Final Traffic Impact Analysis Report

Labcon North America Warehouse Addition

City of Petaluma, California

September 28, 2022

TJKM

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EXECUTIVE SUMMARY

This report summarizes the results of the Traffic Impact Study (TIS) conducted for the proposed industrial/manufacturing facility located south of 3200 Lakeville Avenue and is on the parcel between Fisher Drive, Cader Lane and South McDowell Blvd in the City of Petaluma. The proposed project would construct a 175,000 square feet of research and development space and warehousing on a site that is currently vacant. The project would be an expansion of the existing Labcon facility located on the adjacent parcel to the northeast. Access to the project site would be provided by connections from six intersections along Lakeville Highway between US 101 and Fisher Drive-Cader Lane. This project would also allow bicycle access into the facility.

The purpose of this report is to provide data that would help make decisions regarding potential traffic impacts of the proposed manufacturing facility. This would also include improvements to mitigate these impacts of level of insignificance by the City's General Plan or policies. Vehicular traffic impacts are evaluated by determining total number of new trips that the proposed facility would be expected to generate, distributing these trips to the surrounding street system based on existing travel patterns or anticipate travel patterns specific to the proposed site. The report would also include analysis based on the impacts of new traffic on intersections and roadway segments. Impacts on access for pedestrians, bicycle and to transit are also addressed in the report.

Vehicle Miles Traveled

This study evaluates project-related VMT as outlined in the adopted City of Petaluma VMT methodology, as described in the July 2021 Senate Bill 743 Vehicle Miles Traveled Implementation Guidelines prepared by Fehr & Peers for the City of Petaluma. The Guidelines include map-based screening to identify projects located in low-VMT areas. Although the project is located in a low-VMT area that is screened to have a less-then-significant impact, TJKM utilized the Sonoma County Transportation Authority (SCTA) travel demand model to calculate the Home-Based Work VMT per Employee for this project. The project's Home-Based VMT per employee value of 16.2 is lower than the VMT threshold for the City of Petaluma region of 18.9. Thus, the proposed project is expected to have a less-than-significant impact on VMT.

Project Trip Generation

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication *Trip Generation (11th Edition)*. TJKM used published trip rates for the ITE land uses Manufacturing (140), Warehousing (150), and Single Use Office Building (715), based on the proportion of the project's total floor area primarily dedicated to each use. The proposed project is expected to generate 903 total daily trips, including 124 a.m. peak hour trips (102 in, 22 out) and 126 p.m. peak hour trips (29 in, 97 out).

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on estimated existing traffic volumes during the a.m. and p.m. peak periods. This scenario is based on the Existing plus Project Conditions traffic volumes in the BioMarin traffic impact study, prepared in 2019 by W-Trans. Under

existing conditions, five of the six study intersections operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Northbound Ramps operates at LOS C during the am peak hour and LOS E during the p.m. peak hour.

Existing plus Project Conditions

Under this scenario, five of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Northbound Ramps would continue to operate at LOS C during the am peak hour and LOS E during the p.m. peak hour, with an increase of 6.1 seconds of delay in the p.m. peak hour. Under the City of Petaluma General Plan, this is a potentially significant inconsistency. However, this can be fully mitigated by adding a westbound right turn overlap phase and optimizing signal timing. With mitigation, the project **would be consistent** with level of service standards set forth under the City of Petaluma General Plan.

Existing plus Approved Projects Conditions

This scenario includes traffic generated by approved projects in the project vicinity. This scenario is based on the Baseline plus Project Conditions in the 2019 BioMarin study. Under this scenario, three of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would operate at LOS E in the a.m. peak hour and LOS D in the p.m. peak hour. Lakeville Highway & US-101 Northbound Ramps would operate at LOS C during the am peak hour and LOS F during the p.m. peak hour. Lakeville Highway & Baywood Drive would operate at LOS C during the am peak hour and LOS E during the p.m. peak hour.

Existing plus Approved plus Proposed Project Conditions

Under this scenario, two of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would continue to operate at LOS E in the a.m. peak hour and LOS D in the p.m. peak hour, with an increase of 3.5 seconds in the a.m. peak hour. Lakeville Highway & US-101 Northbound Ramps would continue to operate at LOS C during the am peak hour and LOS F during the p.m. peak hour, with an increase of 6.5 seconds in the p.m. peak hour. Lakeville Highway & Baywood Drive would continue to operate at LOS C during the am peak hour and LOS E during the p.m. peak hour, with an increase of 7.3 seconds in the p.m. peak hour. In addition, at the intersection of Lakeville Highway & S. McDowell Boulevard would degrade to LOS E in the a.m. peak hour and LOS D in the p.m. peak hour. Three of these intersections experience potentially significant inconsistencies. However, these can be fully mitigated with the following changes:

- Lakeville Highway & US-101 Southbound Ramps: optimize signal timing
- Lakeville Highway & US-101 Northbound Ramps: optimize signal timing and add a westbound right turn overlap phase
- Lakeville Highway & Baywood Drive: optimize signal timing
- Lakeville Highway & S. McDowell Boulevard: optimize signal timing

With mitigation, the project **would be consistent** with level of service standards set forth under the City of Petaluma General Plan.

Cumulative Conditions

This scenario considers the development of the city and surrounding communities in the future, using the City of Petaluma Traffic Model. This scenario is based on the Future plus Project Conditions in the 2019 BioMarin study. Under this scenario, two of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would operate at LOS F during both peak hours. Lakeville Highway & US-101 Northbound Ramps would operate at LOS C during the am peak hour and LOS F during the p.m. peak hour. Lakeville Highway South McDowell Boulevard would operate at LOS E during the a.m. peak hour and LOS D during the p.m. peak hour. Lakeville Highway & Frates Road/Cader Lane would operate at LOS F during the am peak hour and LOS D during the p.m. peak hour. It should be noted that the LOS at Lakeville Highway & Baywood Drive is better under Cumulative Conditions than under Existing plus Approved Project Conditions, due to lower project traffic volumes at that intersection.

Cumulative plus Project Conditions

Under this scenario, two of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would continue to operate at LOS F during both peak hours, with an increase of over five seconds of average delay during both peak hours. Lakeville Highway & US-101 Northbound Ramps would continue to operate at LOS C during the am peak hour and LOS F during the p.m. peak hour, with an increase of 9.8 seconds in the p.m. peak hour. The intersection of Lakeville Highway & S. McDowell Boulevard would degrade to LOS F in the a.m. peak hour, with an increase of 14.4 seconds. Lakeville Highway & Frates Road/Cader Lane would continue to operate at LOS F during the am peak hour and LOS D during the p.m. peak hour, with minimal increases in average delay. Three of these intersections experience potentially significant impacts. However, these can be fully mitigated with the following changes:

- Lakeville Highway & US-101 Southbound Ramps: optimize signal timing
- Lakeville Highway & US-101 Northbound Ramps: optimize signal timing and add a westbound right turn overlap phase
- Lakeville Highway & S. McDowell Boulevard: optimize signal timing
- Lakeville Highway & Frates Road/Cader Lane : optimize signal timing

With mitigation, the project **would be consistent** with level of service standards set forth under the City of Petaluma General Plan.

Site Access and On-Site Circulation

TJKM concluded that the site plan will operate acceptably and provide adequate connection to existing streets and circulation within the site. The proposed project does not conflict with existing and planned pedestrian or bicycle facilities and will add trips to existing transit facilities, which can be accommodated by the existing transit capacity. Site access and circulation for vehicles, pedestrians, and bicycles are considered **adequate**.

Parking

Under City of Petaluma requirements for the Lakeview Business District, the proposed project would require a 353 parking spaces. The proposed project would construct 288 spaces, lower than the number required. However, based on ITE parking demand rates, the peak expected parking demand would be 197 spaces. The proposed parking supply is approximately midway between expected parking demand and the parking supply required by the City. Although the parking supply for the proposed project does not satisfy City of Petaluma requirements, it is expected to be **adequate** based on projected parking demand. TJKM recommends that the applicant confirm with City staff that the proposed parking supply would be acceptable.

Recommendations

TJKM recommends the following:

- Landscaping and signage along the project frontages should be designed to ensure that adequate sight lines are maintained.
- Add continuous accessible pedestrian paths connecting the sidewalks on the project frontages to the new building.
- The applicant should confirm with City staff that the proposed parking supply would be acceptable.

1.0 INTRODUCTION

This report summarizes the results of the Traffic Impact Study (TIS) conducted for the proposed industrial/manufacturing facility located south of 3200 Lakeville Avenue and is on the parcel between Fisher Drive, Cader Lane and South McDowell Blvd in the City of Petaluma. The proposed project would construct a 175,000 square feet of research and development space and warehousing on a site that is currently vacant. The project would be an expansion of the existing Labcon facility located on the adjacent parcel to the northeast. Access to the project site would be provided by connections from six intersections along Lakeville Highway between US 101 and Fisher Drive-Cader Lane. This project would also allow bicycle access into the facility.

This chapter discusses the TIS purpose, project study area, and analysis scenarios. **Figure 1** shows the study area and project site location. **Figure 2** shows the project site plan, dated January 14, 2022.

1.1 Study Purpose

The purpose of this report is to provide data that would help make decisions regarding potential traffic impacts of the proposed manufacturing facility. This would also include improvements to mitigate these impacts of level of insignificance by the City's General Plan or policies. Vehicular traffic impacts are evaluated by determining total number of new trips that the proposed facility would be expected to generate, distributing these trips to the surrounding street system based on existing travel patterns or anticipate travel patterns specific to the proposed site. The report would also include analysis based on the impacts of new traffic on intersections and roadway segments. Impacts on access for pedestrians, bicycle and to transit are also addressed in the report.

1.2 Study Intersections

TJKM evaluated traffic conditions at six study intersections during the a.m. and p.m. peak hours for a typical weekday. The study intersections were selected for consistency with prior studies of the existing Labcon facility to the northeast and BioMarin facility to the south. Due to ongoing traffic irregularities associated with the COVID-19 pandemic, this analysis utilizes intersection turning movements from the BioMarin study, prepared by W-Trans in 2019.

The peak periods observed were between 7:00-9:00 a.m. and 4:00-6:00 p.m. The study intersections and associated traffic controls are as follows:

- US 101 SB Lakeville Hwy ramps is a four-legged, signalized intersection, the north leg is the US 101 Southbound on-and off-ramps and the south leg a parking lot driveway. Protected left-turn phasing is provided on the highway, while the ramp and driveway approaches are split- phased. Crosswalks are provided across the northern and western legs of the intersections.
- US 101 NB Lakeville Hwy ramps is a signalized "tee "intersection with protected left-turn phasing on eastbound and southbound approaches and right-turn overlap on the off-ramp. A marked crosswalk is provided across the west leg of the intersection.

- Lakeville Hwy at Baywood Drive is a signalized, four-legged intersection with protected left- turn phasing for all four approaches. Marked crosswalks and pedestrian phasing are provided across all but the western leg of the intersection.
- Lakeville Hwy at Casa Grande Road is a signalized, four-legged intersection with protected left-turning phasing on the Lakeville Highway approached and a free right-turn on the westbound approach. Casa Grande Road intersects Lakeville Highway at a skewed angle. Marked crosswalks and pedestrian phasing are provided across the eastern and southern legs of the intersections.
- Lakeville Hwy at McDowell Blvd is a four-legged, signalized intersection with protected left-turn phasing and crosswalks with pedestrian phasing on all approaches.
- Lakeville Hwy at Calder Lane/Frates Road is a four-legged, signalized intersection with protected left-turn phasing on all approached and a right-turn overlap phase on southbound Frates Road. Crosswalks with pedestrian phasing are present on all but the west leg of the intersection.

1.3 Study Scenarios

The roadway operations analysis addresses the following six traffic scenarios:

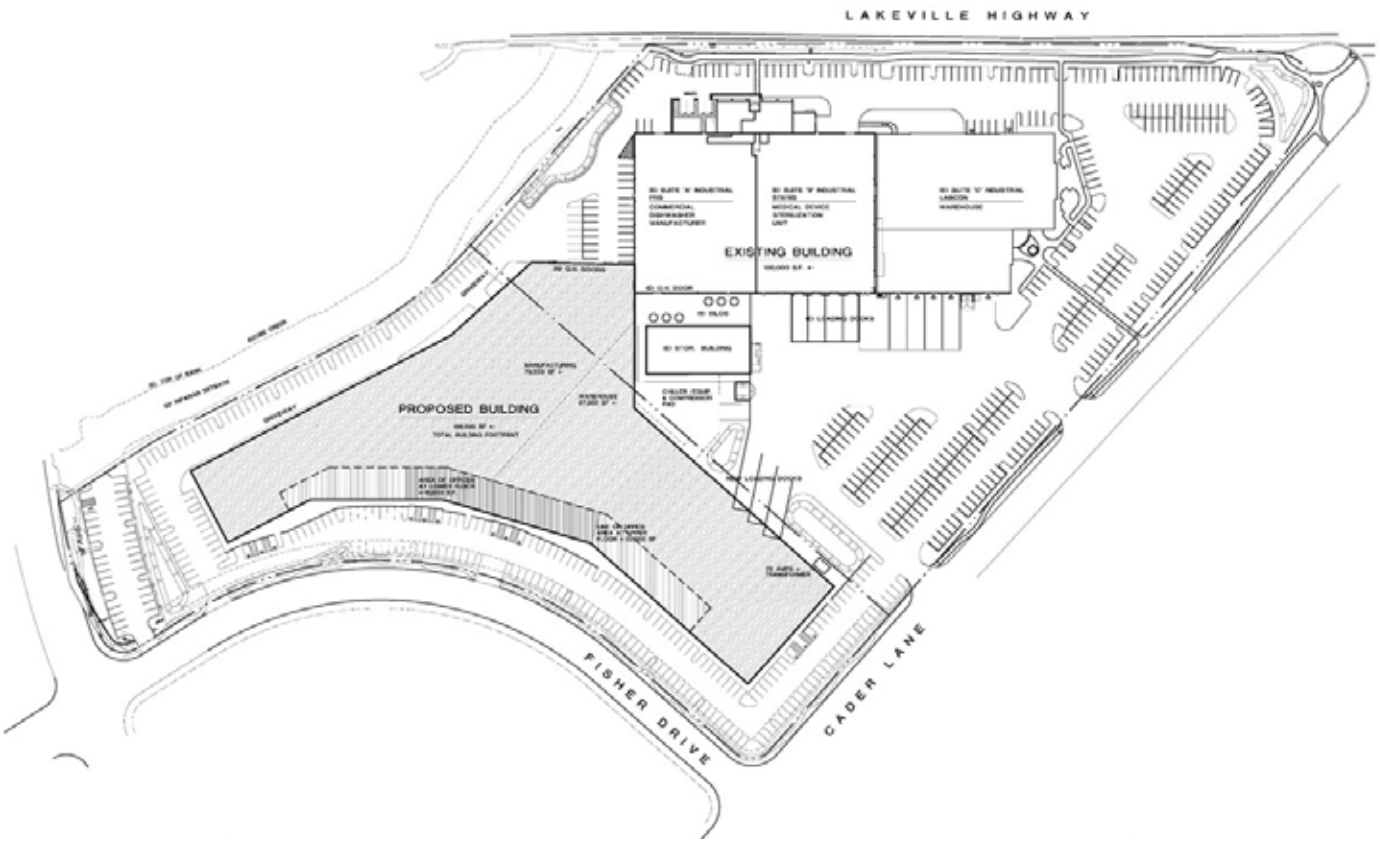
- **Existing Conditions** – This scenario evaluates the study intersections based on estimated existing traffic volumes, lane geometry and traffic controls. This scenario is based on the Existing plus Project Conditions in the 2019 BioMarin study.
- **Existing plus Project Conditions** – This scenario is identical to Existing Conditions, but with the addition of traffic from the proposed project.
- **Existing plus Approved Projects Conditions** – This scenario includes traffic generated by approved projects in the project vicinity. This scenario is based on the Baseline plus Project Conditions in the 2019 BioMarin study.
- **Existing plus Approved plus Proposed Project Conditions** – This scenario is identical to Existing plus Approved Project Conditions, but with the addition of traffic from the proposed project.
- **Cumulative Conditions**– This scenario considers the development of the city and surrounding communities in the future, using the City of Petaluma Traffic Model. This scenario is based on the Future plus Project Conditions in the 2019 BioMarin study. Although the horizon year for this model is 2025, the BioMarin study noted that, "due to economic conditions since the General Plan was completed, it is expected that build-out of the General Plan land uses would occur after 2025. It should be noted that at some study intersections, Cumulative Conditions traffic volumes are lower than Existing plus Approved Projects Conditions.
- **Cumulative plus Project Conditions** – This scenario is identical to Cumulative Conditions, but with the addition of traffic from the proposed project.

Figure 1: Project Vicinity

LEGEND

- Project Site
- Study Intersection

Figure 2: Site Plan



2.0 STUDY METHODOLOGY

Traffic impacts related to the proposed project were evaluated for both compliance with applicable regulatory documents and environmental significance as defined in the California Environmental Quality Act (CEQA). The CEQA analysis was conducted in accordance with the *Technical Advisory On Evaluating Transportation Impacts In CEQA* published by the Governor's Office of Planning and Research (OPR) and the July 2021 *Senate Bill 743 Vehicle Miles Traveled Implementation Guidelines* prepared by Fehr & Peers for the City of Petaluma. As of July 1, 2020, intersection level of service (LOS) can no longer be used to determine significant CEQA impacts. However, an LOS analysis was conducted to determine consistency with City of Petaluma plans and standards.

2.1 Vehicle Miles Traveled

This study evaluates project-related VMT as outlined in the adopted City of Petaluma VMT methodology, as described in the *Implementation Guidelines*. The Governor's Office of Planning and Research (OPR) *Technical Advisory* (December 2018) provides guidance to analysts and local jurisdictions for implementing VMT as a metric for determining the transportation impact for land use projects. The OPR guidelines state that for analysis purposes, "VMT" refers to automobile VMT, specifically passenger vehicles and light trucks. Heavy truck traffic is typically excluded. Consistent with the OPR *Technical Advisory*, the City of Petaluma has adopted metrics for specific project types. For employment-generating uses such as the proposed project, project generated home-based work (commute) VMT per employee is compared to the Bay Area regional average. For residential projects, project-generated home-based VMT per resident is compared to the Petaluma citywide average. The significance threshold for project-generated VMT is 16.8 percent below the applicable average VMT.

The Petaluma guidelines include a screening process based on the OPR Technical Advisory, which includes screening criteria related to project size, type, location, and other factors. Projects proposed in areas that feature similar land uses and currently generate low VMT can be presumed to create a less than significant impact. The Implementation Guidelines reference the *Citywide TDM Requirements* (July 2021), which include screening maps identifying areas with low VMT (Appendix B VMT Screening Map). Low VMT areas are defined as those traffic analysis zones (TAZs) with existing VMT that falls below the applicable significance threshold for residential or commercial VMT. A project that meets any applicable screening criterion can be presumed to generate a less-than-significant impact to VMT and thus exempt from further VMT analysis. It should be noted that a project screened from VMT analysis may still be required to prepare a TDM plan.

Consistent with the OPR Technical Advisory, a local travel demand model, such as the Sonoma County Transportation Authority (SCTA) travel demand model can be used to calculate the Home-Based Work VMT per Employee for work based projects. A base year model run is used to calculate the VMT within the TAZ. Then land use changes based on the project is added to the TAZ and a base year plus project model run provides the VMT statistics. This figure is then compared to the VMT goal which is 16.8% below the regional average based on the local model.

2.2 Level of Service Analysis Methodology

Although Level of Service (LOS) is no longer relevant to CEQA, LOS can be used to determine conformity with an adopted general plan or congestion management program. LOS is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. The LOS generally describes these conditions in terms of such factors as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The operational LOS are given letter designations from A to F, with A representing the best operating conditions (free-flow) and F the worst (severely congested flow with high delays). Intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets in urban areas.

Signalized Intersections

The study intersections under stop control (signalized) were analyzed using the 6th Edition HCM Operations Methodology for signalized intersections described in Chapter 20 (HCM 6th Ed.). LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle during a specified time period (weekday, pm, peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i. progression of movements through the intersection and along the corridor), signal cycle length and traffic volumes with respect to intersection capacity and resulting queues. The weighted average delay for the entire intersections is presented for all-way stop controlled intersections. The average control delay for signalized intersections was calculated using Synchro 10 analysis software and was correlated to a LOS designation as shown in **Table 1**.

The range of delay associated with the various levels of service are indicated in Table 1:

Table 1: Level of Service Criteria for Signalized Intersections:

Level of Service	General Description	Average Control Delay (seconds/vehicle)
A	Free Flow	≤10
B	Stable Flow (Slight delays)	>10 – 20
C	Stable Flow (acceptable delays)	>20 - 35
D	Approaching unstable flow (tolerable delay)	>35 - 55
E	Unstable flow (intolerable delay)	>55-80
F	Forced Flow (congested and queues fail to clear)	>80

Source: Highway Capacity Manual 6th Ed., Chapter 20 (Transportation Research Board, 2010)
Average Control Delay per Vehicle in seconds

2.3 Level of Service Standards

Although level of service is no longer used for identifying impacts under CEQA, level of service analysis is still used for determining consistency with adopted agency plans and standards. Where standards refer to significant environmental impacts, this analysis instead identifies these as significant inconsistencies with adopted plans.

City of Petaluma

The City has established LOS D as the standard for both signalized and unsignalized intersections that are not on designated Routes of Regional Significance or within the Downtown Specific Plan area. Per General Plan *Policy 5-P-10*, "At signalized intersections, levels of service shall be determined for traffic flow and supports multi- modal mobility goals. Controlled movements operating at LOS D or LOS E are allowable if the intersection is projected to operate at LOS F or better overall, and/or if the 'Peak Hour' signal warrant outlined in the City of Petaluma General Plan. For the purposes of this analysis, this standard has been applied to the signalized study intersection to maintain operation at the transition from LOS C to LOS D. The intersections in the City of Petaluma are integral to a local jurisdictions transportation system and often accepts the operational standards applied by the local agencies. (Lakeville Hwy at Baywood Drive, Lakeville Hwy at Calder Lane/Frates Road and US 101 SB Lakeville Hwy ramps)

3.0 EXISTING CONDITIONS

This section describes existing conditions, including bicycle & pedestrian facilities, in the project are which provides an evaluation of current operation based on estimated existing traffic volumes during a.m. and p.m. peak period. This condition does not include project generated traffic volumes. This scenario is based on the Existing plus Project Conditions in the 2019 BioMarin study.

