	11	11	684	14
Future Vol, veh/h	1	0	94	2	0	16	181	742	11	11	684	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	112	2	0	20	187	765	11	12	728	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1915	1910	736	1961	1912	771	743	0	0	776	0	0
Stage 1	760	760	-	1145	1145	-	-	-	-	-	-	-
Stage 2	1155	1150	-	816	767	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	51	68	419	48	68	400	864	-	-	840	-	-
Stage 1	398	414	-	243	274	-	-	-	-	-	-	-
Stage 2	240	273	-	371	411	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	40	53	419	29	53	400	864	-	-	840	-	-
Mov Cap-2 Maneuver	40	53	-	29	53	-	-	-	-	-	-	-
Stage 1	312	408	-	191	215	-	-	-	-	-	-	-
Stage 2	179	214	-	268	405	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	18.4	30.1	2	0.1
HCM LOS	C	D		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	864	-	-	165	381	840	-	-
HCM Lane V/C Ratio	0.216	-	-	0.133	0.297	0.014	-	-
HCM Control Delay (s)	10.3	-	-	30.1	18.4	9.3	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	0.4	1.2	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	25	11	85	10	485	19	443	82	402	684	14
Future Volume (veh/h)	20	25	11	85	10	485	19	443	82	402	684	14
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	26	32	14	92	11	527	21	492	91	462	786	16
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	42	19	301	36	730	33	552	469	482	1000	20
Arrive On Green	0.05	0.05	0.05	0.19	0.19	0.19	0.02	0.30	0.30	0.27	0.55	0.55
Sat Flow, veh/h	639	787	344	1593	190	1583	1774	1863	1583	1774	1819	37
Grp Volume(v), veh/h	72	0	0	103	0	527	21	492	91	462	0	802
Grp Sat Flow(s),veh/h/ln	1770	0	0	1783	0	1583	1774	1863	1583	1774	0	1856
Q Serve(g_s), s	3.4	0.0	0.0	4.2	0.0	16.0	1.0	21.4	3.6	21.7	0.0	29.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	4.2	0.0	16.0	1.0	21.4	3.6	21.7	0.0	29.0
Prop In Lane	0.36		0.19	0.89		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	95	0	0	337	0	730	33	552	469	482	0	1020
V/C Ratio(X)	0.76	0.00	0.00	0.31	0.00	0.72	0.64	0.89	0.19	0.96	0.00	0.79
Avail Cap(c_a), veh/h	335	0	0	337	0	730	84	638	543	482	0	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	0.0	29.5	0.0	18.4	41.3	28.5	22.2	30.3	0.0	15.1
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.5	0.0	3.5	19.1	13.5	0.2	30.5	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	2.1	0.0	10.6	0.7	13.0	1.6	14.7	0.0	15.8
LnGrp Delay(d),s/veh	51.0	0.0	0.0	30.0	0.0	21.9	60.4	41.9	22.4	60.8	0.0	19.0
LnGrp LOS	D			C		C	E	D	C	E		B
Approach Vol, veh/h		72			630			604			1264	
Approach Delay, s/veh		51.0			23.3			39.6			34.3	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	27.0	29.1		8.6	5.6	50.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	23.0	29.0		16.0	4.0	48.0
Max Q Clear Time (g_c+I1), s		18.0	23.7	23.4		5.4	3.0	31.0
Green Ext Time (p_c), s		0.0	0.0	1.7		0.2	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	22.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	7	192	123	26	14	90	150	26	3	272	109
Future Vol, veh/h	99	7	192	123	26	14	90	150	26	3	272	109
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	124	9	240	154	33	18	113	188	33	4	340	136
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	18.3	22.3	19	29
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	93%	0%	75%	100%	0%	0%
Vol Thru, %	0%	85%	7%	0%	16%	0%	100%	0%
Vol Right, %	0%	15%	0%	100%	9%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	176	106	192	163	3	272	109
LT Vol	90	0	99	0	123	3	0	0
Through Vol	0	150	7	0	26	0	272	0
RT Vol	0	26	0	192	14	0	0	109
Lane Flow Rate	112	220	132	240	204	4	340	136
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.289	0.527	0.336	0.528	0.53	0.009	0.785	0.287
Departure Headway (Hd)	9.255	8.626	9.123	7.923	9.37	8.832	8.316	7.593
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	388	418	394	456	385	405	435	473
Service Time	7.014	6.385	6.879	5.678	7.13	6.585	6.069	5.346
HCM Lane V/C Ratio	0.289	0.526	0.335	0.526	0.53	0.01	0.782	0.288
HCM Control Delay	15.8	20.7	16.5	19.3	22.3	11.7	35.5	13.4
HCM Lane LOS	C	C	C	C	C	B	E	B
HCM 95th-tile Q	1.2	3	1.5	3	3	0	6.9	1.2

Intersection	
Int Delay, s/veh	143.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	116	1	123	1	155	140	223	391	0
Future Vol, veh/h	0	1	0	116	1	123	1	155	140	223	391	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	62	62	62	62	62	62	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	0	187	2	198	2	250	226	360	631	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1818	1831	631	1719	1718	363	631	0	0	476	0	0
Stage 1	1351	1351	-	367	367	-	-	-	-	-	-	-
Stage 2	467	480	-	1352	1351	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	60	76	481	~ 71	90	682	951	-	-	1086	-	-
Stage 1	185	219	-	653	622	-	-	-	-	-	-	-
Stage 2	576	554	-	~ 185	219	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	31	51	481	~ 51	60	682	951	-	-	1086	-	-
Mov Cap-2 Maneuver	31	51	-	~ 51	60	-	-	-	-	-	-	-
Stage 1	184	147	-	651	620	-	-	-	-	-	-	-
Stage 2	406	552	-	~ 122	147	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	77.9	$ 679.4	0	3.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	951	-	-	51	51	682	1086	-	-
HCM Lane V/C Ratio	0.002	-	-	0.032	3.7	0.291	0.331	-	-
HCM Control Delay (s)	8.8	0	-	77.9	$ 1380.7	12.4	9.9	-	-
HCM Lane LOS	A	A	-	F	F	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	20.6	1.2	1.5	-	-

Notes

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

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	40	38	6	27	1
Future Vol, veh/h	3	40	38	6	27	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	43	41	7	29	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	48	0	-	0	94	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1559	-	-	-	906	1025
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1559	-	-	-	904	1025
Mov Cap-2 Maneuver	-	-	-	-	904	-
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	973	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1559	-	-	-	908
HCM Lane V/C Ratio	0.002	-	-	-	0.034
HCM Control Delay (s)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	57	22	317	512	22
Future Vol, veh/h	10	57	22	317	512	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	95	37	528	853	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1474	872	890	0	-	0
Stage 1	872	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	139	350	761	-	-	-
Stage 1	409	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	129	350	761	-	-	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	547	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.8	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	761	-	129	350	-	-
HCM Lane V/C Ratio	0.048	-	0.129	0.271	-	-
HCM Control Delay (s)	10	0	37	19.1	-	-
HCM Lane LOS	A	A	E	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	1.1	-	-

Intersection	
Int Delay, s/veh	30.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	65	276	101	190	380
Future Vol, veh/h	36	65	276	101	190	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	112	476	174	328	655

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1874	563	0	0	650	0
Stage 1	563	-	-	-	-	-
Stage 2	1311	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	79	526	-	-	936	-
Stage 1	570	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 51	526	-	-	936	-
Mov Cap-2 Maneuver	~ 51	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	252	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	298.6	0	3.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	122	936	-
HCM Lane V/C Ratio	-	-	1.427	0.35	-
HCM Control Delay (s)	-	-	298.6	10.9	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	12	1.6	-

Notes

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

Intersection	
Int Delay, s/veh	97.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	5	115	1	115	2	274	115	134	265	5
Future Vol, veh/h	0	0	5	115	1	115	2	274	115	134	265	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	172	1	172	3	409	172	200	396	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1388	1387	400	1304	1304	495	403	0	0	581	0	0
Stage 1	800	800	-	501	501	-	-	-	-	-	-	-
Stage 2	588	587	-	803	803	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	120	143	650	~ 137	160	575	1156	-	-	993	-	-
Stage 1	379	397	-	552	543	-	-	-	-	-	-	-
Stage 2	495	497	-	377	396	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	70	114	650	~ 114	128	575	1156	-	-	993	-	-
Mov Cap-2 Maneuver	70	114	-	~ 114	128	-	-	-	-	-	-	-
Stage 1	378	317	-	550	541	-	-	-	-	-	-	-
Stage 2	345	496	-	298	316	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	$ 428.7	0	3.2
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1156	-	-	650	190	993	-	-
HCM Lane V/C Ratio	0.003	-	-	0.011	1.815	0.201	-	-
HCM Control Delay (s)	8.1	-	-	10.6	$ 428.7	9.5	-	-
HCM Lane LOS	A	-	-	B	F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	24.6	0.8	-	-

Notes

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

Intersection	
Int Delay, s/veh	19.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	120	74	305	361	132	265
Future Vol, veh/h	120	74	305	361	132	265
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	96	396	469	171	344

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1317	631	0	0	865	0
Stage 1	631	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	174	481	-	-	778	-
Stage 1	530	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 136	481	-	-	778	-
Mov Cap-2 Maneuver	~ 136	-	-	-	-	-
Stage 1	413	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	120.3	0	3.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	136	481	778	-
HCM Lane V/C Ratio	-	-	1.146	0.2	0.22	-
HCM Control Delay (s)	-	-	185.7	14.3	10.9	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	9	0.7	0.8	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	104	238	137	127	134	264	361	90	47	295	113
Future Volume (veh/h)	178	104	238	137	127	134	264	361	90	47	295	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	196	114	262	151	140	147	290	397	99	52	324	124
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	383	326	177	163	171	469	689	586	292	680	256
Arrive On Green	0.11	0.21	0.21	0.10	0.20	0.20	0.26	0.37	0.37	0.16	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	833	875	1774	1863	1583	1774	2519	946
Grp Volume(v), veh/h	196	114	262	151	0	287	290	397	99	52	226	222
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1708	1774	1863	1583	1774	1770	1696
Q Serve(g_s), s	11.0	5.2	8.9	8.4	0.0	16.2	14.4	17.1	3.0	2.5	10.7	11.0
Cycle Q Clear(g_c), s	11.0	5.2	8.9	8.4	0.0	16.2	14.4	17.1	3.0	2.5	10.7	11.0
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	195	383	326	177	0	334	469	689	586	292	478	458
V/C Ratio(X)	1.00	0.30	0.80	0.85	0.00	0.86	0.62	0.58	0.17	0.18	0.47	0.49
Avail Cap(c_a), veh/h	195	577	491	177	0	513	469	689	586	292	478	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	33.6	12.1	44.3	0.0	38.9	32.3	25.2	10.8	36.0	30.5	30.7
Incr Delay (d2), s/veh	65.6	0.4	5.8	30.5	0.0	8.9	2.5	3.5	0.6	0.3	3.3	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	2.7	4.4	5.6	0.0	8.5	7.3	9.4	1.4	1.3	5.6	5.6
LnGrp Delay(d),s/veh	110.1	34.0	17.9	74.8	0.0	47.8	34.8	28.7	11.4	36.3	33.9	34.3
LnGrp LOS	F	C	B	E		D	C	C	B	D	C	C
Approach Vol, veh/h		572			438			786			500	
Approach Delay, s/veh		52.7			57.1			28.8			34.3	
Approach LOS		D			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	41.0	14.0	24.6	30.4	31.0	15.0	23.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	37.0	10.0	31.0	16.0	27.0	11.0	30.0
Max Q Clear Time (g_c+I1), s	4.5	19.1	10.4	10.9	16.4	13.0	13.0	18.2
Green Ext Time (p_c), s	0.0	2.6	0.0	1.5	0.0	2.3	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	2.2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	125	1	0	18	81	732	6	4	643	9
Future Vol, veh/h	1	0	125	1	0	18	81	732	6	4	643	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	80	80	80	94	94	94	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	142	1	0	23	86	779	6	4	707	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1686	1677	712	1745	1679	782	717	0	0	785	0	0
Stage 1	720	720	-	954	954	-	-	-	-	-	-	-
Stage 2	966	957	-	791	725	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	74	95	432	68	95	394	884	-	-	834	-	-
Stage 1	419	432	-	311	337	-	-	-	-	-	-	-
Stage 2	306	336	-	383	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	64	85	432	42	85	394	884	-	-	834	-	-
Mov Cap-2 Maneuver	64	85	-	42	85	-	-	-	-	-	-	-
Stage 1	378	430	-	281	304	-	-	-	-	-	-	-
Stage 2	260	303	-	256	428	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	18.3	19.4	0.9	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	884	-	-	273	413	834	-	-
HCM Lane V/C Ratio	0.097	-	-	0.087	0.347	0.005	-	-
HCM Control Delay (s)	9.5	-	-	19.4	18.3	9.3	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	1.5	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	6	82	11	52	7	518	6	296	30	389	382	5
Future Volume (veh/h)	6	82	11	52	7	518	6	296	30	389	382	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	9	124	17	55	7	545	7	333	34	423	415	5
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.66	0.66	0.66	0.95	0.95	0.95	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	12	161	22	334	43	755	13	381	324	471	851	10
Arrive On Green	0.11	0.11	0.11	0.21	0.21	0.21	0.01	0.20	0.20	0.27	0.46	0.46
Sat Flow, veh/h	109	1505	206	1582	201	1583	1774	1863	1583	1774	1837	22
Grp Volume(v), veh/h	150	0	0	62	0	545	7	333	34	423	0	420
Grp Sat Flow(s),veh/h/ln	1821	0	0	1784	0	1583	1774	1863	1583	1774	0	1859
Q Serve(g_s), s	6.1	0.0	0.0	2.2	0.0	16.0	0.3	13.1	1.3	17.4	0.0	11.9
Cycle Q Clear(g_c), s	6.1	0.0	0.0	2.2	0.0	16.0	0.3	13.1	1.3	17.4	0.0	11.9
Prop In Lane	0.06		0.11	0.89		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	195	0	0	377	0	755	13	381	324	471	0	861
V/C Ratio(X)	0.77	0.00	0.00	0.16	0.00	0.72	0.55	0.87	0.10	0.90	0.00	0.49
Avail Cap(c_a), veh/h	384	0	0	377	0	755	94	418	355	585	0	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	0.0	24.4	0.0	15.8	37.5	29.2	24.5	26.8	0.0	14.1
Incr Delay (d2), s/veh	6.2	0.0	0.0	0.2	0.0	3.4	31.5	17.1	0.1	14.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	1.1	0.0	9.7	0.3	8.6	0.6	10.3	0.0	6.2
LnGrp Delay(d),s/veh	39.1	0.0	0.0	24.6	0.0	19.2	69.0	46.2	24.6	41.2	0.0	14.5
LnGrp LOS	D			C		B	E	D	C	D		B
Approach Vol, veh/h		150			607			374			843	
Approach Delay, s/veh		39.1			19.8			44.7			27.9	
Approach LOS		D			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	24.1	19.5		12.1	4.5	39.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	25.0	17.0		16.0	4.0	38.0
Max Q Clear Time (g_c+I1), s		18.0	19.4	15.1		8.1	2.3	13.9
Green Ext Time (p_c), s		0.0	0.7	0.4		0.4	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	125	33	136	45	18	13	112	253	74	14	157	74
Future Vol, veh/h	125	33	136	45	18	13	112	253	74	14	157	74
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	154	41	168	56	22	16	138	312	91	17	194	91
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	15.7	14.3	28.6	14.8
HCM LOS	C	B	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	79%	0%	59%	100%	0%	0%
Vol Thru, %	0%	77%	21%	0%	24%	0%	100%	0%
Vol Right, %	0%	23%	0%	100%	17%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	327	158	136	76	14	157	74
LT Vol	112	0	125	0	45	14	0	0
Through Vol	0	253	33	0	18	0	157	0
RT Vol	0	74	0	136	13	0	0	74
Lane Flow Rate	138	404	195	168	94	17	194	91
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.302	0.806	0.447	0.333	0.231	0.041	0.428	0.183
Departure Headway (Hd)	7.865	7.19	8.247	7.131	8.848	8.456	7.943	7.224
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	456	501	435	502	404	422	452	495
Service Time	5.627	4.951	6.014	4.897	6.634	6.229	5.715	4.995
HCM Lane V/C Ratio	0.303	0.806	0.448	0.335	0.233	0.04	0.429	0.184
HCM Control Delay	14	33.6	17.6	13.4	14.3	11.6	16.6	11.6
HCM Lane LOS	B	D	C	B	B	B	C	B
HCM 95th-tile Q	1.3	7.6	2.3	1.4	0.9	0.1	2.1	0.7

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	2	63	1	176	2	300	217	153	206	1
Future Vol, veh/h	1	1	2	63	1	176	2	300	217	153	206	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	2	78	1	217	2	370	268	189	254	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1250	1275	255	1142	1141	504	255	0	0	638	0	0
Stage 1	633	633	-	508	508	-	-	-	-	-	-	-
Stage 2	617	642	-	634	633	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	150	167	784	177	201	568	1310	-	-	946	-	-
Stage 1	468	473	-	547	539	-	-	-	-	-	-	-
Stage 2	477	469	-	467	473	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	133	784	148	160	568	1310	-	-	946	-	-
Mov Cap-2 Maneuver	78	133	-	148	160	-	-	-	-	-	-	-
Stage 1	467	378	-	546	538	-	-	-	-	-	-	-
Stage 2	293	468	-	371	378	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.2	25.6	0	4.1
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1310	-	-	175	148	568	946	-	-
HCM Lane V/C Ratio	0.002	-	-	0.028	0.534	0.383	0.2	-	-
HCM Control Delay (s)	7.8	0	-	26.2	54.2	15.2	9.8	-	-
HCM Lane LOS	A	A	-	D	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	2.6	1.8	0.7	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	19	513	1	12	272
Future Vol, veh/h	9	19	513	1	12	272
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	23	633	1	15	336

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1000	634	0	0	634	0
Stage 1	634	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	270	479	-	-	949	-
Stage 1	529	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	265	479	-	-	949	-
Mov Cap-2 Maneuver	265	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	702	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	380	949	-
HCM Lane V/C Ratio	-	-	0.091	0.016	-
HCM Control Delay (s)	-	-	15.4	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	43	24	15	3
Future Vol, veh/h	1	5	43	24	15	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	8	72	40	25	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	112	0	-	0	104	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1478	-	-	-	894	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1478	-	-	-	893	965
Mov Cap-2 Maneuver	-	-	-	-	893	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1478	-	-	-	904
HCM Lane V/C Ratio	0.001	-	-	-	0.033
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	19	60	512	274	7
Future Vol, veh/h	2	19	60	512	274	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	32	100	853	457	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1516	463	469	0	-	0
Stage 1	463	-	-	-	-	-
Stage 2	1053	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	131	599	1093	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	108	599	1093	-	-	-
Mov Cap-2 Maneuver	108	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1093	-	108	599	-	-
HCM Lane V/C Ratio	0.091	-	0.031	0.053	-	-
HCM Control Delay (s)	8.6	0	39.4	11.3	-	-
HCM Lane LOS	A	A	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.2	-	-

Intersection	
Int Delay, s/veh	14.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	106	469	39	30	263
Future Vol, veh/h	76	106	469	39	30	263
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	156	690	57	44	387

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1194	719	0	0	747	0
Stage 1	719	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	206	428	-	-	861	-
Stage 1	483	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	195	428	-	-	861	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	626	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	77.4	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	286	861	-
HCM Lane V/C Ratio	-	-	0.936	0.051	-
HCM Control Delay (s)	-	-	77.4	9.4	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	8.9	0.2	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	94	22	1	82	76	418	13	7	320	15
Future Vol, veh/h	10	0	94	22	1	82	76	418	13	7	320	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	138	32	1	121	112	615	19	10	471	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1412	1360	482	1420	1362	625	493	0	0	634	0	0
Stage 1	502	502	-	849	849	-	-	-	-	-	-	-
Stage 2	910	858	-	571	513	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	116	148	584	114	148	485	1071	-	-	949	-	-
Stage 1	552	542	-	356	377	-	-	-	-	-	-	-
Stage 2	329	374	-	506	536	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	79	131	584	79	131	485	1071	-	-	949	-	-
Mov Cap-2 Maneuver	79	131	-	79	131	-	-	-	-	-	-	-
Stage 1	494	536	-	319	337	-	-	-	-	-	-	-
Stage 2	220	335	-	382	530	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22	47.2	1.3	0.2
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1071	-	-	362	231	949	-	-
HCM Lane V/C Ratio	0.104	-	-	0.422	0.668	0.011	-	-
HCM Control Delay (s)	8.8	-	-	22	47.2	8.8	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2	4.2	0	-	-

Intersection	
Int Delay, s/veh	7.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	199	304	142	61	381
Future Vol, veh/h	83	199	304	142	61	381
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	117	280	428	200	86	537

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1237	528	0	0	628	0
Stage 1	528	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	194	550	-	-	954	-
Stage 1	592	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	550	-	-	954	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	488	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.9	0	1.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	177	550	954	-
HCM Lane V/C Ratio	-	-	0.66	0.51	0.09	-
HCM Control Delay (s)	-	-	57.9	18.2	9.1	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	3.9	2.9	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	81	267	168	87	55	280	386	189	59	367	145
Future Volume (veh/h)	85	81	267	168	87	55	280	386	189	59	367	145
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	92	88	233	183	95	60	304	420	205	64	399	158
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	269	229	223	145	92	361	740	629	80	595	233
Arrive On Green	0.13	0.14	0.14	0.13	0.14	0.14	0.20	0.40	0.40	0.05	0.24	0.24
Sat Flow, veh/h	1774	1863	1583	1774	1069	675	1774	1863	1583	1774	2487	973
Grp Volume(v), veh/h	92	88	233	183	0	155	304	420	205	64	282	275
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1744	1774	1863	1583	1774	1770	1691
Q Serve(g_s), s	2.6	2.4	4.8	5.6	0.0	4.7	9.2	9.8	5.0	2.0	8.1	8.2
Cycle Q Clear(g_c), s	2.6	2.4	4.8	5.6	0.0	4.7	9.2	9.8	5.0	2.0	8.1	8.2
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	238	269	229	223	0	237	361	740	629	80	423	405
V/C Ratio(X)	0.39	0.33	1.02	0.82	0.00	0.66	0.84	0.57	0.33	0.80	0.67	0.68
Avail Cap(c_a), veh/h	238	1070	909	223	0	1001	446	1103	938	223	826	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	21.4	8.4	23.8	0.0	22.8	21.3	13.1	11.6	26.3	19.2	19.3
Incr Delay (d2), s/veh	1.0	0.7	32.5	21.1	0.0	3.1	11.4	0.7	0.3	16.1	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.3	5.0	4.1	0.0	2.4	5.6	5.2	2.2	1.3	4.1	4.0
LnGrp Delay(d),s/veh	23.0	22.1	41.1	44.9	0.0	25.9	32.8	13.7	11.9	42.4	21.0	21.3
LnGrp LOS	C	C	F	D		C	C	B	B	D	C	C
Approach Vol, veh/h		413			338			929			621	
Approach Delay, s/veh		33.0			36.2			19.6			23.3	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	26.1	11.0	12.0	15.3	17.3	11.5	11.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	4.0	11.8	7.6	6.8	11.2	10.2	4.6	6.7
Green Ext Time (p_c), s	0.0	3.3	0.0	1.3	0.3	3.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	84	1	1	21	107	773	7	8	808	9
Future Vol, veh/h	1	0	84	1	1	21	107	773	7	8	808	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	100	1	1	26	110	797	7	9	860	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1917	1907	865	1954	1909	801	870	0	0	804	0	0
Stage 1	883	883	-	1021	1021	-	-	-	-	-	-	-
Stage 2	1034	1024	-	933	888	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	51	68	353	48	68	384	775	-	-	820	-	-
Stage 1	340	364	-	285	314	-	-	-	-	-	-	-
Stage 2	280	313	-	319	362	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	41	58	353	30	58	384	775	-	-	820	-	-
Mov Cap-2 Maneuver	41	58	-	30	58	-	-	-	-	-	-	-
Stage 1	292	360	-	245	269	-	-	-	-	-	-	-
Stage 2	223	269	-	226	358	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	21.1	23.8	1.3	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	775	-	-	219	324	820	-	-
HCM Lane V/C Ratio	0.142	-	-	0.128	0.312	0.01	-	-
HCM Control Delay (s)	10.4	-	-	23.8	21.1	9.4	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.4	1.3	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	14	66	18	81	10	502	8	390	57	426	451	9
Future Volume (veh/h)	14	66	18	81	10	502	8	390	57	426	451	9
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	18	86	23	88	11	546	9	433	63	490	518	10
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	23	111	30	296	37	720	16	497	422	476	958	18
Arrive On Green	0.09	0.09	0.09	0.19	0.19	0.19	0.01	0.27	0.27	0.27	0.53	0.53
Sat Flow, veh/h	254	1214	325	1585	198	1583	1774	1863	1583	1774	1821	35
Grp Volume(v), veh/h	127	0	0	99	0	546	9	433	63	490	0	528
Grp Sat Flow(s),veh/h/ln	1793	0	0	1783	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	5.9	0.0	0.0	4.1	0.0	16.0	0.4	19.0	2.6	23.0	0.0	16.2
Cycle Q Clear(g_c), s	5.9	0.0	0.0	4.1	0.0	16.0	0.4	19.0	2.6	23.0	0.0	16.2
Prop In Lane	0.14		0.18	0.89		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	165	0	0	333	0	720	16	497	422	476	0	976
V/C Ratio(X)	0.77	0.00	0.00	0.30	0.00	0.76	0.56	0.87	0.15	1.03	0.00	0.54
Avail Cap(c_a), veh/h	335	0	0	333	0	720	83	630	536	476	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	0.0	30.0	0.0	19.4	42.3	30.0	24.0	31.4	0.0	13.5
Incr Delay (d2), s/veh	7.5	0.0	0.0	0.5	0.0	4.7	27.6	10.6	0.2	49.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	2.1	0.0	11.7	0.3	11.2	1.2	17.6	0.0	8.3
LnGrp Delay(d),s/veh	45.5	0.0	0.0	30.5	0.0	24.1	69.9	40.7	24.2	80.3	0.0	14.0
LnGrp LOS	D			C		C	E	D	C	F		B
Approach Vol, veh/h		127			645			505			1018	
Approach Delay, s/veh		45.5			25.1			39.1			45.9	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	27.0	26.8		11.9	4.8	49.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	23.0	29.0		16.0	4.0	48.0
Max Q Clear Time (g_c+I1), s		18.0	25.0	21.0		7.9	2.4	18.2
Green Ext Time (p_c), s		0.0	0.0	1.8		0.3	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	97	33	71	44	25	11	101	220	73	15	126	76
Future Vol, veh/h	97	33	71	44	25	11	101	220	73	15	126	76
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	41	88	54	31	14	125	272	90	19	156	94
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	13.2	13	18.9	12.2
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	75%	0%	55%	100%	0%	0%
Vol Thru, %	0%	75%	25%	0%	31%	0%	100%	0%
Vol Right, %	0%	25%	0%	100%	14%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	293	130	71	80	15	126	76
LT Vol	101	0	97	0	44	15	0	0
Through Vol	0	220	33	0	25	0	126	0
RT Vol	0	73	0	71	11	0	0	76
Lane Flow Rate	125	362	160	88	99	19	156	94
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.252	0.661	0.345	0.162	0.219	0.04	0.313	0.17
Departure Headway (Hd)	7.264	6.577	7.738	6.65	7.976	7.751	7.24	6.526
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	498	553	465	539	449	462	496	549
Service Time	4.964	4.277	5.486	4.397	5.73	5.497	4.987	4.272
HCM Lane V/C Ratio	0.251	0.655	0.344	0.163	0.22	0.041	0.315	0.171
HCM Control Delay	12.4	21.2	14.5	10.7	13	10.8	13.3	10.6
HCM Lane LOS	B	C	B	B	B	B	B	B
HCM 95th-tile Q	1	4.8	1.5	0.6	0.8	0.1	1.3	0.6

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	50	2	195	0	206	71	111	120	0
Future Vol, veh/h	0	0	0	50	2	195	0	206	71	111	120	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	62	2	241	0	254	88	137	148	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	842	764	148	720	720	298	148	0	0	342	0	0
Stage 1	422	422	-	298	298	-	-	-	-	-	-	-
Stage 2	420	342	-	422	422	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	284	334	899	343	354	741	1434	-	-	1217	-	-
Stage 1	609	588	-	711	667	-	-	-	-	-	-	-
Stage 2	611	638	-	609	588	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	174	296	899	314	314	741	1434	-	-	1217	-	-
Mov Cap-2 Maneuver	174	296	-	314	314	-	-	-	-	-	-	-
Stage 1	609	522	-	711	667	-	-	-	-	-	-	-
Stage 2	411	638	-	540	522	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	13.7	0	4
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1434	-	-	-	314	741	1217	-	-
HCM Lane V/C Ratio	-	-	-	-	0.204	0.325	0.113	-	-
HCM Control Delay (s)	0	-	-	0	19.4	12.2	8.3	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.8	1.4	0.4	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	33	528	1	11	160
Future Vol, veh/h	18	33	528	1	11	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	41	652	1	14	198

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	879	653	0	0	653	0
Stage 1	653	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	318	467	-	-	934	-
Stage 1	518	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	467	-	-	934	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	398	934	-
HCM Lane V/C Ratio	-	-	0.158	0.015	-
HCM Control Delay (s)	-	-	15.7	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	1	17	7	4
Future Vol, veh/h	3	13	1	17	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	1	18	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	19	0	-	0	30	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1597	-	-	-	984	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1597	-	-	-	982	1071
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1597	-	-	-	1013
HCM Lane V/C Ratio	0.002	-	-	-	0.012
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	519	175	3
Future Vol, veh/h	10	10	15	519	175	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	641	216	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	897	218	220	0	-	0
Stage 1	218	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	310	822	1349	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	303	822	1349	-	-	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	504	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1349	-	303	822	-	-
HCM Lane V/C Ratio	0.014	-	0.041	0.015	-	-
HCM Control Delay (s)	7.7	0	17.4	9.4	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	139	262	126	120	46	298	298	182	51	260	92
Future Volume (veh/h)	73	139	262	126	120	46	298	298	182	51	260	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	79	151	285	137	130	50	324	324	198	55	283	100
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	317	270	175	201	77	389	677	575	76	483	167
Arrive On Green	0.11	0.17	0.17	0.10	0.16	0.16	0.22	0.36	0.36	0.04	0.19	0.19
Sat Flow, veh/h	1774	1863	1583	1774	1282	493	1774	1863	1583	1774	2582	893
Grp Volume(v), veh/h	79	151	285	137	0	180	324	324	198	55	192	191
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1776	1774	1863	1583	1774	1770	1705
Q Serve(g_s), s	2.0	3.6	4.5	3.7	0.0	4.7	8.6	6.6	4.5	1.5	4.9	5.1
Cycle Q Clear(g_c), s	2.0	3.6	4.5	3.7	0.0	4.7	8.6	6.6	4.5	1.5	4.9	5.1
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	200	317	270	175	0	278	389	677	575	76	331	319
V/C Ratio(X)	0.39	0.48	1.06	0.78	0.00	0.65	0.83	0.48	0.34	0.72	0.58	0.60
Avail Cap(c_a), veh/h	252	1209	1027	252	0	1152	504	1246	1059	252	933	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	18.5	6.0	21.7	0.0	19.5	18.4	12.1	11.4	23.3	18.3	18.4
Incr Delay (d2), s/veh	1.3	1.1	41.8	9.5	0.0	2.5	9.1	0.5	0.4	12.1	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.9	6.1	2.3	0.0	2.5	5.1	3.4	2.0	1.0	2.5	2.5
LnGrp Delay(d),s/veh	21.6	19.6	47.8	31.2	0.0	22.1	27.4	12.6	11.8	35.4	19.9	20.2
LnGrp LOS	C	B	F	C		C	C	B	B	D	B	C
Approach Vol, veh/h		515			317			846			438	
Approach Delay, s/veh		35.5			26.0			18.1			22.0	
Approach LOS		D			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	21.9	8.9	12.4	14.8	13.2	9.6	11.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	3.5	8.6	5.7	6.5	10.6	7.1	4.0	6.7
Green Ext Time (p_c), s	0.0	2.7	0.0	1.9	0.3	2.2	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	94	2	0	16	181	742	11	11	701	14
Future Vol, veh/h	1	0	94	2	0	16	181	742	11	11	701	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	112	2	0	20	187	765	11	12	746	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1933	1928	754	1979	1930	771	761	0	0	776	0	0
Stage 1	778	778	-	1145	1145	-	-	-	-	-	-	-
Stage 2	1155	1150	-	834	785	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	50	66	409	46	66	400	851	-	-	840	-	-
Stage 1	389	407	-	243	274	-	-	-	-	-	-	-
Stage 2	240	273	-	362	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	51	409	27	51	400	851	-	-	840	-	-
Mov Cap-2 Maneuver	39	51	-	27	51	-	-	-	-	-	-	-
Stage 1	303	401	-	190	214	-	-	-	-	-	-	-
Stage 2	178	213	-	259	398	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	18.8	31.4	2	0.1
HCM LOS	C	D		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	851	-	-	158	372	840	-	-
HCM Lane V/C Ratio	0.219	-	-	0.139	0.304	0.014	-	-
HCM Control Delay (s)	10.4	-	-	31.4	18.8	9.3	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	0.5	1.3	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	25	11	85	10	485	19	443	82	414	377	1
Future Volume (veh/h)	20	25	11	85	10	485	19	443	82	414	377	1
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	26	32	14	92	11	527	21	492	91	476	433	1
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	42	19	301	36	730	33	552	469	482	1021	2
Arrive On Green	0.05	0.05	0.05	0.19	0.19	0.19	0.02	0.30	0.30	0.27	0.55	0.55
Sat Flow, veh/h	639	787	344	1593	190	1583	1774	1863	1583	1774	1858	4
Grp Volume(v), veh/h	72	0	0	103	0	527	21	492	91	476	0	434
Grp Sat Flow(s),veh/h/ln	1770	0	0	1783	0	1583	1774	1863	1583	1774	0	1862
Q Serve(g_s), s	3.4	0.0	0.0	4.2	0.0	16.0	1.0	21.4	3.6	22.6	0.0	11.6
Cycle Q Clear(g_c), s	3.4	0.0	0.0	4.2	0.0	16.0	1.0	21.4	3.6	22.6	0.0	11.6
Prop In Lane	0.36		0.19	0.89		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	95	0	0	337	0	730	33	552	469	482	0	1023
V/C Ratio(X)	0.76	0.00	0.00	0.31	0.00	0.72	0.64	0.89	0.19	0.99	0.00	0.42
Avail Cap(c_a), veh/h	335	0	0	337	0	730	84	638	543	482	0	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	0.0	29.5	0.0	18.4	41.3	28.5	22.2	30.7	0.0	11.2
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.5	0.0	3.5	19.1	13.5	0.2	37.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	2.1	0.0	10.6	0.7	13.0	1.6	16.0	0.0	6.0
LnGrp Delay(d),s/veh	51.0	0.0	0.0	30.0	0.0	21.9	60.4	41.9	22.4	68.2	0.0	11.5
LnGrp LOS	D			C		C	E	D	C	E		B
Approach Vol, veh/h		72			630			604			910	
Approach Delay, s/veh		51.0			23.3			39.6			41.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	27.0	29.1		8.6	5.6	50.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	23.0	29.0		16.0	4.0	48.0
Max Q Clear Time (g_c+I1), s		18.0	24.6	23.4		5.4	3.0	13.6
Green Ext Time (p_c), s		0.0	0.0	1.7		0.2	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	97	33	86	44	25	11	101	220	73	15	129	76
Future Vol, veh/h	97	33	86	44	25	11	101	220	73	15	129	76
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	41	106	54	31	14	125	272	90	19	159	94
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	13.2	13.1	19.3	12.4
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	75%	0%	55%	100%	0%	0%
Vol Thru, %	0%	75%	25%	0%	31%	0%	100%	0%
Vol Right, %	0%	25%	0%	100%	14%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	293	130	86	80	15	129	76
LT Vol	101	0	97	0	44	15	0	0
Through Vol	0	220	33	0	25	0	129	0
RT Vol	0	73	0	86	11	0	0	76
Lane Flow Rate	125	362	160	106	99	19	159	94
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.253	0.666	0.347	0.197	0.221	0.04	0.324	0.172
Departure Headway (Hd)	7.311	6.624	7.777	6.688	8.064	7.828	7.317	6.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	491	546	462	536	445	458	492	543
Service Time	5.048	4.36	5.519	4.43	5.814	5.571	5.06	4.345
HCM Lane V/C Ratio	0.255	0.663	0.346	0.198	0.222	0.041	0.323	0.173
HCM Control Delay	12.5	21.6	14.6	11.1	13.1	10.9	13.5	10.7
HCM Lane LOS	B	C	B	B	B	B	B	B
HCM 95th-tile Q	1	4.9	1.5	0.7	0.8	0.1	1.4	0.6

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	72	2	195	0	206	72	111	138	0
Future Vol, veh/h	0	0	0	72	2	195	0	206	72	111	138	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	20	-	-	-	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	89	2	241	0	254	89	137	170	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	864	787	170	743	743	299	170	0	0	343	0	0
Stage 1	444	444	-	299	299	-	-	-	-	-	-	-
Stage 2	420	343	-	444	444	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	274	324	874	331	343	741	1407	-	-	1216	-	-
Stage 1	593	575	-	710	666	-	-	-	-	-	-	-
Stage 2	611	637	-	593	575	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	287	874	303	304	741	1407	-	-	1216	-	-
Mov Cap-2 Maneuver	168	287	-	303	304	-	-	-	-	-	-	-
Stage 1	593	510	-	710	666	-	-	-	-	-	-	-
Stage 2	411	637	-	526	510	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	14.9	0	3.7
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1407	-	-	-	303	741	1216	-	-
HCM Lane V/C Ratio	-	-	-	-	0.302	0.325	0.113	-	-
HCM Control Delay (s)	0	-	-	0	21.9	12.2	8.3	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.2	1.4	0.4	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	34	528	41	51	160
Future Vol, veh/h	17	34	528	41	51	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	42	652	51	63	198

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1002	678	0	0	703	0
Stage 1	678	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	269	452	-	-	895	-
Stage 1	504	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	248	452	-	-	895	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	355	895	-
HCM Lane V/C Ratio	-	-	0.177	0.07	-
HCM Control Delay (s)	-	-	17.3	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	1	17	7	4
Future Vol, veh/h	3	13	1	17	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	1	18	8	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	19	0	-	0	30	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1597	-	-	-	984	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1597	-	-	-	982	1071
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1597	-	-	-	1013
HCM Lane V/C Ratio	0.002	-	-	-	0.012
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	559	174	3
Future Vol, veh/h	10	10	15	559	174	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	690	215	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	945	217	219	0	-	0
Stage 1	217	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	291	823	1350	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	284	823	1350	-	-	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1350	-	284	823	-	-
HCM Lane V/C Ratio	0.014	-	0.043	0.015	-	-
HCM Control Delay (s)	7.7	0	18.3	9.4	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	139	262	126	120	49	298	334	182	52	258	92
Future Volume (veh/h)	73	139	262	126	120	49	298	334	182	52	258	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	79	151	285	137	130	53	324	363	198	57	280	100
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	318	270	175	200	81	389	673	572	78	479	167
Arrive On Green	0.11	0.17	0.17	0.10	0.16	0.16	0.22	0.36	0.36	0.04	0.19	0.19
Sat Flow, veh/h	1774	1863	1583	1774	1259	513	1774	1863	1583	1774	2574	899
Grp Volume(v), veh/h	79	151	285	137	0	183	324	363	198	57	191	189
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1772	1774	1863	1583	1774	1770	1704
Q Serve(g_s), s	2.0	3.6	4.5	3.7	0.0	4.8	8.6	7.6	4.5	1.6	4.8	5.0
Cycle Q Clear(g_c), s	2.0	3.6	4.5	3.7	0.0	4.8	8.6	7.6	4.5	1.6	4.8	5.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	197	318	270	175	0	281	389	673	572	78	329	317
V/C Ratio(X)	0.40	0.48	1.06	0.78	0.00	0.65	0.83	0.54	0.35	0.73	0.58	0.60
Avail Cap(c_a), veh/h	252	1211	1029	252	0	1152	505	1249	1062	252	935	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	18.4	5.9	21.7	0.0	19.4	18.3	12.5	11.5	23.2	18.3	18.3
Incr Delay (d2), s/veh	1.3	1.1	41.5	9.4	0.0	2.5	9.0	0.7	0.4	12.3	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.9	6.0	2.3	0.0	2.5	5.1	4.0	2.0	1.0	2.5	2.5
LnGrp Delay(d),s/veh	21.7	19.5	47.4	31.1	0.0	22.0	27.3	13.1	11.8	35.5	19.9	20.1
LnGrp LOS	C	B	F	C		C	C	B	B	D	B	C
Approach Vol, veh/h		515			320			885			437	
Approach Delay, s/veh		35.3			25.9			18.0			22.0	
Approach LOS		D			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	21.8	8.9	12.4	14.8	13.2	9.5	11.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	3.6	9.6	5.7	6.5	10.6	7.0	4.0	6.8
Green Ext Time (p_c), s	0.0	2.9	0.0	1.9	0.3	2.1	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	0	94	2	0	16	181	779	11	11	699	14
Future Vol, veh/h	1	0	94	2	0	16	181	779	11	11	699	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	112	2	0	20	187	803	11	12	744	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1969	1964	752	2015	1966	809	759	0	0	814	0	0
Stage 1	776	776	-	1183	1183	-	-	-	-	-	-	-
Stage 2	1193	1188	-	832	783	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	47	63	410	44	63	380	852	-	-	813	-	-
Stage 1	390	407	-	231	263	-	-	-	-	-	-	-
Stage 2	228	262	-	363	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	48	410	26	48	380	852	-	-	813	-	-
Mov Cap-2 Maneuver	37	48	-	26	48	-	-	-	-	-	-	-
Stage 1	305	401	-	180	205	-	-	-	-	-	-	-
Stage 2	169	205	-	260	398	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	18.9	32.9	1.9	0.1
HCM LOS	C	D		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	852	-	-	151	371	813	-	-
HCM Lane V/C Ratio	0.219	-	-	0.145	0.305	0.014	-	-
HCM Control Delay (s)	10.4	-	-	32.9	18.9	9.5	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	0.5	1.3	0	-	-

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	25	11	85	10	516	19	450	82	414	376	1
Future Volume (veh/h)	20	25	11	85	10	516	19	450	82	414	376	1
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	26	32	14	92	11	561	21	500	91	476	432	1
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	42	19	300	36	726	33	558	474	480	1025	2
Arrive On Green	0.05	0.05	0.05	0.19	0.19	0.19	0.02	0.30	0.30	0.27	0.55	0.55
Sat Flow, veh/h	639	787	344	1593	190	1583	1774	1863	1583	1774	1858	4
Grp Volume(v), veh/h	72	0	0	103	0	561	21	500	91	476	0	433
Grp Sat Flow(s),veh/h/ln	1770	0	0	1783	0	1583	1774	1863	1583	1774	0	1862
Q Serve(g_s), s	3.4	0.0	0.0	4.2	0.0	16.0	1.0	21.9	3.6	22.7	0.0	11.6
Cycle Q Clear(g_c), s	3.4	0.0	0.0	4.2	0.0	16.0	1.0	21.9	3.6	22.7	0.0	11.6
Prop In Lane	0.36		0.19	0.89		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	95	0	0	335	0	726	33	558	474	480	0	1027
V/C Ratio(X)	0.76	0.00	0.00	0.31	0.00	0.77	0.64	0.90	0.19	0.99	0.00	0.42
Avail Cap(c_a), veh/h	333	0	0	335	0	726	83	635	540	480	0	1051
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	0.0	29.7	0.0	19.3	41.5	28.5	22.1	30.9	0.0	11.1
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.5	0.0	5.2	19.2	14.2	0.2	38.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	2.1	0.0	12.0	0.7	13.5	1.6	16.3	0.0	6.0
LnGrp Delay(d),s/veh	51.2	0.0	0.0	30.3	0.0	24.5	60.7	42.8	22.3	69.8	0.0	11.4
LnGrp LOS	D			C		C	E	D	C	E		B
Approach Vol, veh/h		72			664			612			909	
Approach Delay, s/veh		51.2			25.4			40.3			42.0	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	27.0	29.5		8.6	5.6	50.9
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	23.0	29.0		16.0	4.0	48.0
Max Q Clear Time (g_c+I1), s		18.0	24.7	23.9		5.4	3.0	13.6
Green Ext Time (p_c), s		0.0	0.0	1.6		0.2	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

TECHNICAL APPENDIX 2 of 3

FOR

UNITED AUBURN INDIAN COMMUNITY SCHOOL PROJECT
TRAFFIC IMPACT ANALYSIS
Placer County, CA

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5765-21

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	10	205	115	40	20	125	175	25	10	475	305
Future Volume (veh/h)	150	10	205	115	40	20	125	175	25	10	475	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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	12	256	144	50	25	156	219	31	12	594	381
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	524	23	484	256	82	30	189	730	103	22	676	575
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.11	0.46	0.46	0.01	0.36	0.36
Sat Flow, veh/h	1319	71	1523	472	258	94	1774	1597	226	1774	1863	1583
Grp Volume(v), veh/h	188	0	268	219	0	0	156	0	250	12	594	381
Grp Sat Flow(s),veh/h/ln	1319	0	1594	824	0	0	1774	0	1823	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	7.8	7.8	0.0	0.0	4.9	0.0	4.9	0.4	16.8	11.4
Cycle Q Clear(g_c), s	6.9	0.0	7.8	15.6	0.0	0.0	4.9	0.0	4.9	0.4	16.8	11.4
Prop In Lane	1.00		0.96	0.66		0.11	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	524	0	506	368	0	0	189	0	834	22	676	575
V/C Ratio(X)	0.36	0.00	0.53	0.60	0.00	0.00	0.83	0.00	0.30	0.56	0.88	0.66
Avail Cap(c_a), veh/h	573	0	566	415	0	0	189	0	834	126	727	618
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	15.8	20.5	0.0	0.0	24.7	0.0	9.6	27.7	16.8	15.1
Incr Delay (d2), s/veh	0.4	0.0	0.9	1.9	0.0	0.0	25.0	0.0	0.2	20.5	11.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	3.5	3.4	0.0	0.0	3.7	0.0	2.5	0.3	10.7	5.4
LnGrp Delay(d),s/veh	15.9	0.0	16.6	22.3	0.0	0.0	49.6	0.0	9.8	48.2	28.2	17.5
LnGrp LOS	B		B	C			D		A	D	C	B
Approach Vol, veh/h		456			219			406			987	
Approach Delay, s/veh		16.3			22.3			25.1			24.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	29.8		21.9	10.0	24.5		21.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	24.0		20.0	6.0	22.0		20.0
Max Q Clear Time (g_c+I1), s	2.4	6.9		9.8	6.9	18.8		17.6
Green Ext Time (p_c), s	0.0	1.3		1.7	0.0	1.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.2
Total Delay (hr)	0.0	1.9	1.3	3.8	7.0

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.4	0.4
Total Delay (hr)	0.4	0.5	9.1	10.0

Total Network Performance

Denied Delay (hr)	0.6
Total Delay (hr)	18.1

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	45	50	10	25	5
Future Vol, veh/h	5	45	50	10	25	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	49	54	11	27	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	119	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1537	-	-	-	877	1005
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1537	-	-	-	874	1005
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	964	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1537	-	-	-	893
HCM Lane V/C Ratio	0.004	-	-	-	0.037
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	60	30	295	720	30
Future Vol, veh/h	10	60	30	295	720	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	100	50	492	1200	50

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1817	1225	1250	0	-	0
Stage 1	1225	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	86	218	557	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	75	218	557	-	-	-
Mov Cap-2 Maneuver	75	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39.3	1.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	557	-	75	218	-	-
HCM Lane V/C Ratio	0.09	-	0.222	0.459	-	-
HCM Control Delay (s)	12.1	0	66.2	34.8	-	-
HCM Lane LOS	B	A	F	D	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	2.2	-	-

Intersection	
Int Delay, s/veh	123

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	70	410	120	200	525
Future Vol, veh/h	40	70	410	120	200	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	121	707	207	345	905

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2406	811	0	0	914	0
Stage 1	811	-	-	-	-	-
Stage 2	1595	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 36	379	-	-	746	-
Stage 1	437	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 19	379	-	-	746	-
Mov Cap-2 Maneuver	~ 19	-	-	-	-	-
Stage 1	235	-	-	-	-	-
Stage 2	183	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	1501.8	0	3.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	48	746	-
HCM Lane V/C Ratio	-	-	3.951	0.462	-
HCM Control Delay (s)	-	$	1501.8	13.9	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	21.1	2.5	-

Notes

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

Intersection	
Int Delay, s/veh	254.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	5	120	0	120	5	410	135	140	420	5
Future Vol, veh/h	0	0	5	120	0	120	5	410	135	140	420	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	179	0	179	7	612	201	209	627	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1865	1876	631	1779	1779	713	634	0	0	813	0	0
Stage 1	1049	1049	-	727	727	-	-	-	-	-	-	-
Stage 2	816	827	-	1052	1052	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	56	72	481	~ 64	82	432	949	-	-	814	-	-
Stage 1	275	304	-	415	429	-	-	-	-	-	-	-
Stage 2	371	386	-	274	303	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	26	53	481	~ 50	61	432	949	-	-	814	-	-
Mov Cap-2 Maneuver	26	53	-	~ 50	61	-	-	-	-	-	-	-
Stage 1	273	226	-	412	426	-	-	-	-	-	-	-
Stage 2	216	383	-	200	225	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	$ 1437.5	0.1	2.7
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	949	-	-	481	90	814	-	-
HCM Lane V/C Ratio	0.008	-	-	0.016	3.98	0.257	-	-
HCM Control Delay (s)	8.8	-	-	12.8	$ 1437.5	10.9	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	37.1	1	-	-

Notes

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

Intersection	
Int Delay, s/veh	35.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	75	475	380	70	410
Future Vol, veh/h	130	75	475	380	70	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	169	97	617	494	91	532