3.1 Existing Setting and Intersections

Relevant intersections in the project vicinity are discussed below and shown in **Figure 3**:

Lakeville Hwy/US 101 Southbound Ramps is an intersection which is located towards the west of City of Petaluma, and which provides direct access to the freeway southbound to US 101. Lakeville Hwy/US 101 South Ramp stretches as two lanes from to Lakeville Hwy/US 101 N Ramp west of the City to Lakeville Hwy/McDowell Blvd intersection towards the project site. Lakeville Highway acts as an arterial street until it merges into US 101 Hwy. Within the study area, Lakeville Highway/US 101 S Ramp is a two-lane intersection divided by a two-way center left-turn lane and has sidewalks and Class II bicycle lane facilities on both sides for most of its length. This intersection is a four-legged, signalized intersection with the north leg the US 101 Southbound on- and off ramps and the south leg a parking lot driveway. Protected left-turn phasing is provided on the highway, while the ramp and driveway approaches are split-phased. Crosswalks are provided across the northern and western legs of the intersection. The posted speed limit is 40 miles per hour.

Lakeville Highway/US 101 Northbound Ramps is like a gateway to the City of Petaluma located just under a mile west of the project site. This intersection is a signalized "tee" intersection with protected left-turn phasing on the eastbound and southbound approaches. A marked crosswalk is provided across the west leg of the intersection. The intersection has a center divider with two traffic lanes at intersections and driveways for right turn lanes for less than 0.5 miles in length on the northern side of the road leading to US 101 Hwy Northbound. Class II bicycle lane facilities and sidewalks are also present, except for the northern side of the roadway on Lakeville Hwy, which lacks sidewalks on the southern side. Parking is prohibited along the roadway, and the posted speed limit is 40 miles per hour. This intersection provides a relatively direct connection from the intersection of Lakeville Hwy/Baywood Drive leading towards the project side.

Lakeville Hwy/Baywood Drive is an intersection about 3,000 feet west of the project site. This intersection is a signalized, four-legged intersection with protected left-turn phasing on all four approaches. Marked crosswalks and pedestrian phasing are provided across all but the western leg of the intersection. The roadway has two lanes, sidewalks and Class II bicycle lane facilities on southern sides, and with a center divider for its length stretching towards the project site. The intersection has bike lanes and sidewalks on the northern side on Lakeville Hwy. The street merging into this intersection which is Baywood Drive acts like a collector road in the City. This intersection also leads to US 101 Hwy Northbound. Parking is prohibited along the length of the roadway, and the posted speed limit is 40 miles per hour.

Lakeville Hwy/ Casa Grande Road is an east-west intersection about 1,500 feet to the west of the project site. This intersection is a signalized, four-legged intersection with protected left-turn phasing on the Lakeville Highway approaches and a free right-turn on the westbound approach. Casa Grande Road intersection at Lakeville Highway at a skewed angle. Marked crosswalks and pedestrian phasing are provided across the eastern and southern legs of the intersection. The Lakeville Highway towards west bound then transitions to a single lane minor arterial until the intersection of Lakeville/McDowell Blvd. The Casa Grande Road has on-street parking southbound approaching. Sidewalks and Class II bicycle lanes facilities are not present on both sides of Lakeville Highway where it is a major arterial. The segment also does not host a center divider and no dedicated right-turning lanes at the intersection The posted speed limit is 40 miles per hour and parking is prohibited throughout the roadway's length.

Lakeville Highway/South McDowell Boulevard is an intersection and both the streets run east-west direction. This intersection is a four-legged, signalized intersection with protected left-turning phasing and crosswalks with pedestrian phasing on all approaches. The intersection leads to the project site southbound. Similar to the intersection in the project vicinity, this intersection does not have a center divider, Class II bicycle lane facilities on both sides, but there are no sidewalks on both the sides. The intersection also serves bus stops for Sonoma Transit stop located in Petaluma. This intersection is bisected by Lakeville Highway, and provides access to commercial areas south which is the project site and residential areas to the north. South McDowell Blvd. stretches southbound and the project site is located at the north of the intersection South McDowell Blvd/Fisher Drive. The posted speed limit is 40 miles per hour, and parking is prohibited on both sides. A complete analysis on roadway capacity and traffic volumes would be needed for the intersection as there will be additional traffic added immediate south McDowell Blvd.

Lakeville Hwy/Frates Road-Cader Lane is an intersection about 500 feet north of the project site. This intersection with protected left-turn phasing on all approaches and a right-turn overlap phase on southbound Frates Road. Marked crosswalks and pedestrian phasing are provided across all but the west leg of the intersection. The roadway has two lanes, sidewalks and Class II bicycle lane facilities on northern sides. The intersection lacks sidewalks on both the sides of Lakeville Hwy and no center divider for its length stretching east-west. Frates Road-Cader Lane intersection at Lakeville Highway at a skewed angle. The street merging into this intersection which is Frates Rd acts like a collector road. This intersection approaching west also leads to US 101 Hwy Northbound. Parking is prohibited along the length of the roadway, and the posted speed limit is 40 miles per hour.

3.2 Active Transportation

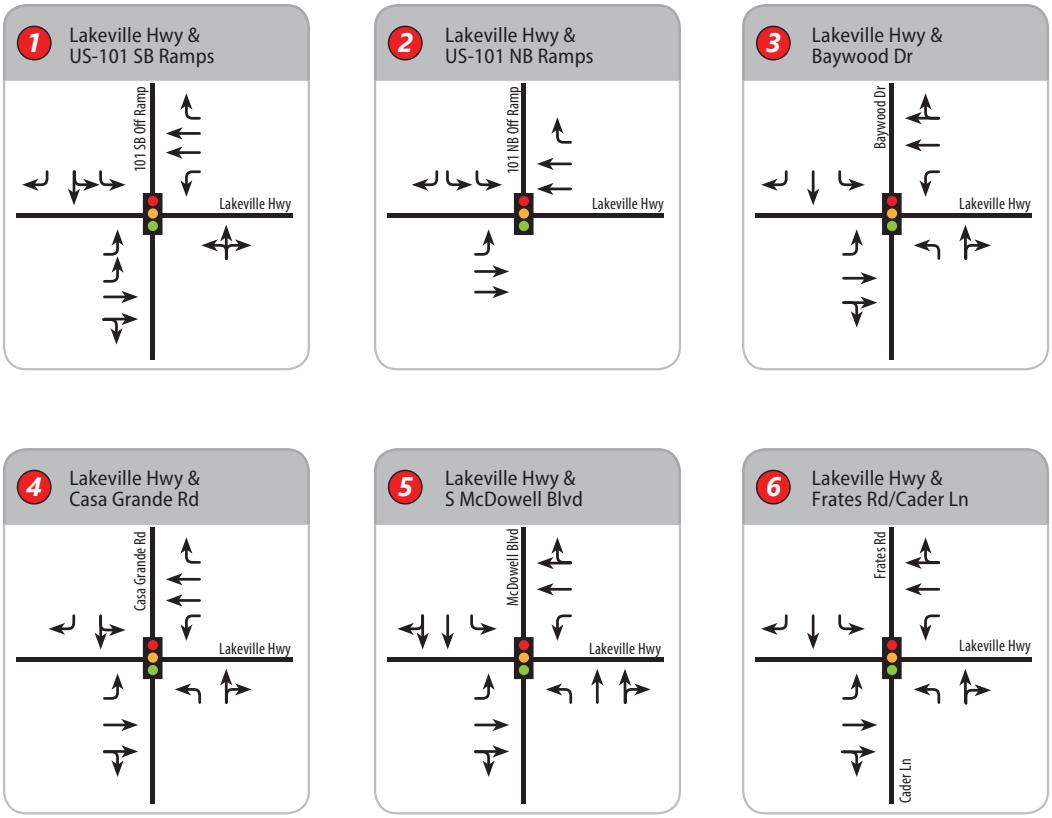
Bicycle and Pedestrian access to the project is provided via an integrated network of bicycle and pedestrian facilities in the vicinity. The project is bordered by S. McDowell Boulevard, Fisher Drive, Cader Lane, Lakeville Highway and Adobe Creek. Lakeville Highway, S. McDowell Boulevard and Cader Lane offer Class II Bike Lanes which offer excellent continuous access to the residential areas east of US 101. On the opposite side of the Adobe Creek is a Class I Off-Street Trail. Access to this trail from the project is via S. McDowell Boulevard. This trail connects into a recreational area to the south and a residential area to the north.

3.5 Existing Traffic Conditions

TJKM evaluated existing traffic conditions at selected study intersections during the a.m. and p.m. peak hours on a typical weekday. Due to ongoing traffic irregularities associated with the COVID-19 pandemic, this scenario is based on the Existing plus Project Conditions in the 2019 BioMarin study as noted in section 1.3.

The traffic count data are included in **Appendix A.** The existing lane geometries and traffic control at each study intersection are illustrated on **Figure 3** and intersection turning movement volumes at each study intersection are illustrated on **Figure 4**.

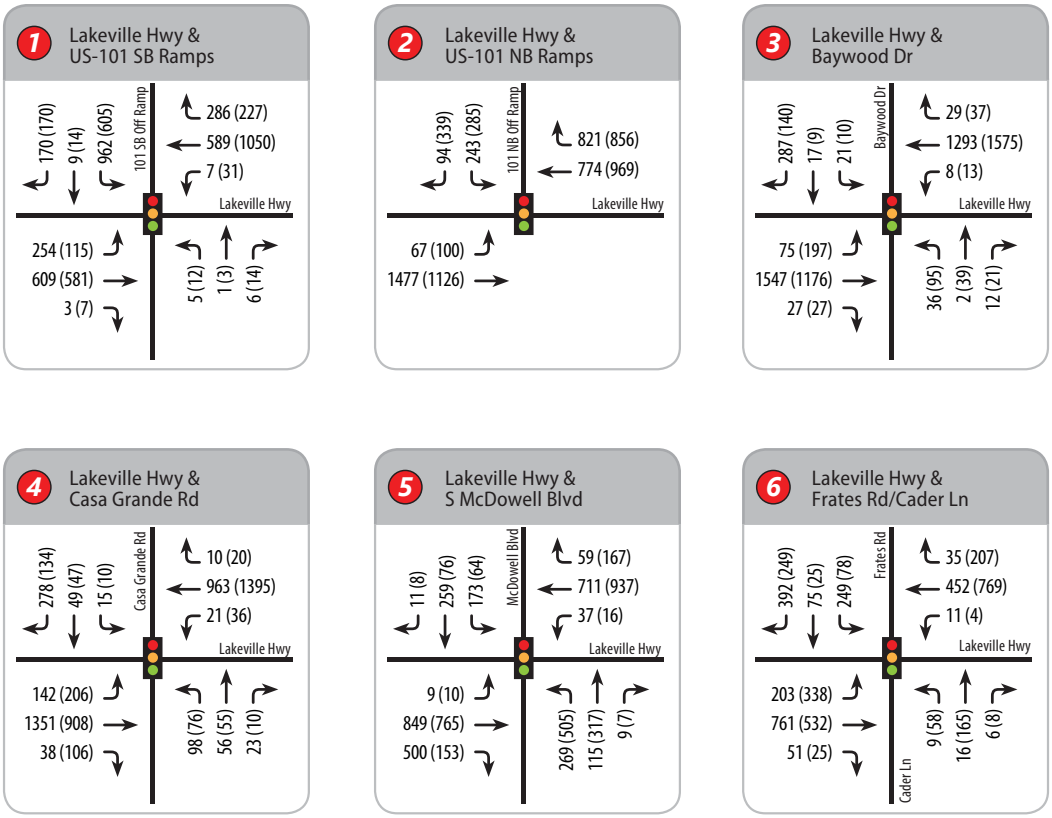
Figure 3: Existing Lane Geometry and Traffic Controls



LEGEND

- Project Site
- Study Intersection
- Traffic Signal

Figure 4: Existing Traffic Volumes



LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

3.6 Intersection Level of Service Analysis – Existing Conditions

This scenario evaluates the study intersections based on adjusted existing traffic volumes, and existing lane geometry and traffic controls, as described above. The peak hour factors and percent heavy vehicles calculated from the existing turning movement counts were used for the study intersections for the Existing Conditions analysis. The results of the LOS analysis using the HCM 6th Ed. methodology and Synchro 10 software program for Existing Conditions are summarized in **Table 3**.

Under existing conditions, five of the six study intersections operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Northbound Ramps operates at LOS C during the am peak hour and LOS E during the p.m. peak hour. LOS worksheets are provided in **Appendix B**.

Table 2: Intersection Level of Service Analysis – Existing Conditions

ID	*Intersection*	*Intersection Control*	*Peak Hour*	*Existing Conditions*	
				Average Delay[1]	*LOS*[2]
1	Lakeville Hwy. & US-101 SB Ramps	Signal	AM	46.8	D
			PM	40.5	D
2	Lakeville Hwy. & US-101 NB Ramps	Signal	AM	20.6	C
			PM	**62.5**	**E**
3	Lakeville Hwy. & Baywood Dr.	Signal	AM	28.4	C
			PM	44.4	D
4	Lakeville Hwy. & Casa Grande Rd.	Signal	AM	19.5	B
			PM	16.7	B
5	Lakeville Hwy. & S. McDowell Blvd.	Signal	AM	38.3	D
			PM	30.6	C
6	Lakeville Hwy. & Frates Rd./Cader Ln.	Signal	AM	19.8	B
			PM	33.7	C

Notes: AM – morning peak hour, PM – evening peak hour

Bold indicates unacceptable operational conditions based on applicable jurisdictional standards. **Red** indicates significant impact.

1. Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS = Level of Service

4.0 EXISTING PLUS PROJECT CONDITIONS

This analysis scenario presents the impacts of the proposed project at the study intersections and surrounding roadway system. This scenario is identical to Existing Conditions, but with the addition of traffic from the proposed project. The proposed project would construct 175,000 building adjacent to Labcon North America on a site that is currently vacant.

4.1 Vehicle Miles Traveled

The City of Petaluma adopted the *Senate Bill 742 Vehicle Miles Traveled Implementation Guidelines* on July 2021. The guidelines include map-based screening to identify projects located in low VMT areas. The project is located within a screened out area from the guidelines, so it is presumed to have a **less-than-significant impact** on VMT. To confirm that this project's VMT is below the significance threshold, TJKM utilized the Sonoma County Transportation Authority (SCTA) travel demand model to calculate the Home-Based Work VMT per Employee for this project.

The project is located in TAZ #239 of the SCTA model, and currently there are 68,000 square feet of institutional/warehouse type employment within the zone. The table below shows the land use changes to the SCTM model to represent the Labcon Warehouse Addition Project.

Land Use Changes for Base Year Plus Project

TAZ	Light Industrial Square Footage	Total Employees
#239	+175,000	+189*

*Total employees was derived from the SCAG employee density study, Table II-A for light manufacturing employer type.

The 175,000 square foot warehouse/light industrial building employs 189 people for the Labcon Warehouse addition project. The land use changes were made into the base year land use of the SCTM model and a base year plus project model run was conducted to extract VMT statistics for the project. The results are summarized in the table below.

Home Based VMT per Employee Comparison

TAZ	Base Year Average Daily Home-Based VMT per Employee (per SCTA Model)	Regional Average (per SCTA Model)	16.8% Below Regional Average (per SCTA Model)	Base Year Plus Project Average Daily Home-Based VMT per Employee (per Model run)
#239	7.35	22.7	18.9	16.2

The project's Home-Based VMT per employee value of 16.2 is lower than the 83.2% VMT threshold for the City of Petaluma region (18.9). Thus, the proposed Labcon Warehouse Addition project is expected to have a less-than-significant impact on VMT. SCTA Model Travel Demand VMT Outputs are shown below.

TAZ	Total Employment	ALLHB VMT - Attraction	VMT/Employee
#239 – No Project	228	1048.84	7.35
#239 – With Project	417	6753.98	16.19
		City of Petaluma Threshold	18.9

4.2 Project Trip Generation

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication *Trip Generation (11th Edition)*. TJKM used published trip rates for the ITE land uses Manufacturing (140), Warehousing (150), and Single Use Office Building (715), based on the proportion of the project's total floor area primarily dedicated to each use. The proposed project is expected to generate 903 total daily trips, including 124 a.m. peak hour trips (102 in, 22 out) and 126 p.m. peak hour trips (29 in, 97 out). **Table 3** shows the trips expected to be generated by the proposed project.

Table 3: Project Trip Generation

Land Use	*Size*		*Daily*		*AM Peak*					*PM Peak*				
			Rate	*Trips*	*Rate*	*In:Out*	*In*	*Out*	*Total*	*Rate*	*In:Out*	*In*	*Out*	*Total*
Manufacturing (140)	79.00	*ksf*	4.75	375	0.68	76:24	41	13	54	0.74	31:69	18	40	58
Warehousing (150)	64.00	*ksf*	1.71	109	0.17	77:23	8	3	11	0.18	28:72	3	9	12
Single Use Office Bldg. (715)	32.00	*ksf*	13.07	418	1.85	89:11	53	6	59	1.79	15:85	8	48	56
Total				**903**			**102**	**22**	**124**			**29**	**97**	**126**

Notes:
1. *Trip Generation, 11th Edition*, Institute of Transportation Engineers (ITE), 2021
2. ksf: 1,000 sq. ft.

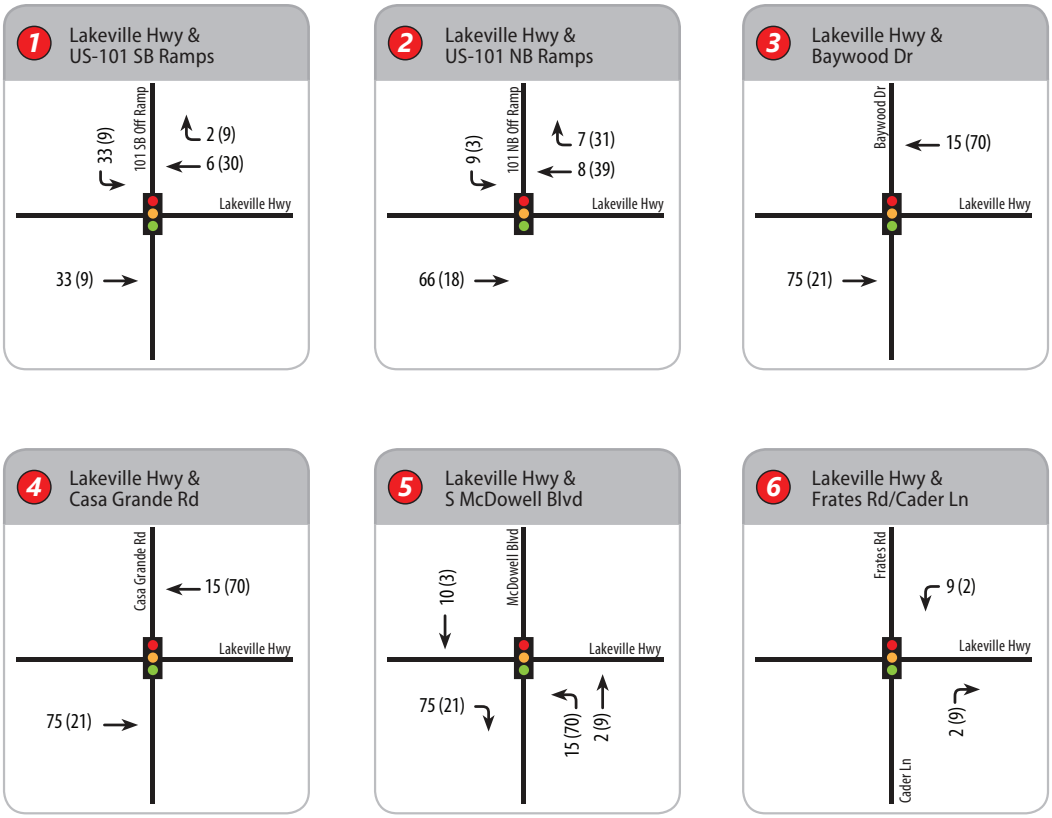
4.3 Project Trip Distribution and Assignment

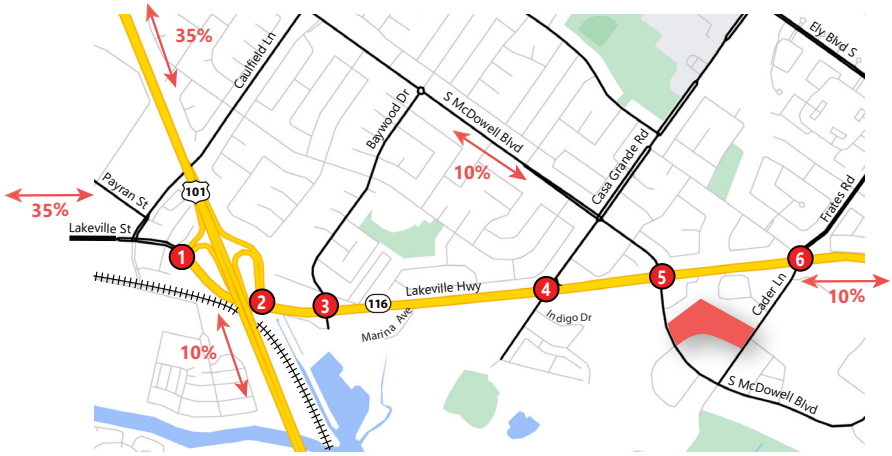
Trip distribution is a process that determines in what proportion vehicles would be expected to travel between the project site and various destinations outside the project study area. Assignment determines the various routes that vehicles would take from the project site to each destination using the calculated trip distribution. Trip distribution assumptions for the proposed development project were developed based on the trip distribution used for the 2019 BioMarin traffic study. The distribution assumptions for the proposed project are as follows:

- 35 percent to/from US-101 to the north
- 10 percent to/from US-101 to the south
- 35 percent to/from Lakeville Highway to the west
- 10 percent to/from Lakeville highway to the east
- 10 percent to/from McDowell Blvd. to the north

Figure 5 illustrates the trip distribution and trip assignment at the study intersections. The project trips were then added to traffic volumes under Existing Conditions to generate Existing plus Project Conditions traffic volumes.

Figure 5: Project Trip Distribution and Assignment





LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Trips
- (XX) PM Peak Hour Trips
- Traffic Signal
- XX% Trip Distribution

4.4 Intersection Level of Service Analysis – Existing plus Project Conditions

The intersection LOS analysis results for Existing plus Project Conditions are summarized in **Table 6**.

Under this scenario, five of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Northbound Ramps would continue to operate at LOS C during the am peak hour and LOS E during the p.m. peak hour, with an increase of 6.1 seconds of delay in the p.m. peak hour. Under the City of Petaluma General Plan, this is a potentially significant inconsistency. However, this can be fully mitigated by adding a westbound right turn overlap phase and optimizing signal timing. With mitigation, the project **would be consistent** with level of service standards set forth under the City of Petaluma General Plan.

Figure 6 shows projected turning movement volumes at all the study intersections for Existing plus Project Conditions. LOS and peak hour signal warrant worksheets are provided in **Appendix D**.

Table 4: Intersection Level of Service Analysis – Existing plus Project Conditions

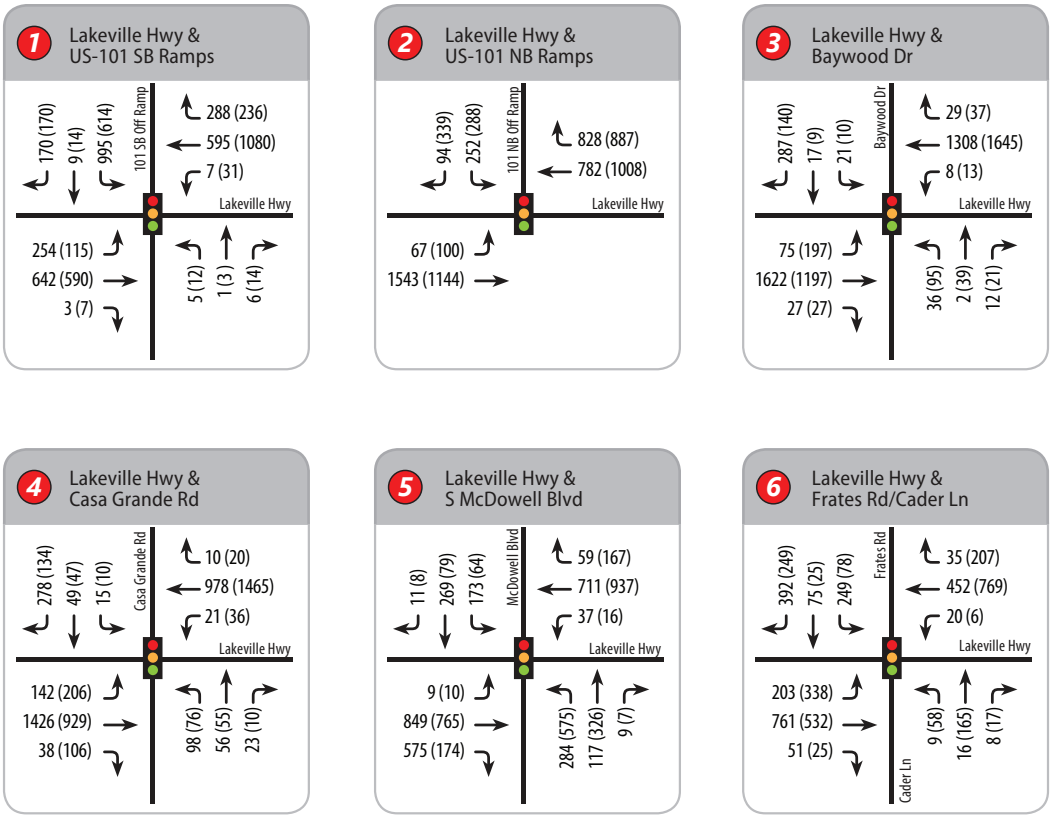
ID	*Intersection*	*Intersection Control*	*Peak Hour*	*Existing Conditions*		*Existing plus Project Conditions*		
				Average Delay[1]	*LOS[2]*	*Average Delay[1]*	*LOS[2]*	*Change in Delay[3]*
1	Lakeville Hwy. & US-101 SB Ramps	Signal	AM	46.8	D	49.2	D	2.4
			PM	40.5	D	43.4	D	2.9
2	Lakeville Hwy. & US-101 NB Ramps	Signal	AM	20.6	C	21.8	C	1.2
			PM	**62.5**	**E**	**68.6**	**E**	**6.1**
	Mitigation: Optimize Timing, add WBR Overlap	*Signal*	*AM*			*10.7*	*B*	*-9.9*
			PM			*14.6*	*B*	*-47.9*
3	Lakeville Hwy. & Baywood Dr.	Signal	AM	28.4	C	30.5	C	2.1
			PM	44.4	D	50.3	D	5.9
4	Lakeville Hwy. & Casa Grande Rd.	Signal	AM	19.5	B	21.2	C	1.7
			PM	16.7	B	17.8	B	1.1
5	Lakeville Hwy. & S. McDowell Blvd.	Signal	AM	38.3	D	47.5	D	9.2
			PM	30.6	C	36.1	D	5.5
6	Lakeville Hwy. & Frates Rd./Cader Ln.	Signal	AM	19.8	B	20.1	C	0.3
			PM	33.7	C	33.8	C	0.1

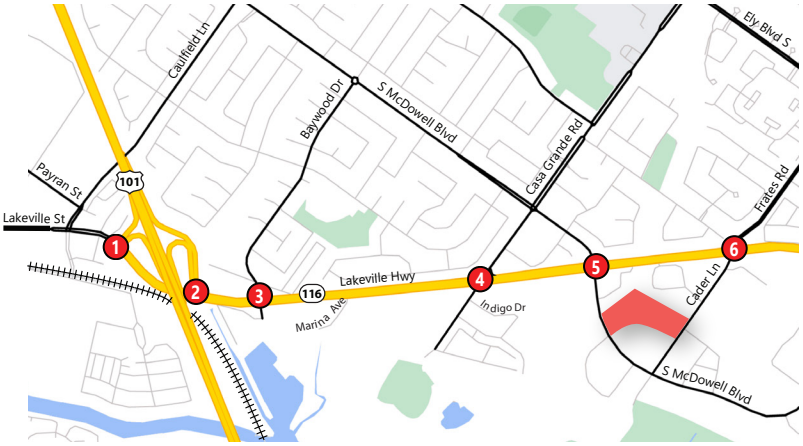
Notes: AM – morning peak hour, PM – evening peak hour

Bold indicates unacceptable operational conditions based on applicable jurisdictional standards. **Red** indicates significant impact.

1. Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS = Level of Service

Figure 6: Existing Plus Project Traffic Volumes





LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

4.5 Intersection Queuing Analysis

The 95th percentile queue lengths were calculated for dedicated turn lanes at all study intersections under Existing and Existing plus Project Conditions. The project would add trips to dedicated turn lanes at four intersections. **Table 6** details the existing traffic volumes, added project trips, and queue lengths at all dedicated turn lanes at the signalized study intersections.

Under Existing Conditions, the 95th percentile queue lengths would overflow the available storage length at three of the study intersections. At the intersections of Lakeville Highway & Baywood Drive and Lakeville Highway & Frates Road/Cader Lane, added project traffic would not increase the existing overflows. At the intersection of Lakeville Highway & S. McDowell Boulevard, added project trips would increase the northbound left turn queue overflow by 25 ft. in the a.m. peak hour and 110 ft. in the p.m. peak hour. Queuing worksheets for each scenario are provided in **Appendix C** and **Appendix D**.

Table 6. 95th Percentile Queue Lengths– Existing and Existing plus Project Conditions

ID	Study Intersection	Lane Group	Storage Length	Peak Hour	Existing Volume	Project Trips	Existing Conditions Queue Length	Existing plus Project Conditions Queue Length	Existing plus Project Conditions Change in Queue
1	Lakeville Hwy. & US-101 SB Ramps	EBL	170	AM	254	0	155	155	0
				PM	115	0	70	70	0
		WBL	80	AM	7	0	20	20	0
				PM	31	0	50	50	0
		WBR	285	AM	286	2	65	65	0
				PM	227	9	50	50	0
2	Lakeville Hwy. & US-101 NB Ramps	EBL	475	AM	67	0	70	70	0
				PM	100	0	90	90	0
		WBR	350	AM	821	7	55	55	0
				PM	856	31	70	80	10
3	Lakeville Hwy. & Baywood Dr.	EBL	350	AM	75	0	90	90	0
				PM	197	0	285	285	0
		WBL	110	AM	8	0	20	20	0
				PM	13	0	30	30	0
		NBL	75	AM	36	0	55	55	0
				PM	95	0	**170**	**170**	**0**
4	Lakeville Hwy. & Casa Grande Rd.	EBL	230	AM	142	0	145	145	0
				PM	206	0	220	220	0
		WBL	270	AM	21	0	30	30	0
				PM	36	0	50	50	0
		NBL	95	AM	98	0	80	80	0
				PM	76	0	80	80	0
		SBR	140	AM	278	0	115	115	0
				PM	134	0	50	50	0
5	Lakeville Hwy. & S. McDowell Blvd.	EBL	225	AM	9	0	20	20	0
				PM	10	0	25	25	0
		WBL	105	AM	37	0	65	65	0
				PM	16	0	30	30	0
		NBL	240	AM	269	15	**335**	**360**	**25**
				PM	505	70	**520**	**630**	**110**
		SBL	130	AM	173	0	**200**	**200**	**0**
				PM	64	0	85	85	0
6	Lakeville Hwy. & Frates Rd./Cader Ln.	EBL	320	AM	203	0	190	190	0
				PM	338	0	**365**	**365**	**0**
		WBL	340	AM	11	9	20	30	10
				PM	4	2	15	15	0
		NBL	120	AM	9	0	15	15	0
				PM	58	0	95	95	0
		SBL	125	AM	249	0	**225**	**225**	**0**
				PM	78	0	125	125	0
		SBR	145	AM	392	0	110	110	0
				PM	249	0	115	115	0

Notes:
95th percentile queue lengths expressed in feet, rounded to the nearest five feet
* Average storage per lane, where dual turn lanes provide different storage lengths
Bold indicates queue length exceeds storage capacity
Red indicates queue length increases by more than one vehicle length

5.0 EXISTING PLUS APPROVED PROJECTS

This scenario includes traffic generated by approved projects in the project vicinity. This scenario is based on the Baseline plus Project Conditions in the 2019 BioMarin study.

Existing plus Approved Project conditions were assessed to reflect the addition of the traffic associated with known projects that may be constructed and/or become operational in the study area in the next two to three years. Following the projects were included in this scenario:

- BioMarin Petaluma Project: 32,000 sq. ft. of R& D space and 40,000 sq. ft. of warehousing
- Riverfront Courtyard Marriott – 122 room hotel
- Cagwin and Dorwin – 100 employee office building
- Labcon Phase IV Expansion – 40,000 sq. ft. of warehousing
- Petaluma Poultry Expansion – expanding floors pace with addition of 24-hour operation
- Riverfront 2010- 273 residential units and up to 60,000 square feet of
- Riverview Apartments – 200 unit apartment complex
- Sartori Historic SPAR/Subdivision – subdivide into seven parcels
- Altura Apartments- 150- units apartments complex to be located at the northwest corner of Baywood Drive/Perry Lane

5.1 Intersection Level of Service Analysis – Existing plus Approved Project Conditions

The intersection LOS analysis results for Existing plus Approved Projects Conditions are summarized in **Table 5**.

Under this scenario, three of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would operate at LOS E in the a.m. peak hour and LOS D in the p.m. peak hour. Lakeville Highway & US-101 Northbound Ramps would operate at LOS C during the am peak hour and LOS F during the p.m. peak hour. Lakeville Highway & Baywood Drive would operate at LOS C during the am peak hour and LOS E during the p.m. peak hour.

Figure 7 shows projected turning movement volumes at all the study intersections for Existing plus Approved Project Conditions. LOS and peak hour signal warrant worksheets are provided in **Appendix E**.

Table 5: Intersection Level of Service Analysis – Existing plus Approved Project Conditions

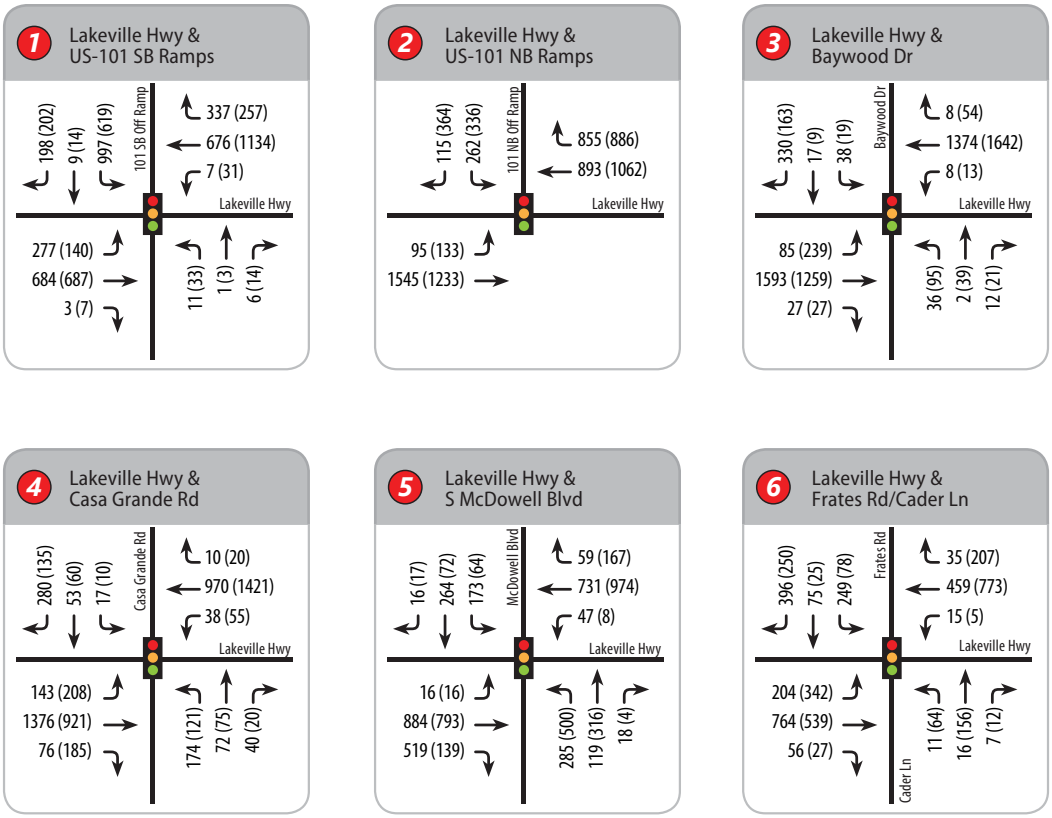
ID	*Intersection*	*Intersection Control*	*Peak Hour*	*Existing plus Approved Projects Conditions*	
				Average Delay[1]	*LOS*[2]
1	Lakeville Hwy. & US-101 SB Ramps	Signal	AM	**63.1**	**E**
			PM	49.2	D
2	Lakeville Hwy. & US-101 NB Ramps	Signal	AM	27.4	C
			PM	**70.5**	**F**
3	Lakeville Hwy. & Baywood Dr.	Signal	AM	31.6	C
			PM	**55.9**	**E**
4	Lakeville Hwy. & Casa Grande Rd.	Signal	AM	24.5	C
			PM	21.3	C
5	Lakeville Hwy. & S. McDowell Blvd.	Signal	AM	46.0	D
			PM	31.7	C
6	Lakeville Hwy. & Frates Rd./Cader Ln.	Signal	AM	20.4	C
			PM	34.8	C

Notes: AM – morning peak hour, PM – evening peak hour

Bold indicates unacceptable operational conditions based on applicable jurisdictional standards. **Red** indicates significant impact.

1. Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS = Level of Service

Figure 7: Existing plus Approved Project Traffic Volumes



LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

6.0 EXISTING PLUS APPROVED PLUS PROPOSED PROJECT CONDITIONS

This scenario is identical to Existing plus Approved Project Conditions, but with the addition of traffic from the proposed project.

6.1 Intersection Level of Service Analysis – Existing plus Approved plus proposed Project Conditions

The intersection LOS analysis results for Existing plus Approved plus proposed Project Conditions are summarized in **Table 7**.

Under this scenario, two of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would continue to operate at LOS E in the a.m. peak hour and LOS D in the p.m. peak hour, with an increase of 3.5 seconds in the a.m. peak hour. Lakeville Highway & US-101 Northbound Ramps would continue to operate at LOS C during the am peak hour and LOS F during the p.m. peak hour, with an increase of 6.5 seconds in the p.m. peak hour. Lakeville Highway & Baywood Drive would continue to operate at LOS C during the am peak hour and LOS E during the p.m. peak hour, with an increase of 7.3 seconds in the p.m. peak hour. In addition, at the intersection of Lakeville Highway & S. McDowell Boulevard would degrade to LOS E in the a.m. peak hour and LOS D in the p.m. peak hour. Three of these intersections experience potentially significant inconsistencies. However, these can be fully mitigated with the following changes:

- Lakeville Highway & US-101 Southbound Ramps: optimize signal timing
- Lakeville Highway & US-101 Northbound Ramps: optimize signal timing and add a westbound right turn overlap phase
- Lakeville Highway & Baywood Drive: optimize signal timing
- Lakeville Highway & S. McDowell Boulevard: optimize signal timing

With mitigation, the project **would be consistent** with level of service standards set forth under the City of Petaluma General Plan.

Figure 8 shows projected turning movement volumes at all the study intersections for Existing plus Approved plus Proposed Project Conditions. LOS and peak hour signal warrant worksheets are provided in **Appendix F**.

Table 7: Intersection Level of Service Analysis – Existing plus Approved plus Proposed Conditions

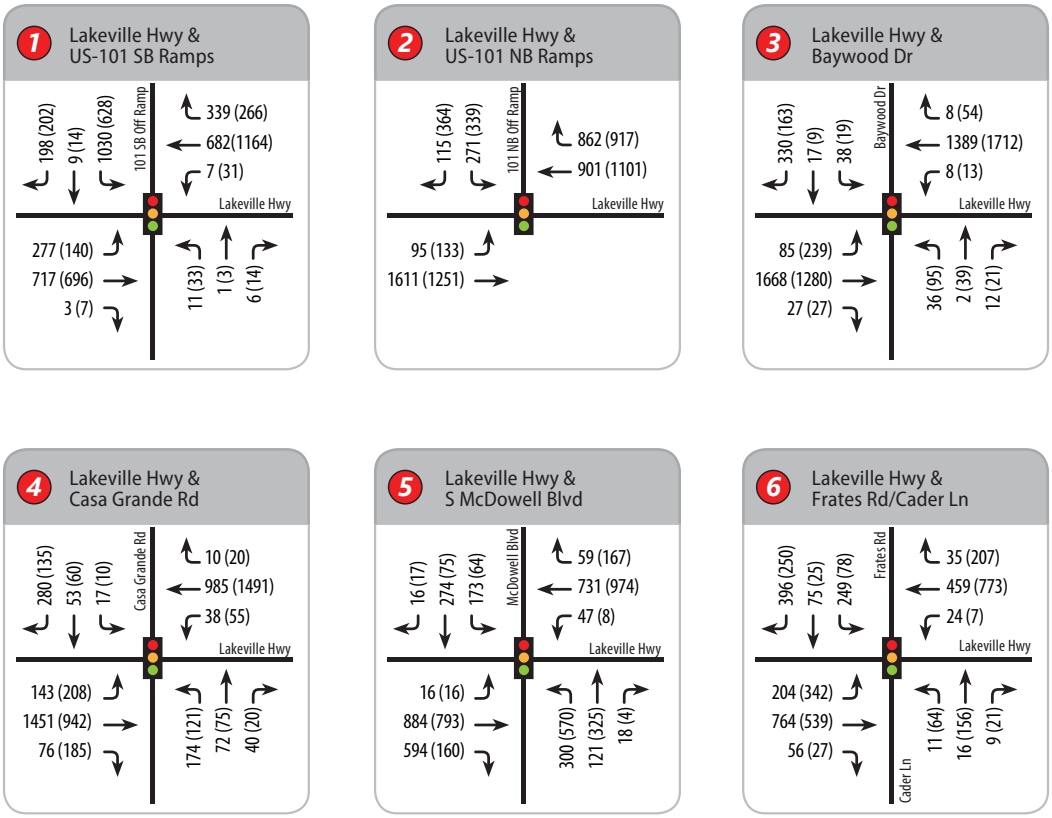
ID	Intersection	Intersection Control	Peak Hour	Existing plus Approved Projects Conditions		Existing plus Approved plus Proposed Project Conditions		
				Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]	Change in Delay[3]
1	Lakeville Hwy. & US-101 SB Ramps	Signal	AM	**63.1**	**E**	**66.6**	**E**	**3.5**
			PM	49.2	D	53.2	D	4.0
	Mitigation: Optimize Timing	*Signal*	*AM*			*54.6*	*D*	*-8.5*
			PM			*42.7*	*D*	*-6.5*
2	Lakeville Hwy. & US-101 NB Ramps	Signal	AM	27.4	C	28.8	C	1.4
			PM	**70.5**	**F**	**77.0**	**F**	**6.5**
	Mitigation: Optimize Timing, add WBR Overlap	*Signal*	*AM*			*12.1*	*B*	*-15.3*
			PM			*17.4*	*B*	*-53.1*
3	Lakeville Hwy. & Baywood Dr.	Signal	AM	31.6	C	34.3	C	2.7
			PM	**55.9**	**E**	**63.2**	**E**	**7.3**
	Mitigation: Optimize Timing	*Signal*	*AM*			*33.9*	*C*	*2.3*
			PM			*44.2*	*D*	*-11.7*
4	Lakeville Hwy. & Casa Grande Rd.	Signal	AM	24.5	C	27.5	C	3.0
			PM	21.3	C	23.0	C	1.7
5	Lakeville Hwy. & S. McDowell Blvd.	Signal	AM	46.0	D	**56.1**	**E**	**10.1**
			PM	31.7	C	37.5	D	5.8
	Mitigation: Optimize Timing	*Signal*	*AM*			*48.9*	*D*	*2.9*
			PM			*35.1*	*D*	*3.4*
6	Lakeville Hwy. & Frates Rd./Cader Ln.	Signal	AM	20.4	C	20.7	C	0.3
			PM	34.8	C	34.9	C	0.1

Notes: AM – morning peak hour, PM – evening peak hour

Bold indicates unacceptable operational conditions based on applicable jurisdictional standards. **Red** indicates significant impact.

1. Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS = Level of Service

Figure 8: Existing plus Approved plus Proposed Project Traffic Volumes



LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

7.0 CUMULATIVE NO-PROJECT CONDITIONS (2040)

This scenario considers the development of the city and surrounding communities in the future, using the City of Petaluma Traffic Model. This scenario is based on the Future plus Project Conditions in the 2019 BioMarin study. Although the horizon year for this model is 2025, the BioMarin study noted that, "due to economic conditions since the General Plan was completed, it is expected that build-out of the General Plan land uses would occur after 2025. It should be noted that at some study intersections, Cumulative Conditions traffic volumes are lower than Existing plus Approved Projects Conditions.

Figure 9 shows projected turning movement volumes at the study intersections for Cumulative Conditions for a.m. and p.m. peak hours.

7.1 Intersections Level of Service Analysis – Cumulative No-Project Conditions

The intersection LOS analysis results for Cumulative No-Project Conditions are summarized in **Table 8**. Under this scenario, two of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would operate at LOS F during both peak hours. Lakeville Highway & US-101 Northbound Ramps would operate at LOS C during the am peak hour and LOS F during the p.m. peak hour. Lakeville Highway South McDowell Boulevard would operate at LOS E during the a.m. peak hour and LOS D during the p.m. peak hour. Lakeville Highway & Frates Road/Cader Lane would operate at LOS F during the am peak hour and LOS D during the p.m. peak hour. It should be noted that the LOS at Lakeville Highway & Baywood Drive is better under Cumulative Conditions than under Existing plus Approved Project Conditions, due to lower project traffic volumes at that intersection.

LOS worksheets are provided in **Appendix G**.

Table 8: Intersection Level of Service Analysis – Cumulative Conditions

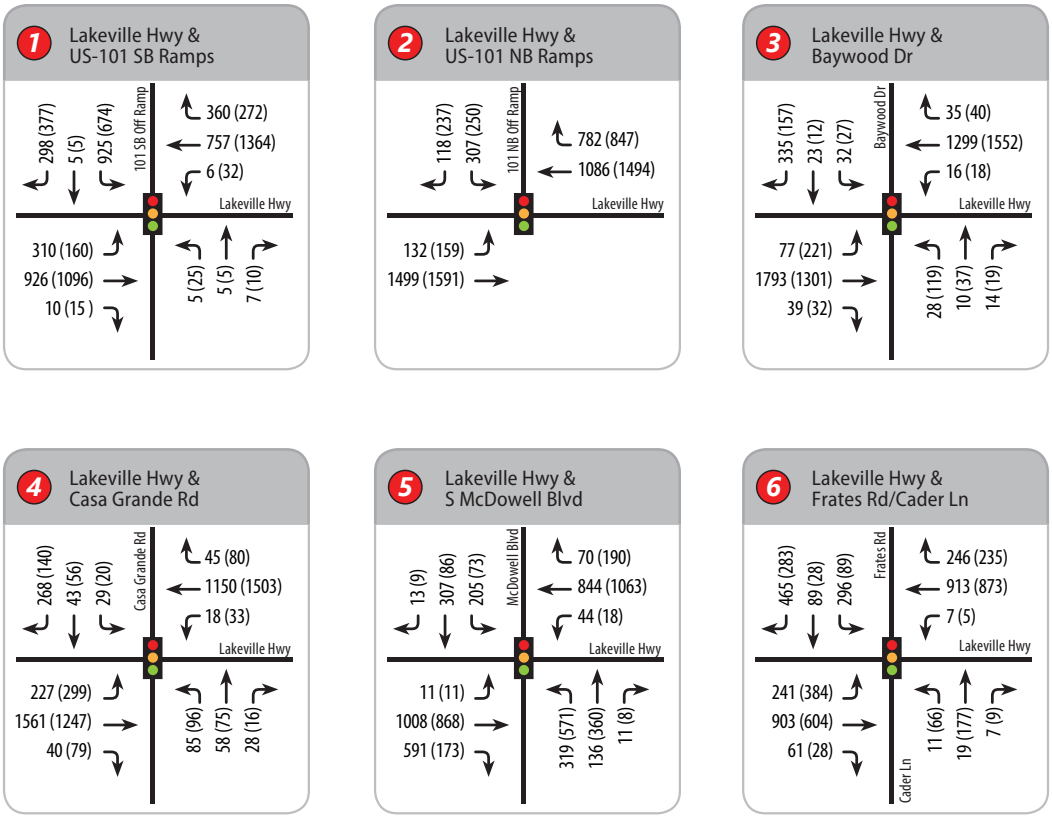
ID	*Intersection*	*Intersection Control*	*Peak Hour*	*Cumulative Conditions*	
				Average Delay[1]	*LOS*[2]
1	Lakeville Hwy. & US-101 SB Ramps	Signal	AM	**82.7**	**F**
			PM	**97.7**	**F**
2	Lakeville Hwy. & US-101 NB Ramps	Signal	AM	24.1	C
			PM	**92.8**	**F**
3	Lakeville Hwy. & Baywood Dr.	Signal	AM	42.5	D
			PM	47.3	D
4	Lakeville Hwy. & Casa Grande Rd.	Signal	AM	28.3	C
			PM	27.7	C
5	Lakeville Hwy. & S. McDowell Blvd.	Signal	AM	**73.1**	**E**
			PM	43.6	D
6	Lakeville Hwy. & Frates Rd./Cader Ln.	Signal	AM	**87.5**	**F**
			PM	54.4	D

Notes: AM – morning peak hour, PM – evening peak hour

Bold indicates unacceptable operational conditions based on applicable jurisdictional standards. **Red** indicates significant impact.

1. Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS = Level of Service

Figure 9: Cumulative Traffic Volumes



LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

8.0 CUMULATIVE PLUS PROJECT CONDITIONS

This scenario is identical to Cumulative No-Project Conditions, but with the addition of projected traffic from the proposed project. Trip generation, distribution, and assignment for the proposed project are identical to that assumed under Existing plus Project Conditions.

8.1 Intersection Level of Service Analysis – Cumulative plus Project Conditions

The intersection LOS analysis results for Cumulative plus Project Conditions are summarized in **Table 9**.

Under this scenario, two of the six study intersections would continue to operate within applicable jurisdictional standards of LOS D or better during both peak hours. The intersection of Lakeville Highway & US-101 Southbound Ramps would continue to operate at LOS F during both peak hours, with an increase of over five seconds of average delay during both peak hours. Lakeville Highway & US-101 Northbound Ramps would continue to operate at LOS C during the am peak hour and LOS F during the p.m. peak hour, with an increase of 9.8 seconds in the p.m. peak hour. The intersection of Lakeville Highway & S. McDowell Boulevard would degrade to LOS F in the a.m. peak hour, with an increase of 14.4 seconds. Lakeville Highway & Frates Road/Cader Lane would continue to operate at LOS F during the am peak hour and LOS D during the p.m. peak hour, with minimal increases in average delay. Three of these intersections experience potentially significant impacts. However, these can be fully mitigated with the following changes:

- Lakeville Highway & US-101 Southbound Ramps: optimize signal timing
- Lakeville Highway & US-101 Northbound Ramps: optimize signal timing and add a westbound right turn overlap phase
- Lakeville Highway & S. McDowell Boulevard: optimize signal timing
- Lakeville Highway & Frates Road/Cader Lane : optimize signal timing

With mitigation, the project **would be consistent** with level of service standards set forth under the City of Petaluma General Plan.

Figure 10 shows projected turning movement volumes at all the study intersections for Cumulative plus Project Conditions. LOS and peak hour signal warrant worksheets are provided in **Appendix H**

Table 9: Intersection Level of Service Analysis – Cumulative plus Project Conditions

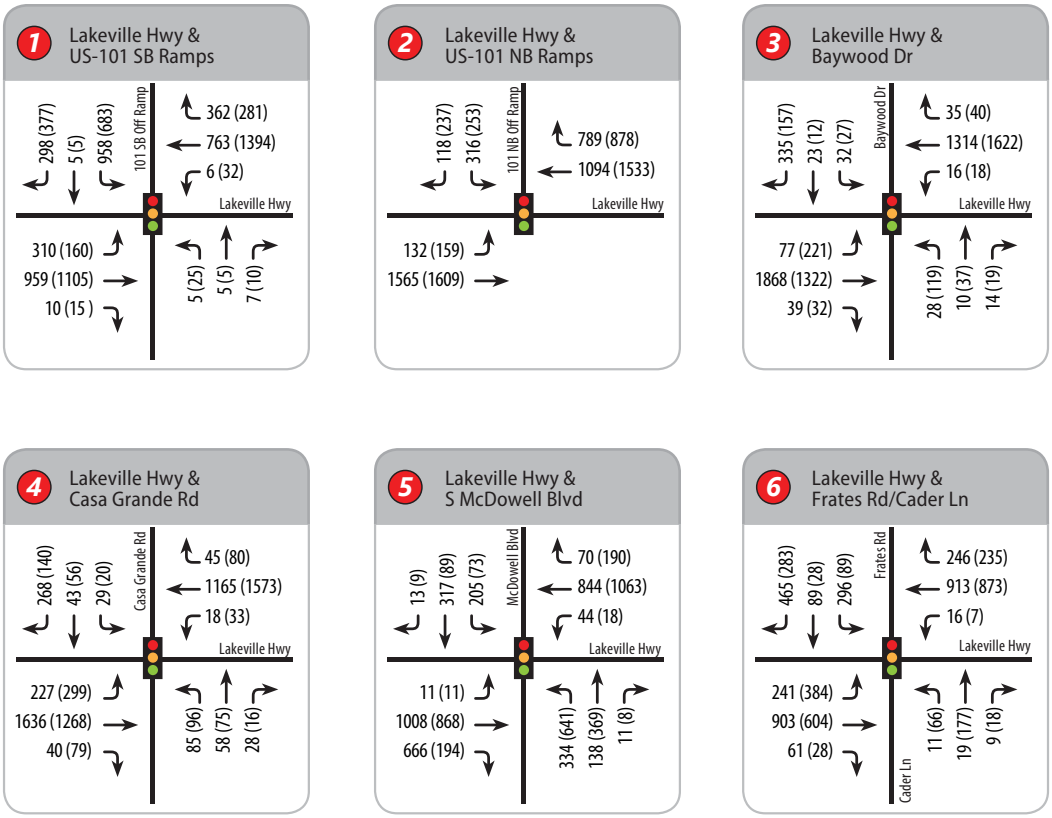
ID	Intersection	Intersection Control	Peak Hour	Cumulative Conditions		Cumulative plus Project Conditions		
				Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]	Change in Delay[3]
1	Lakeville Hwy. & US-101 SB Ramps	Signal	AM	**82.7**	**F**	**88.2**	**F**	**5.5**
			PM	**97.7**	**F**	**102.8**	**F**	**5.1**
	Mitigation: Optimize Timing	*Signal*	*AM*			*52.1*	*D*	*-30.6*
			PM			***58.6***	***E***	*-39.1*
2	Lakeville Hwy. & US-101 NB Ramps	Signal	AM	24.1	C	25.3	C	1.2
			PM	**92.8**	**F**	**102.6**	**F**	**9.8**
	Mitigation: Optimize Timing, add WBR Overlap	*Signal*	*AM*			*13.8*	*B*	*-10.3*
			PM			*17.8*	*B*	*-75.0*
3	Lakeville Hwy. & Baywood Dr.	Signal	AM	42.5	D	49.3	D	6.8
			PM	47.3	D	52.7	D	5.4
4	Lakeville Hwy. & Casa Grande Rd.	Signal	AM	28.3	C	31.9	C	3.6
			PM	27.7	C	30.3	C	2.6
5	Lakeville Hwy. & S. McDowell Blvd.	Signal	AM	**73.1**	**E**	**87.5**	**F**	**14.4**
			PM	43.6	D	41.4	D	-2.2
	Mitigation: Optimize Timing	*Signal*	*AM*			***69.1***	***E***	*-4.0*
			PM			*38.5*	*D*	*-5.1*
6	Lakeville Hwy. & Frates Rd./Cader Ln.	Signal	AM	**87.5**	**F**	**87.7**	**F**	**0.2**
			PM	54.4	D	54.4	D	0.0
	Mitigation: Optimize Timing	*Signal*	*AM*			*45.6*	*D*	*-41.9*
			PM			*48.0*	*D*	*-6.4*

Notes: AM – morning peak hour, PM – evening peak hour

Bold indicates unacceptable operational conditions based on applicable jurisdictional standards. **Red** indicates significant impact.

1. Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS = Level of Service

Figure 10: Cumulative plus Project Traffic Volumes



LEGEND

- Project Site
- Study Intersection
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes
- Traffic Signal

9.0 ADDITIONAL ANALYSIS

The following sections provide additional analyses of other transportation issues associated with the project site, including:

- Site access and impacts
- Parking analysis
- Local Road Safety Plan
- Recommendations

The analyses in these sections are based on professional judgment in accordance with the standards and methods employed by traffic engineers. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

9.1 Site Access, Circulation, and Multimodal Impacts

This section analyzes site access and internal circulation based on the site plan presented in **Figure 2**, dated January 14, 2022.

Vehicle Access and Circulation

The proposed project would connect to the parking lots and drive aisles of the existing Labcon facilities immediately to the northeast. Access to the project site would be via two new driveways on Fisher Drive and two existing driveways on Cader Lane. The loading docks would be closest to the southern driveway on Cader Lane, which currently serves the loading docks at the existing buildings on the site. The new driveways on Fisher Drive would provide access to the majority of automobile spaces. The proposed driveways, drive aisles, and parking appear to satisfy City of Petaluma design requirements. Vehicle access to the project is considered **adequate** and would not result in any significant impacts to the nearby roadways.

Sight Distance

A substantially clear line of sight should be maintained between the driver of a vehicle waiting at a driveway and the driver of an approaching vehicle. Sight distances along Fisher Drive and Cader Lane from the project driveways were evaluated based on sight distance criteria contained in the Highway Design Manual by Caltrans. The recommended sight distance for driveway approached is based on stopping sight distance using the approach travel speed as the basis for determining the recommended sight distance. Based on the prima facie speed limit of 25 mph on both Fisher Drive and Caser Lane, the minimum stopping sight distance required is 150 feet, measured along the centerline of the approaching vehicle's path of travel. The sight distances at the new project driveways are expected to be adequate, based on driveway locations and roadway alignment. Landscaping and signs near the driveways should be located to ensure maintenance of adequate sight lines.

Emergency Access

The Site Circulation, Loading and Parking Plan, drawing A1.1 dated September 14, 2022 identifies the fire apparatus access and circulation within the proposed project. This analysis shown on the plans by the

architect accounts for turning radii of the largest fire engines. This should be verified by the responding fire agency to the project area.

Pedestrian Access, Circulation, and Impacts

Pedestrian access to the project site would be via new sidewalks to be constructed along the project frontages on Fisher Drive and Cader Lane. These would connect to existing sidewalks on Cader Lane and S. McDowell Boulevard. However, the project site plan does not show any marked accessible paths between the public sidewalk and the proposed building. TJKM recommends that such paths be added, similar to those present on the completed portions of the Labcon site, which connect the buildings to Lakeville highway and Cader Lane.

A significant impact occurs if the proposed project conflicts with applicable or adopted policies, plans or programs related to pedestrians facilities or otherwise decreases the performance or safety of pedestrian facilities. The proposed project will not result in any such conflicts. With the addition of accessible paths, pedestrian access to the project site would be considered **adequate** and would not result in any significant impacts to the nearby pedestrian facilities.

Bicycle Access, Circulation, and Impacts

Bicycle access to the project site would be via existing Class II bike lanes on S. McDowell Boulevard and along Cader Lane north of the project site. The existing bike lanes on Cader Lane end at the edge of the developed portion of the Labcon facility. Although not required, TJKM recommends that the site plan be revised to include new bike lanes along the project frontages on Cader Lane and Fisher Drive.

An impact to bicyclists occurs if the proposed project disrupt existing bicycle facilities; or conflict or create inconsistencies with adopted bicycle system plans, guidelines, and policies. A significant impact occurs if the proposed project conflicts with applicable or adopted policies, plans or programs related to bicycle facilities or otherwise decrease the performance or safety of bicycle facilities. The proposed project will not result in any such conflicts. Bicycle access to the project site is considered **adequate** and would not result in any significant impacts to the nearby bicycle facilities.

Transit Access and Impacts

Existing transit routes are adequate to accommodate project-generated transit trips. There are existing bus stops for multiple routes on S. McDowell Boulevard and Lakeville Highway. Existing stops are within an acceptable walking distance of the site.

A proposed project is considered to have a significant impact on transit if it conflicts with existing or planned transit facilities, or is expected to generate additional transit trips and does not provide adequate facilities for pedestrians and bicyclists to access transit routes and stops. It is expected that few, if any, visitors would travel to the project via transit without a vehicle trip between Higgins Corner and the project site. The transit service within the immediate project site operates within capacity, and additional trips generated by the proposed project could be accommodated by existing bus services. The proposed project would not result in any significant impacts to the nearby transit network.

9.2 Parking

Parking standards for the majority of the City are provided in Chapter 11 of the City's Zoning Code. Standards for accessible parking spaces are required in compliance with the Uniform Building Code (UBC), the Federal Accessibility Guidelines, and the California Code of Regulations Title 24. Bicycle parking is required at a rate of 10 percent of automobile spaces provided. Additionally, the proposed project is located within the Lakeview Business District, which established modified parking requirements with a range of parking ratios that can be applied.

Under City requirements for the Lakeville Business District, the minimum number of required spaces is one space per 450 sq. ft. of manufacturing, one space per 900 sq. ft. of warehousing, and one space per 300 sq. ft. of commercial, office, or research and development. The project would consist of 79,000 sq. ft. of manufacturing, 64,000 sq. ft. of warehousing, and 32,000 sq. ft. of office space. Using the minimum parking ratios, the project would require 353 parking spaces. As shown in **Figure 2**, the project would construct 288 new parking spaces, including 12 accessible spaces. There would be a total of 23 bicycle spaces provided. As the proposed vehicle parking supply is below the minimum that would typically be required, TJKM also reviewed parking demand rates in the Institute of Transportation Engineers publication *Parking Generation, 5th Edition*. Parking demand represents the maximum number of spaces actually occupied for a variety of land uses. Rates are expressed in spaces per 1,000 sq. ft.: 0.92 for manufacturing, 0.39 for warehousing, and 3.1 for office. Applying these rates to the proposed project, the expected parking demand would be 197 spaces. The proposed parking supply is approximately midway between expected parking demand and the parking supply required by the City. Although the parking supply for the proposed project does not satisfy City of Petaluma requirements, it is expected to be **adequate** based on projected parking demand. TJKM recommends that the applicant confirm with City staff that the proposed parking supply would be acceptable.

9.3 Local Road Safety Plan

According to the City of Petaluma's Draft Final Local Roadway Safety Plan (LRSP), dated August 1, 2022, four of the six studied intersections are identified as prioritized locations for improved safety based on collision data. These four intersections are Lakeville Hwy. & US-101 SB Ramps, Lakeville Hwy. & Baywood Dr., Lakeville Hwy. & Casa Grande Rd., and Lakeville Hwy. & S. McDowell Blvd.

The LRSP identifies recommended countermeasures for these locations as improved signal timing. This recommendation is in agreement with the recommended LOS mitigation measure of optimized signal timing for the Existing plus Approved plus Proposed Project Conditions for the intersections of Lakeville Hwy. & S. McDowell Blvd. and Lakeville Hwy. & Baywood Dr. It is also in agreement with the recommended LOS mitigation measure of optimized signal timing for the Cumulative plus Proposed Project Conditions for the intersections of Lakeville Hwy. & S. McDowell Blvd. and Lakeville Hwy. & US-

101 SB Ramps. Therefore, not only would these mitigations reduce project traffic impacts, they are also projected to improve traffic safety in key in priority areas in the city.

9.4 RECOMMENDATIONS

TJKM recommends the following:

- Landscaping and signage along the project frontages should be designed to ensure that adequate sight lines are maintained.
- Add continuous accessible pedestrian paths connecting the sidewalks on the project frontages to the new building.
- The applicant should confirm with City staff that the proposed parking supply would be acceptable.