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1578	864	0	0	1111	0
Stage 1	864	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 120	354	-	-	629	-
Stage 1	413	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 103	354	-	-	629	-
Mov Cap-2 Maneuver	~ 103	-	-	-	-	-
Stage 1	353	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	260.2	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	103	354	629	-
HCM Lane V/C Ratio	-	-	1.639	0.275	0.145	-
HCM Control Delay (s)	-	-	$ 399.3	19	11.7	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	13.1	1.1	0.5	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	115	165	135	155	205	160	360	95	80	465	170
Future Volume (veh/h)	170	115	165	135	155	205	160	360	95	80	465	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	193	131	188	180	207	273	193	434	114	95	554	202
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.83	0.83	0.83	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	705	599	158	243	321	177	491	417	162	648	236
Arrive On Green	0.13	0.38	0.38	0.09	0.33	0.33	0.10	0.26	0.26	0.09	0.25	0.25
Sat Flow, veh/h	1774	1863	1583	1774	730	963	1774	1863	1583	1774	2544	925
Grp Volume(v), veh/h	193	131	188	180	0	480	193	434	114	95	385	371
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1693	1774	1863	1583	1774	1770	1700
Q Serve(g_s), s	9.5	4.2	5.2	8.0	0.0	23.7	9.0	20.1	3.9	4.6	18.6	18.7
Cycle Q Clear(g_c), s	9.5	4.2	5.2	8.0	0.0	23.7	9.0	20.1	3.9	4.6	18.6	18.7
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	238	705	599	158	0	564	177	491	417	162	451	433
V/C Ratio(X)	0.81	0.19	0.31	1.14	0.00	0.85	1.09	0.88	0.27	0.59	0.85	0.86
Avail Cap(c_a), veh/h	238	705	599	158	0	564	177	580	493	162	511	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	18.7	9.6	41.0	0.0	27.9	40.5	31.8	15.1	39.3	31.9	32.0
Incr Delay (d2), s/veh	18.8	0.6	1.4	114.8	0.0	14.9	93.0	13.5	0.4	5.4	12.0	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	2.3	2.5	8.9	0.0	13.4	9.0	12.2	1.7	2.5	10.6	10.3
LnGrp Delay(d),s/veh	56.7	19.3	10.9	155.8	0.0	42.8	133.5	45.3	15.5	44.6	44.0	44.8
LnGrp LOS	E	B	B	F		D	F	D	B	D	D	D
Approach Vol, veh/h		512			660			741			851	
Approach Delay, s/veh		30.3			73.6			63.7			44.4	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	27.7	12.0	38.1	13.0	26.9	16.1	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0	8.0	31.0	9.0	26.0	9.0	30.0
Max Q Clear Time (g_c+I1), s	6.6	22.1	10.0	7.2	11.0	20.7	11.5	25.7
Green Ext Time (p_c), s	0.0	1.6	0.0	1.3	0.0	2.2	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	5	35	80	5	30	235	125	465	70	175	550	55
Future Volume (veh/h)	5	35	80	5	30	235	125	465	70	175	550	55
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	6	40	91	6	38	294	133	495	74	192	604	60
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.80	0.80	0.80	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	135	279	50	50	351	161	756	113	207	839	83
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.09	0.48	0.48	0.12	0.50	0.50
Sat Flow, veh/h	23	540	1114	9	201	1401	1774	1584	237	1774	1668	166
Grp Volume(v), veh/h	137	0	0	338	0	0	133	0	569	192	0	664
Grp Sat Flow(s),veh/h/ln	1678	0	0	1611	0	0	1774	0	1821	1774	0	1834
Q Serve(g_s), s	0.0	0.0	0.0	2.1	0.0	0.0	5.7	0.0	18.3	8.3	0.0	21.7
Cycle Q Clear(g_c), s	5.2	0.0	0.0	15.3	0.0	0.0	5.7	0.0	18.3	8.3	0.0	21.7
Prop In Lane	0.04		0.66	0.02		0.87	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	469	0	0	451	0	0	161	0	869	207	0	922
V/C Ratio(X)	0.29	0.00	0.00	0.75	0.00	0.00	0.82	0.00	0.65	0.93	0.00	0.72
Avail Cap(c_a), veh/h	469	0	0	737	0	0	161	0	869	207	0	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.85	0.00	0.85	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	0.0	27.4	0.0	0.0	34.4	0.0	15.3	33.7	0.0	14.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	2.5	0.0	0.0	24.6	0.0	3.3	42.3	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	7.1	0.0	0.0	3.9	0.0	10.0	6.5	0.0	12.1
LnGrp Delay(d),s/veh	23.9	0.0	0.0	29.9	0.0	0.0	59.0	0.0	18.6	76.0	0.0	19.7
LnGrp LOS	C			C			E		B	E		B
Approach Vol, veh/h		137			338			702			856	
Approach Delay, s/veh		23.9			29.9			26.2			32.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.3	13.0	40.7		23.3	11.0	42.7
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		33.0	9.0	23.0		16.0	7.0	25.0
Max Q Clear Time (g_c+I1), s		17.3	10.3	20.3		7.2	7.7	23.7
Green Ext Time (p_c), s		2.0	0.0	1.0		0.4	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	40	50	140	10	475	5	185	10	65	580	5
Future Volume (veh/h)	10	40	50	140	10	475	5	185	10	65	580	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	61	76	147	11	500	6	208	11	71	630	5
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.66	0.66	0.66	0.95	0.95	0.95	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	77	96	331	25	600	11	574	488	317	887	7
Arrive On Green	0.11	0.11	0.11	0.20	0.20	0.20	0.01	0.31	0.31	0.18	0.48	0.48
Sat Flow, veh/h	168	684	852	1656	124	1583	1774	1863	1583	1774	1846	15
Grp Volume(v), veh/h	152	0	0	158	0	500	6	208	11	71	0	635
Grp Sat Flow(s),veh/h/ln	1704	0	0	1780	0	1583	1774	1863	1583	1774	0	1860
Q Serve(g_s), s	7.0	0.0	0.0	6.2	0.0	16.0	0.3	7.0	0.4	2.7	0.0	21.5
Cycle Q Clear(g_c), s	7.0	0.0	0.0	6.2	0.0	16.0	0.3	7.0	0.4	2.7	0.0	21.5
Prop In Lane	0.10		0.50	0.93		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	192	0	0	356	0	600	11	574	488	317	0	894
V/C Ratio(X)	0.79	0.00	0.00	0.44	0.00	0.83	0.54	0.36	0.02	0.22	0.00	0.71
Avail Cap(c_a), veh/h	341	0	0	356	0	600	89	574	488	355	0	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.72	0.00	0.72
Uniform Delay (d), s/veh	34.6	0.0	0.0	28.1	0.0	22.6	39.6	21.5	19.3	28.1	0.0	16.4
Incr Delay (d2), s/veh	7.1	0.0	0.0	0.9	0.0	9.8	35.5	0.4	0.0	0.3	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	3.2	0.0	11.6	0.2	3.6	0.2	1.4	0.0	11.8
LnGrp Delay(d),s/veh	41.6	0.0	0.0	29.0	0.0	32.4	75.1	21.9	19.3	28.4	0.0	19.8
LnGrp LOS	D			C		C	E	C	B	C		B
Approach Vol, veh/h		152			658			225			706	
Approach Delay, s/veh		41.6			31.6			23.2			20.7	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	18.3	28.7		13.0	4.5	42.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		18.0	4.7	9.0		9.0	2.3	23.5
Green Ext Time (p_c), s		0.0	0.1	0.6		0.4	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	40	160	40	25	20	135	385	65	25	245	170
Future Volume (veh/h)	275	40	160	40	25	20	135	385	65	25	245	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	340	49	198	49	31	25	167	475	80	31	302	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	441	80	325	67	42	34	210	547	92	49	486	413
Arrive On Green	0.25	0.25	0.25	0.08	0.08	0.08	0.12	0.35	0.35	0.03	0.26	0.26
Sat Flow, veh/h	1774	324	1308	816	516	416	1774	1555	262	1774	1863	1583
Grp Volume(v), veh/h	340	0	247	105	0	0	167	0	555	31	302	210
Grp Sat Flow(s),veh/h/ln	1774	0	1632	1748	0	0	1774	0	1817	1774	1863	1583
Q Serve(g_s), s	9.8	0.0	7.4	3.2	0.0	0.0	5.0	0.0	15.7	1.0	7.9	6.2
Cycle Q Clear(g_c), s	9.8	0.0	7.4	3.2	0.0	0.0	5.0	0.0	15.7	1.0	7.9	6.2
Prop In Lane	1.00		0.80	0.47		0.24	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	441	0	405	143	0	0	210	0	639	49	486	413
V/C Ratio(X)	0.77	0.00	0.61	0.73	0.00	0.00	0.79	0.00	0.87	0.64	0.62	0.51
Avail Cap(c_a), veh/h	676	0	622	666	0	0	257	0	758	129	642	546
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	18.3	24.7	0.0	0.0	23.6	0.0	16.7	26.5	18.0	17.4
Incr Delay (d2), s/veh	3.0	0.0	1.5	7.0	0.0	0.0	12.9	0.0	9.3	13.0	1.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	3.5	1.8	0.0	0.0	3.2	0.0	9.5	0.6	4.2	2.8
LnGrp Delay(d),s/veh	22.2	0.0	19.8	31.8	0.0	0.0	36.6	0.0	26.0	39.5	19.3	18.3
LnGrp LOS	C		B	C			D		C	D	B	B
Approach Vol, veh/h		587			105			722			543	
Approach Delay, s/veh		21.2			31.8			28.4			20.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	23.4		17.7	10.5	18.4		8.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		21.0	8.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	3.0	17.7		11.8	7.0	9.9		5.2
Green Ext Time (p_c), s	0.0	1.7		1.9	0.0	1.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.2	0.1	0.0	0.3
Total Delay (hr)	0.0	1.2	9.3	2.0	12.5

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.7	1.4	2.2

Total Network Performance

Denied Delay (hr)	0.3
Total Delay (hr)	15.5

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	60	30	15	5
Future Vol, veh/h	5	10	60	30	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	17	100	50	25	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	150	0	-	0	158	125
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1431	-	-	-	833	926
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1431	-	-	-	828	926
Mov Cap-2 Maneuver	-	-	-	-	828	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1431	-	-	-	851
HCM Lane V/C Ratio	0.006	-	-	-	0.039
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	20	80	605	340	10
Future Vol, veh/h	5	20	80	605	340	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	33	133	1008	567	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1850	576	584	0	-	0
Stage 1	576	-	-	-	-	-
Stage 2	1274	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	82	517	991	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	263	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	57	517	991	-	-	-
Mov Cap-2 Maneuver	57	-	-	-	-	-
Stage 1	391	-	-	-	-	-
Stage 2	263	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.7	1.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	991	-	57	517	-	-
HCM Lane V/C Ratio	0.135	-	0.146	0.064	-	-
HCM Control Delay (s)	9.2	0	78.7	12.4	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.5	0.2	-	-

Intersection	
Int Delay, s/veh	46.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	120	535	50	35	430
Future Vol, veh/h	80	120	535	50	35	430
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	176	787	74	51	632

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1558	824	0	0	861	0
Stage 1	824	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	124	373	-	-	781	-
Stage 1	431	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 116	373	-	-	781	-
Mov Cap-2 Maneuver	~ 116	-	-	-	-	-
Stage 1	403	-	-	-	-	-
Stage 2	475	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	287.6	0	0.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	198	781	-
HCM Lane V/C Ratio	-	-	1.485	0.066	-
HCM Control Delay (s)	-	-	287.6	9.9	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	18.1	0.2	-

Notes

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

Intersection	
Int Delay, s/veh	24.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	95	25	0	90	25	585	20	15	480	15
Future Vol, veh/h	10	0	95	25	0	90	25	585	20	15	480	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	140	37	0	132	37	860	29	22	706	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1776	1724	717	1780	1721	875	728	0	0	889	0	0
Stage 1	761	761	-	949	949	-	-	-	-	-	-	-
Stage 2	1015	963	-	831	772	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	64	89	430	64	89	349	876	-	-	762	-	-
Stage 1	398	414	-	313	339	-	-	-	-	-	-	-
Stage 2	287	334	-	364	409	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	83	430	41	83	349	876	-	-	762	-	-
Mov Cap-2 Maneuver	38	83	-	41	83	-	-	-	-	-	-	-
Stage 1	381	402	-	300	325	-	-	-	-	-	-	-
Stage 2	171	320	-	239	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	54.3	231.8	0.4	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	876	-	-	217	133	762	-	-
HCM Lane V/C Ratio	0.042	-	-	0.712	1.272	0.029	-	-
HCM Control Delay (s)	9.3	-	-	54.3	231.8	9.9	-	-
HCM Lane LOS	A	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.6	10.5	0.1	-	-

Intersection	
Int Delay, s/veh	26.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	210	470	160	70	530
Future Vol, veh/h	90	210	470	160	70	530
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	296	662	225	99	746

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1719	775	0	0	887	0
Stage 1	775	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 99	398	-	-	763	-
Stage 1	454	-	-	-	-	-
Stage 2	378	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 86	398	-	-	763	-
Mov Cap-2 Maneuver	~ 86	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	130.6	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	86	398	763	-
HCM Lane V/C Ratio	-	-	1.474	0.743	0.129	-
HCM Control Delay (s)	-	-	$ 351.3	36	10.4	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	9.9	5.9	0.4	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	105	225	190	110	110	235	490	215	115	455	200
Future Volume (veh/h)	125	105	225	190	110	110	235	490	215	115	455	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	149	125	268	232	134	134	242	505	222	122	484	213
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	371	315	196	175	175	293	626	532	181	655	286
Arrive On Green	0.11	0.20	0.20	0.11	0.20	0.20	0.16	0.34	0.34	0.10	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	856	856	1774	1863	1583	1774	2398	1049
Grp Volume(v), veh/h	149	125	268	232	0	268	242	505	222	122	356	341
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1712	1774	1863	1583	1774	1770	1678
Q Serve(g_s), s	5.2	3.7	6.6	7.0	0.0	9.4	8.4	15.7	4.4	4.2	11.6	11.7
Cycle Q Clear(g_c), s	5.2	3.7	6.6	7.0	0.0	9.4	8.4	15.7	4.4	4.2	11.6	11.7
Prop In Lane	1.00		1.00	1.00		0.50	1.00		1.00	1.00		0.63
Lane Grp Cap(c), veh/h	187	371	315	196	0	350	293	626	532	181	483	458
V/C Ratio(X)	0.80	0.34	0.85	1.18	0.00	0.77	0.83	0.81	0.42	0.67	0.74	0.74
Avail Cap(c_a), veh/h	196	941	800	196	0	864	392	970	824	196	726	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	21.8	9.9	28.2	0.0	23.8	25.6	19.2	6.7	27.4	21.0	21.0
Incr Delay (d2), s/veh	19.5	0.5	6.4	122.7	0.0	3.5	10.4	2.9	0.5	8.0	2.2	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	3.5	1.9	4.2	10.1	0.0	4.7	4.9	8.5	2.5	2.5	5.9	5.7
LnGrp Delay(d),s/veh	47.2	22.3	16.3	150.8	0.0	27.3	36.0	22.1	7.3	35.4	23.2	23.4
LnGrp LOS	D	C	B	F		C	D	C	A	D	C	C
Approach Vol, veh/h		542			500			969			819	
Approach Delay, s/veh		26.2			84.6			22.1			25.1	
Approach LOS		C			F			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	25.3	11.0	16.6	14.5	21.3	10.7	16.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	6.2	17.7	9.0	8.6	10.4	13.7	7.2	11.4
Green Ext Time (p_c), s	0.0	3.6	0.0	1.6	0.2	3.6	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	5	30	90	10	30	355	125	505	75	185	635	25
Future Volume (veh/h)	5	30	90	10	30	355	125	505	75	185	635	25
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	6	36	107	12	37	433	129	521	77	197	676	27
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	122	327	66	39	384	164	635	94	237	785	31
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.40	0.40	0.13	0.44	0.44
Sat Flow, veh/h	23	459	1228	16	147	1438	1774	1587	235	1774	1779	71
Grp Volume(v), veh/h	149	0	0	482	0	0	129	0	598	197	0	703
Grp Sat Flow(s),veh/h/ln	1710	0	0	1601	0	0	1774	0	1821	1774	0	1850
Q Serve(g_s), s	0.0	0.0	0.0	6.3	0.0	0.0	4.3	0.0	17.6	6.5	0.0	20.6
Cycle Q Clear(g_c), s	4.4	0.0	0.0	16.0	0.0	0.0	4.3	0.0	17.6	6.5	0.0	20.6
Prop In Lane	0.04		0.72	0.02		0.90	1.00		0.13	1.00		0.04
Lane Grp Cap(c), veh/h	518	0	0	488	0	0	164	0	729	237	0	816
V/C Ratio(X)	0.29	0.00	0.00	0.99	0.00	0.00	0.79	0.00	0.82	0.83	0.00	0.86
Avail Cap(c_a), veh/h	518	0	0	488	0	0	177	0	729	237	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.65	0.00	0.65	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	22.9	0.0	0.0	26.7	0.0	16.1	25.3	0.0	15.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	37.2	0.0	0.0	13.3	0.0	6.8	21.7	0.0	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	12.9	0.0	0.0	2.7	0.0	10.2	4.6	0.0	13.0
LnGrp Delay(d),s/veh	18.0	0.0	0.0	60.1	0.0	0.0	40.0	0.0	22.9	47.1	0.0	26.7
LnGrp LOS	B			E			D		C	D		C
Approach Vol, veh/h		149			482			727			900	
Approach Delay, s/veh		18.0			60.1			25.9			31.2	
Approach LOS		B			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	12.0	28.0		20.0	9.5	30.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	8.0	24.0		16.0	6.0	26.0
Max Q Clear Time (g_c+I1), s		18.0	8.5	19.6		6.4	6.3	22.6
Green Ext Time (p_c), s		0.0	0.0	1.6		0.5	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	60	35	130	10	280	15	470	90	225	520	5
Future Volume (veh/h)	10	60	35	130	10	280	15	470	90	225	520	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	13	78	45	141	11	304	17	522	100	259	598	6
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	101	58	303	24	558	28	647	550	300	922	9
Arrive On Green	0.10	0.10	0.10	0.18	0.18	0.18	0.02	0.35	0.35	0.17	0.50	0.50
Sat Flow, veh/h	167	1005	580	1651	129	1583	1774	1863	1583	1774	1841	18
Grp Volume(v), veh/h	136	0	0	152	0	304	17	522	100	259	0	604
Grp Sat Flow(s),veh/h/ln	1752	0	0	1780	0	1583	1774	1863	1583	1774	0	1859
Q Serve(g_s), s	6.1	0.0	0.0	6.1	0.0	12.3	0.8	20.3	3.5	11.4	0.0	19.2
Cycle Q Clear(g_c), s	6.1	0.0	0.0	6.1	0.0	12.3	0.8	20.3	3.5	11.4	0.0	19.2
Prop In Lane	0.10		0.33	0.93		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	176	0	0	327	0	558	28	647	550	300	0	931
V/C Ratio(X)	0.77	0.00	0.00	0.47	0.00	0.54	0.61	0.81	0.18	0.86	0.00	0.65
Avail Cap(c_a), veh/h	350	0	0	356	0	584	89	647	550	355	0	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.62	0.00	0.62
Uniform Delay (d), s/veh	35.1	0.0	0.0	29.2	0.0	20.8	39.1	23.7	18.2	32.3	0.0	14.8
Incr Delay (d2), s/veh	7.1	0.0	0.0	1.0	0.0	1.0	19.5	10.4	0.7	11.5	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	3.3	0.0	0.0	3.1	0.0	5.5	0.5	12.3	1.6	6.5	0.0	10.3
LnGrp Delay(d),s/veh	42.2	0.0	0.0	30.2	0.0	21.7	58.7	34.1	18.9	43.8	0.0	17.0
LnGrp LOS	D			C		C	E	C	B	D		B
Approach Vol, veh/h		136			456			639			863	
Approach Delay, s/veh		42.2			24.5			32.4			25.0	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.7	17.5	31.8		12.0	5.3	44.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		14.3	13.4	22.3		8.1	2.8	21.2
Green Ext Time (p_c), s		0.4	0.2	0.0		0.4	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	70	125	40	30	20	115	380	75	30	195	170
Future Volume (veh/h)	350	70	125	40	30	20	115	380	75	30	195	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	432	86	154	49	37	25	142	469	93	37	241	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	479	162	290	66	50	34	180	555	110	53	552	469
Arrive On Green	0.27	0.27	0.27	0.09	0.09	0.09	0.10	0.37	0.37	0.03	0.30	0.30
Sat Flow, veh/h	1774	600	1074	774	585	395	1774	1510	300	1774	1863	1583
Grp Volume(v), veh/h	432	0	240	111	0	0	142	0	562	37	241	210
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1754	0	0	1774	0	1810	1774	1863	1583
Q Serve(g_s), s	15.3	0.0	7.9	4.0	0.0	0.0	5.1	0.0	18.5	1.3	6.8	7.0
Cycle Q Clear(g_c), s	15.3	0.0	7.9	4.0	0.0	0.0	5.1	0.0	18.5	1.3	6.8	7.0
Prop In Lane	1.00		0.64	0.44		0.23	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	479	0	452	151	0	0	180	0	666	53	552	469
V/C Ratio(X)	0.90	0.00	0.53	0.74	0.00	0.00	0.79	0.00	0.84	0.70	0.44	0.45
Avail Cap(c_a), veh/h	492	0	464	568	0	0	246	0	1004	109	890	756
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	20.2	29.0	0.0	0.0	28.5	0.0	18.8	31.2	18.5	18.5
Incr Delay (d2), s/veh	19.4	0.0	1.1	6.9	0.0	0.0	11.3	0.0	4.3	15.0	0.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	3.8	2.2	0.0	0.0	3.0	0.0	10.0	0.9	3.6	3.1
LnGrp Delay(d),s/veh	42.3	0.0	21.3	35.8	0.0	0.0	39.8	0.0	23.1	46.2	19.0	19.2
LnGrp LOS	D		C	D			D		C	D	B	B
Approach Vol, veh/h		672			111			704			488	
Approach Delay, s/veh		34.8			35.8			26.5			21.2	
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	5.9	27.9		21.5	10.6	23.2		9.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.3	20.5		17.3	7.1	9.0		6.0
Green Ext Time (p_c), s	0.0	3.4		0.3	0.1	2.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.7	0.3	0.0	0.8
Total Del/Veh (s)	14.7	12.6	12.6	14.8	13.3

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	6.6	3.0	11.5	6.1

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	20.2

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	5	15	5	5
Future Vol, veh/h	5	15	5	15	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	16	5	16	5	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	21	0	-	0	39	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1595	-	-	-	973	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1595	-	-	-	970	1067
Mov Cap-2 Maneuver	-	-	-	-	970	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1595	-	-	-	1016
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	705	200	5
Future Vol, veh/h	10	10	15	705	200	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	870	247	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1158	250	253	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	217	789	1312	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	211	789	1312	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	393	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1312	-	211	789	-	-
HCM Lane V/C Ratio	0.014	-	0.059	0.016	-	-
HCM Control Delay (s)	7.8	0	23.1	9.6	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	275	230	120	125	75	275	445	345	125	265	110
Future Volume (veh/h)	115	275	230	120	125	75	275	445	345	125	265	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	327	274	146	152	91	284	459	356	133	282	117
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	706	600	178	357	214	352	520	442	131	379	154
Arrive On Green	0.15	0.38	0.38	0.10	0.33	0.33	0.20	0.28	0.28	0.07	0.15	0.15
Sat Flow, veh/h	1774	1863	1583	1774	1093	654	1774	1863	1583	1774	2460	997
Grp Volume(v), veh/h	137	327	274	146	0	243	284	459	356	133	201	198
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1747	1774	1863	1583	1774	1770	1687
Q Serve(g_s), s	6.7	12.6	6.7	7.7	0.0	10.3	14.5	22.4	14.8	7.0	10.3	10.7
Cycle Q Clear(g_c), s	6.7	12.6	6.7	7.7	0.0	10.3	14.5	22.4	14.8	7.0	10.3	10.7
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	271	706	600	178	0	570	352	520	442	131	273	260
V/C Ratio(X)	0.51	0.46	0.46	0.82	0.00	0.43	0.81	0.88	0.81	1.02	0.74	0.76
Avail Cap(c_a), veh/h	271	706	600	205	0	570	352	588	500	131	484	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	22.2	6.6	41.9	0.0	25.0	36.3	32.8	17.6	44.0	38.3	38.5
Incr Delay (d2), s/veh	1.5	2.2	2.5	20.4	0.0	2.3	12.9	13.6	8.4	83.4	3.9	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.9	3.3	4.8	0.0	5.4	8.4	13.4	7.5	6.4	5.3	5.3
LnGrp Delay(d),s/veh	38.5	24.4	9.1	62.3	0.0	27.4	49.2	46.4	26.1	127.6	42.2	43.1
LnGrp LOS	D	C	A	E		C	D	D	C	F	D	D
Approach Vol, veh/h		738			389			1099			532	
Approach Delay, s/veh		21.3			40.5			40.5			63.9	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	30.5	13.5	40.0	22.9	18.6	18.5	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	11.0	31.0	11.0	26.0	11.0	31.0
Max Q Clear Time (g_c+I1), s	9.0	24.4	9.7	14.6	16.5	12.7	8.7	12.3
Green Ext Time (p_c), s	0.0	2.1	0.0	2.7	0.0	2.0	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	39.9
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	55	160	5	25	390	115	685	35	170	485	45
Future Volume (veh/h)	10	55	160	5	25	390	115	685	35	170	485	45
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	65	190	6	30	476	119	706	36	181	516	48
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	123	325	62	28	396	152	716	36	224	752	70
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.41	0.41	0.13	0.45	0.45
Sat Flow, veh/h	32	462	1219	6	107	1485	1774	1757	90	1774	1679	156
Grp Volume(v), veh/h	267	0	0	512	0	0	119	0	742	181	0	564
Grp Sat Flow(s),veh/h/ln	1713	0	0	1597	0	0	1774	0	1847	1774	0	1835
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	3.9	0.0	23.9	6.0	0.0	14.7
Cycle Q Clear(g_c), s	8.5	0.0	0.0	16.0	0.0	0.0	3.9	0.0	23.9	6.0	0.0	14.7
Prop In Lane	0.04		0.71	0.01		0.93	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	520	0	0	487	0	0	152	0	752	224	0	822
V/C Ratio(X)	0.51	0.00	0.00	1.05	0.00	0.00	0.78	0.00	0.99	0.81	0.00	0.69
Avail Cap(c_a), veh/h	520	0	0	487	0	0	177	0	752	237	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.58	0.00	0.58	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	23.0	0.0	0.0	26.9	0.0	17.6	25.5	0.0	13.2
Incr Delay (d2), s/veh	0.9	0.0	0.0	55.2	0.0	0.0	10.9	0.0	22.0	17.8	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	15.4	0.0	0.0	2.4	0.0	16.5	4.0	0.0	8.4
LnGrp Delay(d),s/veh	20.1	0.0	0.0	78.2	0.0	0.0	37.8	0.0	39.6	43.3	0.0	17.8
LnGrp LOS	C			F			D		D	D		B
Approach Vol, veh/h		267			512			861			745	
Approach Delay, s/veh		20.1			78.2			39.3			24.0	
Approach LOS		C			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	11.6	28.4		20.0	9.1	30.9
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	8.0	24.0		16.0	6.0	26.0
Max Q Clear Time (g_c+I1), s		18.0	8.0	25.9		10.5	5.9	16.7
Green Ext Time (p_c), s		0.0	0.0	0.0		0.7	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	40.8
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	25	25	190	10	325	25	550	140	210	465	10
Future Volume (veh/h)	15	25	25	190	10	325	25	550	140	210	465	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	32	32	207	11	353	28	611	156	241	534	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	42	42	338	18	569	41	703	598	283	934	19
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.02	0.38	0.38	0.16	0.51	0.51
Sat Flow, veh/h	395	665	665	1689	90	1583	1774	1863	1583	1774	1819	37
Grp Volume(v), veh/h	83	0	0	218	0	353	28	611	156	241	0	545
Grp Sat Flow(s),veh/h/ln	1726	0	0	1778	0	1583	1774	1863	1583	1774	0	1856
Q Serve(g_s), s	3.8	0.0	0.0	8.9	0.0	14.7	1.3	24.3	5.4	10.6	0.0	16.2
Cycle Q Clear(g_c), s	3.8	0.0	0.0	8.9	0.0	14.7	1.3	24.3	5.4	10.6	0.0	16.2
Prop In Lane	0.23		0.39	0.95		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	109	0	0	356	0	569	41	703	598	283	0	953
V/C Ratio(X)	0.76	0.00	0.00	0.61	0.00	0.62	0.68	0.87	0.26	0.85	0.00	0.57
Avail Cap(c_a), veh/h	345	0	0	356	0	569	89	703	598	355	0	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.77	0.00	0.77
Uniform Delay (d), s/veh	36.9	0.0	0.0	29.2	0.0	21.1	38.8	23.1	17.2	32.7	0.0	13.4
Incr Delay (d2), s/veh	10.3	0.0	0.0	3.1	0.0	2.1	18.0	13.8	1.1	11.9	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	4.7	0.0	6.7	0.8	15.1	2.6	6.1	0.0	8.7
LnGrp Delay(d),s/veh	47.2	0.0	0.0	32.3	0.0	23.2	56.8	36.8	18.3	44.6	0.0	15.3
LnGrp LOS	D			C		C	E	D	B	D		B
Approach Vol, veh/h		83			571			795			786	
Approach Delay, s/veh		47.2			26.7			33.9			24.3	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	16.7	34.2		9.1	5.9	45.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		16.7	12.6	26.3		5.8	3.3	18.2
Green Ext Time (p_c), s		0.0	0.2	0.0		0.2	0.0	2.5