Appendix A – Existing Turning Movement Counts

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HCM 2010 Signalized Intersection Summary
1: In-n-Out Driveway/US 101 SB Ramps & Lakeville St/Lakeville Hwy

04/23/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	609	3	7	589	286	5	1	6	962	9	170
Future Volume (veh/h)	254	609	3	7	589	286	5	1	6	962	9	170
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.91	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1728	1900	1863	1652	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	267	641	3	7	620	301	5	1	6	1019	0	179
Adj No. of Lanes	2	2	0	1	2	1	0	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	919	1688	8	19	733	370	7	1	9	1139	0	931
Arrive On Green	0.27	0.50	0.50	0.02	0.47	0.47	0.01	0.01	0.01	0.32	0.00	0.32
Sat Flow, veh/h	3442	3351	16	1774	3139	1583	665	133	798	3548	0	1583
Grp Volume(v), veh/h	267	314	330	7	620	301	12	0	0	1019	0	179
Grp Sat Flow(s),veh/h/ln	1721	1641	1725	1774	1570	1583	1597	0	0	1774	0	1583
Q Serve(g_s), s	6.8	12.9	12.9	0.4	19.1	18.0	0.8	0.0	0.0	30.1	0.0	0.0
Cycle Q Clear(g_c), s	6.8	12.9	12.9	0.4	19.1	18.0	0.8	0.0	0.0	30.1	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.42		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	919	827	869	19	733	370	18	0	0	1139	0	931
V/C Ratio(X)	0.29	0.38	0.38	0.38	0.85	0.81	0.67	0.00	0.00	0.89	0.00	0.19
Avail Cap(c_a), veh/h	919	827	869	105	1044	527	71	0	0	1293	0	1000
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.0	16.7	16.7	53.5	27.6	27.3	54.2	0.0	0.0	35.6	0.0	10.5
Incr Delay (d2), s/veh	0.2	1.3	1.3	4.3	10.8	16.5	36.1	0.0	0.0	7.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.1	6.4	0.2	9.2	9.4	0.5	0.0	0.0	15.9	0.0	2.5
LnGrp Delay(d),s/veh	32.2	18.1	18.0	57.7	38.4	43.8	90.3	0.0	0.0	43.3	0.0	10.6
LnGrp LOS	C	B	B	E	D	D	F			D		B
Approach Vol, veh/h		911			928			12			1198	
Approach Delay, s/veh		22.2			40.3			90.3			38.4	
Approach LOS		C			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	60.4		40.2	34.4	30.7		4.7
Change Period (Y+Rc), s	3.5	5.0		4.9	5.0	* 5		3.5
Max Green Setting (Gmax), s	6.5	41.6		40.1	10.5	* 37		4.9
Max Q Clear Time (g_c+I1), s	2.4	14.9		32.1	8.8	21.1		2.8
Green Ext Time (p_c), s	0.0	3.9		3.2	0.2	4.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
2: Lakeville Hwy & US 101 NB Ramps

04/23/2019

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	67	1477	774	821	243	94
Future Volume (veh/h)	67	1477	774	821	243	94
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1638	1652	1863	1863	1863
Adj Flow Rate, veh/h	74	1641	860	912	270	104
Adj No. of Lanes	1	2	2	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	116	2533	2237	1125	346	262
Arrive On Green	0.13	1.00	0.24	0.24	0.10	0.10
Sat Flow, veh/h	1774	3194	3222	1579	3442	1583
Grp Volume(v), veh/h	74	1641	860	912	270	104
Grp Sat Flow(s),veh/h/ln	1774	1556	1570	1579	1721	1583
Q Serve(g_s), s	4.4	0.0	25.3	60.0	8.4	6.5
Cycle Q Clear(g_c), s	4.4	0.0	25.3	60.0	8.4	6.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	116	2533	2237	1125	346	262
V/C Ratio(X)	0.64	0.65	0.38	0.81	0.78	0.40
Avail Cap(c_a), veh/h	177	2533	2237	1125	957	544
HCM Platoon Ratio	2.00	2.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	0.78	0.78	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	21.8	35.1	48.3	41.0
Incr Delay (d2), s/veh	1.7	1.0	0.5	6.4	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.4	11.2	28.3	4.1	5.8
LnGrp Delay(d),s/veh	48.3	1.0	22.3	41.4	49.7	41.3
LnGrp LOS	D	A	C	D	D	D
Approach Vol, veh/h		1715	1772		374	
Approach Delay, s/veh		3.0	32.1		47.4	
Approach LOS		A	C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		94.5		15.5	11.2	83.4		
Change Period (Y+Rc), s		5.0		4.4	4.0	5.0		
Max Green Setting (Gmax), s		70.0		30.6	11.0	55.0		
Max Q Clear Time (g_c+I1), s		2.0		10.4	6.4	62.0		
Green Ext Time (p_c), s		21.2		0.6	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
3: Baywood Dr & Lakeville Hwy

04/23/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1547	27	8	1293	29	36	2	12	21	17	287
Future Volume (veh/h)	75	1547	27	8	1293	29	36	2	12	21	17	287
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	79	1628	28	8	1361	31	39	2	13	23	18	309
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	431	1829	31	354	1660	38	49	24	157	33	221	566
Arrive On Green	0.24	0.50	0.50	0.13	0.31	0.31	0.03	0.12	0.12	0.02	0.12	0.12
Sat Flow, veh/h	1774	3649	63	1774	3627	83	1774	209	1359	1774	1863	1528
Grp Volume(v), veh/h	79	830	826	8	698	694	39	0	15	23	18	309
Grp Sat Flow(s),veh/h/ln	1774	1863	1849	1774	1863	1847	1774	0	1568	1774	1863	1528
Q Serve(g_s), s	3.9	44.1	44.3	0.4	38.2	38.3	2.4	0.0	0.9	1.4	0.9	1.5
Cycle Q Clear(g_c), s	3.9	44.1	44.3	0.4	38.2	38.3	2.4	0.0	0.9	1.4	0.9	1.5
Prop In Lane	1.00		0.03	1.00		0.04	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	431	934	927	354	852	845	49	0	181	33	221	566
V/C Ratio(X)	0.18	0.89	0.89	0.02	0.82	0.82	0.79	0.00	0.08	0.71	0.08	0.55
Avail Cap(c_a), veh/h	431	967	960	354	936	929	97	0	399	65	440	746
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	24.7	24.7	38.3	33.9	34.0	53.1	0.0	43.4	53.7	43.1	17.7
Incr Delay (d2), s/veh	0.2	12.3	12.7	0.0	6.9	7.0	9.8	0.0	0.1	9.9	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	25.8	25.8	0.2	21.3	21.2	1.3	0.0	0.4	0.8	0.5	5.9
LnGrp Delay(d),s/veh	33.2	37.0	37.4	38.3	40.8	40.9	63.0	0.0	43.5	63.6	43.2	18.0
LnGrp LOS	C	D	D	D	D	D	E		D	E	D	B
Approach Vol, veh/h		1735			1400			54			350	
Approach Delay, s/veh		37.0			40.8			57.6			22.3	
Approach LOS		D			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	60.4	6.1	17.5	30.8	55.6	6.4	17.1
Change Period (Y+Rc), s	4.1	5.3	3.0	4.4	4.1	* 5.3	4.4	* 4.4
Max Green Setting (Gmax), s	4.1	57.1	6.0	26.0	6.5	* 55	4.0	* 28
Max Q Clear Time (g_c+I1), s	2.4	46.3	4.4	3.5	5.9	40.3	3.4	2.9
Green Ext Time (p_c), s	0.0	8.8	0.0	0.7	0.0	10.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
4: Casa Grande Rd & Lakeville Hwy

04/23/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1351	38	21	963	10	98	56	23	15	49	278
Future Volume (veh/h)	142	1351	38	21	963	10	98	56	23	15	49	278
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1643	1900	1863	1652	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	149	1422	40	22	1014	0	103	59	24	16	52	293
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	538	1973	55	47	1102	556	358	261	106	101	302	324
Arrive On Green	0.20	0.43	0.43	0.05	0.70	0.00	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3099	87	1774	3139	1583	1340	1252	509	291	1448	1554
Grp Volume(v), veh/h	149	715	747	22	1014	0	103	0	83	68	0	293
Grp Sat Flow(s),veh/h/ln	1774	1561	1625	1774	1570	1583	1340	0	1761	1738	0	1554
Q Serve(g_s), s	7.8	41.7	41.9	1.3	29.9	0.0	2.8	0.0	4.3	0.0	0.0	20.2
Cycle Q Clear(g_c), s	7.8	41.7	41.9	1.3	29.9	0.0	6.1	0.0	4.3	3.3	0.0	20.2
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.29	0.24		1.00
Lane Grp Cap(c), veh/h	538	994	1034	47	1102	556	358	0	367	403	0	324
V/C Ratio(X)	0.28	0.72	0.72	0.46	0.92	0.00	0.29	0.00	0.23	0.17	0.00	0.90
Avail Cap(c_a), veh/h	538	994	1034	185	1470	741	455	0	495	525	0	436
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.7	23.4	23.5	51.3	15.1	0.0	36.7	0.0	36.1	35.7	0.0	42.4
Incr Delay (d2), s/veh	0.1	2.3	2.2	2.6	13.7	0.0	0.4	0.0	0.3	0.1	0.0	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	18.6	19.4	0.7	14.5	0.0	2.7	0.0	2.1	1.7	0.0	10.1
LnGrp Delay(d),s/veh	33.7	25.7	25.7	53.9	28.8	0.0	37.1	0.0	36.5	35.9	0.0	59.3
LnGrp LOS	C	C	C	D	C		D		D	D		E
Approach Vol, veh/h		1611			1036			186			361	
Approach Delay, s/veh		26.4			29.3			36.8			54.9	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	75.5		27.1	38.8	44.1		27.1
Change Period (Y+Rc), s	4.5	5.5		4.1	5.5	* 5.5		4.1
Max Green Setting (Gmax), s	11.5	53.5		30.9	13.5	* 52		30.9
Max Q Clear Time (g_c+I1), s	3.3	43.9		22.2	9.8	31.9		8.1
Green Ext Time (p_c), s	0.0	6.0		0.7	0.1	6.7		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
5: McDowell Bl & Lakeville Hwy

04/23/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	849	500	37	711	59	269	115	9	173	259	11
Future Volume (veh/h)	9	849	500	37	711	59	269	115	9	173	259	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1715	1900	1863	1667	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	875	515	38	733	61	277	119	9	178	267	11
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	15	2	2	2	2	2	2
Cap, veh/h	476	1055	610	48	788	66	309	590	44	208	359	15
Arrive On Green	0.54	1.00	1.00	0.01	0.09	0.09	0.17	0.18	0.18	0.12	0.10	0.10
Sat Flow, veh/h	1774	1990	1150	1774	2957	246	1774	3333	249	1774	3462	142
Grp Volume(v), veh/h	9	713	677	38	392	402	277	63	65	178	136	142
Grp Sat Flow(s),veh/h/ln	1774	1629	1512	1774	1583	1619	1774	1770	1813	1774	1770	1834
Q Serve(g_s), s	0.3	0.0	0.0	2.4	27.1	27.1	16.8	3.3	3.4	10.8	8.2	8.3
Cycle Q Clear(g_c), s	0.3	0.0	0.0	2.4	27.1	27.1	16.8	3.3	3.4	10.8	8.2	8.3
Prop In Lane	1.00		0.76	1.00		0.15	1.00		0.14	1.00		0.08
Lane Grp Cap(c), veh/h	476	864	802	48	422	431	309	313	321	208	183	190
V/C Ratio(X)	0.02	0.83	0.84	0.79	0.93	0.93	0.90	0.20	0.20	0.86	0.74	0.75
Avail Cap(c_a), veh/h	476	864	802	145	425	434	387	518	531	323	454	470
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	0.0	54.2	49.1	49.2	44.4	38.6	38.6	47.6	47.9	47.9
Incr Delay (d2), s/veh	0.0	8.9	10.6	9.0	27.1	26.9	19.5	0.1	0.1	8.0	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.1	2.4	1.3	15.1	15.4	9.9	1.6	1.7	5.8	4.1	4.3
LnGrp Delay(d),s/veh	18.7	8.9	10.6	63.2	76.3	76.0	64.0	38.7	38.8	55.6	50.1	50.1
LnGrp LOS	B	A	B	E	E	E	E	D	D	E	D	D
Approach Vol, veh/h		1399			832			405			456	
Approach Delay, s/veh		9.8			75.6			56.0			52.3	
Approach LOS		A			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	6.0	63.8	24.0	16.2	35.0	34.8	15.9	24.3
Change Period (Y+Rc), s	3.0	5.5	4.8	* 4.8	5.5	* 5.5	3.0	4.8
Max Green Setting (Gmax), s	9.0	32.5	24.0	* 28	12.0	* 30	20.0	32.2
Max Q Clear Time (g_c+I1), s	4.4	2.0	18.8	10.3	2.3	29.1	12.8	5.4
Green Ext Time (p_c), s	0.0	11.5	0.4	0.9	0.0	0.2	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
6: Cader Ln/Frates Rd & Lakeville Hwy

04/23/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	761	51	11	452	35	9	16	6	249	75	392
Future Volume (veh/h)	203	761	51	11	452	35	9	16	6	249	75	392
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1765	1900	1863	1782	1900	1863	1863	1900	1863	1863	1759
Adj Flow Rate, veh/h	211	793	53	11	471	36	9	17	6	259	78	408
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	189	945	63	493	1495	114	16	167	59	218	427	511
Arrive On Green	0.04	0.10	0.10	0.28	0.47	0.47	0.01	0.13	0.13	0.12	0.23	0.23
Sat Flow, veh/h	1675	3183	213	1774	3181	242	1774	1315	464	1774	1863	1493
Grp Volume(v), veh/h	211	418	428	11	250	257	9	0	23	259	78	408
Grp Sat Flow(s),veh/h/ln	1675	1677	1719	1774	1693	1730	1774	0	1780	1774	1863	1493
Q Serve(g_s), s	12.4	26.9	26.9	0.5	10.1	10.2	0.6	0.0	1.3	13.5	3.7	21.5
Cycle Q Clear(g_c), s	12.4	26.9	26.9	0.5	10.1	10.2	0.6	0.0	1.3	13.5	3.7	21.5
Prop In Lane	1.00		0.12	1.00		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	189	498	510	493	796	813	16	0	226	218	427	511
V/C Ratio(X)	1.12	0.84	0.84	0.02	0.31	0.32	0.58	0.00	0.10	1.19	0.18	0.80
Avail Cap(c_a), veh/h	189	611	627	493	796	813	65	0	518	218	703	732
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	47.0	47.0	28.9	18.1	18.1	54.3	0.0	42.4	48.3	34.1	20.7
Incr Delay (d2), s/veh	77.1	6.8	6.6	0.0	1.0	1.0	12.1	0.0	0.2	121.7	0.2	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	13.5	13.8	0.2	4.9	5.1	0.3	0.0	0.6	14.0	1.9	9.4
LnGrp Delay(d),s/veh	130.0	53.8	53.7	28.9	19.2	19.2	66.4	0.0	42.6	169.9	34.3	24.8
LnGrp LOS	F	D	D	C	B	B	E		D	F	C	C
Approach Vol, veh/h		1057			518			32			745	
Approach Delay, s/veh		69.0			19.4			49.3			76.2	
Approach LOS		E			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.1	38.1	5.8	30.0	17.0	57.2	17.0	18.8
Change Period (Y+Rc), s	5.5	* 5.5	4.8	* 4.8	4.6	5.5	3.5	4.8
Max Green Setting (Gmax), s	6.0	* 40	4.0	* 42	12.4	33.7	13.5	32.0
Max Q Clear Time (g_c+I1), s	2.5	28.9	2.6	23.5	14.4	12.2	15.5	3.3
Green Ext Time (p_c), s	0.0	3.7	0.0	1.7	0.0	2.7	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	60.1
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
1: In-n-Out Driveway/US 101 SB Ramps & Lakeville St/Lakeville Hwy 04/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	581	7	31	1050	227	12	3	14	605	14	170
Future Volume (veh/h)	115	581	7	31	1050	227	12	3	14	605	14	170
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.89	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1793	1900	1863	1743	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	122	618	7	33	1117	241	13	3	15	655	0	181
Adj No. of Lanes	2	2	0	1	2	1	0	1	0	2	0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	171	2071	23	55	1926	920	17	4	19	756	0	414
Arrive On Green	0.05	0.60	0.60	0.06	1.00	1.00	0.03	0.03	0.03	0.21	0.00	0.21
Sat Flow, veh/h	3442	3451	39	1774	3312	1582	666	154	768	3548	0	1572
Grp Volume(v), veh/h	122	305	320	33	1117	241	31	0	0	655	0	181
Grp Sat Flow(s),veh/h/ln	1721	1704	1786	1774	1656	1582	1588	0	0	1774	0	1572
Q Serve(g_s), s	4.9	12.2	12.2	2.5	0.0	0.0	2.7	0.0	0.0	24.9	0.0	13.4
Cycle Q Clear(g_c), s	4.9	12.2	12.2	2.5	0.0	0.0	2.7	0.0	0.0	24.9	0.0	13.4
Prop In Lane	1.00		0.02	1.00		1.00	0.42		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	171	1023	1072	55	1926	920	40	0	0	756	0	414
V/C Ratio(X)	0.71	0.30	0.30	0.60	0.58	0.26	0.78	0.00	0.00	0.87	0.00	0.44
Avail Cap(c_a), veh/h	221	1023	1072	76	1926	920	75	0	0	1067	0	551
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.5	13.6	13.6	64.8	0.0	0.0	67.9	0.0	0.0	53.2	0.0	43.0
Incr Delay (d2), s/veh	7.4	0.7	0.7	3.3	1.1	0.6	11.6	0.0	0.0	5.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.9	6.3	1.3	0.3	0.1	1.3	0.0	0.0	12.8	0.0	5.9
LnGrp Delay(d),s/veh	72.9	14.4	14.3	68.1	1.1	0.6	79.4	0.0	0.0	58.8	0.0	43.7
LnGrp LOS	E	B	B	E	A	A	E			E		D
Approach Vol, veh/h		747			1391			31			836	
Approach Delay, s/veh		23.9			2.6			79.4			55.5	
Approach LOS		C			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	89.0		34.7	11.0	86.4		7.9
Change Period (Y+Rc), s	4.0	5.0		4.9	4.0	5.0		4.4
Max Green Setting (Gmax), s	6.0	67.0		42.1	9.0	64.0		6.6
Max Q Clear Time (g_c+I1), s	4.5	14.2		26.9	6.9	2.0		4.7
Green Ext Time (p_c), s	0.0	3.9		2.9	0.1	11.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
2: Lakeville Hwy & US 101 NB Ramps 04/26/2019

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	1126	969	856	285	339
Future Volume (veh/h)	100	1126	969	856	285	339
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1776	1743	1863	1863	1863
Adj Flow Rate, veh/h	101	1137	979	865	288	342
Adj No. of Lanes	1	2	2	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	443	2795	1798	859	357	560
Arrive On Green	0.50	1.00	0.36	0.36	0.10	0.10
Sat Flow, veh/h	1774	3463	3399	1582	3442	1583
Grp Volume(v), veh/h	101	1137	979	865	288	342
Grp Sat Flow(s),veh/h/ln	1774	1687	1656	1582	1721	1583
Q Serve(g_s), s	4.5	0.0	32.8	76.0	11.5	0.0
Cycle Q Clear(g_c), s	4.5	0.0	32.8	76.0	11.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	443	2795	1798	859	357	560
V/C Ratio(X)	0.23	0.41	0.54	1.01	0.81	0.61
Avail Cap(c_a), veh/h	443	2795	1798	859	676	707
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	0.87	0.87	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	0.0	30.8	44.5	61.4	37.3
Incr Delay (d2), s/veh	0.1	0.4	1.2	32.5	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.1	15.3	41.0	5.5	13.3
LnGrp Delay(d),s/veh	27.5	0.4	32.0	77.1	63.0	37.7
LnGrp LOS	C	A	C	F	E	D
Approach Vol, veh/h		1238	1844		630	
Approach Delay, s/veh		2.6	53.1		49.3	
Approach LOS		A	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		121.0		19.0	40.0	81.0		
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5		
Max Green Setting (Gmax), s		103.0		27.5	23.0	* 76		
Max Q Clear Time (g_c+I1), s		2.0		13.5	6.5	78.0		
Green Ext Time (p_c), s		10.7		1.1	0.1	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
3: Baywood Dr & Lakeville Hwy

04/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1176	27	13	1575	37	95	39	21	10	9	140
Future Volume (veh/h)	197	1176	27	13	1575	37	95	39	21	10	9	140
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.96	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1778	1900	1863	1746	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	203	1212	28	13	1624	38	98	40	22	10	9	144
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	442	2486	57	20	1625	38	120	125	69	16	119	488
Arrive On Green	0.50	1.00	1.00	0.01	0.49	0.49	0.07	0.11	0.11	0.01	0.06	0.06
Sat Flow, veh/h	1774	3372	78	1774	3312	77	1774	1111	611	1774	1863	1469
Grp Volume(v), veh/h	203	607	633	13	811	851	98	0	62	10	9	144
Grp Sat Flow(s),veh/h/ln	1774	1689	1761	1774	1658	1731	1774	0	1721	1774	1863	1469
Q Serve(g_s), s	10.4	0.0	0.0	1.0	68.3	68.7	7.6	0.0	4.6	0.8	0.6	1.4
Cycle Q Clear(g_c), s	10.4	0.0	0.0	1.0	68.3	68.7	7.6	0.0	4.6	0.8	0.6	1.4
Prop In Lane	1.00		0.04	1.00		0.04	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	442	1245	1298	20	814	849	120	0	193	16	119	488
V/C Ratio(X)	0.46	0.49	0.49	0.65	1.00	1.00	0.82	0.00	0.32	0.61	0.08	0.29
Avail Cap(c_a), veh/h	442	1245	1298	100	814	849	241	0	352	114	247	590
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	0.0	68.9	35.6	35.7	64.4	0.0	57.2	69.1	61.7	22.1
Incr Delay (d2), s/veh	0.7	1.4	1.3	8.3	25.0	25.4	5.0	0.0	0.4	13.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.5	0.5	0.5	36.8	38.8	3.9	0.0	2.2	0.4	0.3	3.3
LnGrp Delay(d),s/veh	29.7	1.4	1.3	77.2	60.5	61.1	69.4	0.0	57.6	82.1	61.8	22.3
LnGrp LOS	C	A	A	E	E	F	E		E	F	E	C
Approach Vol, veh/h		1443			1675			160			163	
Approach Delay, s/veh		5.3			61.0			64.8			28.1	
Approach LOS		A			E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	108.5	12.5	13.3	40.2	74.0	5.7	20.1
Change Period (Y+Rc), s	4.1	5.3	3.0	4.4	5.3	* 5.3	4.4	* 4.4
Max Green Setting (Gmax), s	7.9	77.7	19.0	18.6	17.5	* 69	9.0	* 29
Max Q Clear Time (g_c+I1), s	3.0	2.0	9.6	3.4	12.4	70.7	2.8	6.6
Green Ext Time (p_c), s	0.0	17.9	0.1	0.2	0.2	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	36.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
4: Casa Grande Rd & Lakeville Hwy

04/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	908	106	36	1395	20	76	55	10	10	47	134
Future Volume (veh/h)	206	908	106	36	1395	20	76	55	10	10	47	134
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1659	1900	1863	1652	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	212	936	109	37	1438	0	78	57	10	10	48	138
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	235	2135	249	58	2050	1034	152	175	31	48	186	176
Arrive On Green	0.13	0.75	0.75	0.04	0.87	0.00	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1774	2835	330	1774	3139	1583	1186	1538	270	159	1638	1549
Grp Volume(v), veh/h	212	520	525	37	1438	0	78	0	67	58	0	138
Grp Sat Flow(s),veh/h/ln	1774	1576	1589	1774	1570	1583	1186	0	1807	1797	0	1549
Q Serve(g_s), s	16.5	17.0	17.0	2.9	21.6	0.0	9.0	0.0	4.8	0.0	0.0	12.1
Cycle Q Clear(g_c), s	16.5	17.0	17.0	2.9	21.6	0.0	13.0	0.0	4.8	4.0	0.0	12.1
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.15	0.17		1.00
Lane Grp Cap(c), veh/h	235	1187	1197	58	2050	1034	152	0	205	234	0	176
V/C Ratio(X)	0.90	0.44	0.44	0.64	0.70	0.00	0.51	0.00	0.33	0.25	0.00	0.79
Avail Cap(c_a), veh/h	285	1187	1197	108	2050	1034	237	0	334	359	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.8	6.4	6.4	66.1	4.6	0.0	62.7	0.0	57.1	56.8	0.0	60.4
Incr Delay (d2), s/veh	20.2	0.9	0.9	4.3	2.0	0.0	2.7	0.0	0.9	0.4	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	7.7	7.7	1.5	9.4	0.0	3.1	0.0	2.4	2.1	0.0	5.5
LnGrp Delay(d),s/veh	80.0	7.3	7.3	70.4	6.6	0.0	65.4	0.0	58.0	57.2	0.0	66.1
LnGrp LOS	F	A	A	E	A		E		E	E		E
Approach Vol, veh/h		1257			1475			145			196	
Approach Delay, s/veh		19.6			8.2			62.0			63.4	
Approach LOS		B			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	110.9		20.0	23.1	96.9		20.0
Change Period (Y+Rc), s	4.5	5.5		4.1	4.5	5.5		4.1
Max Green Setting (Gmax), s	8.5	91.5		25.9	22.5	77.5		25.9
Max Q Clear Time (g_c+I1), s	4.9	19.0		14.1	18.5	23.6		15.0
Green Ext Time (p_c), s	0.0	7.9		0.4	0.1	14.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
5: McDowell Bl & Lakeville Hwy

04/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	765	153	16	937	167	505	317	7	64	76	8
Future Volume (veh/h)	10	765	153	16	937	167	505	317	7	64	76	8
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1790	1900	1863	1760	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	10	781	156	16	956	170	515	323	7	65	78	8
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	297	1465	293	23	981	174	456	1079	23	83	305	31
Arrive On Green	0.06	0.17	0.17	0.03	0.69	0.69	0.26	0.30	0.30	0.05	0.09	0.09
Sat Flow, veh/h	1774	2825	564	1774	2831	503	1774	3539	77	1774	3224	324
Grp Volume(v), veh/h	10	470	467	16	564	562	515	161	169	65	42	44
Grp Sat Flow(s),veh/h/ln	1774	1700	1689	1774	1672	1662	1774	1770	1846	1774	1770	1779
Q Serve(g_s), s	0.7	35.3	35.3	1.3	44.6	44.8	36.0	9.8	9.8	5.1	3.1	3.2
Cycle Q Clear(g_c), s	0.7	35.3	35.3	1.3	44.6	44.8	36.0	9.8	9.8	5.1	3.1	3.2
Prop In Lane	1.00		0.33	1.00		0.30	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	297	882	876	23	579	576	456	540	563	83	167	168
V/C Ratio(X)	0.03	0.53	0.53	0.68	0.97	0.98	1.13	0.30	0.30	0.78	0.25	0.26
Avail Cap(c_a), veh/h	297	882	876	127	591	588	456	622	649	190	356	358
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	42.6	42.6	67.9	20.9	20.9	52.0	37.2	37.2	66.0	58.8	58.8
Incr Delay (d2), s/veh	0.0	2.3	2.3	9.0	26.3	26.6	82.4	0.1	0.1	6.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	17.2	17.1	0.7	24.3	24.2	28.1	4.8	5.0	2.6	1.5	1.6
LnGrp Delay(d),s/veh	55.4	44.9	44.9	76.9	47.2	47.6	134.4	37.3	37.3	72.0	59.1	59.1
LnGrp LOS	E	D	D	E	D	D	F	D	D	E	E	E
Approach Vol, veh/h		947			1142			845			151	
Approach Delay, s/veh		45.0			47.8			96.5			64.7	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	78.1	39.0	18.0	29.0	54.0	9.5	47.5
Change Period (Y+Rc), s	3.0	5.5	3.0	4.8	5.5	* 5.5	3.0	4.8
Max Green Setting (Gmax), s	10.0	49.5	36.0	28.2	10.0	* 50	15.0	49.2
Max Q Clear Time (g_c+I1), s	3.3	37.3	38.0	5.2	2.7	46.8	7.1	11.8
Green Ext Time (p_c), s	0.0	4.4	0.0	0.2	0.0	1.7	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	61.1
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
6: Cader Ln/Frates Rd & Lakeville Hwy

04/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	532	25	4	769	207	58	156	8	78	25	249
Future Volume (veh/h)	338	532	25	4	769	207	58	156	8	78	25	249
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1764	1900	1863	1793	1900	1863	1863	1900	1863	1863	1759
Adj Flow Rate, veh/h	356	560	26	4	809	218	61	164	8	82	26	262
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	588	2271	105	11	911	246	78	190	9	102	226	706
Arrive On Green	0.70	1.00	1.00	0.01	0.35	0.35	0.04	0.11	0.11	0.06	0.12	0.12
Sat Flow, veh/h	1675	3257	151	1774	2635	710	1774	1761	86	1774	1863	1492
Grp Volume(v), veh/h	356	288	298	4	523	504	61	0	172	82	26	262
Grp Sat Flow(s),veh/h/ln	1675	1675	1732	1774	1704	1641	1774	0	1847	1774	1863	1492
Q Serve(g_s), s	15.4	0.0	0.0	0.3	40.6	40.6	4.8	0.0	12.8	6.4	1.7	2.1
Cycle Q Clear(g_c), s	15.4	0.0	0.0	0.3	40.6	40.6	4.8	0.0	12.8	6.4	1.7	2.1
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	588	1168	1208	11	589	568	78	0	199	102	226	706
V/C Ratio(X)	0.61	0.25	0.25	0.37	0.89	0.89	0.78	0.00	0.86	0.80	0.12	0.37
Avail Cap(c_a), veh/h	588	1168	1208	76	724	697	118	0	227	108	226	706
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	0.0	69.3	43.2	43.2	66.3	0.0	61.5	65.2	54.8	13.0
Incr Delay (d2), s/veh	1.4	0.4	0.4	7.4	17.8	18.4	8.7	0.0	25.3	30.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.1	0.1	0.2	22.0	21.2	2.5	0.0	7.9	4.0	0.9	4.8
LnGrp Delay(d),s/veh	17.2	0.4	0.4	76.7	61.0	61.6	74.9	0.0	86.8	95.4	55.0	13.3
LnGrp LOS	B	A	A	E	E	E	E		F	F	E	B
Approach Vol, veh/h		942			1031			233			370	
Approach Delay, s/veh		6.7			61.4			83.7			34.5	
Approach LOS		A			E			F			C	

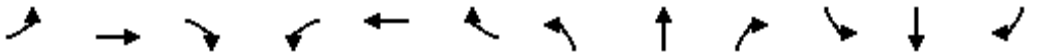
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	103.1	9.6	21.8	54.6	53.9	11.5	19.9
Change Period (Y+Rc), s	4.6	5.5	3.5	4.8	5.5	* 5.5	3.5	4.8
Max Green Setting (Gmax), s	6.0	89.9	9.3	16.4	36.4	* 60	8.5	17.2
Max Q Clear Time (g_c+I1), s	2.3	2.0	6.8	4.1	17.4	42.6	8.4	14.8
Green Ext Time (p_c), s	0.0	3.5	0.0	0.8	1.0	5.8	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Notes

Appendix B – Existing Conditions

Intersection Level of Service Worksheets



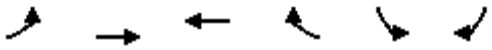
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	609	3	7	589	286	5	1	6	962	9	170
Future Volume (veh/h)	254	609	3	7	589	286	5	1	6	962	9	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1752	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	267	641	3	7	620	301	5	1	6	1019	0	179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	292	972	5	16	671	334	141	28	169	1083	0	482
Arrive On Green	0.08	0.29	0.29	0.01	0.21	0.21	0.20	0.20	0.20	0.30	0.00	0.30
Sat Flow, veh/h	3456	3397	16	1781	3188	1585	702	140	842	3563	0	1585
Grp Volume(v), veh/h	267	314	330	7	620	301	12	0	0	1019	0	179
Grp Sat Flow(s),veh/h/ln	1728	1664	1749	1781	1594	1585	1684	0	0	1781	0	1585
Q Serve(g_s), s	6.9	14.9	14.9	0.4	17.1	16.6	0.5	0.0	0.0	25.0	0.0	8.0
Cycle Q Clear(g_c), s	6.9	14.9	14.9	0.4	17.1	16.6	0.5	0.0	0.0	25.0	0.0	8.0
Prop In Lane	1.00		0.01	1.00		1.00	0.42		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	292	476	500	16	671	334	337	0	0	1083	0	482
V/C Ratio(X)	0.91	0.66	0.66	0.44	0.92	0.90	0.04	0.00	0.00	0.94	0.00	0.37
Avail Cap(c_a), veh/h	292	476	500	99	671	334	337	0	0	1091	0	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	28.2	28.2	44.3	34.7	34.6	28.9	0.0	0.0	30.5	0.0	24.5
Incr Delay (d2), s/veh	31.1	3.3	3.2	18.0	18.6	26.4	0.2	0.0	0.0	15.1	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	4.1	6.0	6.3	0.2	8.0	8.5	0.2	0.0	0.0	12.1	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.9	31.5	31.4	62.3	53.4	60.9	29.1	0.0	0.0	45.6	0.0	25.0
LnGrp LOS	E	C	C	E	D	E	C	A	A	D	A	C
Approach Vol, veh/h		911			928			12			1198	
Approach Delay, s/veh		43.3			55.9			29.1			42.5	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	30.2		31.8	12.1	23.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	21.5		27.5	7.6	18.9		18.0				
Max Q Clear Time (g_c+I1), s	2.4	16.9		27.0	8.9	19.1		2.5				
Green Ext Time (p_c), s	0.0	1.5		0.3	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		46.8	
HCM 6th LOS		D	

Notes

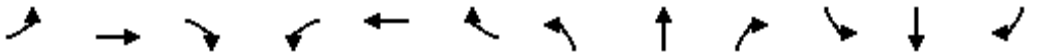
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	67	1477	774	821	243	94
Future Volume (veh/h)	67	1477	774	821	243	94
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	74	1641	860	912	270	104
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	112	2201	1744	867	451	307
Arrive On Green	0.06	0.70	0.55	0.55	0.13	0.13
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	74	1641	860	912	270	104
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	2.1	17.1	8.7	28.5	3.8	2.9
Cycle Q Clear(g_c), s	2.1	17.1	8.7	28.5	3.8	2.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	112	2201	1744	867	451	307
V/C Ratio(X)	0.66	0.75	0.49	1.05	0.60	0.34
Avail Cap(c_a), veh/h	171	2305	1744	867	1194	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	5.0	7.3	11.8	21.4	18.1
Incr Delay (d2), s/veh	6.4	1.3	1.0	45.0	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.2	2.1	17.0	1.4	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.3	6.3	8.3	56.8	22.6	18.8
LnGrp LOS	C	A	A	F	C	B
Approach Vol, veh/h		1715	1772		374	
Approach Delay, s/veh		7.3	33.3		21.6	
Approach LOS		A	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		40.8		11.3	7.8	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		38.0		18.0	5.0	28.5
Max Q Clear Time (g_c+I1), s		19.1		5.8	4.1	30.5
Green Ext Time (p_c), s		11.8		1.0	0.0	0.0

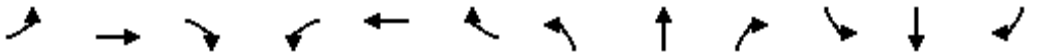
Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1547	27	8	1293	29	36	2	12	21	17	287
Future Volume (veh/h)	75	1547	27	8	1293	29	36	2	12	21	17	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1628	28	8	1361	31	39	2	13	23	18	309
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1823	31	18	1644	37	64	50	328	44	416	443
Arrive On Green	0.06	0.51	0.51	0.01	0.46	0.46	0.04	0.23	0.23	0.02	0.22	0.22
Sat Flow, veh/h	1781	3575	61	1781	3552	81	1781	216	1402	1781	1870	1585
Grp Volume(v), veh/h	79	808	848	8	680	712	39	0	15	23	18	309
Grp Sat Flow(s),veh/h/ln	1781	1777	1859	1781	1777	1856	1781	0	1618	1781	1870	1585
Q Serve(g_s), s	3.6	33.2	33.4	0.4	27.1	27.2	1.8	0.0	0.6	1.0	0.6	14.2
Cycle Q Clear(g_c), s	3.6	33.2	33.4	0.4	27.1	27.2	1.8	0.0	0.6	1.0	0.6	14.2
Prop In Lane	1.00		0.03	1.00		0.04	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	102	906	948	18	822	859	64	0	378	44	416	443
V/C Ratio(X)	0.77	0.89	0.89	0.44	0.83	0.83	0.61	0.00	0.04	0.52	0.04	0.70
Avail Cap(c_a), veh/h	186	955	999	112	880	920	112	0	378	112	416	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	17.9	18.0	40.0	19.0	19.0	38.6	0.0	24.1	39.2	24.8	26.2
Incr Delay (d2), s/veh	11.8	10.3	10.1	16.0	6.2	6.1	9.0	0.0	0.2	9.1	0.2	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	14.0	14.7	0.2	11.1	11.6	0.9	0.0	0.2	0.6	0.3	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	28.2	28.1	56.0	25.3	25.1	47.6	0.0	24.3	48.2	25.0	35.0
LnGrp LOS	D	C	C	E	C	C	D	A	C	D	C	C
Approach Vol, veh/h		1735			1400			54			350	
Approach Delay, s/veh		29.1			25.3			41.1			35.3	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	46.0	7.4	22.6	9.2	42.1	6.5	23.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	8.5	40.3	5.1	18.1
Max Q Clear Time (g_c+I1), s	2.4	35.4	3.8	16.2	5.6	29.2	3.0	2.6
Green Ext Time (p_c), s	0.0	6.1	0.0	0.2	0.0	6.5	0.0	0.0

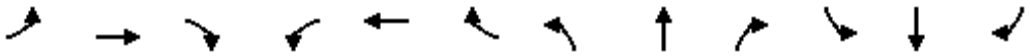
Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1351	38	21	963	10	98	56	23	15	49	278
Future Volume (veh/h)	142	1351	38	21	963	10	98	56	23	15	49	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1422	40	22	1014	11	103	59	24	16	52	293
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	189	1684	47	45	1453	722	313	278	113	125	336	348
Arrive On Green	0.11	0.54	0.54	0.03	0.46	0.46	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3139	88	1781	3188	1585	1036	1264	514	240	1529	1585
Grp Volume(v), veh/h	149	715	747	22	1014	11	103	0	83	68	0	293
Grp Sat Flow(s),veh/h/ln	1781	1580	1647	1781	1594	1585	1036	0	1778	1769	0	1585
Q Serve(g_s), s	5.0	23.7	23.8	0.8	15.7	0.2	5.5	0.0	2.4	0.0	0.0	10.9
Cycle Q Clear(g_c), s	5.0	23.7	23.8	0.8	15.7	0.2	7.3	0.0	2.4	1.8	0.0	10.9
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.29	0.24		1.00
Lane Grp Cap(c), veh/h	189	848	884	45	1453	722	313	0	390	460	0	348
V/C Ratio(X)	0.79	0.84	0.85	0.49	0.70	0.02	0.33	0.00	0.21	0.15	0.00	0.84
Avail Cap(c_a), veh/h	274	984	1026	144	1753	872	388	0	518	582	0	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	12.1	12.2	29.7	13.4	9.2	22.5	0.0	19.7	19.5	0.0	23.1
Incr Delay (d2), s/veh	9.1	6.0	5.9	7.8	1.0	0.0	0.6	0.0	0.3	0.1	0.0	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.2	7.5	0.4	4.5	0.1	1.3	0.0	0.9	0.7	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	18.1	18.0	37.5	14.4	9.2	23.1	0.0	20.0	19.7	0.0	33.4
LnGrp LOS	D	B	B	D	B	A	C	A	C	B	A	C
Approach Vol, veh/h		1611			1047			186			361	
Approach Delay, s/veh		19.8			14.8			21.7			30.8	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	37.7		18.1	11.1	32.7		18.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	38.5		18.0	9.5	34.0		18.0				
Max Q Clear Time (g_c+I1), s	2.8	25.8		12.9	7.0	17.7		9.3				
Green Ext Time (p_c), s	0.0	7.4		0.6	0.1	6.2		0.5				

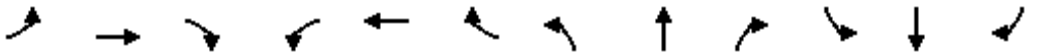
Intersection Summary			
HCM 6th Ctrl Delay		19.5	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	849	500	37	711	59	269	115	9	173	259	11
Future Volume (veh/h)	9	849	500	37	711	59	269	115	9	173	259	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1678	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	875	515	38	733	61	277	119	9	178	267	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	15	15	2	2	2	2	2	2	2
Cap, veh/h	20	925	535	55	1498	125	312	545	41	214	376	15
Arrive On Green	0.01	0.48	0.48	0.03	0.50	0.50	0.17	0.16	0.16	0.12	0.11	0.11
Sat Flow, veh/h	1781	1928	1114	1598	2979	248	1781	3351	251	1781	3479	143
Grp Volume(v), veh/h	9	714	676	38	392	402	277	63	65	178	136	142
Grp Sat Flow(s),veh/h/ln	1781	1580	1462	1598	1594	1633	1781	1777	1825	1781	1777	1845
Q Serve(g_s), s	0.4	38.0	39.6	2.1	14.4	14.4	13.5	2.7	2.8	8.7	6.6	6.6
Cycle Q Clear(g_c), s	0.4	38.0	39.6	2.1	14.4	14.4	13.5	2.7	2.8	8.7	6.6	6.6
Prop In Lane	1.00		0.76	1.00		0.15	1.00		0.14	1.00		0.08
Lane Grp Cap(c), veh/h	20	758	702	55	801	821	312	289	297	214	192	199
V/C Ratio(X)	0.45	0.94	0.96	0.69	0.49	0.49	0.89	0.22	0.22	0.83	0.71	0.71
Avail Cap(c_a), veh/h	100	763	706	92	801	821	323	401	412	283	361	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	21.9	22.3	42.4	14.5	14.5	35.7	32.2	32.2	38.1	38.2	38.2
Incr Delay (d2), s/veh	15.1	19.8	25.0	14.6	0.5	0.5	24.1	0.4	0.4	14.4	4.8	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	16.2	16.5	1.0	4.6	4.7	7.7	1.2	1.2	4.5	3.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	41.7	47.3	56.9	15.0	15.0	59.9	32.6	32.6	52.5	43.0	42.9
LnGrp LOS	E	D	D	E	B	B	E	C	C	D	D	D
Approach Vol, veh/h		1399			832			405			456	
Approach Delay, s/veh		44.5			16.9			51.3			46.7	
Approach LOS		D			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	47.0	20.0	14.1	5.5	49.1	15.2	18.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	42.8	16.1	18.0	5.0	42.9	14.1	20.0
Max Q Clear Time (g_c+I1), s	4.1	41.6	15.5	8.6	2.4	16.4	10.7	4.8
Green Ext Time (p_c), s	0.0	0.9	0.1	1.0	0.0	4.8	0.1	0.5

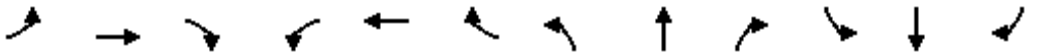
Intersection Summary	
HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	761	51	11	452	35	9	16	6	249	75	392
Future Volume (veh/h)	203	761	51	11	452	35	9	16	6	249	75	392
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	214	801	54	12	476	37	9	17	6	262	79	413
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	264	1141	77	27	687	53	21	148	52	320	525	659
Arrive On Green	0.16	0.35	0.35	0.02	0.21	0.21	0.01	0.11	0.11	0.18	0.28	0.28
Sat Flow, veh/h	1697	3218	217	1781	3209	249	1781	1320	466	1781	1870	1510
Grp Volume(v), veh/h	214	421	434	12	252	261	9	0	23	262	79	413
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1781	1706	1751	1781	0	1786	1781	1870	1510
Q Serve(g_s), s	6.5	11.4	11.4	0.4	7.3	7.3	0.3	0.0	0.6	7.5	1.7	11.3
Cycle Q Clear(g_c), s	6.5	11.4	11.4	0.4	7.3	7.3	0.3	0.0	0.6	7.5	1.7	11.3
Prop In Lane	1.00		0.12	1.00		0.14	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	264	600	618	27	365	375	21	0	201	320	525	659
V/C Ratio(X)	0.81	0.70	0.70	0.44	0.69	0.70	0.43	0.00	0.11	0.82	0.15	0.63
Avail Cap(c_a), veh/h	366	833	857	167	631	648	167	0	604	428	906	966
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	14.8	14.8	26.0	19.3	19.3	26.1	0.0	21.2	21.0	14.4	11.6
Incr Delay (d2), s/veh	9.1	1.6	1.5	10.8	2.3	2.3	13.5	0.0	0.3	8.9	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.6	3.7	0.2	2.7	2.8	0.2	0.0	0.3	3.6	0.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	16.3	16.3	36.8	21.6	21.6	39.6	0.0	21.5	29.9	14.5	12.6
LnGrp LOS	C	B	B	D	C	C	D	A	C	C	B	B
Approach Vol, veh/h		1069			525			32			754	
Approach Delay, s/veh		19.2			22.0			26.6			18.8	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	23.4	5.1	19.4	12.8	15.9	14.1	10.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.2	5.0	25.8	11.5	19.7	12.8	18.0
Max Q Clear Time (g_c+I1), s	2.4	13.4	2.3	13.3	8.5	9.3	9.5	2.6
Green Ext Time (p_c), s	0.0	4.0	0.0	1.6	0.2	2.1	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