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)	150	10	214	115	40	20	126	175	25	10	476	305
Future Volume (veh/h)	150	10	214	115	40	20	126	175	25	10	476	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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	12	268	144	50	25	158	219	31	12	595	381
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	22	494	253	81	30	186	725	103	22	673	572
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.10	0.45	0.45	0.01	0.36	0.36
Sat Flow, veh/h	1319	68	1525	459	250	91	1774	1597	226	1774	1863	1583
Grp Volume(v), veh/h	188	0	280	219	0	0	158	0	250	12	595	381
Grp Sat Flow(s),veh/h/ln	1319	0	1594	801	0	0	1774	0	1823	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	8.2	8.1	0.0	0.0	5.0	0.0	5.0	0.4	17.1	11.6
Cycle Q Clear(g_c), s	6.9	0.0	8.2	16.3	0.0	0.0	5.0	0.0	5.0	0.4	17.1	11.6
Prop In Lane	1.00		0.96	0.66		0.11	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	529	0	516	364	0	0	186	0	828	22	673	572
V/C Ratio(X)	0.36	0.00	0.54	0.60	0.00	0.00	0.85	0.00	0.30	0.56	0.88	0.67
Avail Cap(c_a), veh/h	564	0	558	397	0	0	186	0	828	124	717	610
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	0.0	15.8	20.7	0.0	0.0	25.1	0.0	9.9	28.1	17.1	15.4
Incr Delay (d2), s/veh	0.4	0.0	0.9	2.2	0.0	0.0	28.9	0.0	0.2	20.6	12.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	3.7	3.5	0.0	0.0	4.0	0.0	2.5	0.3	11.0	5.4
LnGrp Delay(d),s/veh	15.8	0.0	16.8	22.9	0.0	0.0	54.1	0.0	10.1	48.7	29.3	17.9
LnGrp LOS	B		B	C			D		B	D	C	B
Approach Vol, veh/h		468			219			408			988	
Approach Delay, s/veh		16.4			22.9			27.1			25.1	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	29.9		22.5	10.0	24.6		22.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	24.0		20.0	6.0	22.0		20.0
Max Q Clear Time (g_c+I1), s	2.4	7.0		10.2	7.0	19.1		18.3
Green Ext Time (p_c), s	0.0	1.3		1.7	0.0	1.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.0	0.3	0.0	0.5
Total Del/Veh (s)	7.9	26.5	15.8	12.5	16.3

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.8	0.6
Total Del/Veh (s)	24.4	3.9	21.2	16.1

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	31.6

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	16	305	25	35	750
Future Vol, veh/h	2	16	305	25	35	750
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	17	332	27	38	815

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1237	346	0	0	359	0
Stage 1	346	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	194	697	-	-	1200	-
Stage 1	716	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	697	-	-	1200	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	401	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	531	1200	-
HCM Lane V/C Ratio	-	-	0.037	0.032	-
HCM Control Delay (s)	-	-	12	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	45	50	10	25	5
Future Vol, veh/h	5	45	50	10	25	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	49	54	11	27	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	119	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1537	-	-	-	877	1005
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1537	-	-	-	874	1005
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	964	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1537	-	-	-	893
HCM Lane V/C Ratio	0.004	-	-	-	0.037
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	60	30	320	722	30
Future Vol, veh/h	10	60	30	320	722	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	100	50	533	1203	50

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1861	1228	1253	0	-	0
Stage 1	1228	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	80	217	555	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	217	555	-	-	-
Mov Cap-2 Maneuver	70	-	-	-	-	-
Stage 1	242	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40.3	1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	555	-	70	217	-	-
HCM Lane V/C Ratio	0.09	-	0.238	0.461	-	-
HCM Control Delay (s)	12.1	0	71.8	35	-	-
HCM Lane LOS	B	A	F	E	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	2.2	-	-

Intersection	
Int Delay, s/veh	130.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	70	435	120	200	527
Future Vol, veh/h	40	70	435	120	200	527
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	121	750	207	345	909

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2453	854	0	0	957	0
Stage 1	854	-	-	-	-	-
Stage 2	1599	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 34	358	-	-	719	-
Stage 1	417	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 18	358	-	-	719	-
Mov Cap-2 Maneuver	~ 18	-	-	-	-	-
Stage 1	217	-	-	-	-	-
Stage 2	182	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	1629.8	0	4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	45	719	-
HCM Lane V/C Ratio	-	-	4.215	0.48	-
HCM Control Delay (s)	-	$	1629.8	14.5	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	21.4	2.6	-

Notes

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

Intersection	
Int Delay, s/veh	273

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	5	120	0	120	5	435	135	140	422	5
Future Vol, veh/h	0	0	5	120	0	120	5	435	135	140	422	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	179	0	179	7	649	201	209	630	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1905	1916	634	1819	1819	750	637	0	0	850	0	0
Stage 1	1052	1052	-	764	764	-	-	-	-	-	-	-
Stage 2	853	864	-	1055	1055	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	52	68	479	~ 60	78	411	947	-	-	788	-	-
Stage 1	274	303	-	396	413	-	-	-	-	-	-	-
Stage 2	354	371	-	273	302	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	23	50	479	~ 47	57	411	947	-	-	788	-	-
Mov Cap-2 Maneuver	23	50	-	~ 47	57	-	-	-	-	-	-	-
Stage 1	272	223	-	393	410	-	-	-	-	-	-	-
Stage 2	198	368	-	197	222	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	$ 1570.8	0.1	2.8
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	947	-	-	479	84	788	-	-
HCM Lane V/C Ratio	0.008	-	-	0.016	4.264	0.265	-	-
HCM Control Delay (s)	8.8	-	-	12.5	$ 1570.8	11.2	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	37.8	1.1	-	-

Notes

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

Intersection	
Int Delay, s/veh	37.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	75	500	380	70	412
Future Vol, veh/h	130	75	500	380	70	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	169	97	649	494	91	535

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1613	896	0	0	1143	0
Stage 1	896	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 115	339	-	-	611	-
Stage 1	399	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 98	339	-	-	611	-
Mov Cap-2 Maneuver	~ 98	-	-	-	-	-
Stage 1	340	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	285.4	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	98	339	611	-
HCM Lane V/C Ratio	-	-	1.723	0.287	0.149	-
HCM Control Delay (s)	-	-	$ 438.7	19.8	11.9	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	13.5	1.2	0.5	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	115	165	135	155	206	160	383	95	80	467	170
Future Volume (veh/h)	170	115	165	135	155	206	160	383	95	80	467	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	193	131	188	180	207	275	193	461	114	95	556	202
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.83	0.83	0.83	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	704	599	158	242	322	177	514	437	141	650	236
Arrive On Green	0.13	0.38	0.38	0.09	0.33	0.33	0.10	0.28	0.28	0.08	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	727	966	1774	1863	1583	1774	2547	923
Grp Volume(v), veh/h	193	131	188	180	0	482	193	461	114	95	386	372
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1692	1774	1863	1583	1774	1770	1700
Q Serve(g_s), s	9.5	4.2	5.3	8.0	0.0	23.9	9.0	21.4	3.8	4.7	18.7	18.8
Cycle Q Clear(g_c), s	9.5	4.2	5.3	8.0	0.0	23.9	9.0	21.4	3.8	4.7	18.7	18.8
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	237	704	599	158	0	564	177	514	437	141	452	434
V/C Ratio(X)	0.81	0.19	0.31	1.14	0.00	0.85	1.09	0.90	0.26	0.67	0.85	0.86
Avail Cap(c_a), veh/h	237	704	599	158	0	564	177	580	493	141	511	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	18.7	9.6	41.0	0.0	28.0	40.5	31.4	14.5	40.3	31.9	32.0
Incr Delay (d2), s/veh	19.2	0.6	1.4	114.8	0.0	15.2	93.0	15.6	0.3	11.9	12.1	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	2.3	2.5	8.9	0.0	13.5	9.0	13.2	1.7	2.8	10.6	10.3
LnGrp Delay(d),s/veh	57.1	19.3	10.9	155.8	0.0	43.2	133.5	46.9	14.8	52.2	44.0	44.9
LnGrp LOS	E	B	B	F		D	F	D	B	D	D	D
Approach Vol, veh/h		512			662			768			853	
Approach Delay, s/veh		30.5			73.8			63.9			45.3	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	28.8	12.0	38.0	13.0	27.0	16.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0	8.0	31.0	9.0	26.0	9.0	30.0
Max Q Clear Time (g_c+I1), s	6.7	23.4	10.0	7.3	11.0	20.8	11.5	25.9
Green Ext Time (p_c), s	0.0	1.4	0.0	1.3	0.0	2.2	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	54.4
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	5	35	80	5	30	235	125	488	70	175	552	55
Future Volume (veh/h)	5	35	80	5	30	235	125	488	70	175	552	55
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	6	40	91	6	38	294	133	519	74	192	607	60
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.80	0.80	0.80	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	135	279	50	50	351	161	761	109	207	839	83
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.09	0.48	0.48	0.12	0.50	0.50
Sat Flow, veh/h	23	540	1114	9	201	1401	1774	1595	227	1774	1669	165
Grp Volume(v), veh/h	137	0	0	338	0	0	133	0	593	192	0	667
Grp Sat Flow(s),veh/h/ln	1678	0	0	1611	0	0	1774	0	1823	1774	0	1834
Q Serve(g_s), s	0.0	0.0	0.0	2.1	0.0	0.0	5.7	0.0	19.4	8.3	0.0	21.9
Cycle Q Clear(g_c), s	5.2	0.0	0.0	15.3	0.0	0.0	5.7	0.0	19.4	8.3	0.0	21.9
Prop In Lane	0.04		0.66	0.02		0.87	1.00		0.12	1.00		0.09
Lane Grp Cap(c), veh/h	469	0	0	451	0	0	161	0	870	207	0	922
V/C Ratio(X)	0.29	0.00	0.00	0.75	0.00	0.00	0.82	0.00	0.68	0.93	0.00	0.72
Avail Cap(c_a), veh/h	469	0	0	737	0	0	161	0	870	207	0	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.84	0.00	0.84	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	0.0	27.4	0.0	0.0	34.4	0.0	15.6	33.7	0.0	14.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	2.5	0.0	0.0	24.3	0.0	3.6	42.3	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	7.1	0.0	0.0	3.9	0.0	10.6	6.5	0.0	12.2
LnGrp Delay(d),s/veh	23.9	0.0	0.0	29.9	0.0	0.0	58.7	0.0	19.2	76.0	0.0	19.8
LnGrp LOS	C			C			E		B	E		B
Approach Vol, veh/h		137			338			726			859	
Approach Delay, s/veh		23.9			29.9			26.5			32.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.3	13.0	40.7		23.3	11.0	42.7
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		33.0	9.0	23.0		16.0	7.0	25.0
Max Q Clear Time (g_c+I1), s		17.3	10.3	21.4		7.2	7.7	23.9
Green Ext Time (p_c), s		2.0	0.0	0.6		0.4	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	40	50	140	10	492	5	191	10	66	580	5
Future Volume (veh/h)	10	40	50	140	10	492	5	191	10	66	580	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	61	76	147	11	518	6	215	11	72	630	5
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.66	0.66	0.66	0.95	0.95	0.95	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	77	96	331	25	601	11	573	487	318	887	7
Arrive On Green	0.11	0.11	0.11	0.20	0.20	0.20	0.01	0.31	0.31	0.18	0.48	0.48
Sat Flow, veh/h	168	684	852	1656	124	1583	1774	1863	1583	1774	1846	15
Grp Volume(v), veh/h	152	0	0	158	0	518	6	215	11	72	0	635
Grp Sat Flow(s),veh/h/ln	1704	0	0	1780	0	1583	1774	1863	1583	1774	0	1860
Q Serve(g_s), s	7.0	0.0	0.0	6.2	0.0	16.0	0.3	7.2	0.4	2.8	0.0	21.5
Cycle Q Clear(g_c), s	7.0	0.0	0.0	6.2	0.0	16.0	0.3	7.2	0.4	2.8	0.0	21.5
Prop In Lane	0.10		0.50	0.93		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	192	0	0	356	0	601	11	573	487	318	0	894
V/C Ratio(X)	0.79	0.00	0.00	0.44	0.00	0.86	0.54	0.38	0.02	0.23	0.00	0.71
Avail Cap(c_a), veh/h	341	0	0	356	0	601	89	573	487	355	0	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.72	0.00	0.72
Uniform Delay (d), s/veh	34.6	0.0	0.0	28.1	0.0	22.9	39.6	21.7	19.3	28.1	0.0	16.4
Incr Delay (d2), s/veh	7.1	0.0	0.0	0.9	0.0	12.3	35.5	0.4	0.0	0.3	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	3.2	0.0	12.5	0.2	3.8	0.2	1.4	0.0	11.8
LnGrp Delay(d),s/veh	41.6	0.0	0.0	29.0	0.0	35.2	75.1	22.1	19.3	28.3	0.0	19.8
LnGrp LOS	D			C		D	E	C	B	C		B
Approach Vol, veh/h		152			676			232			707	
Approach Delay, s/veh		41.6			33.7			23.3			20.7	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	18.4	28.6		13.0	4.5	42.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		18.0	4.8	9.2		9.0	2.3	23.5
Green Ext Time (p_c), s		0.0	0.1	0.6		0.4	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	40	161	40	25	20	138	385	65	25	245	170
Future Volume (veh/h)	275	40	161	40	25	20	138	385	65	25	245	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	340	49	199	49	31	25	170	475	80	31	302	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	441	80	325	67	42	34	214	547	92	49	482	410
Arrive On Green	0.25	0.25	0.25	0.08	0.08	0.08	0.12	0.35	0.35	0.03	0.26	0.26
Sat Flow, veh/h	1774	322	1309	816	516	416	1774	1555	262	1774	1863	1583
Grp Volume(v), veh/h	340	0	248	105	0	0	170	0	555	31	302	210
Grp Sat Flow(s),veh/h/ln	1774	0	1632	1748	0	0	1774	0	1817	1774	1863	1583
Q Serve(g_s), s	9.8	0.0	7.4	3.2	0.0	0.0	5.1	0.0	15.7	1.0	7.9	6.2
Cycle Q Clear(g_c), s	9.8	0.0	7.4	3.2	0.0	0.0	5.1	0.0	15.7	1.0	7.9	6.2
Prop In Lane	1.00		0.80	0.47		0.24	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	441	0	405	143	0	0	214	0	639	49	482	410
V/C Ratio(X)	0.77	0.00	0.61	0.73	0.00	0.00	0.79	0.00	0.87	0.64	0.63	0.51
Avail Cap(c_a), veh/h	676	0	622	666	0	0	257	0	758	129	642	546
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	18.4	24.7	0.0	0.0	23.6	0.0	16.7	26.5	18.1	17.5
Incr Delay (d2), s/veh	3.0	0.0	1.5	7.0	0.0	0.0	13.3	0.0	9.3	13.0	1.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	3.5	1.8	0.0	0.0	3.3	0.0	9.5	0.6	4.2	2.9
LnGrp Delay(d),s/veh	22.2	0.0	19.9	31.8	0.0	0.0	36.9	0.0	26.0	39.5	19.4	18.5
LnGrp LOS	C		B	C			D		C	D	B	B
Approach Vol, veh/h		588			105			725			543	
Approach Delay, s/veh		21.2			31.8			28.5			20.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	23.4		17.7	10.6	18.3		8.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		21.0	8.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	3.0	17.7		11.8	7.1	9.9		5.2
Green Ext Time (p_c), s	0.0	1.7		1.9	0.0	1.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.5	0.6	0.0	0.7
Total Del/Veh (s)	17.6	18.9	23.2	19.9	21.3

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.4	0.2
Total Del/Veh (s)	13.7	3.8	13.6	8.0

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	29.2

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	19	650	1	12	345
Future Vol, veh/h	9	19	650	1	12	345
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	23	802	1	15	426

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1259	803	0	0	803	0
Stage 1	803	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	188	383	-	-	821	-
Stage 1	441	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	383	-	-	821	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	430	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	283	821	-
HCM Lane V/C Ratio	-	-	0.122	0.018	-
HCM Control Delay (s)	-	-	19.5	9.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	60	30	15	5
Future Vol, veh/h	5	10	60	30	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	17	100	50	25	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	150	0	-	0	158	125
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1431	-	-	-	833	926
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1431	-	-	-	828	926
Mov Cap-2 Maneuver	-	-	-	-	828	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1431	-	-	-	851
HCM Lane V/C Ratio	0.006	-	-	-	0.039
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	20	80	606	349	10
Future Vol, veh/h	5	20	80	606	349	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	33	133	1010	582	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1867	591	599	0	-	0
Stage 1	591	-	-	-	-	-
Stage 2	1276	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	80	507	978	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	55	507	978	-	-	-
Mov Cap-2 Maneuver	55	-	-	-	-	-
Stage 1	382	-	-	-	-	-
Stage 2	262	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.4	1.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	978	-	55	507	-	-
HCM Lane V/C Ratio	0.136	-	0.152	0.066	-	-
HCM Control Delay (s)	9.3	0	81.8	12.6	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.5	0.2	-	-

Intersection	
Int Delay, s/veh	48.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	120	536	50	35	439
Future Vol, veh/h	80	120	536	50	35	439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	176	788	74	51	646

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1573	825	0	0	862	0
Stage 1	825	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	121	372	-	-	780	-
Stage 1	430	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 113	372	-	-	780	-
Mov Cap-2 Maneuver	~ 113	-	-	-	-	-
Stage 1	402	-	-	-	-	-
Stage 2	468	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s$	301.4	0	0.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	194	780	-
HCM Lane V/C Ratio	-	-	1.516	0.066	-
HCM Control Delay (s)	-	-	$ 301.4	9.9	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	18.5	0.2	-

Notes

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

Intersection	
Int Delay, s/veh	26

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	95	25	0	90	25	586	20	15	489	15
Future Vol, veh/h	10	0	95	25	0	90	25	586	20	15	489	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	140	37	0	132	37	862	29	22	719	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1791	1739	730	1795	1736	877	741	0	0	891	0	0
Stage 1	774	774	-	951	951	-	-	-	-	-	-	-
Stage 2	1017	965	-	844	785	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	63	87	422	62	87	348	866	-	-	761	-	-
Stage 1	391	408	-	312	338	-	-	-	-	-	-	-
Stage 2	287	333	-	358	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	81	422	39	81	348	866	-	-	761	-	-
Mov Cap-2 Maneuver	37	81	-	39	81	-	-	-	-	-	-	-
Stage 1	374	396	-	299	323	-	-	-	-	-	-	-
Stage 2	170	319	-	233	392	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.3	253.5	0.4	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	866	-	-	212	128	761	-	-
HCM Lane V/C Ratio	0.042	-	-	0.728	1.321	0.029	-	-
HCM Control Delay (s)	9.3	-	-	57.3	253.5	9.9	-	-
HCM Lane LOS	A	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.8	10.9	0.1	-	-

Intersection	
Int Delay, s/veh	26.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	210	471	160	70	539
Future Vol, veh/h	90	210	471	160	70	539
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	296	663	225	99	759

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1733	776	0	0	888	0
Stage 1	776	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 97	397	-	-	763	-
Stage 1	454	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 84	397	-	-	763	-
Mov Cap-2 Maneuver	~ 84	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	373	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	135.8	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	84	397	763	-
HCM Lane V/C Ratio	-	-	1.509	0.745	0.129	-
HCM Control Delay (s)	-	-	$ 367.9	36.3	10.4	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	10.1	6	0.4	-

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	105	225	190	110	110	235	491	215	116	464	200
Future Volume (veh/h)	125	105	225	190	110	110	235	491	215	116	464	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	149	125	268	232	134	134	242	506	222	123	494	213
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	371	316	195	174	174	292	626	532	185	665	285
Arrive On Green	0.11	0.20	0.20	0.11	0.20	0.20	0.16	0.34	0.34	0.10	0.28	0.28
Sat Flow, veh/h	1774	1863	1583	1774	856	856	1774	1863	1583	1774	2414	1035
Grp Volume(v), veh/h	149	125	268	232	0	268	242	506	222	123	361	346
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1712	1774	1863	1583	1774	1770	1680
Q Serve(g_s), s	5.2	3.7	6.6	7.0	0.0	9.4	8.4	15.8	4.5	4.3	11.9	12.0
Cycle Q Clear(g_c), s	5.2	3.7	6.6	7.0	0.0	9.4	8.4	15.8	4.5	4.3	11.9	12.0
Prop In Lane	1.00		1.00	1.00		0.50	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	187	371	316	195	0	349	292	626	532	185	487	462
V/C Ratio(X)	0.80	0.34	0.85	1.19	0.00	0.77	0.83	0.81	0.42	0.67	0.74	0.75
Avail Cap(c_a), veh/h	195	934	794	195	0	859	389	964	819	195	721	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	21.9	10.0	28.4	0.0	24.0	25.8	19.3	6.8	27.5	21.1	21.1
Incr Delay (d2), s/veh	19.7	0.5	6.3	125.7	0.0	3.6	10.6	3.0	0.5	7.8	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.9	4.3	10.2	0.0	4.8	5.0	8.5	2.6	2.5	6.0	5.9
LnGrp Delay(d),s/veh	47.6	22.4	16.3	154.1	0.0	27.5	36.4	22.3	7.3	35.3	23.3	23.6
LnGrp LOS	D	C	B	F		C	D	C	A	D	C	C
Approach Vol, veh/h		542			500			970			830	
Approach Delay, s/veh		26.3			86.3			22.4			25.2	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	25.4	11.0	16.7	14.5	21.6	10.7	17.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	6.3	17.8	9.0	8.6	10.4	14.0	7.2	11.4
Green Ext Time (p_c), s	0.0	3.6	0.0	1.6	0.2	3.6	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	5	30	90	10	30	355	125	506	75	185	644	25
Future Volume (veh/h)	5	30	90	10	30	355	125	506	75	185	644	25
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	6	36	107	12	37	433	129	522	77	197	685	27
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	122	327	66	39	384	164	635	94	237	785	31
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.40	0.40	0.13	0.44	0.44
Sat Flow, veh/h	23	459	1228	16	147	1438	1774	1587	234	1774	1780	70
Grp Volume(v), veh/h	149	0	0	482	0	0	129	0	599	197	0	712
Grp Sat Flow(s),veh/h/ln	1710	0	0	1601	0	0	1774	0	1821	1774	0	1850
Q Serve(g_s), s	0.0	0.0	0.0	6.3	0.0	0.0	4.3	0.0	17.6	6.5	0.0	21.0
Cycle Q Clear(g_c), s	4.4	0.0	0.0	16.0	0.0	0.0	4.3	0.0	17.6	6.5	0.0	21.0
Prop In Lane	0.04		0.72	0.02		0.90	1.00		0.13	1.00		0.04
Lane Grp Cap(c), veh/h	518	0	0	488	0	0	164	0	729	237	0	816
V/C Ratio(X)	0.29	0.00	0.00	0.99	0.00	0.00	0.79	0.00	0.82	0.83	0.00	0.87
Avail Cap(c_a), veh/h	518	0	0	488	0	0	177	0	729	237	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.65	0.00	0.65	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	22.9	0.0	0.0	26.7	0.0	16.1	25.3	0.0	15.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	37.2	0.0	0.0	13.2	0.0	6.8	21.7	0.0	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	12.9	0.0	0.0	2.7	0.0	10.2	4.6	0.0	13.3
LnGrp Delay(d),s/veh	18.0	0.0	0.0	60.1	0.0	0.0	39.9	0.0	22.9	47.1	0.0	27.7
LnGrp LOS	B			E			D		C	D		C
Approach Vol, veh/h		149			482			728			909	
Approach Delay, s/veh		18.0			60.1			25.9			31.9	
Approach LOS		B			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	12.0	28.0		20.0	9.5	30.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	8.0	24.0		16.0	6.0	26.0
Max Q Clear Time (g_c+I1), s		18.0	8.5	19.6		6.4	6.3	23.0
Green Ext Time (p_c), s		0.0	0.0	1.6		0.5	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	60	35	130	10	281	15	470	90	231	522	5
Future Volume (veh/h)	10	60	35	130	10	281	15	470	90	231	522	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	13	78	45	141	11	305	17	522	100	266	600	6
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	101	58	303	24	564	28	640	544	307	922	9
Arrive On Green	0.10	0.10	0.10	0.18	0.18	0.18	0.02	0.34	0.34	0.17	0.50	0.50
Sat Flow, veh/h	167	1005	580	1651	129	1583	1774	1863	1583	1774	1841	18
Grp Volume(v), veh/h	136	0	0	152	0	305	17	522	100	266	0	606
Grp Sat Flow(s),veh/h/ln	1752	0	0	1780	0	1583	1774	1863	1583	1774	0	1859
Q Serve(g_s), s	6.1	0.0	0.0	6.1	0.0	12.3	0.8	20.4	3.5	11.7	0.0	19.3
Cycle Q Clear(g_c), s	6.1	0.0	0.0	6.1	0.0	12.3	0.8	20.4	3.5	11.7	0.0	19.3
Prop In Lane	0.10		0.33	0.93		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	176	0	0	326	0	564	28	640	544	307	0	931
V/C Ratio(X)	0.77	0.00	0.00	0.47	0.00	0.54	0.61	0.82	0.18	0.87	0.00	0.65
Avail Cap(c_a), veh/h	350	0	0	356	0	590	89	640	544	355	0	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.61	0.00	0.61
Uniform Delay (d), s/veh	35.1	0.0	0.0	29.2	0.0	20.5	39.1	23.9	18.4	32.2	0.0	14.8
Incr Delay (d2), s/veh	7.1	0.0	0.0	1.0	0.0	0.9	19.5	11.0	0.7	11.9	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	3.3	0.0	0.0	3.1	0.0	5.5	0.5	12.4	1.7	6.7	0.0	10.3
LnGrp Delay(d),s/veh	42.2	0.0	0.0	30.2	0.0	21.4	58.7	34.9	19.1	44.1	0.0	17.0
LnGrp LOS	D			C		C	E	C	B	D		B
Approach Vol, veh/h		136			457			639			872	
Approach Delay, s/veh		42.2			24.4			33.1			25.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.7	17.8	31.5		12.0	5.3	44.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		14.3	13.7	22.4		8.1	2.8	21.3
Green Ext Time (p_c), s		0.4	0.2	0.0		0.4	0.0	2.2

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)	350	70	125	40	30	20	122	381	75	30	195	170
Future Volume (veh/h)	350	70	125	40	30	20	122	381	75	30	195	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	432	86	154	49	37	25	151	470	93	37	241	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	479	162	290	66	50	34	190	556	110	53	542	461
Arrive On Green	0.27	0.27	0.27	0.09	0.09	0.09	0.11	0.37	0.37	0.03	0.29	0.29
Sat Flow, veh/h	1774	600	1074	774	585	395	1774	1511	299	1774	1863	1583
Grp Volume(v), veh/h	432	0	240	111	0	0	151	0	563	37	241	210
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1754	0	0	1774	0	1810	1774	1863	1583
Q Serve(g_s), s	15.3	0.0	7.9	4.0	0.0	0.0	5.4	0.0	18.5	1.3	6.8	7.0
Cycle Q Clear(g_c), s	15.3	0.0	7.9	4.0	0.0	0.0	5.4	0.0	18.5	1.3	6.8	7.0
Prop In Lane	1.00		0.64	0.44		0.23	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	479	0	451	151	0	0	190	0	666	53	542	461
V/C Ratio(X)	0.90	0.00	0.53	0.74	0.00	0.00	0.79	0.00	0.84	0.70	0.44	0.46
Avail Cap(c_a), veh/h	491	0	463	567	0	0	246	0	1003	109	888	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	20.2	29.0	0.0	0.0	28.3	0.0	18.8	31.2	18.8	18.8
Incr Delay (d2), s/veh	19.5	0.0	1.1	6.9	0.0	0.0	12.7	0.0	4.3	15.0	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	3.8	2.2	0.0	0.0	3.3	0.0	10.0	0.9	3.6	3.1
LnGrp Delay(d),s/veh	42.4	0.0	21.3	35.9	0.0	0.0	41.0	0.0	23.2	46.3	19.3	19.5
LnGrp LOS	D		C	D			D		C	D	B	B
Approach Vol, veh/h		672			111			714			488	
Approach Delay, s/veh		34.9			35.9			26.9			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	5.9	27.9		21.5	11.0	22.9		9.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.3	20.5		17.3	7.4	9.0		6.0
Green Ext Time (p_c), s	0.0	3.4		0.3	0.1	2.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.7	0.4	0.0	0.8
Total Del/Veh (s)	9.8	13.4	13.3	15.5	14.0

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	7.0	3.0	11.6	6.1

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	20.8

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	33	715	1	11	205
Future Vol, veh/h	18	33	715	1	11	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	41	883	1	14	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1165	884	0	0	884	0
Stage 1	884	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	344	-	-	765	-
Stage 1	404	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	210	344	-	-	765	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	765	-
HCM Lane V/C Ratio	-	-	0.224	0.018	-
HCM Control Delay (s)	-	-	21.5	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	5	15	5	5
Future Vol, veh/h	5	15	5	15	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	16	5	16	5	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	21	0	-	0	39	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1595	-	-	-	973	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1595	-	-	-	970	1067
Mov Cap-2 Maneuver	-	-	-	-	970	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1595	-	-	-	1016
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	706	218	5
Future Vol, veh/h	10	10	15	706	218	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	872	269	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1182	272	275	0	-	0
Stage 1	272	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	210	767	1288	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	204	767	1288	-	-	-
Mov Cap-2 Maneuver	204	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	393	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1288	-	204	767	-	-
HCM Lane V/C Ratio	0.014	-	0.061	0.016	-	-
HCM Control Delay (s)	7.8	0	23.8	9.8	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	275	230	120	125	75	275	446	345	126	282	110
Future Volume (veh/h)	115	275	230	120	125	75	275	446	345	126	282	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	327	274	146	152	91	284	460	356	134	300	117
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	705	599	178	357	214	344	521	443	131	400	153
Arrive On Green	0.15	0.38	0.38	0.10	0.33	0.33	0.19	0.28	0.28	0.07	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1774	1093	654	1774	1863	1583	1774	2506	957
Grp Volume(v), veh/h	137	327	274	146	0	243	284	460	356	134	210	207
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1747	1774	1863	1583	1774	1770	1694
Q Serve(g_s), s	6.7	12.6	6.8	7.7	0.0	10.3	14.6	22.4	14.8	7.0	10.7	11.1
Cycle Q Clear(g_c), s	6.7	12.6	6.8	7.7	0.0	10.3	14.6	22.4	14.8	7.0	10.7	11.1
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	270	705	599	178	0	570	344	521	443	131	282	270
V/C Ratio(X)	0.51	0.46	0.46	0.82	0.00	0.43	0.83	0.88	0.80	1.03	0.74	0.77
Avail Cap(c_a), veh/h	270	705	599	205	0	570	344	588	500	131	484	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	37.0	22.3	6.8	41.9	0.0	25.0	36.8	32.7	17.6	44.0	38.1	38.2
Incr Delay (d2), s/veh	1.6	2.2	2.5	20.4	0.0	2.3	15.2	13.7	8.4	85.5	3.9	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.9	3.4	4.8	0.0	5.4	8.6	13.5	7.5	6.5	5.6	5.5
LnGrp Delay(d),s/veh	38.6	24.5	9.3	62.3	0.0	27.4	52.0	46.4	26.0	129.9	42.0	42.8
LnGrp LOS	D	C	A	E		C	D	D	C	F	D	D
Approach Vol, veh/h		738			389			1100			551	
Approach Delay, s/veh		21.4			40.5			41.2			63.6	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	30.6	13.5	39.9	22.4	19.1	18.4	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	11.0	31.0	11.0	26.0	11.0	31.0
Max Q Clear Time (g_c+I1), s	9.0	24.4	9.7	14.6	16.6	13.1	8.7	12.3
Green Ext Time (p_c), s	0.0	2.1	0.0	2.7	0.0	2.0	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	55	160	5	25	390	115	686	35	170	502	45
Future Volume (veh/h)	10	55	160	5	25	390	115	686	35	170	502	45
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	65	190	6	30	476	119	707	36	181	534	48
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	123	325	62	28	396	152	716	36	224	754	68
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.41	0.41	0.13	0.45	0.45
Sat Flow, veh/h	32	462	1219	6	107	1485	1774	1757	89	1774	1685	151
Grp Volume(v), veh/h	267	0	0	512	0	0	119	0	743	181	0	582
Grp Sat Flow(s),veh/h/ln	1713	0	0	1597	0	0	1774	0	1847	1774	0	1836
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	3.9	0.0	23.9	6.0	0.0	15.4
Cycle Q Clear(g_c), s	8.5	0.0	0.0	16.0	0.0	0.0	3.9	0.0	23.9	6.0	0.0	15.4
Prop In Lane	0.04		0.71	0.01		0.93	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	520	0	0	487	0	0	152	0	752	224	0	822
V/C Ratio(X)	0.51	0.00	0.00	1.05	0.00	0.00	0.78	0.00	0.99	0.81	0.00	0.71
Avail Cap(c_a), veh/h	520	0	0	487	0	0	177	0	752	237	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.56	0.00	0.56	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	23.0	0.0	0.0	26.9	0.0	17.6	25.5	0.0	13.4
Incr Delay (d2), s/veh	0.9	0.0	0.0	55.2	0.0	0.0	10.6	0.0	21.8	17.8	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	15.4	0.0	0.0	2.4	0.0	16.5	4.0	0.0	8.9
LnGrp Delay(d),s/veh	20.1	0.0	0.0	78.2	0.0	0.0	37.5	0.0	39.5	43.3	0.0	18.5
LnGrp LOS	C			F			D		D	D		B
Approach Vol, veh/h		267			512			862			763	
Approach Delay, s/veh		20.1			78.2			39.2			24.4	
Approach LOS		C			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	11.6	28.4		20.0	9.1	30.9
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	8.0	24.0		16.0	6.0	26.0
Max Q Clear Time (g_c+I1), s		18.0	8.0	25.9		10.5	5.9	17.4
Green Ext Time (p_c), s		0.0	0.0	0.0		0.7	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.7
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	25	25	190	10	325	25	550	140	222	469	10
Future Volume (veh/h)	15	25	25	190	10	325	25	550	140	222	469	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	32	32	207	11	353	28	611	156	255	539	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	42	42	338	18	581	41	689	586	296	934	19
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.02	0.37	0.37	0.17	0.51	0.51
Sat Flow, veh/h	395	665	665	1689	90	1583	1774	1863	1583	1774	1819	37
Grp Volume(v), veh/h	83	0	0	218	0	353	28	611	156	255	0	550
Grp Sat Flow(s),veh/h/ln	1726	0	0	1778	0	1583	1774	1863	1583	1774	0	1856
Q Serve(g_s), s	3.8	0.0	0.0	8.9	0.0	14.5	1.3	24.6	5.5	11.2	0.0	16.4
Cycle Q Clear(g_c), s	3.8	0.0	0.0	8.9	0.0	14.5	1.3	24.6	5.5	11.2	0.0	16.4
Prop In Lane	0.23		0.39	0.95		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	109	0	0	356	0	581	41	689	586	296	0	953
V/C Ratio(X)	0.76	0.00	0.00	0.61	0.00	0.61	0.68	0.89	0.27	0.86	0.00	0.58
Avail Cap(c_a), veh/h	345	0	0	356	0	581	89	689	586	355	0	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.75	0.00	0.75
Uniform Delay (d), s/veh	36.9	0.0	0.0	29.2	0.0	20.6	38.8	23.6	17.6	32.4	0.0	13.4
Incr Delay (d2), s/veh	10.3	0.0	0.0	3.1	0.0	1.8	18.0	15.7	1.1	13.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	4.7	0.0	6.6	0.8	15.6	2.6	6.5	0.0	8.9
LnGrp Delay(d),s/veh	47.2	0.0	0.0	32.3	0.0	22.5	56.8	39.3	18.7	45.4	0.0	15.3
LnGrp LOS	D			C		C	E	D	B	D		B
Approach Vol, veh/h		83			571			795			805	
Approach Delay, s/veh		47.2			26.2			35.9			24.9	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	17.4	33.6		9.1	5.9	45.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		16.5	13.2	26.6		5.8	3.3	18.4
Green Ext Time (p_c), s		0.0	0.2	0.0		0.2	0.0	2.5

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)	350	70	140	40	30	20	122	381	75	30	198	170
Future Volume (veh/h)	350	70	140	40	30	20	122	381	75	30	198	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	432	86	173	49	37	25	151	470	93	37	244	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	479	149	300	66	50	34	190	556	110	53	542	461
Arrive On Green	0.27	0.27	0.27	0.09	0.09	0.09	0.11	0.37	0.37	0.03	0.29	0.29
Sat Flow, veh/h	1774	553	1113	774	585	395	1774	1511	299	1774	1863	1583
Grp Volume(v), veh/h	432	0	259	111	0	0	151	0	563	37	244	210
Grp Sat Flow(s),veh/h/ln	1774	0	1666	1754	0	0	1774	0	1810	1774	1863	1583
Q Serve(g_s), s	15.3	0.0	8.7	4.0	0.0	0.0	5.4	0.0	18.5	1.3	6.9	7.0
Cycle Q Clear(g_c), s	15.3	0.0	8.7	4.0	0.0	0.0	5.4	0.0	18.5	1.3	6.9	7.0
Prop In Lane	1.00		0.67	0.44		0.23	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	479	0	450	151	0	0	190	0	666	53	542	461
V/C Ratio(X)	0.90	0.00	0.58	0.74	0.00	0.00	0.79	0.00	0.84	0.70	0.45	0.46
Avail Cap(c_a), veh/h	491	0	461	567	0	0	246	0	1002	109	888	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	20.5	29.0	0.0	0.0	28.3	0.0	18.8	31.2	18.8	18.8
Incr Delay (d2), s/veh	19.5	0.0	1.7	6.9	0.0	0.0	12.7	0.0	4.3	15.0	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	4.2	2.2	0.0	0.0	3.3	0.0	10.0	0.9	3.6	3.1
LnGrp Delay(d),s/veh	42.4	0.0	22.2	35.9	0.0	0.0	41.0	0.0	23.2	46.3	19.4	19.5
LnGrp LOS	D		C	D			D		C	D	B	B
Approach Vol, veh/h		691			111			714			491	
Approach Delay, s/veh		34.8			35.9			26.9			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	5.9	27.9		21.5	11.0	22.9		9.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.3	20.5		17.3	7.4	9.0		6.0
Green Ext Time (p_c), s	0.0	3.4		0.3	0.1	2.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Notes

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.5	0.4	0.0	0.8
Total Del/Veh (s)	12.8	14.7	14.1	15.6	14.8

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	4.1	3.0	11.1	5.9

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	21.3

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	34	715	41	51	205
Future Vol, veh/h	17	34	715	41	51	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	42	883	51	63	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1288	909	0	0	934	0
Stage 1	909	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	181	333	-	-	733	-
Stage 1	393	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	163	333	-	-	733	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.5	0	2.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	247	733	-
HCM Lane V/C Ratio	-	-	0.255	0.086	-
HCM Control Delay (s)	-	-	24.5	10.4	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	1	0.3	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	5	15	5	5
Future Vol, veh/h	5	15	5	15	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	16	5	16	5	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	21	0	-	0	39	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1595	-	-	-	973	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1595	-	-	-	970	1067
Mov Cap-2 Maneuver	-	-	-	-	970	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1595	-	-	-	1016
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	15	746	217	5
Future Vol, veh/h	10	10	15	746	217	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	921	268	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1230	271	274	0	-	0
Stage 1	271	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	196	768	1289	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	372	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	768	1289	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1289	-	190	768	-	-
HCM Lane V/C Ratio	0.014	-	0.065	0.016	-	-
HCM Control Delay (s)	7.8	0	25.3	9.8	-	-
HCM Lane LOS	A	A	D	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	275	230	120	125	78	275	482	345	127	280	110
Future Volume (veh/h)	115	275	230	120	125	78	275	482	345	127	280	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	327	274	146	152	95	284	497	356	135	298	117
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	677	575	178	350	219	371	549	466	131	397	153
Arrive On Green	0.14	0.36	0.36	0.10	0.33	0.33	0.21	0.29	0.29	0.07	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1774	1073	671	1774	1863	1583	1774	2501	961
Grp Volume(v), veh/h	137	327	274	146	0	247	284	497	356	135	209	206
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1744	1774	1863	1583	1774	1770	1693
Q Serve(g_s), s	6.9	12.9	6.8	7.7	0.0	10.6	14.3	24.4	14.4	7.0	10.7	11.1
Cycle Q Clear(g_c), s	6.9	12.9	6.8	7.7	0.0	10.6	14.3	24.4	14.4	7.0	10.7	11.1
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	243	677	575	178	0	569	371	549	466	131	281	269
V/C Ratio(X)	0.56	0.48	0.48	0.82	0.00	0.43	0.76	0.91	0.76	1.03	0.74	0.77
Avail Cap(c_a), veh/h	243	677	575	205	0	569	371	588	500	131	484	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	23.4	6.8	41.9	0.0	25.1	35.4	32.2	16.6	44.0	38.1	38.3
Incr Delay (d2), s/veh	3.0	2.5	2.8	20.4	0.0	2.4	9.2	17.1	6.4	87.7	3.9	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	7.1	3.4	4.8	0.0	5.5	8.0	15.2	7.1	6.6	5.5	5.5
LnGrp Delay(d),s/veh	41.3	25.8	9.6	62.3	0.0	27.5	44.5	49.3	23.1	132.1	42.0	42.8
LnGrp LOS	D	C	A	E		C	D	D	C	F	D	D
Approach Vol, veh/h		738			393			1137			550	
Approach Delay, s/veh		22.7			40.5			39.9			64.4	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	32.0	13.5	38.5	23.9	19.1	17.0	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	11.0	31.0	11.0	26.0	11.0	31.0
Max Q Clear Time (g_c+I1), s	9.0	26.4	9.7	14.9	16.3	13.1	8.9	12.6
Green Ext Time (p_c), s	0.0	1.6	0.0	2.7	0.0	2.0	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	55	160	5	25	390	115	722	35	170	500	45
Future Volume (veh/h)	10	55	160	5	25	390	115	722	35	170	500	45
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	65	190	6	30	476	119	744	36	181	532	48
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	123	325	62	28	396	152	718	35	224	754	68
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.09	0.41	0.41	0.13	0.45	0.45
Sat Flow, veh/h	32	462	1219	6	107	1485	1774	1762	85	1774	1684	152
Grp Volume(v), veh/h	267	0	0	512	0	0	119	0	780	181	0	580
Grp Sat Flow(s),veh/h/ln	1713	0	0	1597	0	0	1774	0	1848	1774	0	1836
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	3.9	0.0	24.4	6.0	0.0	15.3
Cycle Q Clear(g_c), s	8.5	0.0	0.0	16.0	0.0	0.0	3.9	0.0	24.4	6.0	0.0	15.3
Prop In Lane	0.04		0.71	0.01		0.93	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	520	0	0	487	0	0	152	0	752	224	0	822
V/C Ratio(X)	0.51	0.00	0.00	1.05	0.00	0.00	0.78	0.00	1.04	0.81	0.00	0.71
Avail Cap(c_a), veh/h	520	0	0	487	0	0	177	0	752	237	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.54	0.00	0.54	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	23.0	0.0	0.0	26.9	0.0	17.8	25.5	0.0	13.4
Incr Delay (d2), s/veh	0.9	0.0	0.0	55.2	0.0	0.0	10.3	0.0	34.3	17.8	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	15.4	0.0	0.0	2.4	0.0	19.5	4.0	0.0	8.9
LnGrp Delay(d),s/veh	20.1	0.0	0.0	78.2	0.0	0.0	37.2	0.0	52.1	43.3	0.0	18.4
LnGrp LOS	C			F			D		F	D		B
Approach Vol, veh/h		267			512			899			761	
Approach Delay, s/veh		20.1			78.2			50.1			24.3	
Approach LOS		C			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	11.6	28.4		20.0	9.1	30.9
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	8.0	24.0		16.0	6.0	26.0
Max Q Clear Time (g_c+I1), s		18.0	8.0	26.4		10.5	5.9	17.3
Green Ext Time (p_c), s		0.0	0.0	0.0		0.7	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	44.7
HCM 2010 LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	25	25	190	10	356	25	557	140	222	468	10
Future Volume (veh/h)	15	25	25	190	10	356	25	557	140	222	468	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	32	32	207	11	387	28	619	156	255	538	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	42	42	338	18	581	41	689	586	296	934	19
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.02	0.37	0.37	0.17	0.51	0.51
Sat Flow, veh/h	395	665	665	1689	90	1583	1774	1863	1583	1774	1819	37
Grp Volume(v), veh/h	83	0	0	218	0	387	28	619	156	255	0	549
Grp Sat Flow(s),veh/h/ln	1726	0	0	1778	0	1583	1774	1863	1583	1774	0	1856
Q Serve(g_s), s	3.8	0.0	0.0	8.9	0.0	16.0	1.3	25.1	5.5	11.2	0.0	16.3
Cycle Q Clear(g_c), s	3.8	0.0	0.0	8.9	0.0	16.0	1.3	25.1	5.5	11.2	0.0	16.3
Prop In Lane	0.23		0.39	0.95		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	109	0	0	356	0	581	41	689	586	296	0	953
V/C Ratio(X)	0.76	0.00	0.00	0.61	0.00	0.67	0.68	0.90	0.27	0.86	0.00	0.58
Avail Cap(c_a), veh/h	345	0	0	356	0	581	89	689	586	355	0	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.74	0.00	0.74
Uniform Delay (d), s/veh	36.9	0.0	0.0	29.2	0.0	21.2	38.8	23.8	17.6	32.4	0.0	13.4
Incr Delay (d2), s/veh	10.3	0.0	0.0	3.1	0.0	2.9	18.0	16.9	1.1	13.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	4.7	0.0	7.6	0.8	16.1	2.6	6.5	0.0	8.7
LnGrp Delay(d),s/veh	47.2	0.0	0.0	32.3	0.0	24.1	56.8	40.7	18.7	45.4	0.0	15.3
LnGrp LOS	D			C		C	E	D	B	D		B
Approach Vol, veh/h		83			605			803			804	
Approach Delay, s/veh		47.2			27.1			37.0			24.9	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	17.4	33.6		9.1	5.9	45.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		18.0	13.2	27.1		5.8	3.3	18.3
Green Ext Time (p_c), s		0.0	0.2	0.0		0.2	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

TECHNICAL APPENDIX 3 of 3

FOR

UNITED AUBURN INDIAN COMMUNITY SCHOOL PROJECT
TRAFFIC IMPACT ANALYSIS
Placer County, CA

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5765-21

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	188	268	219	156	250	12	594	381
v/c Ratio	0.56	0.43	0.83	0.78	0.25	0.09	0.83	0.45
Control Delay	24.0	5.2	45.1	56.7	8.9	27.7	29.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	5.2	45.1	56.7	8.9	27.7	29.3	3.8
Queue Length 50th (ft)	53	3	64	52	34	4	170	0
Queue Length 95th (ft)	90	32	#121	#127	89	16	#298	30
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	457	762	356	200	1003	133	774	880
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.35	0.62	0.78	0.25	0.09	0.77	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	10	205	115	40	20	125	175	25	10	475	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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	12	194	144	50	25	156	219	31	12	594	381
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	512	28	449	279	90	33	196	747	106	22	689	586
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.11	0.47	0.47	0.01	0.37	0.37
Sat Flow, veh/h	1319	93	1504	568	301	112	1774	1597	226	1774	1863	1583
Grp Volume(v), veh/h	188	0	206	219	0	0	156	0	250	12	594	381
Grp Sat Flow(s),veh/h/ln	1319	0	1597	980	0	0	1774	0	1823	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	5.6	7.0	0.0	0.0	4.7	0.0	4.6	0.4	16.0	10.8
Cycle Q Clear(g_c), s	6.7	0.0	5.6	12.6	0.0	0.0	4.7	0.0	4.6	0.4	16.0	10.8
Prop In Lane	1.00		0.94	0.66		0.11	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	512	0	477	403	0	0	196	0	853	22	689	586
V/C Ratio(X)	0.37	0.00	0.43	0.54	0.00	0.00	0.80	0.00	0.29	0.55	0.86	0.65
Avail Cap(c_a), veh/h	603	0	588	494	0	0	196	0	853	131	754	641
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	15.3	19.0	0.0	0.0	23.6	0.0	8.9	26.7	15.8	14.2
Incr Delay (d2), s/veh	0.4	0.0	0.6	1.1	0.0	0.0	20.0	0.0	0.2	20.3	9.5	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.5	3.2	0.0	0.0	3.3	0.0	2.3	0.3	9.9	5.0
LnGrp Delay(d),s/veh	16.2	0.0	15.9	20.2	0.0	0.0	43.6	0.0	9.1	47.0	25.3	16.3
LnGrp LOS	B		B	C			D		A	D	C	B
Approach Vol, veh/h		394			219			406			987	
Approach Delay, s/veh		16.0			20.2			22.4			22.1	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	29.4		20.2	10.0	24.1		20.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	24.0		20.0	6.0	22.0		20.0
Max Q Clear Time (g_c+I1), s	2.4	6.6		8.7	6.7	18.0		14.6
Green Ext Time (p_c), s	0.0	6.7		2.6	0.0	2.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	60	30	295	720	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	100	50	492	1200	50