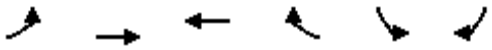
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	581	7	31	1050	227	12	3	14	605	14	170
Future Volume (veh/h)	115	581	7	31	1050	227	12	3	14	605	14	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1811	1870	1767	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	618	7	33	1117	241	13	3	15	655	0	181
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	187	1282	15	56	1158	547	142	33	164	714	0	317
Arrive On Green	0.05	0.37	0.37	0.03	0.34	0.34	0.20	0.20	0.20	0.20	0.00	0.20
Sat Flow, veh/h	3456	3485	39	1781	3357	1585	708	163	817	3563	0	1585
Grp Volume(v), veh/h	122	305	320	33	1117	241	31	0	0	655	0	181
Grp Sat Flow(s),veh/h/ln	1728	1721	1804	1781	1678	1585	1688	0	0	1781	0	1585
Q Serve(g_s), s	3.1	12.2	12.2	1.6	29.4	10.6	1.3	0.0	0.0	16.2	0.0	9.3
Cycle Q Clear(g_c), s	3.1	12.2	12.2	1.6	29.4	10.6	1.3	0.0	0.0	16.2	0.0	9.3
Prop In Lane	1.00		0.02	1.00		1.00	0.42		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	187	633	664	56	1158	547	338	0	0	714	0	317
V/C Ratio(X)	0.65	0.48	0.48	0.59	0.96	0.44	0.09	0.00	0.00	0.92	0.00	0.57
Avail Cap(c_a), veh/h	192	633	664	117	1158	547	338	0	0	714	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	21.8	21.8	43.0	28.9	22.7	29.3	0.0	0.0	35.2	0.0	32.4
Incr Delay (d2), s/veh	7.3	0.6	0.5	9.7	18.5	0.6	0.5	0.0	0.0	16.9	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.7	4.9	0.9	13.9	3.8	0.6	0.0	0.0	8.2	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	22.4	22.4	52.7	47.4	23.3	29.8	0.0	0.0	52.1	0.0	34.9
LnGrp LOS	D	C	C	D	D	C	C	A	A	D	A	C
Approach Vol, veh/h		747			1391			31			836	
Approach Delay, s/veh		26.7			43.4			29.8			48.4	
Approach LOS		C			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	37.6		22.5	9.4	35.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	30.1		18.0	5.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	14.2		18.2	5.1	31.4		3.3				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	0.0		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			40.5									
HCM 6th LOS			D									

Notes

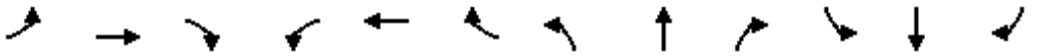
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	1126	969	856	285	339
Future Volume (veh/h)	100	1126	969	856	285	339
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	101	1137	979	865	288	342
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	130	1822	1287	608	1074	608
Arrive On Green	0.07	0.53	0.38	0.38	0.31	0.31
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	101	1137	979	865	288	342
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	3.2	13.5	14.7	22.2	3.6	9.8
Cycle Q Clear(g_c), s	3.2	13.5	14.7	22.2	3.6	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	1822	1287	608	1074	608
V/C Ratio(X)	0.78	0.62	0.76	1.42	0.27	0.56
Avail Cap(c_a), veh/h	194	1945	1287	608	1074	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	9.4	15.5	17.9	15.0	14.0
Incr Delay (d2), s/veh	11.0	0.6	2.7	200.1	0.6	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.7	5.0	40.3	1.3	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.4	10.0	18.3	218.0	15.6	17.8
LnGrp LOS	D	B	B	F	B	B
Approach Vol, veh/h		1238	1844		630	
Approach Delay, s/veh		12.2	112.0		16.8	
Approach LOS		B	F		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.4		22.5	8.7	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		15.5		11.8	5.2	24.2
Green Ext Time (p_c), s		7.4		1.3	0.0	0.0

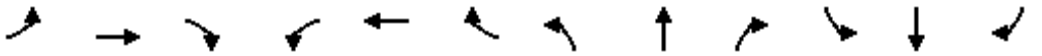
Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1176	27	13	1575	37	95	39	21	10	9	140
Future Volume (veh/h)	197	1176	27	13	1575	37	95	39	21	10	9	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1212	28	13	1624	38	98	40	22	10	9	144
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	219	2023	47	27	1628	38	115	245	135	21	306	454
Arrive On Green	0.12	0.59	0.59	0.01	0.49	0.49	0.06	0.22	0.22	0.01	0.16	0.16
Sat Flow, veh/h	1781	3410	79	1781	3353	78	1781	1134	624	1781	1870	1585
Grp Volume(v), veh/h	203	606	634	13	811	851	98	0	62	10	9	144
Grp Sat Flow(s),veh/h/ln	1781	1706	1782	1781	1678	1753	1781	0	1758	1781	1870	1585
Q Serve(g_s), s	12.4	24.7	24.7	0.8	53.0	53.4	6.0	0.0	3.2	0.6	0.4	7.8
Cycle Q Clear(g_c), s	12.4	24.7	24.7	0.8	53.0	53.4	6.0	0.0	3.2	0.6	0.4	7.8
Prop In Lane	1.00		0.04	1.00		0.04	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	219	1012	1057	27	815	851	115	0	380	21	306	454
V/C Ratio(X)	0.93	0.60	0.60	0.49	1.00	1.00	0.85	0.00	0.16	0.47	0.03	0.32
Avail Cap(c_a), veh/h	219	1012	1057	81	815	851	115	0	380	81	306	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	14.1	14.1	53.8	28.2	28.3	50.9	0.0	35.0	54.0	38.7	30.8
Incr Delay (d2), s/veh	41.5	1.0	0.9	13.3	30.4	30.8	42.4	0.0	0.9	15.2	0.2	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	7.9	8.8	9.2	0.4	26.3	27.7	4.0	0.0	1.5	0.4	0.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.3	15.1	15.1	67.1	58.6	59.1	93.3	0.0	35.9	69.2	38.8	32.6
LnGrp LOS	F	B	B	E	E	E	F	A	D	E	D	C
Approach Vol, veh/h		1443			1675			160			163	
Approach Delay, s/veh		25.5			58.9			71.1			35.2	
Approach LOS		C			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	69.8	11.6	22.5	18.0	57.9	5.8	28.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	61.9	7.1	18.0	13.5	53.4	5.0	20.1
Max Q Clear Time (g_c+I1), s	2.8	26.7	8.0	9.8	14.4	55.4	2.6	5.2
Green Ext Time (p_c), s	0.0	9.9	0.0	0.3	0.0	0.0	0.0	0.2

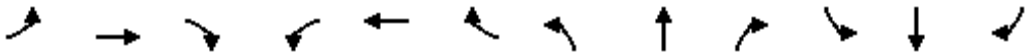
Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	908	106	36	1395	20	76	55	10	10	47	134
Future Volume (veh/h)	206	908	106	36	1395	20	76	55	10	10	47	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	936	109	37	1438	21	78	57	10	10	48	138
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	257	1842	215	65	1717	854	218	193	34	78	208	197
Arrive On Green	0.14	0.65	0.65	0.04	0.54	0.54	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	2851	332	1781	3188	1585	1198	1550	272	141	1672	1585
Grp Volume(v), veh/h	212	519	526	37	1438	21	78	0	67	58	0	138
Grp Sat Flow(s),veh/h/ln	1781	1580	1603	1781	1594	1585	1198	0	1821	1814	0	1585
Q Serve(g_s), s	8.1	12.1	12.1	1.4	26.6	0.4	4.4	0.0	2.3	0.0	0.0	5.9
Cycle Q Clear(g_c), s	8.1	12.1	12.1	1.4	26.6	0.4	6.4	0.0	2.3	2.0	0.0	5.9
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.15	0.17		1.00
Lane Grp Cap(c), veh/h	257	1021	1036	65	1717	854	218	0	227	286	0	197
V/C Ratio(X)	0.82	0.51	0.51	0.57	0.84	0.02	0.36	0.00	0.30	0.20	0.00	0.70
Avail Cap(c_a), veh/h	343	1181	1199	155	2047	1018	377	0	468	518	0	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	6.5	6.5	33.2	13.6	7.6	30.6	0.0	27.9	27.7	0.0	29.4
Incr Delay (d2), s/veh	11.5	0.4	0.4	7.5	2.8	0.0	1.0	0.0	0.7	0.3	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.7	2.7	0.7	7.8	0.1	1.3	0.0	1.0	0.9	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	6.9	6.9	40.7	16.4	7.6	31.6	0.0	28.6	28.1	0.0	33.9
LnGrp LOS	D	A	A	D	B	A	C	A	C	C	A	C
Approach Vol, veh/h		1257			1496			145			196	
Approach Delay, s/veh		12.6			16.9			30.2			32.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	49.8		13.2	14.6	42.2		13.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.1	52.4		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s	3.4	14.1		7.9	10.1	28.6		8.4				
Green Ext Time (p_c), s	0.0	7.5		0.5	0.2	9.2		0.3				

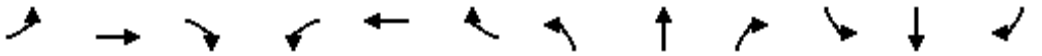
Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	765	153	16	937	167	505	317	7	64	76	8
Future Volume (veh/h)	10	765	153	16	937	167	505	317	7	64	76	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	781	155	16	956	170	515	323	7	65	78	8
Peak Hour Factor	0.98	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	22	1090	216	33	1111	197	563	1173	25	84	199	20
Arrive On Green	0.01	0.38	0.38	0.02	0.39	0.39	0.32	0.33	0.33	0.05	0.06	0.06
Sat Flow, veh/h	1781	2838	563	1781	2848	506	1781	3556	77	1781	3259	329
Grp Volume(v), veh/h	10	470	466	16	563	563	515	161	169	65	42	44
Grp Sat Flow(s),veh/h/ln	1781	1706	1695	1781	1678	1676	1781	1777	1857	1781	1777	1811
Q Serve(g_s), s	0.5	19.1	19.1	0.7	25.2	25.2	22.7	5.5	5.5	2.9	1.9	1.9
Cycle Q Clear(g_c), s	0.5	19.1	19.1	0.7	25.2	25.2	22.7	5.5	5.5	2.9	1.9	1.9
Prop In Lane	1.00		0.33	1.00		0.30	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	22	655	651	33	655	654	563	586	613	84	109	111
V/C Ratio(X)	0.45	0.72	0.72	0.48	0.86	0.86	0.92	0.27	0.28	0.77	0.39	0.40
Avail Cap(c_a), veh/h	109	770	765	109	758	756	700	880	920	209	391	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	21.4	21.4	39.7	22.9	22.9	26.9	20.2	20.2	38.5	36.9	36.9
Incr Delay (d2), s/veh	13.7	2.6	2.7	10.4	8.8	8.9	14.6	0.3	0.2	13.9	2.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.2	7.2	0.4	10.3	10.3	11.3	2.2	2.3	1.6	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	24.0	24.1	50.2	31.7	31.8	41.5	20.4	20.4	52.4	39.1	39.2
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		946			1142			845			151	
Approach Delay, s/veh		24.4			32.0			33.3			44.9	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	35.9	30.3	9.5	5.5	36.4	8.4	31.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	36.9	32.1	18.0	5.0	36.9	9.6	40.5
Max Q Clear Time (g_c+I1), s	2.7	21.1	24.7	3.9	2.5	27.2	4.9	7.5
Green Ext Time (p_c), s	0.0	5.0	1.1	0.3	0.0	4.7	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	532	25	4	769	207	58	165	8	78	25	249
Future Volume (veh/h)	338	532	25	4	769	207	58	165	8	78	25	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	356	560	26	4	809	218	61	174	8	82	26	262
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	394	1857	86	9	896	241	83	260	12	105	298	591
Arrive On Green	0.23	0.56	0.56	0.01	0.34	0.34	0.05	0.15	0.15	0.06	0.16	0.16
Sat Flow, veh/h	1697	3294	153	1781	2658	716	1781	1774	82	1781	1870	1510
Grp Volume(v), veh/h	356	287	299	4	519	508	61	0	182	82	26	262
Grp Sat Flow(s),veh/h/ln	1697	1692	1754	1781	1706	1667	1781	0	1856	1781	1870	1510
Q Serve(g_s), s	16.3	7.1	7.2	0.2	23.2	23.2	2.7	0.0	7.4	3.6	0.9	10.2
Cycle Q Clear(g_c), s	16.3	7.1	7.2	0.2	23.2	23.2	2.7	0.0	7.4	3.6	0.9	10.2
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	394	954	989	9	575	562	83	0	272	105	298	591
V/C Ratio(X)	0.90	0.30	0.30	0.42	0.90	0.90	0.74	0.00	0.67	0.78	0.09	0.44
Avail Cap(c_a), veh/h	435	954	989	111	602	588	114	0	418	118	426	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	9.2	9.2	39.6	25.3	25.3	37.6	0.0	32.3	37.1	28.6	17.9
Incr Delay (d2), s/veh	20.8	0.2	0.2	27.2	16.6	16.9	14.9	0.0	2.8	25.2	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	2.2	2.2	0.1	11.2	10.9	1.5	0.0	3.5	2.3	0.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	9.3	9.3	66.8	41.9	42.2	52.6	0.0	35.1	62.3	28.8	18.4
LnGrp LOS	D	A	A	E	D	D	D	A	D	E	C	B
Approach Vol, veh/h		942			1031			243			370	
Approach Delay, s/veh		24.9			42.1			39.5			28.9	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	49.6	8.2	17.2	23.1	31.4	9.2	16.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.7	5.1	18.2	20.5	28.2	5.3	18.0
Max Q Clear Time (g_c+I1), s	2.2	9.2	4.7	12.2	18.3	25.2	5.6	9.4
Green Ext Time (p_c), s	0.0	3.4	0.0	0.5	0.3	1.7	0.0	0.6

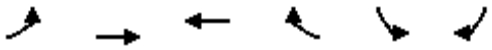
Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	267	644	7	620	301	12	506	516	179
v/c Ratio	0.92	0.61	0.07	0.94	0.53	0.04	0.99	1.00	0.29
Control Delay	79.3	29.7	42.0	59.5	7.6	22.6	69.6	73.4	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.3	29.7	42.0	59.5	7.6	22.6	69.6	73.4	5.2
Queue Length 50th (ft)	79	155	4	183	0	3	298	~308	0
Queue Length 95th (ft)	#153	#267	18	#290	66	17	#514	#527	45
Internal Link Dist (ft)		736		1055		231		252	
Turn Bay Length (ft)	170		80		285				
Base Capacity (vph)	289	1060	98	659	570	293	513	515	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.61	0.07	0.94	0.53	0.04	0.99	1.00	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	74	1641	860	912	270	104
v/c Ratio	0.45	0.80	0.52	0.72	0.45	0.17
Control Delay	35.8	11.2	11.0	4.8	23.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	11.2	11.0	4.8	23.3	6.0
Queue Length 50th (ft)	24	161	96	0	43	5
Queue Length 95th (ft)	#71	294	157	53	72	31
Internal Link Dist (ft)		1055	699		464	
Turn Bay Length (ft)	475			350		
Base Capacity (vph)	163	2180	1649	1264	1139	607
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.75	0.52	0.72	0.24	0.17

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	79	1656	8	1392	39	15	23	18	309
v/c Ratio	0.48	0.81	0.07	0.87	0.35	0.04	0.21	0.04	0.49
Control Delay	48.0	19.4	41.8	28.6	49.4	16.2	44.9	29.3	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	19.4	41.8	28.6	49.4	16.2	44.9	29.3	19.5
Queue Length 50th (ft)	43	348	4	366	22	1	13	8	104
Queue Length 95th (ft)	88	#639	18	#480	54	17	38	26	185
Internal Link Dist (ft)		699		2643		176		411	
Turn Bay Length (ft)	350		110		75				
Base Capacity (vph)	186	2101	111	1761	111	407	111	417	653
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.79	0.07	0.79	0.35	0.04	0.21	0.04	0.47

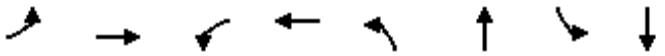
Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	149	1462	22	1014	11	103	83	68	293
v/c Ratio	0.54	0.79	0.14	0.68	0.01	0.42	0.24	0.22	0.66
Control Delay	36.4	15.3	33.1	16.4	0.0	29.3	19.1	24.4	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	15.3	33.1	16.4	0.0	29.3	19.1	24.4	17.7
Queue Length 50th (ft)	49	131	7	147	0	33	18	21	34
Queue Length 95th (ft)	#145	#474	31	262	0	82	55	57	113
Internal Link Dist (ft)		2643		1335			324	380	
Turn Bay Length (ft)	230		270			95			140
Base Capacity (vph)	305	2159	161	1941	1012	434	600	563	644
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.68	0.14	0.52	0.01	0.24	0.14	0.12	0.45

Intersection Summary

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	9	1390	38	794	277	128	178	278
v/c Ratio	0.09	0.94	0.43	0.49	0.88	0.21	0.72	0.58
Control Delay	46.1	35.7	59.5	16.1	66.7	32.5	56.1	41.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	35.7	59.5	16.1	66.7	32.5	56.1	41.7
Queue Length 50th (ft)	5	388	23	138	165	33	102	82
Queue Length 95th (ft)	22	#596	#63	250	#334	60	#201	124
Internal Link Dist (ft)		1335		1631		403		268
Turn Bay Length (ft)	225		105		240		130	
Base Capacity (vph)	98	1474	88	1621	316	782	277	706
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	0.09	0.94	0.43	0.49	0.88	0.16	0.64	0.39

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	214	855	12	513	9	23	262	79	413
v/c Ratio	0.71	0.56	0.09	0.65	0.06	0.13	0.74	0.12	0.42
Control Delay	41.5	14.9	30.7	25.7	30.3	24.7	39.8	17.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	14.9	30.7	25.7	30.3	24.7	39.8	17.8	5.1
Queue Length 50th (ft)	77	109	4	92	3	6	94	19	22
Queue Length 95th (ft)	#191	217	20	141	17	27	#224	61	108
Internal Link Dist (ft)		1631		879		405		428	
Turn Bay Length (ft)	320		340		120		125		145
Base Capacity (vph)	304	1527	140	1048	140	515	359	762	994
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.56	0.09	0.49	0.06	0.04	0.73	0.10	0.42

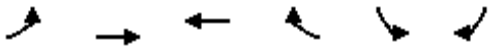
Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	122	625	33	1117	241	31	328	331	181
v/c Ratio	0.64	0.48	0.29	0.98	0.34	0.10	0.98	0.98	0.39
Control Delay	58.0	23.7	46.8	52.6	4.4	20.2	81.5	82.8	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	23.7	46.8	52.6	4.4	20.2	81.5	82.8	7.7
Queue Length 50th (ft)	35	150	18	326	0	7	196	198	0
Queue Length 95th (ft)	#72	205	48	#471	49	31	#372	#376	53
Internal Link Dist (ft)		736		1055		195		252	
Turn Bay Length (ft)	170		80		285				
Base Capacity (vph)	190	1294	116	1140	703	299	336	337	461
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.48	0.28	0.98	0.34	0.10	0.98	0.98	0.39

Intersection Summary

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	101	1137	979	865	288	342
v/c Ratio	0.55	0.61	0.80	0.77	0.28	0.44
Control Delay	38.6	11.0	23.3	6.9	16.9	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	11.0	23.3	6.9	16.9	11.6
Queue Length 50th (ft)	35	132	161	0	40	68
Queue Length 95th (ft)	#88	185	#235	68	67	126
Internal Link Dist (ft)		1055	699		464	
Turn Bay Length (ft)	475			350		
Base Capacity (vph)	186	1859	1228	1131	1032	777
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.61	0.80	0.76	0.28	0.44

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	203	1240	13	1662	98	62	10	9	144
v/c Ratio	0.94	0.60	0.16	1.04	0.86	0.13	0.12	0.03	0.26
Control Delay	95.2	15.2	55.2	61.1	104.9	24.6	54.0	39.1	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	15.2	55.2	61.1	104.9	24.6	54.0	39.1	17.1
Queue Length 50th (ft)	144	233	9	~666	70	21	7	5	42
Queue Length 95th (ft)	#286	374	30	#807	#169	62	25	20	92
Internal Link Dist (ft)		699		2643		176		411	
Turn Bay Length (ft)	350		110		75				
Base Capacity (vph)	217	2068	80	1604	114	460	80	304	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.60	0.16	1.04	0.86	0.13	0.13	0.03	0.26

Intersection Summary

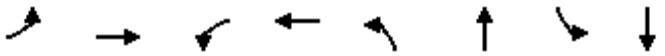
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	212	1045	37	1438	21	78	67	58	138
v/c Ratio	0.73	0.50	0.27	0.86	0.02	0.46	0.28	0.26	0.43
Control Delay	49.2	8.3	42.4	23.2	0.1	41.9	31.6	34.9	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	8.3	42.4	23.2	0.1	41.9	31.6	34.9	10.7
Queue Length 50th (ft)	105	133	18	302	0	38	28	28	0
Queue Length 95th (ft)	#220	213	50	#476	0	80	64	62	48
Internal Link Dist (ft)		2643		1335			324	380	
Turn Bay Length (ft)	230		270			95			140
Base Capacity (vph)	312	2162	141	1848	984	315	435	414	478
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.48	0.26	0.78	0.02	0.25	0.15	0.14	0.29