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1817	1225	1250	0	-	0
Stage 1	1225	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	86	218	557	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	75	218	557	-	-	-
Mov Cap-2 Maneuver	75	-	-	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39.3	1.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	557	-	75	218	-	-
HCM Lane V/C Ratio	0.09	-	0.222	0.459	-	-
HCM Control Delay (s)	12.1	0	66.2	34.8	-	-
HCM Lane LOS	B	A	F	D	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	2.2	-	-

Intersection	
Int Delay, s/veh	123

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	40	70	410	120	200	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	121	707	207	345	905

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2405	810	0	0	914	0
Stage 1	810	-	-	-	-	-
Stage 2	1595	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 36	380	-	-	746	-
Stage 1	438	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 19	380	-	-	746	-
Mov Cap-2 Maneuver	~ 19	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	98	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 1501.8	0	3.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	48	746	-
HCM Lane V/C Ratio	-	-	3.951	0.462	-
HCM Control Delay (s)	-	-	$ 1501.8	13.9	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	21.1	2.5	-

Notes

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

Intersection	
Int Delay, s/veh	254.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	5	120	0	120	5	410	135	140	420	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	179	0	179	7	612	201	209	627	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1866	1877	631	1780	1780	713	634	0	0	813	0	0
Stage 1	1049	1049	-	728	728	-	-	-	-	-	-	-
Stage 2	817	828	-	1052	1052	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	56	71	481	~ 64	82	432	949	-	-	814	-	-
Stage 1	275	304	-	415	429	-	-	-	-	-	-	-
Stage 2	370	386	-	274	303	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	26	52	481	~ 50	60	432	949	-	-	814	-	-
Mov Cap-2 Maneuver	26	52	-	~ 50	60	-	-	-	-	-	-	-
Stage 1	273	226	-	412	426	-	-	-	-	-	-	-
Stage 2	215	383	-	200	225	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	$ 1437.5	0.1	2.7
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	949	-	-	481	90	814	-	-
HCM Lane V/C Ratio	0.008	-	-	0.016	3.98	0.257	-	-
HCM Control Delay (s)	8.8	-	-	12.8	$ 1437.5	10.9	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	37.1	1	-	-

Notes

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

Intersection	
Int Delay, s/veh	35.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	130	75	475	380	70	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	169	97	617	494	91	532

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1578	864	0	0	1110	0
Stage 1	864	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 120	354	-	-	629	-
Stage 1	413	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 103	354	-	-	629	-
Mov Cap-2 Maneuver	~ 103	-	-	-	-	-
Stage 1	413	-	-	-	-	-
Stage 2	415	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	260.2	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	103	354	629	-
HCM Lane V/C Ratio	-	-	1.639	0.275	0.145	-
HCM Control Delay (s)	-	-	$ 399.3	19	11.7	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	13.1	1.1	0.5	-

Notes

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

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	340	247	105	167	555	31	302	210
v/c Ratio	0.71	0.42	0.41	0.73	0.75	0.27	0.65	0.38
Control Delay	32.4	8.5	29.6	54.1	30.3	40.1	31.6	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	8.5	29.6	54.1	30.3	40.1	31.6	6.2
Queue Length 50th (ft)	131	16	36	73	190	13	118	0
Queue Length 95th (ft)	205	55	71	#163	#392	37	185	35
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	601	687	610	229	736	114	573	632
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.36	0.17	0.73	0.75	0.27	0.53	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	40	160	40	25	20	135	385	65	25	245	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	340	49	198	49	31	25	167	475	80	31	302	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	437	80	322	67	42	34	210	565	95	48	507	431
Arrive On Green	0.25	0.25	0.25	0.08	0.08	0.08	0.12	0.36	0.36	0.03	0.27	0.27
Sat Flow, veh/h	1774	324	1308	816	516	416	1774	1555	262	1774	1863	1583
Grp Volume(v), veh/h	340	0	247	105	0	0	167	0	555	31	302	210
Grp Sat Flow(s),veh/h/ln	1774	0	1632	1748	0	0	1774	0	1817	1774	1863	1583
Q Serve(g_s), s	10.2	0.0	7.6	3.3	0.0	0.0	5.2	0.0	15.9	1.0	8.0	6.3
Cycle Q Clear(g_c), s	10.2	0.0	7.6	3.3	0.0	0.0	5.2	0.0	15.9	1.0	8.0	6.3
Prop In Lane	1.00		0.80	0.47		0.24	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	437	0	402	143	0	0	210	0	660	48	507	431
V/C Ratio(X)	0.78	0.00	0.61	0.73	0.00	0.00	0.80	0.00	0.84	0.64	0.60	0.49
Avail Cap(c_a), veh/h	655	0	603	646	0	0	250	0	735	125	623	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	0.0	19.0	25.5	0.0	0.0	24.4	0.0	16.6	27.4	18.0	17.4
Incr Delay (d2), s/veh	3.4	0.0	1.5	7.1	0.0	0.0	13.9	0.0	8.0	13.3	1.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	3.6	1.9	0.0	0.0	3.4	0.0	9.3	0.7	4.3	2.8
LnGrp Delay(d),s/veh	23.4	0.0	20.6	32.6	0.0	0.0	38.3	0.0	24.6	40.7	19.1	18.2
LnGrp LOS	C		C	C			D		C	D	B	B
Approach Vol, veh/h		587			105			722			543	
Approach Delay, s/veh		22.2			32.6			27.8			20.0	
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	5.5	24.6		18.0	10.7	19.5		8.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		21.0	8.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	3.0	17.9		12.2	7.2	10.0		5.3
Green Ext Time (p_c), s	0.0	2.7		1.8	0.0	4.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	20	80	605	340	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	33	133	1008	567	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1850	575	583	0	-	0
Stage 1	575	-	-	-	-	-
Stage 2	1275	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	82	518	991	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	263	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	57	518	991	-	-	-
Mov Cap-2 Maneuver	57	-	-	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	183	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.7	1.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	991	-	57	518	-	-
HCM Lane V/C Ratio	0.135	-	0.146	0.064	-	-
HCM Control Delay (s)	9.2	0	78.7	12.4	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.5	0.2	-	-

Intersection	
Int Delay, s/veh	46.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	80	120	535	50	35	430
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	176	787	74	51	632

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1559	824	0	0	860	0
Stage 1	824	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	124	373	-	-	781	-
Stage 1	431	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 116	373	-	-	781	-
Mov Cap-2 Maneuver	~ 116	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	287.6	0	0.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	198	781	-
HCM Lane V/C Ratio	-	-	1.485	0.066	-
HCM Control Delay (s)	-	-	287.6	9.9	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	18.1	0.2	-

Notes

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

Intersection	
Int Delay, s/veh	24.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	0	95	25	0	90	25	585	20	15	480	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	140	37	0	132	37	860	29	22	706	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1776	1724	717	1780	1721	875	728	0	0	890	0	0
Stage 1	761	761	-	949	949	-	-	-	-	-	-	-
Stage 2	1015	963	-	831	772	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	64	89	430	64	89	349	876	-	-	761	-	-
Stage 1	398	414	-	313	339	-	-	-	-	-	-	-
Stage 2	287	334	-	364	409	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	83	430	41	83	349	876	-	-	761	-	-
Mov Cap-2 Maneuver	38	83	-	41	83	-	-	-	-	-	-	-
Stage 1	381	402	-	300	325	-	-	-	-	-	-	-
Stage 2	171	320	-	239	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	54.3	231.8	0.4	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	876	-	-	217	133	761	-	-
HCM Lane V/C Ratio	0.042	-	-	0.712	1.272	0.029	-	-
HCM Control Delay (s)	9.3	-	-	54.3	231.8	9.9	-	-
HCM Lane LOS	A	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.6	10.5	0.1	-	-

Intersection	
Int Delay, s/veh	26.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	90	210	470	160	70	530
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	296	662	225	99	746

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1719	775	0	0	887	0
Stage 1	775	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 99	398	-	-	763	-
Stage 1	454	-	-	-	-	-
Stage 2	378	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 86	398	-	-	763	-
Mov Cap-2 Maneuver	~ 86	-	-	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	329	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	130.6	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	86	398	763	-
HCM Lane V/C Ratio	-	-	1.474	0.743	0.129	-
HCM Control Delay (s)	-	-	$ 351.3	36	10.4	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	9.9	5.9	0.4	-

Notes

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

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	432	240	111	142	562	37	241	210
v/c Ratio	0.92	0.47	0.45	0.62	0.75	0.36	0.46	0.35
Control Delay	59.8	22.0	34.9	49.4	26.9	49.3	24.5	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	59.8	22.0	34.9	49.4	27.1	49.3	24.5	5.0
Queue Length 50th (ft)	~231	64	44	67	230	18	90	0
Queue Length 95th (ft)	#405	130	87	#147	323	#48	141	31
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	468	507	554	234	966	104	848	835
Starvation Cap Reductn	0	0	0	0	81	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.47	0.20	0.61	0.64	0.36	0.28	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	350	70	125	40	30	20	115	380	75	30	195	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	432	86	154	49	37	25	142	469	93	37	241	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	469	159	284	66	50	34	179	582	115	52	585	497
Arrive On Green	0.26	0.26	0.26	0.09	0.09	0.09	0.10	0.39	0.39	0.03	0.31	0.31
Sat Flow, veh/h	1774	600	1074	774	585	395	1774	1510	300	1774	1863	1583
Grp Volume(v), veh/h	432	0	240	111	0	0	142	0	562	37	241	210
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1754	0	0	1774	0	1810	1774	1863	1583
Q Serve(g_s), s	16.1	0.0	8.4	4.2	0.0	0.0	5.3	0.0	18.8	1.4	6.9	7.1
Cycle Q Clear(g_c), s	16.1	0.0	8.4	4.2	0.0	0.0	5.3	0.0	18.8	1.4	6.9	7.1
Prop In Lane	1.00		0.64	0.44		0.23	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	469	0	443	150	0	0	179	0	697	52	585	497
V/C Ratio(X)	0.92	0.00	0.54	0.74	0.00	0.00	0.79	0.00	0.81	0.71	0.41	0.42
Avail Cap(c_a), veh/h	469	0	443	541	0	0	235	0	957	104	849	721
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	21.5	30.4	0.0	0.0	29.9	0.0	18.6	32.7	18.4	18.5
Incr Delay (d2), s/veh	23.5	0.0	1.4	7.0	0.0	0.0	12.8	0.0	3.6	15.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.0	4.0	2.3	0.0	0.0	3.2	0.0	10.1	0.9	3.6	3.2
LnGrp Delay(d),s/veh	47.8	0.0	22.8	37.3	0.0	0.0	42.7	0.0	22.3	48.6	18.9	19.0
LnGrp LOS	D		C	D			D		C	D	B	B
Approach Vol, veh/h		672			111			704			488	
Approach Delay, s/veh		38.9			37.3			26.4			21.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	30.2		22.0	10.9	25.4		9.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.4	20.8		18.1	7.3	9.1		6.2
Green Ext Time (p_c), s	0.0	5.4		0.0	0.1	6.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	715	0	0	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	883	0	0	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1136	883	0	0	883	0
Stage 1	883	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	223	345	-	-	766	-
Stage 1	404	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	223	345	-	-	766	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	404	-	-	-	-	-
Stage 2	789	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	766	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	10	15	705	200	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	870	247	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1157	250	253	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	217	789	1312	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	211	789	1312	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1312	-	211	789	-	-
HCM Lane V/C Ratio	0.014	-	0.059	0.016	-	-
HCM Control Delay (s)	7.8	0	23.1	9.6	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	720	0	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1059	0	0	309

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1368	1059	0	0	1059	0
Stage 1	1059	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	162	273	-	-	658	-
Stage 1	333	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	162	273	-	-	658	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	745	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	658	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	0	0	720	0	0	210	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	1059	0	0	309	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1368	1368	309	1368	1368	1059	309	0	0	1059	0	0
Stage 1	309	309	-	1059	1059	-	-	-	-	-	-	-
Stage 2	1059	1059	-	309	309	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	124	147	731	124	147	273	1252	-	-	658	-	-
Stage 1	701	660	-	271	301	-	-	-	-	-	-	-
Stage 2	271	301	-	701	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	124	147	731	124	147	273	1252	-	-	658	-	-
Mov Cap-2 Maneuver	124	147	-	124	147	-	-	-	-	-	-	-
Stage 1	701	660	-	271	301	-	-	-	-	-	-	-
Stage 2	271	301	-	701	660	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1252	-	-	-	-	658	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	720	0	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1014	0	0	296

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1310	1014	0	0	1014	0
Stage 1	1014	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	175	290	-	-	684	-
Stage 1	350	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	290	-	-	684	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	755	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	684	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	188	280	219	158	250	12	595	381
v/c Ratio	0.56	0.44	0.85	0.79	0.25	0.09	0.84	0.45
Control Delay	23.7	5.1	48.8	58.6	8.9	27.7	29.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	5.1	48.8	58.6	8.9	27.7	29.8	3.8
Queue Length 50th (ft)	53	3	64	54	35	4	174	0
Queue Length 95th (ft)	90	32	#133	#129	89	16	#299	30
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	453	766	341	199	998	133	770	878
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.37	0.64	0.79	0.25	0.09	0.77	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	10	214	115	40	20	126	175	25	10	476	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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	12	206	144	50	25	158	219	31	12	595	381
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	516	27	459	276	89	33	194	742	105	22	685	582
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.11	0.46	0.46	0.01	0.37	0.37
Sat Flow, veh/h	1319	88	1509	551	292	109	1774	1597	226	1774	1863	1583
Grp Volume(v), veh/h	188	0	218	219	0	0	158	0	250	12	595	381
Grp Sat Flow(s),veh/h/ln	1319	0	1597	951	0	0	1774	0	1823	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	6.0	7.1	0.0	0.0	4.8	0.0	4.7	0.4	16.3	11.0
Cycle Q Clear(g_c), s	6.8	0.0	6.0	13.2	0.0	0.0	4.8	0.0	4.7	0.4	16.3	11.0
Prop In Lane	1.00		0.94	0.66		0.11	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	516	0	486	398	0	0	194	0	848	22	685	582
V/C Ratio(X)	0.36	0.00	0.45	0.55	0.00	0.00	0.82	0.00	0.29	0.56	0.87	0.65
Avail Cap(c_a), veh/h	595	0	582	477	0	0	194	0	848	129	746	634
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	15.4	19.3	0.0	0.0	23.9	0.0	9.1	27.0	16.1	14.4
Incr Delay (d2), s/veh	0.4	0.0	0.6	1.2	0.0	0.0	22.8	0.0	0.2	20.4	10.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.8	3.2	0.0	0.0	3.6	0.0	2.3	0.3	10.2	5.1
LnGrp Delay(d),s/veh	16.1	0.0	16.0	20.4	0.0	0.0	46.7	0.0	9.3	47.4	26.2	16.6
LnGrp LOS	B		B	C			D		A	D	C	B
Approach Vol, veh/h		406			219			408			988	
Approach Delay, s/veh		16.1			20.4			23.8			22.8	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	29.5		20.7	10.0	24.2		20.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	24.0		20.0	6.0	22.0		20.0
Max Q Clear Time (g_c+I1), s	2.4	6.7		8.8	6.8	18.3		15.2
Green Ext Time (p_c), s	0.0	6.7		2.7	0.0	1.9		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	60	30	320	722	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	100	50	533	1203	50

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1861	1228	1253	0	-	0
Stage 1	1228	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	80	217	555	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	217	555	-	-	-
Mov Cap-2 Maneuver	70	-	-	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40.3	1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	555	-	70	217	-	-
HCM Lane V/C Ratio	0.09	-	0.238	0.461	-	-
HCM Control Delay (s)	12.1	0	71.8	35	-	-
HCM Lane LOS	B	A	F	E	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	2.2	-	-

Intersection	
Int Delay, s/veh	127.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	40	70	435	120	200	527
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	121	750	207	345	909

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2451	853	0	0	957	0
Stage 1	853	-	-	-	-	-
Stage 2	1598	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 34	359	-	-	719	-
Stage 1	418	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 18	359	-	-	719	-
Mov Cap-2 Maneuver	~ 18	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	95	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 1585.3	0	4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	46	719	-
HCM Lane V/C Ratio	-	-	4.123	0.48	-
HCM Control Delay (s)	-		$ 1585.3	14.5	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	21.3	2.6	-

Notes

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

Intersection	
Int Delay, s/veh	273

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	5	120	0	120	5	435	135	140	422	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	179	0	179	7	649	201	209	630	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1905	1917	634	1820	1820	750	637	0	0	851	0	0
Stage 1	1051	1051	-	765	765	-	-	-	-	-	-	-
Stage 2	854	866	-	1055	1055	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	52	67	479	~ 60	78	411	947	-	-	788	-	-
Stage 1	274	304	-	396	412	-	-	-	-	-	-	-
Stage 2	353	370	-	273	302	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	23	49	479	~ 47	57	411	947	-	-	788	-	-
Mov Cap-2 Maneuver	23	49	-	~ 47	57	-	-	-	-	-	-	-
Stage 1	272	223	-	393	409	-	-	-	-	-	-	-
Stage 2	198	367	-	197	222	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	$ 1570.8	0.1	2.8
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	947	-	-	479	84	788	-	-
HCM Lane V/C Ratio	0.008	-	-	0.016	4.264	0.265	-	-
HCM Control Delay (s)	8.8	-	-	12.8	$ 1570.8	11.2	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	37.8	1.1	-	-

Notes

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

Intersection	
Int Delay, s/veh	37.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	130	75	500	380	70	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	169	97	649	494	91	535

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1613	896	0	0	1143	0
Stage 1	896	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 115	339	-	-	611	-
Stage 1	399	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 98	339	-	-	611	-
Mov Cap-2 Maneuver	~ 98	-	-	-	-	-
Stage 1	399	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	285.4	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	98	339	611	-
HCM Lane V/C Ratio	-	-	1.723	0.287	0.149	-
HCM Control Delay (s)	-	-	$ 438.7	19.8	11.9	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	13.5	1.2	0.5	-

Notes

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

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	340	248	105	170	555	31	302	210
v/c Ratio	0.72	0.43	0.43	0.72	0.71	0.30	0.60	0.36
Control Delay	39.1	11.0	33.3	54.6	24.1	45.5	27.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	39.1	11.0	33.3	54.6	24.5	45.5	27.8	5.0
Queue Length 50th (ft)	133	19	36	71	182	13	117	0
Queue Length 95th (ft)	#293	71	82	#184	316	41	176	31
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	471	575	557	235	974	104	853	839
Starvation Cap Reductn	0	0	0	0	95	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.43	0.19	0.72	0.63	0.30	0.35	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	40	161	40	25	20	138	385	65	25	245	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	340	49	199	49	31	25	170	475	80	31	302	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	75	307	67	42	34	212	618	104	47	567	482
Arrive On Green	0.23	0.23	0.23	0.08	0.08	0.08	0.12	0.40	0.40	0.03	0.30	0.30
Sat Flow, veh/h	1774	322	1309	816	516	416	1774	1555	262	1774	1863	1583
Grp Volume(v), veh/h	340	0	248	105	0	0	170	0	555	31	302	210
Grp Sat Flow(s),veh/h/ln	1774	0	1632	1748	0	0	1774	0	1817	1774	1863	1583
Q Serve(g_s), s	11.2	0.0	8.4	3.6	0.0	0.0	5.7	0.0	16.3	1.1	8.3	6.5
Cycle Q Clear(g_c), s	11.2	0.0	8.4	3.6	0.0	0.0	5.7	0.0	16.3	1.1	8.3	6.5
Prop In Lane	1.00		0.80	0.47		0.24	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	382	143	0	0	212	0	722	47	567	482
V/C Ratio(X)	0.82	0.00	0.65	0.74	0.00	0.00	0.80	0.00	0.77	0.65	0.53	0.44
Avail Cap(c_a), veh/h	520	0	478	597	0	0	260	0	1064	115	939	799
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	21.3	27.6	0.0	0.0	26.3	0.0	16.1	29.6	17.8	17.2
Incr Delay (d2), s/veh	8.1	0.0	2.1	7.2	0.0	0.0	13.5	0.0	2.0	14.2	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	4.0	2.0	0.0	0.0	3.6	0.0	8.4	0.7	4.3	2.9
LnGrp Delay(d),s/veh	30.4	0.0	23.4	34.8	0.0	0.0	39.8	0.0	18.1	43.8	18.5	17.8
LnGrp LOS	C		C	C			D		B	D	B	B
Approach Vol, veh/h		588			105			725			543	
Approach Delay, s/veh		27.5			34.8			23.2			19.7	
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	5.6	28.4		18.4	11.4	22.7		9.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.1	18.3		13.2	7.7	10.3		5.6
Green Ext Time (p_c), s	0.0	6.1		1.2	0.1	6.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	9	19	650	1	12	345
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	23	802	1	15	426

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1259	803	0	0	804	0
Stage 1	803	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	188	383	-	-	820	-
Stage 1	441	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	383	-	-	820	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	283	820	-
HCM Lane V/C Ratio	-	-	0.122	0.018	-
HCM Control Delay (s)	-	-	19.5	9.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	20	80	606	349	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	33	133	1010	582	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1867	590	598	0	-	0
Stage 1	590	-	-	-	-	-
Stage 2	1277	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	80	508	979	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	55	508	979	-	-	-
Mov Cap-2 Maneuver	55	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	181	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.4	1.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	979	-	55	508	-	-
HCM Lane V/C Ratio	0.136	-	0.152	0.066	-	-
HCM Control Delay (s)	9.3	0	81.8	12.6	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.5	0.2	-	-

Intersection	
Int Delay, s/veh	48.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	80	120	536	50	35	439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	176	788	74	51	646

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1574	825	0	0	862	0
Stage 1	825	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	121	372	-	-	780	-
Stage 1	430	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 113	372	-	-	780	-
Mov Cap-2 Maneuver	~ 113	-	-	-	-	-
Stage 1	430	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 301.4	0	0.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	194	780	-
HCM Lane V/C Ratio	-	-	1.516	0.066	-
HCM Control Delay (s)	-	-	$ 301.4	9.9	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	18.5	0.2	-

Notes

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

Intersection	
Int Delay, s/veh	26

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	0	95	25	0	90	25	586	20	15	489	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	140	37	0	132	37	862	29	22	719	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1790	1739	730	1794	1735	876	741	0	0	891	0	0
Stage 1	774	774	-	950	950	-	-	-	-	-	-	-
Stage 2	1016	965	-	844	785	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	63	87	422	62	88	348	866	-	-	761	-	-
Stage 1	391	408	-	312	339	-	-	-	-	-	-	-
Stage 2	287	333	-	358	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	81	422	39	82	348	866	-	-	761	-	-
Mov Cap-2 Maneuver	37	81	-	39	82	-	-	-	-	-	-	-
Stage 1	374	396	-	299	325	-	-	-	-	-	-	-
Stage 2	170	319	-	233	392	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.3	253.5	0.4	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	866	-	-	212	128	761	-	-
HCM Lane V/C Ratio	0.042	-	-	0.728	1.321	0.029	-	-
HCM Control Delay (s)	9.3	-	-	57.3	253.5	9.9	-	-
HCM Lane LOS	A	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.8	10.9	0.1	-	-

Intersection	
Int Delay, s/veh	26.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	90	210	471	160	70	539
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	296	663	225	99	759

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1732	776	0	0	889	0
Stage 1	776	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 97	397	-	-	762	-
Stage 1	454	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 84	397	-	-	762	-
Mov Cap-2 Maneuver	~ 84	-	-	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	325	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	135.8	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	84	397	762	-
HCM Lane V/C Ratio	-	-	1.509	0.745	0.129	-
HCM Control Delay (s)	-	-	$ 367.9	36.3	10.4	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	10.1	6	0.4	-

Notes

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

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	432	240	111	151	563	37	241	210
v/c Ratio	0.93	0.48	0.45	0.65	0.75	0.36	0.46	0.35
Control Delay	60.7	22.0	35.0	50.7	26.7	49.4	24.5	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	60.7	22.0	35.0	50.7	27.0	49.4	24.5	5.0
Queue Length 50th (ft)	~231	64	44	72	231	18	90	0
Queue Length 95th (ft)	#405	130	87	#160	324	#48	141	31
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	465	504	552	232	961	103	844	832
Starvation Cap Reductn	0	0	0	0	83	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.48	0.20	0.65	0.64	0.36	0.29	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	350	70	125	40	30	20	122	381	75	30	195	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	432	86	154	49	37	25	151	470	93	37	241	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	469	158	284	66	50	34	189	583	115	52	575	489
Arrive On Green	0.26	0.26	0.26	0.09	0.09	0.09	0.11	0.39	0.39	0.03	0.31	0.31
Sat Flow, veh/h	1774	600	1074	774	585	395	1774	1511	299	1774	1863	1583
Grp Volume(v), veh/h	432	0	240	111	0	0	151	0	563	37	241	210
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1754	0	0	1774	0	1810	1774	1863	1583
Q Serve(g_s), s	16.1	0.0	8.4	4.2	0.0	0.0	5.7	0.0	18.9	1.4	7.0	7.2
Cycle Q Clear(g_c), s	16.1	0.0	8.4	4.2	0.0	0.0	5.7	0.0	18.9	1.4	7.0	7.2
Prop In Lane	1.00		0.64	0.44		0.23	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	469	0	442	150	0	0	189	0	698	52	575	489
V/C Ratio(X)	0.92	0.00	0.54	0.74	0.00	0.00	0.80	0.00	0.81	0.71	0.42	0.43
Avail Cap(c_a), veh/h	469	0	442	541	0	0	234	0	957	104	848	721
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	21.5	30.4	0.0	0.0	29.7	0.0	18.7	32.8	18.7	18.8
Incr Delay (d2), s/veh	23.6	0.0	1.4	7.0	0.0	0.0	14.3	0.0	3.7	15.9	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	4.0	2.3	0.0	0.0	3.5	0.0	10.1	0.9	3.6	3.2
LnGrp Delay(d),s/veh	48.0	0.0	22.9	37.4	0.0	0.0	44.0	0.0	22.3	48.6	19.2	19.4
LnGrp LOS	D		C	D			D		C	D	B	B
Approach Vol, veh/h		672			111			714			488	
Approach Delay, s/veh		39.0			37.4			26.9			21.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	30.3		22.0	11.3	25.0		9.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.4	20.9		18.1	7.7	9.2		6.2
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	6.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	18	33	715	1	11	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	41	883	1	14	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1163	883	0	0	884	0
Stage 1	883	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	345	-	-	765	-
Stage 1	404	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	210	345	-	-	765	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	404	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	765	-
HCM Lane V/C Ratio	-	-	0.224	0.018	-
HCM Control Delay (s)	-	-	21.5	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	10	15	706	218	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	872	269	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1181	272	275	0	-	0
Stage 1	272	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	210	767	1288	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	204	767	1288	-	-	-
Mov Cap-2 Maneuver	204	-	-	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	382	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1288	-	204	767	-	-
HCM Lane V/C Ratio	0.014	-	0.061	0.016	-	-
HCM Control Delay (s)	7.8	0	23.8	9.8	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	721	0	0	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1060	0	0	335

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1395	1060	0	0	1060	0
Stage 1	1060	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	156	272	-	-	657	-
Stage 1	333	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	156	272	-	-	657	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	725	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	657	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	0	0	721	0	0	228	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	1060	0	0	335	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1395	1395	335	1395	1395	1060	335	0	0	1060	0	0
Stage 1	335	335	-	1060	1060	-	-	-	-	-	-	-
Stage 2	1060	1060	-	335	335	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	119	141	707	119	141	272	1224	-	-	657	-	-
Stage 1	679	643	-	271	301	-	-	-	-	-	-	-
Stage 2	271	301	-	679	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	119	141	707	119	141	272	1224	-	-	657	-	-
Mov Cap-2 Maneuver	119	141	-	119	141	-	-	-	-	-	-	-
Stage 1	679	643	-	271	301	-	-	-	-	-	-	-
Stage 2	271	301	-	679	643	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1224	-	-	-	-	657	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	721	0	0	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1015	0	0	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1336	1015	0	0	1015	0
Stage 1	1015	-	-	-	-	-
Stage 2	321	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	169	289	-	-	683	-
Stage 1	350	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	169	289	-	-	683	-
Mov Cap-2 Maneuver	169	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	735	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	683	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	432	259	111	151	563	37	244	210
v/c Ratio	0.93	0.51	0.45	0.65	0.75	0.36	0.47	0.35
Control Delay	60.8	22.1	35.0	50.7	26.7	49.4	24.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	60.8	22.1	35.0	50.7	27.0	49.4	24.6	5.0
Queue Length 50th (ft)	~231	68	44	72	231	18	91	0
Queue Length 95th (ft)	#405	137	87	#160	324	#48	143	31
Internal Link Dist (ft)		824	534		328		282	
Turn Bay Length (ft)				125		120		
Base Capacity (vph)	465	510	552	232	961	103	843	832
Starvation Cap Reductn	0	0	0	0	83	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.51	0.20	0.65	0.64	0.36	0.29	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	350	70	140	40	30	20	122	381	75	30	198	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	432	86	173	49	37	25	151	470	93	37	244	210
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	469	146	294	66	50	34	189	583	115	52	575	489
Arrive On Green	0.26	0.26	0.26	0.09	0.09	0.09	0.11	0.39	0.39	0.03	0.31	0.31
Sat Flow, veh/h	1774	553	1113	774	585	395	1774	1511	299	1774	1863	1583
Grp Volume(v), veh/h	432	0	259	111	0	0	151	0	563	37	244	210
Grp Sat Flow(s),veh/h/ln	1774	0	1666	1754	0	0	1774	0	1810	1774	1863	1583
Q Serve(g_s), s	16.1	0.0	9.2	4.2	0.0	0.0	5.7	0.0	18.9	1.4	7.1	7.2
Cycle Q Clear(g_c), s	16.1	0.0	9.2	4.2	0.0	0.0	5.7	0.0	18.9	1.4	7.1	7.2
Prop In Lane	1.00		0.67	0.44		0.23	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	469	0	440	150	0	0	189	0	698	52	575	489
V/C Ratio(X)	0.92	0.00	0.59	0.74	0.00	0.00	0.80	0.00	0.81	0.71	0.42	0.43
Avail Cap(c_a), veh/h	469	0	440	541	0	0	234	0	956	104	848	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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	21.8	30.4	0.0	0.0	29.7	0.0	18.6	32.8	18.7	18.8
Incr Delay (d2), s/veh	23.7	0.0	2.0	7.0	0.0	0.0	14.3	0.0	3.7	15.9	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	4.5	2.3	0.0	0.0	3.5	0.0	10.1	0.9	3.7	3.2
LnGrp Delay(d),s/veh	48.1	0.0	23.9	37.4	0.0	0.0	44.1	0.0	22.3	48.6	19.2	19.4
LnGrp LOS	D		C	D			D		C	D	B	B
Approach Vol, veh/h		691			111			714			491	
Approach Delay, s/veh		39.0			37.4			26.9			21.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	30.3		22.0	11.3	25.0		9.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		18.0	9.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	3.4	20.9		18.1	7.7	9.2		6.2
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	6.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	17	34	715	41	51	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	42	883	51	63	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1287	908	0	0	933	0
Stage 1	908	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	181	334	-	-	734	-
Stage 1	393	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	163	334	-	-	734	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	393	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.5	0	2.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	247	734	-
HCM Lane V/C Ratio	-	-	0.255	0.086	-
HCM Control Delay (s)	-	-	24.5	10.4	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	1	0.3	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	10	15	746	217	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	45	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	19	921	268	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1229	271	274	0	-	0
Stage 1	271	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	196	768	1289	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	768	1289	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	362	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1289	-	190	768	-	-
HCM Lane V/C Ratio	0.014	-	0.065	0.016	-	-
HCM Control Delay (s)	7.8	0	25.3	9.8	-	-
HCM Lane LOS	A	A	D	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	761	0	0	227
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	45	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1119	0	0	334

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1453	1119	0	0	1119	0
Stage 1	1119	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	144	252	-	-	624	-
Stage 1	312	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	144	252	-	-	624	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	312	-	-	-	-	-
Stage 2	725	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	624	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	0	0	761	0	0	227	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	70	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	1119	0	0	334	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1453	1453	334	1453	1453	1119	334	0	0	1119	0	0
Stage 1	334	334	-	1119	1119	-	-	-	-	-	-	-
Stage 2	1119	1119	-	334	334	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	130	708	108	130	252	1225	-	-	624	-	-
Stage 1	680	643	-	251	282	-	-	-	-	-	-	-
Stage 2	251	282	-	680	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	108	130	708	108	130	252	1225	-	-	624	-	-
Mov Cap-2 Maneuver	108	130	-	108	130	-	-	-	-	-	-	-
Stage 1	680	643	-	251	282	-	-	-	-	-	-	-
Stage 2	251	282	-	680	643	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1225	-	-	-	-	624	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	761	0	0	227
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1072	0	0	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1392	1072	0	0	1072	0
Stage 1	1072	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	156	268	-	-	650	-
Stage 1	329	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	156	268	-	-	650	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	329	-	-	-	-	-
Stage 2	736	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	650	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	115	195	155	160	200	165	355	95	70	470	170
Future Volume (veh/h)	175	115	195	155	160	200	165	355	95	70	470	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	199	131	222	207	213	267	199	428	114	83	560	202
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.83	0.83	0.83	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	703	597	158	251	315	177	486	413	169	654	235
Arrive On Green	0.13	0.38	0.38	0.09	0.33	0.33	0.10	0.26	0.26	0.10	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	753	944	1774	1863	1583	1774	2552	918
Grp Volume(v), veh/h	199	131	222	207	0	480	199	428	114	83	388	374
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1696	1774	1863	1583	1774	1770	1701
Q Serve(g_s), s	9.9	4.2	6.4	8.0	0.0	23.7	9.0	19.9	3.9	4.0	18.8	18.9
Cycle Q Clear(g_c), s	9.9	4.2	6.4	8.0	0.0	23.7	9.0	19.9	3.9	4.0	18.8	18.9
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	236	703	597	158	0	565	177	486	413	169	453	436
V/C Ratio(X)	0.84	0.19	0.37	1.31	0.00	0.85	1.12	0.88	0.28	0.49	0.86	0.86
Avail Cap(c_a), veh/h	236	703	597	158	0	565	177	580	493	169	511	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	18.8	9.9	41.0	0.0	27.9	40.5	31.9	15.3	38.6	31.9	31.9
Incr Delay (d2), s/veh	23.5	0.6	1.8	178.5	0.0	14.7	104.0	13.1	0.4	2.2	12.3	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	2.3	3.1	11.7	0.0	13.4	9.5	12.0	1.7	2.1	10.7	10.4
LnGrp Delay(d),s/veh	61.7	19.4	11.6	219.5	0.0	42.6	144.5	45.0	15.7	40.8	44.2	45.0
LnGrp LOS	E	B	B	F		D	F	D	B	D	D	D
Approach Vol, veh/h		552			687			741			845	
Approach Delay, s/veh		31.5			95.9			67.2			44.2	
Approach LOS		C			F			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	12.6	27.5	12.0	37.9	13.0	27.1	15.9	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0	8.0	31.0	9.0	26.0	9.0	30.0
Max Q Clear Time (g_c+I1), s	6.0	21.9	10.0	8.4	11.0	20.9	11.9	25.7
Green Ext Time (p_c), s	0.0	1.6	0.0	1.5	0.0	2.2	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	60.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	102.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	65	10	65	205	640	30	5	845	20
Future Vol, veh/h	0	0	10	65	10	65	205	640	30	5	845	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	80	80	80	94	94	94	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	81	13	81	218	681	32	5	929	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2130	2099	940	2089	2094	697	951	0	0	713	0	0
Stage 1	950	950	-	1133	1133	-	-	-	-	-	-	-
Stage 2	1180	1149	-	956	961	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	36	52	320	~ 39	52	441	722	-	-	887	-	-
Stage 1	312	339	-	247	278	-	-	-	-	-	-	-
Stage 2	232	273	-	310	335	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	17	36	320	~ 29	36	441	722	-	-	887	-	-
Mov Cap-2 Maneuver	17	36	-	~ 29	36	-	-	-	-	-	-	-
Stage 1	218	337	-	172	194	-	-	-	-	-	-	-
Stage 2	124	191	-	297	333	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	16.7	$ 1198.4	2.8	0.1
HCM LOS	C	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	722	-	-	53	320	887	-	-
HCM Lane V/C Ratio	0.302	-	-	3.302	0.036	0.006	-	-
HCM Control Delay (s)	12.1	-	$	1198.4	16.7	9.1	-	-
HCM Lane LOS	B	-	-	F	C	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	18.8	0.1	0	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	5	80	15	150	10	695	5	180	25	420	565	5
Future Volume (veh/h)	5	80	15	150	10	695	5	180	25	420	565	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	8	121	23	158	11	732	6	202	28	457	614	5
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.66	0.66	0.66	0.95	0.95	0.95	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	11	161	31	412	29	785	11	270	230	440	713	6
Arrive On Green	0.11	0.11	0.11	0.25	0.25	0.25	0.01	0.14	0.14	0.25	0.39	0.39
Sat Flow, veh/h	95	1441	274	1664	116	1583	1774	1863	1583	1774	1845	15
Grp Volume(v), veh/h	152	0	0	169	0	732	6	202	28	457	0	619
Grp Sat Flow(s),veh/h/ln	1810	0	0	1780	0	1583	1774	1863	1583	1774	0	1860
Q Serve(g_s), s	5.3	0.0	0.0	5.1	0.0	16.0	0.2	6.7	1.0	16.0	0.0	19.8
Cycle Q Clear(g_c), s	5.3	0.0	0.0	5.1	0.0	16.0	0.2	6.7	1.0	16.0	0.0	19.8
Prop In Lane	0.05		0.15	0.93		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	202	0	0	441	0	785	11	270	230	440	0	719
V/C Ratio(X)	0.75	0.00	0.00	0.38	0.00	0.93	0.54	0.75	0.12	1.04	0.00	0.86
Avail Cap(c_a), veh/h	448	0	0	441	0	785	110	462	392	440	0	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	0.0	20.2	0.0	15.3	32.0	26.5	24.0	24.3	0.0	18.2
Incr Delay (d2), s/veh	5.6	0.0	0.0	0.5	0.0	17.9	34.3	4.1	0.2	53.6	0.0	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	2.6	0.0	16.0	0.2	3.7	0.5	14.2	0.0	11.9
LnGrp Delay(d),s/veh	33.4	0.0	0.0	20.7	0.0	33.2	66.3	30.6	24.3	77.9	0.0	26.9
LnGrp LOS	C			C		C	E	C	C	F		C
Approach Vol, veh/h		152			901			236			1076	
Approach Delay, s/veh		33.4			30.8			30.8			48.5	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	20.0	13.4		11.2	4.4	29.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		18.0	18.0	8.7		7.3	2.2	21.8
Green Ext Time (p_c), s		0.0	0.0	0.6		0.5	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	105	245	205	110	100	260	495	230	105	460	195
Future Volume (veh/h)	120	105	245	205	110	100	260	495	230	105	460	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	143	125	292	250	134	122	268	510	237	112	489	207
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	349	296	195	176	160	318	631	537	200	661	278
Arrive On Green	0.10	0.19	0.19	0.11	0.20	0.20	0.18	0.34	0.34	0.11	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	899	819	1774	1863	1583	1774	2429	1023
Grp Volume(v), veh/h	143	125	292	250	0	256	268	510	237	112	355	341
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1718	1774	1863	1583	1774	1770	1682
Q Serve(g_s), s	5.0	3.7	7.3	7.0	0.0	9.0	9.3	15.9	4.8	3.8	11.6	11.8
Cycle Q Clear(g_c), s	5.0	3.7	7.3	7.0	0.0	9.0	9.3	15.9	4.8	3.8	11.6	11.8
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	180	349	296	195	0	336	318	631	537	200	481	458
V/C Ratio(X)	0.79	0.36	0.99	1.28	0.00	0.76	0.84	0.81	0.44	0.56	0.74	0.74
Avail Cap(c_a), veh/h	195	937	796	195	0	864	390	966	821	200	723	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	22.5	10.1	28.3	0.0	24.2	25.2	19.1	6.8	26.8	21.1	21.1
Incr Delay (d2), s/veh	18.7	0.6	21.0	159.8	0.0	3.6	13.0	3.0	0.6	3.5	2.2	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	3.4	2.0	5.9	12.0	0.0	4.5	5.7	8.6	2.8	2.1	5.9	5.7
LnGrp Delay(d),s/veh	46.7	23.2	31.1	188.1	0.0	27.7	38.3	22.2	7.3	30.3	23.3	23.6
LnGrp LOS	D	C	C	F		C	D	C	A	C	C	C
Approach Vol, veh/h		560			506			1015			808	
Approach Delay, s/veh		33.3			107.0			23.0			24.4	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	25.6	11.0	15.9	15.4	21.3	10.5	16.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	5.8	17.9	9.0	9.3	11.3	13.8	7.0	11.0
Green Ext Time (p_c), s	0.0	3.7	0.0	1.7	0.2	3.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	115.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	115	45	5	75	155	815	75	10	895	10
Future Vol, veh/h	0	0	115	45	5	75	155	815	75	10	895	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	137	55	6	91	160	840	77	11	952	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2227	2217	958	2247	2184	879	963	0	0	917	0	0
Stage 1	980	980	-	1199	1199	-	-	-	-	-	-	-
Stage 2	1247	1237	-	1048	985	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	31	44	312	~ 30	46	347	715	-	-	744	-	-
Stage 1	301	328	-	226	259	-	-	-	-	-	-	-
Stage 2	213	248	-	275	326	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	16	34	312	~ 14	35	347	715	-	-	744	-	-
Mov Cap-2 Maneuver	16	34	-	~ 14	35	-	-	-	-	-	-	-
Stage 1	234	323	-	175	201	-	-	-	-	-	-	-
Stage 2	118	192	-	152	321	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	25.3	$ 1741.2	1.7	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	715	-	-	35	312	744	-	-
HCM Lane V/C Ratio	0.223	-	-	4.355	0.439	0.014	-	-
HCM Control Delay (s)	11.5	-	-	$ 1741.2	25.3	9.9	-	-
HCM Lane LOS	B	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.9	-	-	17.9	2.1	0	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	70	20	140	15	625	10	445	100	535	510	10
Future Volume (veh/h)	10	70	20	140	15	625	10	445	100	535	510	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	13	91	26	152	16	679	11	494	111	615	586	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	112	32	226	24	778	18	520	442	622	1129	21
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.01	0.28	0.28	0.35	0.62	0.62
Sat Flow, veh/h	179	1253	358	1612	170	1583	1774	1863	1583	1774	1822	34
Grp Volume(v), veh/h	130	0	0	168	0	679	11	494	111	615	0	597
Grp Sat Flow(s),veh/h/ln	1791	0	0	1782	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	8.1	0.0	0.0	10.2	0.0	16.0	0.7	29.7	6.2	39.3	0.0	20.6
Cycle Q Clear(g_c), s	8.1	0.0	0.0	10.2	0.0	16.0	0.7	29.7	6.2	39.3	0.0	20.6
Prop In Lane	0.10		0.20	0.90		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	161	0	0	250	0	778	18	520	442	622	0	1150
V/C Ratio(X)	0.81	0.00	0.00	0.67	0.00	0.87	0.60	0.95	0.25	0.99	0.00	0.52
Avail Cap(c_a), veh/h	251	0	0	250	0	778	62	523	444	622	0	1150
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.9	0.0	0.0	46.5	0.0	25.9	56.2	40.3	31.9	36.8	0.0	12.2
Incr Delay (d2), s/veh	10.3	0.0	0.0	6.8	0.0	10.8	27.7	27.4	0.3	33.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	5.5	0.0	21.2	0.5	19.2	2.7	24.8	0.0	10.6
LnGrp Delay(d),s/veh	61.3	0.0	0.0	53.4	0.0	36.6	83.9	67.7	32.2	69.8	0.0	12.6
LnGrp LOS	E			D		D	F	E	C	E		B
Approach Vol, veh/h		130			847			616			1212	
Approach Delay, s/veh		61.3			39.9			61.6			41.6	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	44.0	35.8		14.2	5.2	74.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	40.0	32.0		16.0	4.0	68.0
Max Q Clear Time (g_c+I1), s		18.0	41.3	31.7		10.1	2.7	22.6
Green Ext Time (p_c), s		0.0	0.0	0.1		0.3	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	46.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	270	260	130	120	75	280	440	330	115	280	105
Future Volume (veh/h)	115	270	260	130	120	75	280	440	330	115	280	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	137	321	310	159	146	91	289	454	340	122	298	112
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	696	592	191	351	219	343	515	438	131	398	147
Arrive On Green	0.15	0.37	0.37	0.11	0.33	0.33	0.19	0.28	0.28	0.07	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1774	1075	670	1774	1863	1583	1774	2535	933
Grp Volume(v), veh/h	137	321	310	159	0	237	289	454	340	122	206	204
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1745	1774	1863	1583	1774	1770	1698
Q Serve(g_s), s	6.7	12.4	8.1	8.3	0.0	10.1	14.9	22.1	13.8	6.5	10.6	10.9
Cycle Q Clear(g_c), s	6.7	12.4	8.1	8.3	0.0	10.1	14.9	22.1	13.8	6.5	10.6	10.9
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	275	696	592	191	0	569	343	515	438	131	278	267
V/C Ratio(X)	0.50	0.46	0.52	0.83	0.00	0.42	0.84	0.88	0.78	0.93	0.74	0.76
Avail Cap(c_a), veh/h	275	696	592	205	0	569	343	588	500	131	484	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	22.5	7.2	41.6	0.0	24.9	36.9	32.9	17.1	43.8	38.2	38.4
Incr Delay (d2), s/veh	1.4	2.2	3.3	23.3	0.0	2.2	17.1	13.3	6.7	58.5	3.9	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.8	4.0	5.3	0.0	5.2	8.9	13.3	6.8	5.3	5.5	5.4
LnGrp Delay(d),s/veh	38.2	24.7	10.5	64.8	0.0	27.2	54.1	46.2	23.8	102.3	42.1	42.9
LnGrp LOS	D	C	B	E		C	D	D	C	F	D	D
Approach Vol, veh/h		768			396			1083			532	
Approach Delay, s/veh		21.4			42.3			41.2			56.2	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	30.3	14.2	39.5	22.4	18.9	18.7	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	11.0	31.0	11.0	26.0	11.0	31.0
Max Q Clear Time (g_c+I1), s	8.5	24.1	10.3	14.4	16.9	12.9	8.7	12.1
Green Ext Time (p_c), s	0.0	2.1	0.0	2.8	0.0	2.0	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	185.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	170	40	5	100	150	980	50	10	815	5
Future Vol, veh/h	0	0	170	40	5	100	150	980	50	10	815	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	202	49	6	122	155	1010	52	11	867	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2302	2264	870	2339	2240	1036	872	0	0	1062	0	0
Stage 1	892	892	-	1346	1346	-	-	-	-	-	-	-
Stage 2	1410	1372	-	993	894	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	27	41	351	~ 26	42	281	773	-	-	656	-	-
Stage 1	337	360	-	187	220	-	-	-	-	-	-	-
Stage 2	172	214	-	296	360	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	11	32	351	~ 9	33	281	773	-	-	656	-	-
Mov Cap-2 Maneuver	11	32	-	~ 9	33	-	-	-	-	-	-	-
Stage 1	269	354	-	149	176	-	-	-	-	-	-	-
Stage 2	75	171	-	123	354	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	28.3	$ 2563	1.4	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	773	-	-	29	351	656	-	-
HCM Lane V/C Ratio	0.2	-	-	6.098	0.577	0.016	-	-
HCM Control Delay (s)	10.8	-	-	$ 2563	28.3	10.6	-	-
HCM Lane LOS	B	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0.7	-	-	21.6	3.4	0	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	30	15	185	15	665	20	555	135	445	495	10
Future Volume (veh/h)	15	30	15	185	15	665	20	555	135	445	495	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	39	19	201	16	723	22	617	150	511	569	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	51	25	243	19	713	32	644	548	538	1149	22
Arrive On Green	0.06	0.06	0.06	0.15	0.15	0.15	0.02	0.35	0.35	0.30	0.63	0.63
Sat Flow, veh/h	435	894	435	1649	131	1583	1774	1863	1583	1774	1821	35
Grp Volume(v), veh/h	77	0	0	217	0	723	22	617	150	511	0	580
Grp Sat Flow(s),veh/h/ln	1764	0	0	1780	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	4.7	0.0	0.0	12.9	0.0	16.0	1.3	35.2	7.4	30.7	0.0	18.2
Cycle Q Clear(g_c), s	4.7	0.0	0.0	12.9	0.0	16.0	1.3	35.2	7.4	30.7	0.0	18.2
Prop In Lane	0.25		0.25	0.93		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	100	0	0	262	0	713	32	644	548	538	0	1171
V/C Ratio(X)	0.77	0.00	0.00	0.83	0.00	1.01	0.69	0.96	0.27	0.95	0.00	0.50
Avail Cap(c_a), veh/h	260	0	0	262	0	713	82	651	553	555	0	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	0.0	45.1	0.0	29.9	53.1	34.8	25.7	37.1	0.0	10.8
Incr Delay (d2), s/veh	11.5	0.0	0.0	19.4	0.0	37.4	23.8	25.1	0.3	26.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	7.7	0.0	28.7	0.9	22.5	3.3	18.9	0.0	9.5
LnGrp Delay(d),s/veh	62.0	0.0	0.0	64.5	0.0	67.3	76.9	59.9	26.0	63.1	0.0	11.1
LnGrp LOS	E			E		F	E	E	C	E		B
Approach Vol, veh/h		77			940			789			1091	
Approach Delay, s/veh		62.0			66.6			53.9			35.5	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	37.0	41.6		10.2	5.9	72.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	34.0	38.0		16.0	5.0	67.0
Max Q Clear Time (g_c+I1), s		18.0	32.7	37.2		6.7	3.3	20.2
Green Ext Time (p_c), s		0.0	0.3	0.4		0.2	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	115	195	155	160	201	165	378	95	70	472	170
Future Volume (veh/h)	175	115	195	155	160	201	165	378	95	70	472	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	199	131	222	207	213	268	199	455	114	83	562	202
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.83	0.83	0.83	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	702	597	158	250	315	177	509	432	148	655	235
Arrive On Green	0.13	0.38	0.38	0.09	0.33	0.33	0.10	0.27	0.27	0.08	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	751	945	1774	1863	1583	1774	2555	916
Grp Volume(v), veh/h	199	131	222	207	0	481	199	455	114	83	389	375
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1696	1774	1863	1583	1774	1770	1701
Q Serve(g_s), s	9.9	4.2	6.4	8.0	0.0	23.8	9.0	21.1	3.8	4.0	18.8	18.9
Cycle Q Clear(g_c), s	9.9	4.2	6.4	8.0	0.0	23.8	9.0	21.1	3.8	4.0	18.8	18.9
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	235	702	597	158	0	565	177	509	432	148	454	436
V/C Ratio(X)	0.85	0.19	0.37	1.31	0.00	0.85	1.12	0.89	0.26	0.56	0.86	0.86
Avail Cap(c_a), veh/h	235	702	597	158	0	565	177	580	493	148	511	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	18.8	9.9	41.0	0.0	27.9	40.5	31.5	14.6	39.7	31.9	31.9
Incr Delay (d2), s/veh	24.0	0.6	1.8	178.5	0.0	14.9	104.0	15.1	0.3	4.7	12.4	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	2.3	3.1	11.7	0.0	13.4	9.5	13.0	1.7	2.2	10.7	10.5
LnGrp Delay(d),s/veh	62.2	19.4	11.6	219.5	0.0	42.8	144.5	46.5	14.9	44.4	44.3	45.1
LnGrp LOS	E	B	B	F		D	F	D	B	D	D	D
Approach Vol, veh/h		552			688			768			847	
Approach Delay, s/veh		31.7			95.9			67.2			44.6	
Approach LOS		C			F			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	11.5	28.6	12.0	37.9	13.0	27.1	15.9	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	28.0	8.0	31.0	9.0	26.0	9.0	30.0
Max Q Clear Time (g_c+I1), s	6.0	23.1	10.0	8.4	11.0	20.9	11.9	25.8
Green Ext Time (p_c), s	0.0	1.4	0.0	1.5	0.0	2.2	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	60.6
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	112.2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	65	10	65	205	663	30	5	847	20
Future Vol, veh/h	0	0	10	65	10	65	205	663	30	5	847	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	80	80	80	94	94	94	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	81	13	81	218	705	32	5	931	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2156	2125	942	2115	2120	721	953	0	0	737	0	0
Stage 1	952	952	-	1157	1157	-	-	-	-	-	-	-
Stage 2	1204	1173	-	958	963	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	35	50	319	~ 37	50	427	721	-	-	869	-	-
Stage 1	312	338	-	239	271	-	-	-	-	-	-	-
Stage 2	225	266	-	309	334	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	16	35	319	~ 27	35	427	721	-	-	869	-	-
Mov Cap-2 Maneuver	16	35	-	~ 27	35	-	-	-	-	-	-	-
Stage 1	218	336	-	167	189	-	-	-	-	-	-	-
Stage 2	119	186	-	296	332	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	16.7	$ 1330	2.8	0.1
HCM LOS	C	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	721	-	-	49	319	869	-	-
HCM Lane V/C Ratio	0.302	-	-	3.571	0.036	0.006	-	-
HCM Control Delay (s)	12.1	-	-	$ 1330	16.7	9.2	-	-
HCM Lane LOS	B	-	-	F	C	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	19.2	0.1	0	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	5	80	15	150	10	712	5	186	25	421	565	5
Future Volume (veh/h)	5	80	15	150	10	712	5	186	25	421	565	5
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	8	121	23	158	11	749	6	209	28	458	614	5
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.66	0.66	0.66	0.95	0.95	0.95	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	11	161	31	410	29	781	11	277	235	438	717	6
Arrive On Green	0.11	0.11	0.11	0.25	0.25	0.25	0.01	0.15	0.15	0.25	0.39	0.39
Sat Flow, veh/h	95	1441	274	1664	116	1583	1774	1863	1583	1774	1845	15
Grp Volume(v), veh/h	152	0	0	169	0	749	6	209	28	458	0	619
Grp Sat Flow(s),veh/h/ln	1810	0	0	1780	0	1583	1774	1863	1583	1774	0	1860
Q Serve(g_s), s	5.3	0.0	0.0	5.1	0.0	16.0	0.2	7.0	1.0	16.0	0.0	19.8
Cycle Q Clear(g_c), s	5.3	0.0	0.0	5.1	0.0	16.0	0.2	7.0	1.0	16.0	0.0	19.8
Prop In Lane	0.05		0.15	0.93		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	202	0	0	439	0	781	11	277	235	438	0	723
V/C Ratio(X)	0.75	0.00	0.00	0.39	0.00	0.96	0.54	0.76	0.12	1.05	0.00	0.86
Avail Cap(c_a), veh/h	446	0	0	439	0	781	109	459	390	438	0	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	0.0	20.3	0.0	15.8	32.1	26.5	23.9	24.4	0.0	18.2
Incr Delay (d2), s/veh	5.6	0.0	0.0	0.6	0.0	22.7	34.3	4.2	0.2	55.8	0.0	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	2.6	0.0	17.6	0.2	3.9	0.5	14.4	0.0	11.8
LnGrp Delay(d),s/veh	33.5	0.0	0.0	20.9	0.0	38.5	66.5	30.7	24.2	80.2	0.0	26.5
LnGrp LOS	C			C		D	E	C	C	F		C
Approach Vol, veh/h		152			918			243			1077	
Approach Delay, s/veh		33.5			35.2			30.8			49.4	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	20.0	13.6		11.2	4.4	29.2
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0		16.0	4.0	28.0
Max Q Clear Time (g_c+I1), s		18.0	18.0	9.0		7.3	2.2	21.8
Green Ext Time (p_c), s		0.0	0.0	0.7		0.5	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	105	245	205	110	100	260	496	230	106	469	195
Future Volume (veh/h)	120	105	245	205	110	100	260	496	230	106	469	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	143	125	292	250	134	122	268	511	237	113	499	207
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	349	297	194	176	160	318	631	537	203	671	277
Arrive On Green	0.10	0.19	0.19	0.11	0.20	0.20	0.18	0.34	0.34	0.11	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	899	819	1774	1863	1583	1774	2445	1009
Grp Volume(v), veh/h	143	125	292	250	0	256	268	511	237	113	360	346
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1718	1774	1863	1583	1774	1770	1685
Q Serve(g_s), s	5.0	3.7	7.4	7.0	0.0	9.0	9.4	16.0	4.8	3.9	11.9	12.0
Cycle Q Clear(g_c), s	5.0	3.7	7.4	7.0	0.0	9.0	9.4	16.0	4.8	3.9	11.9	12.0
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	180	349	297	194	0	336	318	631	537	203	485	462
V/C Ratio(X)	0.80	0.36	0.98	1.29	0.00	0.76	0.84	0.81	0.44	0.56	0.74	0.75
Avail Cap(c_a), veh/h	194	931	791	194	0	858	388	960	816	203	718	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	22.7	10.2	28.5	0.0	24.4	25.4	19.3	6.9	26.8	21.2	21.2
Incr Delay (d2), s/veh	19.0	0.6	20.6	163.3	0.0	3.6	13.3	3.1	0.6	3.3	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.0	5.8	12.2	0.0	4.6	5.7	8.8	2.8	2.1	6.1	5.9
LnGrp Delay(d),s/veh	47.1	23.3	30.8	191.9	0.0	28.0	38.7	22.4	7.4	30.1	23.5	23.8
LnGrp LOS	D	C	C	F		C	D	C	A	C	C	C
Approach Vol, veh/h		560			506			1016			819	
Approach Delay, s/veh		33.3			108.9			23.2			24.5	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	25.7	11.0	16.0	15.5	21.6	10.5	16.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	33.0	7.0	32.0	14.0	26.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	5.9	18.0	9.0	9.4	11.4	14.0	7.0	11.0
Green Ext Time (p_c), s	0.0	3.7	0.0	1.7	0.2	3.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	123.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	115	45	5	75	155	816	75	10	904	10
Future Vol, veh/h	0	0	115	45	5	75	155	816	75	10	904	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	137	55	6	91	160	841	77	11	962	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2238	2228	968	2258	2195	880	973	0	0	918	0	0
Stage 1	990	990	-	1200	1200	-	-	-	-	-	-	-
Stage 2	1248	1238	-	1058	995	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	30	43	308	~ 29	45	346	709	-	-	743	-	-
Stage 1	297	324	-	226	258	-	-	-	-	-	-	-
Stage 2	212	248	-	272	323	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	16	33	308	~ 13	34	346	709	-	-	743	-	-
Mov Cap-2 Maneuver	16	33	-	~ 13	34	-	-	-	-	-	-	-
Stage 1	230	319	-	175	200	-	-	-	-	-	-	-
Stage 2	117	192	-	149	318	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	25.7	$ 1871.8	1.7	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	709	-	-	33	308	743	-	-
HCM Lane V/C Ratio	0.225	-	-	4.619	0.444	0.014	-	-
HCM Control Delay (s)	11.5	-	-	$ 1871.8	25.7	9.9	-	-
HCM Lane LOS	B	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.9	-	-	18.1	2.2	0	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	70	20	140	15	626	10	445	100	541	512	10
Future Volume (veh/h)	10	70	20	140	15	626	10	445	100	541	512	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	13	91	26	152	16	680	11	494	111	622	589	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	112	32	226	24	790	18	505	430	637	1130	21
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.01	0.27	0.27	0.36	0.62	0.62
Sat Flow, veh/h	179	1253	358	1612	170	1583	1774	1863	1583	1774	1823	34
Grp Volume(v), veh/h	130	0	0	168	0	680	11	494	111	622	0	600
Grp Sat Flow(s),veh/h/ln	1791	0	0	1782	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	8.1	0.0	0.0	10.2	0.0	16.0	0.7	30.0	6.3	39.5	0.0	20.7
Cycle Q Clear(g_c), s	8.1	0.0	0.0	10.2	0.0	16.0	0.7	30.0	6.3	39.5	0.0	20.7
Prop In Lane	0.10		0.20	0.90		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	161	0	0	250	0	790	18	505	430	637	0	1151
V/C Ratio(X)	0.81	0.00	0.00	0.67	0.00	0.86	0.60	0.98	0.26	0.98	0.00	0.52
Avail Cap(c_a), veh/h	251	0	0	250	0	790	62	505	430	637	0	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	0.0	46.6	0.0	25.1	56.3	41.3	32.6	36.2	0.0	12.2
Incr Delay (d2), s/veh	10.4	0.0	0.0	6.9	0.0	9.6	27.7	34.1	0.3	29.8	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	5.5	0.0	20.8	0.5	20.3	2.8	24.6	0.0	10.6
LnGrp Delay(d),s/veh	61.5	0.0	0.0	53.6	0.0	34.7	84.0	75.4	32.9	66.0	0.0	12.6
LnGrp LOS	E			D		C	F	E	C	E		B
Approach Vol, veh/h		130			848			616			1222	
Approach Delay, s/veh		61.5			38.4			67.9			39.8	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	45.0	35.0		14.2	5.2	74.8
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	41.0	31.0		16.0	4.0	68.0
Max Q Clear Time (g_c+I1), s		18.0	41.5	32.0		10.1	2.7	22.7
Green Ext Time (p_c), s		0.0	0.0	0.0		0.3	0.0	4.7

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)	115	270	260	130	120	75	280	441	330	116	297	105
Future Volume (veh/h)	115	270	260	130	120	75	280	441	330	116	297	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	137	321	310	159	146	91	289	455	340	123	316	112
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	695	591	191	351	219	334	516	439	131	418	146
Arrive On Green	0.15	0.37	0.37	0.11	0.33	0.33	0.19	0.28	0.28	0.07	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1774	1075	670	1774	1863	1583	1774	2577	897
Grp Volume(v), veh/h	137	321	310	159	0	237	289	455	340	123	215	213
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1745	1774	1863	1583	1774	1770	1704
Q Serve(g_s), s	6.7	12.4	8.2	8.3	0.0	10.1	15.0	22.2	13.8	6.6	11.0	11.4
Cycle Q Clear(g_c), s	6.7	12.4	8.2	8.3	0.0	10.1	15.0	22.2	13.8	6.6	11.0	11.4
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	274	695	591	191	0	569	334	516	439	131	287	277
V/C Ratio(X)	0.50	0.46	0.52	0.83	0.00	0.42	0.86	0.88	0.78	0.94	0.75	0.77
Avail Cap(c_a), veh/h	274	695	591	205	0	569	334	588	500	131	484	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	22.5	7.4	41.6	0.0	24.9	37.4	32.8	17.1	43.8	37.9	38.1
Incr Delay (d2), s/veh	1.4	2.2	3.3	23.3	0.0	2.2	20.3	13.4	6.6	60.7	3.9	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.8	4.0	5.3	0.0	5.2	9.3	13.3	6.8	5.4	5.7	5.7
LnGrp Delay(d),s/veh	38.2	24.7	10.7	64.8	0.0	27.2	57.7	46.2	23.7	104.4	41.8	42.6
LnGrp LOS	D	C	B	E		C	E	D	C	F	D	D
Approach Vol, veh/h		768			396			1084			551	
Approach Delay, s/veh		21.5			42.3			42.2			56.1	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	30.3	14.2	39.5	21.9	19.4	18.7	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	11.0	31.0	11.0	26.0	11.0	31.0
Max Q Clear Time (g_c+I1), s	8.6	24.2	10.3	14.4	17.0	13.4	8.7	12.1
Green Ext Time (p_c), s	0.0	2.1	0.0	2.8	0.0	2.1	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	208.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	170	40	5	100	150	981	50	10	837	5
Future Vol, veh/h	0	0	170	40	5	100	150	981	50	10	837	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	202	49	6	122	155	1011	52	11	890	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2326	2288	893	2363	2264	1037	895	0	0	1063	0	0
Stage 1	915	915	-	1347	1347	-	-	-	-	-	-	-
Stage 2	1411	1373	-	1016	917	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	26	39	340	~ 25	41	281	758	-	-	655	-	-
Stage 1	327	352	-	186	220	-	-	-	-	-	-	-
Stage 2	171	213	-	287	351	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	11	30	340	~ 8	32	281	758	-	-	655	-	-
Mov Cap-2 Maneuver	11	30	-	~ 8	32	-	-	-	-	-	-	-
Stage 1	260	346	-	148	175	-	-	-	-	-	-	-
Stage 2	74	170	-	114	345	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	30	$ 2907.3	1.4	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	758	-	-	26	340	655	-	-
HCM Lane V/C Ratio	0.204	-	-	6.801	0.595	0.016	-	-
HCM Control Delay (s)	11	-	$ 2907.3	30	10.6	-	-	
HCM Lane LOS	B	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0.8	-	-	21.9	3.6	0	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	30	15	185	15	665	20	555	135	457	499	10
Future Volume (veh/h)	15	30	15	185	15	665	20	555	135	457	499	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	39	19	201	16	723	22	617	150	525	574	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	51	25	239	19	719	32	641	545	548	1156	22
Arrive On Green	0.06	0.06	0.06	0.15	0.15	0.15	0.02	0.34	0.34	0.31	0.63	0.63
Sat Flow, veh/h	435	894	435	1649	131	1583	1774	1863	1583	1774	1822	35
Grp Volume(v), veh/h	77	0	0	217	0	723	22	617	150	525	0	585
Grp Sat Flow(s),veh/h/ln	1764	0	0	1780	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	4.7	0.0	0.0	13.1	0.0	16.0	1.4	35.8	7.6	32.0	0.0	18.5
Cycle Q Clear(g_c), s	4.7	0.0	0.0	13.1	0.0	16.0	1.4	35.8	7.6	32.0	0.0	18.5
Prop In Lane	0.25		0.25	0.93		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	100	0	0	259	0	719	32	641	545	548	0	1179
V/C Ratio(X)	0.77	0.00	0.00	0.84	0.00	1.01	0.70	0.96	0.28	0.96	0.00	0.50
Avail Cap(c_a), veh/h	256	0	0	259	0	719	81	643	546	548	0	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	0.0	45.8	0.0	30.1	53.8	35.4	26.2	37.4	0.0	10.7
Incr Delay (d2), s/veh	11.5	0.0	0.0	21.1	0.0	35.1	24.1	26.4	0.3	28.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	8.0	0.0	28.8	0.9	23.0	3.3	19.9	0.0	9.5
LnGrp Delay(d),s/veh	62.7	0.0	0.0	66.9	0.0	65.2	77.9	61.9	26.5	65.7	0.0	11.0
LnGrp LOS	E			E		F	E	E	C	E		B
Approach Vol, veh/h		77			940			789			1110	
Approach Delay, s/veh		62.7			65.6			55.6			36.9	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	38.0	41.9		10.3	6.0	73.9
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	34.0	38.0		16.0	5.0	67.0
Max Q Clear Time (g_c+I1), s		18.0	34.0	37.8		6.7	3.4	20.5
Green Ext Time (p_c), s		0.0	0.0	0.1		0.2	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	51.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	270	260	130	120	78	280	477	330	117	295	105
Future Volume (veh/h)	115	270	260	130	120	78	280	477	330	117	295	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	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	137	321	310	159	146	95	289	492	340	124	314	112
Adj No. of Lanes	1	1	1	1	1	0	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.97	0.97	0.97	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	667	567	191	344	224	362	545	463	131	416	146
Arrive On Green	0.14	0.36	0.36	0.11	0.33	0.33	0.20	0.29	0.29	0.07	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1774	1055	687	1774	1863	1583	1774	2573	901
Grp Volume(v), veh/h	137	321	310	159	0	241	289	492	340	124	214	212
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1742	1774	1863	1583	1774	1770	1704
Q Serve(g_s), s	6.8	12.7	8.2	8.3	0.0	10.3	14.7	24.1	13.4	6.6	11.0	11.3
Cycle Q Clear(g_c), s	6.8	12.7	8.2	8.3	0.0	10.3	14.7	24.1	13.4	6.6	11.0	11.3
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	247	667	567	191	0	568	362	545	463	131	286	276
V/C Ratio(X)	0.55	0.48	0.55	0.83	0.00	0.42	0.80	0.90	0.73	0.95	0.75	0.77
Avail Cap(c_a), veh/h	247	667	567	205	0	568	362	588	500	131	484	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	23.7	7.4	41.6	0.0	25.0	35.9	32.3	16.1	43.8	38.0	38.1
Incr Delay (d2), s/veh	2.7	2.5	3.8	23.3	0.0	2.3	11.8	16.6	5.1	62.9	3.9	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	7.0	4.1	5.3	0.0	5.3	8.4	15.0	6.5	5.5	5.7	5.6
LnGrp Delay(d),s/veh	40.8	26.1	11.1	64.8	0.0	27.3	47.8	49.0	21.2	106.7	41.9	42.6
LnGrp LOS	D	C	B	E		C	D	D	C	F	D	D
Approach Vol, veh/h		768			400			1121			550	
Approach Delay, s/veh		22.7			42.2			40.2			56.8	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	31.8	14.2	38.0	23.4	19.4	17.2	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	11.0	31.0	11.0	26.0	11.0	31.0
Max Q Clear Time (g_c+I1), s	8.6	26.1	10.3	14.7	16.7	13.3	8.8	12.3
Green Ext Time (p_c), s	0.0	1.6	0.0	2.8	0.0	2.1	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	205.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	0	170	40	5	100	150	1017	50	10	840	5
Future Vol, veh/h	0	0	170	40	5	100	150	1017	50	10	840	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	1	-	-	1	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	82	82	82	97	97	97	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	202	49	6	122	155	1048	52	11	894	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2367	2329	897	2404	2305	1074	899	0	0	1100	0	0
Stage 1	919	919	-	1384	1384	-	-	-	-	-	-	-
Stage 2	1448	1410	-	1020	921	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	24	37	339	~ 23	38	267	756	-	-	635	-	-
Stage 1	325	350	-	178	211	-	-	-	-	-	-	-
Stage 2	163	205	-	285	349	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	9	29	339	~ 8	30	267	756	-	-	635	-	-
Mov Cap-2 Maneuver	9	29	-	~ 8	30	-	-	-	-	-	-	-
Stage 1	258	344	-	142	168	-	-	-	-	-	-	-
Stage 2	68	163	-	113	343	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	30.2	$ 2907.3	1.4	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	756	-	-	26	339	635	-	-
HCM Lane V/C Ratio	0.205	-	-	6.801	0.597	0.017	-	-
HCM Control Delay (s)	11	-	$ 2907.3	30.2	10.8	-	-	
HCM Lane LOS	B	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0.8	-	-	21.9	3.7	0.1	-	-

Notes

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

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	30	15	185	15	696	20	562	135	457	498	10
Future Volume (veh/h)	15	30	15	185	15	696	20	562	135	457	498	10
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	39	19	201	16	757	22	624	150	525	572	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	51	25	241	19	707	32	653	555	534	1154	22
Arrive On Green	0.06	0.06	0.06	0.15	0.15	0.15	0.02	0.35	0.35	0.30	0.63	0.63
Sat Flow, veh/h	435	894	435	1649	131	1583	1774	1863	1583	1774	1822	35
Grp Volume(v), veh/h	77	0	0	217	0	757	22	624	150	525	0	583
Grp Sat Flow(s),veh/h/ln	1764	0	0	1780	0	1583	1774	1863	1583	1774	0	1857
Q Serve(g_s), s	4.7	0.0	0.0	13.0	0.0	16.0	1.4	35.9	7.5	32.2	0.0	18.4
Cycle Q Clear(g_c), s	4.7	0.0	0.0	13.0	0.0	16.0	1.4	35.9	7.5	32.2	0.0	18.4
Prop In Lane	0.25		0.25	0.93		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	100	0	0	260	0	707	32	653	555	534	0	1176
V/C Ratio(X)	0.77	0.00	0.00	0.84	0.00	1.07	0.70	0.96	0.27	0.98	0.00	0.50
Avail Cap(c_a), veh/h	257	0	0	260	0	707	81	662	563	534	0	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	0.0	45.6	0.0	30.3	53.6	34.8	25.6	38.1	0.0	10.7
Incr Delay (d2), s/veh	11.5	0.0	0.0	20.5	0.0	54.2	24.0	24.4	0.3	34.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	7.9	0.0	32.0	0.9	22.8	3.3	20.9	0.0	9.5
LnGrp Delay(d),s/veh	62.5	0.0	0.0	66.0	0.0	84.5	77.6	59.2	25.8	72.7	0.0	11.1
LnGrp LOS	E			E		F	E	E	C	E		B
Approach Vol, veh/h		77			974			796			1108	
Approach Delay, s/veh		62.5			80.4			53.4			40.3	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	37.0	42.4		10.2	6.0	73.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	33.0	39.0		16.0	5.0	67.0
Max Q Clear Time (g_c+I1), s		18.0	34.2	37.9		6.7	3.4	20.4
Green Ext Time (p_c), s		0.0	0.0	0.6		0.2	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	57.6
HCM 2010 LOS	E

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.2
Total Delay (hr)	0.0	1.9	1.4	4.4	7.8

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.2	0.2
Total Delay (hr)	0.6	0.5	10.0	11.1

Total Network Performance

Denied Delay (hr)	0.4
Total Delay (hr)	19.9

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.2	0.1	0.0	0.3
Total Delay (hr)	0.0	1.3	11.9	2.3	15.4

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.1	0.1
Total Delay (hr)	0.1	0.7	1.7	2.5

Total Network Performance

Denied Delay (hr)	0.4
Total Delay (hr)	18.7

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.8	0.3	0.0	0.9
Total Del/Veh (s)	12.3	12.4	13.3	13.4	13.1

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	3.9	2.9	10.8	5.5

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	19.6

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.0	0.3	0.0	0.5
Total Del/Veh (s)	12.5	23.3	16.3	13.7	16.4

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.8	0.5
Total Del/Veh (s)	31.5	3.7	23.2	17.6

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	33.0

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.5	0.5	0.0	0.7
Total Del/Veh (s)	21.1	19.0	22.6	18.7	20.6

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.4	0.2
Total Del/Veh (s)	9.1	3.9	11.1	6.9

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	27.7

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.7	0.4	0.0	0.9
Total Del/Veh (s)	15.6	13.9	13.6	15.1	14.2

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	6.3	3.1	12.2	6.3

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	21.2

1: Taylor Road & Penryn Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.5	0.4	0.0	0.8
Total Del/Veh (s)	17.5	15.3	14.3	14.7	14.7

2: Taylor Road & N. Penryn Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	6.4	3.0	10.8	5.8

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	21.2

KD Anderson & Associates, Inc.
Transportation Engineers

July 25, 2018

Mr. Nick Pappani
RANEY PLANNING AND MANAGEMENT
1501 Sports Drive
Sacramento, CA 95834

RE: UNITED AUBURN INDIAN COMMUNITY (UAIC) MASTER PLAN & SCHOOL PROJECT EIR, PLACER COUNTY: STAFFING LEVELS.

Dear Mr. Pappani:

As we have discussed, our firm prepared the June 25, 2018 traffic impact analysis for the **United Auburn Indian Community (UAIC)'s Master Plan & School Project EIR**. We have subsequently learned that there may be a discrepancy between the number of staff for the Tribal Education Center (TEC) and Cultural Center. The analysis assumes a total of 6 employees, along with 35 education staff. It is now anticipated that here would be 6 staff for the TEC and 2 for the Cultural Center.

The addition of two employees would result in a small amount of traffic but would not change the traffic impact analysis' conclusions regarding traffic impacts or mitigation requirements. Using the trip generation rates presented in the analysis, another 4 daily trips may result with two trips in the a.m. peak hour and 2 trips in the p.m. peak hour. Total daily site trip generation could increase from 254 to 258 daily trips. These increases would be too small to have an appreciable quantifiable effect on the Levels of Service projected by the analysis, and as a result mitigation requirements would be unchanged.

Thank you for your attention to this information. Please don't hesitate to contact me if you have any questions.

Sincerely,

KD Anderson & Associates, Inc.

Kenneth D. Anderson, P.E.
President

UAIC School Staffing.ltr

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