Intersection Summary

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	936	16	1126	515	330	65	86
v/c Ratio	0.11	0.71	0.17	0.83	0.85	0.26	0.42	0.30
Control Delay	47.7	27.9	49.3	31.6	44.7	23.6	50.7	40.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	27.9	49.3	31.6	44.7	23.6	50.7	40.6
Queue Length 50th (ft)	6	218	9	291	261	70	35	22
Queue Length 95th (ft)	24	352	32	#507	#520	121	84	49
Internal Link Dist (ft)		1335		1631		403		268
Turn Bay Length (ft)	225		105		240		130	
Base Capacity (vph)	94	1312	94	1350	607	1543	181	678
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	0.11	0.71	0.17	0.83	0.85	0.21	0.36	0.13

Intersection Summary

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

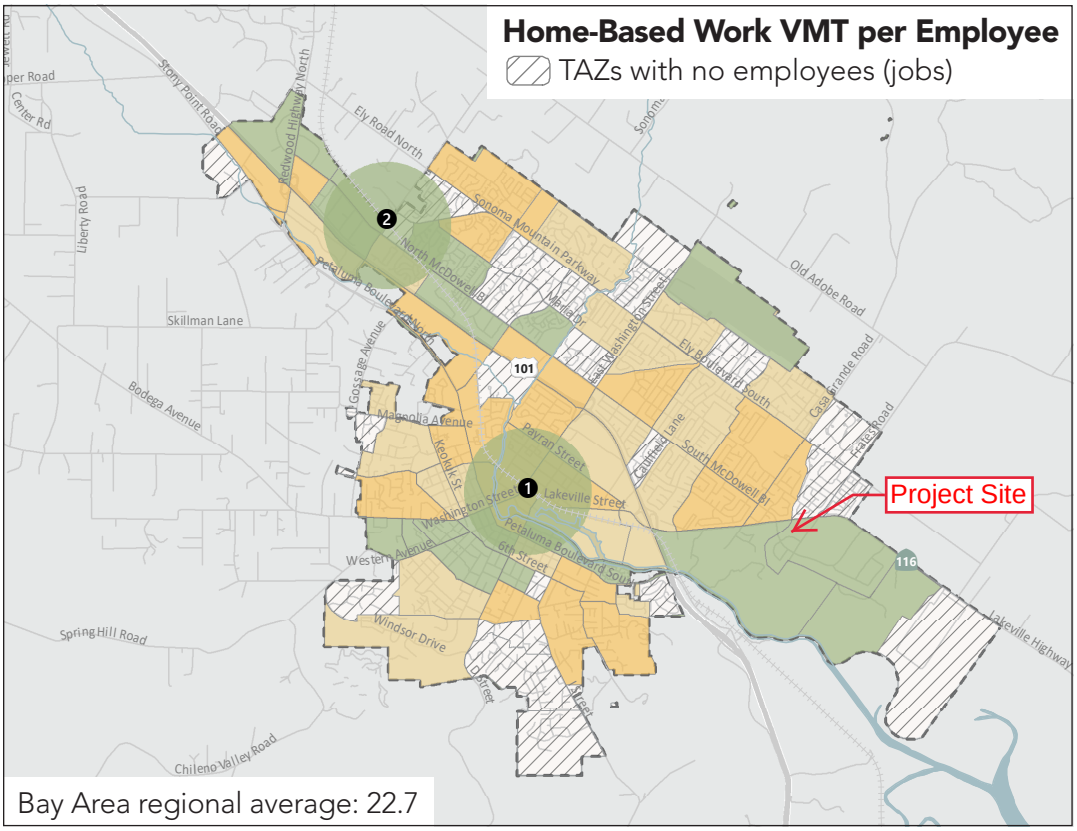
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	356	586	4	1027	61	182	82	26	262
v/c Ratio	0.88	0.28	0.04	0.90	0.56	0.61	0.73	0.09	0.36
Control Delay	56.0	9.3	40.5	38.5	61.2	42.2	76.2	30.6	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	9.3	40.5	38.5	61.2	42.2	76.2	30.6	12.1
Queue Length 50th (ft)	185	67	2	268	33	91	44	12	61
Queue Length 95th (ft)	#367	142	13	#433	#93	156	#127	34	116
Internal Link Dist (ft)		1631		879		405		428	
Turn Bay Length (ft)	320		340		120		125		145
Base Capacity (vph)	416	2059	107	1145	109	406	113	412	734
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.28	0.04	0.90	0.56	0.45	0.73	0.06	0.36

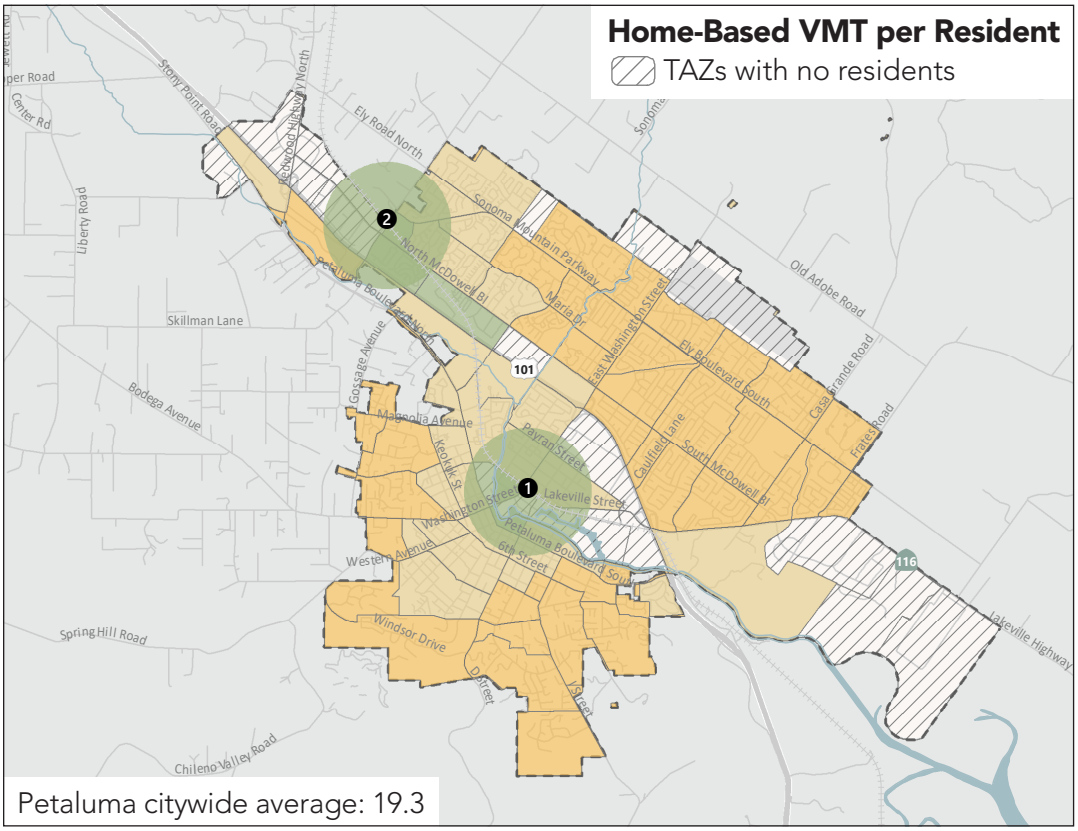
Intersection Summary

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

Appendix C – City of Petaluma VMT Screening Maps

Step 2: VMT Maps





Legend

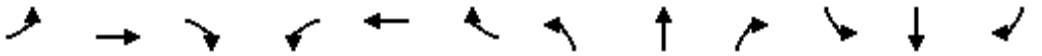
Data from Sonoma County Travel Demand Model

- 16.8% or more below average
- Between 16.8% and 0% below average
- Above average
- ❶ Petaluma Downtown SMART station
- ❷ Petaluma North SMART station (future - staff discretion remains for screening pending funding)
- ½-mile station buffer
- City limits

* These values were calculated using the 2015 base year of the August 2020 version of the Sonoma County Transportation Authority (SCTA) travel demand model. This model incorporates 'Big Data' to refine trip length estimates for inter-county trips. The 2015 horizon year was chosen as a baseline due to the effects of 2017 and 2019 Sonoma County wildfires and the 2020 COVID-19 pandemic. **These values should be updated with new baseline SCTA model information as it becomes available.**

Appendix D – Existing plus Project Conditions

Intersection Level of Service Worksheets



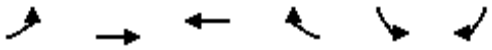
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	642	3	7	595	288	5	1	6	995	9	170
Future Volume (veh/h)	254	642	3	7	595	288	5	1	6	995	9	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1752	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	267	676	3	7	626	303	5	1	6	1053	0	179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	292	970	4	16	669	333	140	28	168	1089	0	484
Arrive On Green	0.08	0.29	0.29	0.01	0.21	0.21	0.20	0.20	0.20	0.31	0.00	0.31
Sat Flow, veh/h	3456	3398	15	1781	3188	1585	702	140	842	3563	0	1585
Grp Volume(v), veh/h	267	331	348	7	626	303	12	0	0	1053	0	179
Grp Sat Flow(s),veh/h/ln	1728	1664	1749	1781	1594	1585	1684	0	0	1781	0	1585
Q Serve(g_s), s	6.9	16.0	16.0	0.4	17.4	16.8	0.5	0.0	0.0	26.2	0.0	8.0
Cycle Q Clear(g_c), s	6.9	16.0	16.0	0.4	17.4	16.8	0.5	0.0	0.0	26.2	0.0	8.0
Prop In Lane	1.00		0.01	1.00		1.00	0.42		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	292	475	499	16	669	333	337	0	0	1089	0	484
V/C Ratio(X)	0.91	0.70	0.70	0.44	0.94	0.91	0.04	0.00	0.00	0.97	0.00	0.37
Avail Cap(c_a), veh/h	292	475	499	99	669	333	337	0	0	1089	0	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.9	28.7	28.7	44.4	34.9	34.7	29.0	0.0	0.0	30.8	0.0	24.5
Incr Delay (d2), s/veh	31.5	4.4	4.2	18.0	20.5	27.9	0.2	0.0	0.0	19.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	6.6	6.9	0.2	8.3	8.7	0.2	0.0	0.0	13.3	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	33.1	32.9	62.4	55.4	62.6	29.2	0.0	0.0	50.6	0.0	24.9
LnGrp LOS	E	C	C	E	E	E	C	A	A	D	A	C
Approach Vol, veh/h		946			936			12			1232	
Approach Delay, s/veh		44.1			57.8			29.2			46.9	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	30.2		32.0	12.1	23.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	21.5		27.5	7.6	18.9		18.0				
Max Q Clear Time (g_c+I1), s	2.4	18.0		28.2	8.9	19.4		2.5				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		49.2
HCM 6th LOS		D

Notes

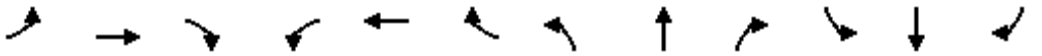
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	67	1543	782	828	252	94
Future Volume (veh/h)	67	1543	782	828	252	94
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	74	1714	869	920	280	104
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	112	2193	1738	864	462	312
Arrive On Green	0.06	0.69	0.55	0.55	0.13	0.13
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	74	1714	869	920	280	104
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	2.1	19.0	8.9	28.5	4.0	2.9
Cycle Q Clear(g_c), s	2.1	19.0	8.9	28.5	4.0	2.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	112	2193	1738	864	462	312
V/C Ratio(X)	0.66	0.78	0.50	1.06	0.61	0.33
Avail Cap(c_a), veh/h	170	2297	1738	864	1190	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	5.3	7.4	11.9	21.4	18.1
Incr Delay (d2), s/veh	6.4	1.7	1.0	49.3	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.6	2.2	18.1	1.5	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.4	7.1	8.5	61.2	22.6	18.7
LnGrp LOS	C	A	A	F	C	B
Approach Vol, veh/h		1788	1789		384	
Approach Delay, s/veh		8.0	35.6		21.6	
Approach LOS		A	D		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		40.8		11.5	7.8	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		38.0		18.0	5.0	28.5
Max Q Clear Time (g_c+I1), s		21.0		6.0	4.1	30.5
Green Ext Time (p_c), s		11.5		1.0	0.0	0.0

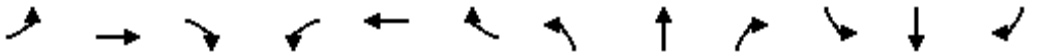
Intersection Summary		
HCM 6th Ctrl Delay		21.8
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1622	27	8	1308	29	36	2	12	21	17	287
Future Volume (veh/h)	75	1622	27	8	1308	29	36	2	12	21	17	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1707	28	8	1377	31	39	2	13	23	18	309
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1849	30	18	1669	38	64	50	323	44	410	438
Arrive On Green	0.06	0.52	0.52	0.01	0.47	0.47	0.04	0.23	0.23	0.02	0.22	0.22
Sat Flow, veh/h	1781	3578	59	1781	3553	80	1781	216	1402	1781	1870	1585
Grp Volume(v), veh/h	79	846	889	8	688	720	39	0	15	23	18	309
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1856	1781	0	1618	1781	1870	1585
Q Serve(g_s), s	3.6	36.3	36.5	0.4	27.7	27.7	1.8	0.0	0.6	1.1	0.6	14.5
Cycle Q Clear(g_c), s	3.6	36.3	36.5	0.4	27.7	27.7	1.8	0.0	0.6	1.1	0.6	14.5
Prop In Lane	1.00		0.03	1.00		0.04	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	102	918	961	18	835	872	64	0	372	44	410	438
V/C Ratio(X)	0.78	0.92	0.92	0.44	0.82	0.83	0.61	0.00	0.04	0.52	0.04	0.71
Avail Cap(c_a), veh/h	183	940	984	110	867	906	110	0	372	110	410	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	18.4	18.5	40.6	18.9	19.0	39.2	0.0	24.7	39.8	25.4	26.9
Incr Delay (d2), s/veh	11.8	13.9	13.8	16.0	6.3	6.1	9.1	0.0	0.2	9.1	0.2	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	16.0	16.9	0.2	11.4	11.9	0.9	0.0	0.2	0.6	0.3	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	32.3	32.3	56.7	25.3	25.1	48.4	0.0	24.9	48.9	25.6	36.0
LnGrp LOS	D	C	C	E	C	C	D	A	C	D	C	D
Approach Vol, veh/h		1814			1416			54			350	
Approach Delay, s/veh		33.1			25.4			41.9			36.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	47.2	7.5	22.6	9.2	43.3	6.5	23.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	8.5	40.3	5.1	18.1
Max Q Clear Time (g_c+I1), s	2.4	38.5	3.8	16.5	5.6	29.7	3.1	2.6
Green Ext Time (p_c), s	0.0	4.2	0.0	0.2	0.0	6.3	0.0	0.0

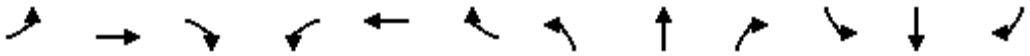
Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1426	38	21	978	10	98	56	23	15	49	278
Future Volume (veh/h)	142	1426	38	21	978	10	98	56	23	15	49	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1501	40	22	1029	11	103	59	24	16	52	293
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	189	1719	46	45	1486	739	307	275	112	122	332	345
Arrive On Green	0.11	0.55	0.55	0.03	0.47	0.47	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3144	84	1781	3188	1585	1036	1264	514	243	1525	1585
Grp Volume(v), veh/h	149	753	788	22	1029	11	103	0	83	68	0	293
Grp Sat Flow(s),veh/h/ln	1781	1580	1648	1781	1594	1585	1036	0	1778	1768	0	1585
Q Serve(g_s), s	5.2	26.5	26.7	0.8	16.3	0.2	5.8	0.0	2.5	0.0	0.0	11.4
Cycle Q Clear(g_c), s	5.2	26.5	26.7	0.8	16.3	0.2	7.7	0.0	2.5	1.9	0.0	11.4
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.29	0.24		1.00
Lane Grp Cap(c), veh/h	189	864	901	45	1486	739	307	0	387	454	0	345
V/C Ratio(X)	0.79	0.87	0.87	0.49	0.69	0.01	0.34	0.00	0.21	0.15	0.00	0.85
Avail Cap(c_a), veh/h	263	947	988	139	1687	839	372	0	498	560	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	12.6	12.6	30.9	13.5	9.2	23.5	0.0	20.6	20.4	0.0	24.1
Incr Delay (d2), s/veh	10.3	8.4	8.3	8.0	1.1	0.0	0.6	0.0	0.3	0.2	0.0	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.5	8.9	0.4	4.7	0.1	1.4	0.0	1.0	0.8	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	21.0	20.9	38.9	14.6	9.2	24.1	0.0	20.9	20.5	0.0	35.8
LnGrp LOS	D	C	C	D	B	A	C	A	C	C	A	D
Approach Vol, veh/h		1690			1062			186			361	
Approach Delay, s/veh		22.5			15.0			22.7			32.9	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	39.6		18.5	11.3	34.4		18.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	38.5		18.0	9.5	34.0		18.0				
Max Q Clear Time (g_c+I1), s	2.8	28.7		13.4	7.2	18.3		9.7				
Green Ext Time (p_c), s	0.0	6.4		0.6	0.1	6.1		0.5				

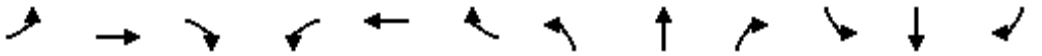
Intersection Summary			
HCM 6th Ctrl Delay		21.2	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	849	575	37	711	59	284	117	9	173	269	11
Future Volume (veh/h)	9	849	575	37	711	59	284	117	9	173	269	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1678	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	875	593	38	733	61	293	121	9	178	277	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	15	15	2	2	2	2	2	2	2
Cap, veh/h	20	869	572	54	1487	124	319	569	42	214	385	15
Arrive On Green	0.01	0.48	0.48	0.03	0.50	0.50	0.18	0.17	0.17	0.12	0.11	0.11
Sat Flow, veh/h	1781	1825	1201	1598	2979	248	1781	3355	247	1781	3484	138
Grp Volume(v), veh/h	9	754	714	38	392	402	293	64	66	178	141	147
Grp Sat Flow(s),veh/h/ln	1781	1580	1447	1598	1594	1633	1781	1777	1826	1781	1777	1846
Q Serve(g_s), s	0.5	42.8	42.8	2.1	14.7	14.7	14.5	2.8	2.8	8.8	6.9	6.9
Cycle Q Clear(g_c), s	0.5	42.8	42.8	2.1	14.7	14.7	14.5	2.8	2.8	8.8	6.9	6.9
Prop In Lane	1.00		0.83	1.00		0.15	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	20	752	689	54	795	815	319	301	309	214	196	204
V/C Ratio(X)	0.45	1.00	1.04	0.70	0.49	0.49	0.92	0.21	0.21	0.83	0.72	0.72
Avail Cap(c_a), veh/h	99	752	689	91	795	815	319	395	406	279	356	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	23.5	23.5	43.0	15.0	15.0	36.2	32.2	32.2	38.7	38.6	38.7
Incr Delay (d2), s/veh	15.1	33.3	44.2	14.9	0.5	0.5	30.3	0.3	0.3	15.0	4.9	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	20.6	21.0	1.0	4.8	4.9	8.8	1.2	1.2	4.6	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	56.8	67.7	57.8	15.4	15.4	66.6	32.5	32.5	53.7	43.5	43.4
LnGrp LOS	E	F	F	E	B	B	E	C	C	D	D	D
Approach Vol, veh/h		1477			832			423			466	
Approach Delay, s/veh		62.1			17.4			56.1			47.4	
Approach LOS		E			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	47.3	20.6	14.4	5.5	49.4	15.3	19.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	42.8	16.1	18.0	5.0	42.9	14.1	20.0
Max Q Clear Time (g_c+I1), s	4.1	44.8	16.5	8.9	2.5	16.7	10.8	4.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	4.8	0.1	0.5

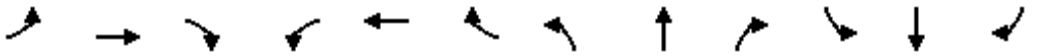
Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	761	51	20	452	35	9	16	8	249	75	392
Future Volume (veh/h)	203	761	51	20	452	35	9	16	8	249	75	392
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	214	801	54	21	476	37	9	17	8	262	79	413
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	264	1109	75	45	687	53	21	135	64	320	525	659
Arrive On Green	0.16	0.34	0.34	0.03	0.21	0.21	0.01	0.11	0.11	0.18	0.28	0.28
Sat Flow, veh/h	1697	3218	217	1781	3209	249	1781	1203	566	1781	1870	1510
Grp Volume(v), veh/h	214	421	434	21	252	261	9	0	25	262	79	413
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1781	1706	1751	1781	0	1768	1781	1870	1510
Q Serve(g_s), s	6.5	11.6	11.6	0.6	7.3	7.3	0.3	0.0	0.7	7.5	1.7	11.3
Cycle Q Clear(g_c), s	6.5	11.6	11.6	0.6	7.3	7.3	0.3	0.0	0.7	7.5	1.7	11.3
Prop In Lane	1.00		0.12	1.00		0.14	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	264	583	601	45	365	375	21	0	199	320	525	659
V/C Ratio(X)	0.81	0.72	0.72	0.47	0.69	0.70	0.43	0.00	0.13	0.82	0.15	0.63
Avail Cap(c_a), veh/h	366	833	857	167	631	648	167	0	598	428	906	966
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	15.2	15.2	25.6	19.3	19.3	26.1	0.0	21.3	21.0	14.4	11.6
Incr Delay (d2), s/veh	9.1	1.8	1.7	7.5	2.3	2.3	13.5	0.0	0.3	8.9	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.7	3.8	0.3	2.7	2.8	0.2	0.0	0.3	3.6	0.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	17.0	17.0	33.1	21.6	21.6	39.6	0.0	21.6	29.9	14.5	12.6
LnGrp LOS	C	B	B	C	C	C	D	A	C	C	B	B
Approach Vol, veh/h		1069			534			34			754	
Approach Delay, s/veh		19.8			22.1			26.3			18.8	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	22.9	5.1	19.4	12.8	15.9	14.1	10.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.2	5.0	25.8	11.5	19.7	12.8	18.0
Max Q Clear Time (g_c+I1), s	2.6	13.6	2.3	13.3	8.5	9.3	9.5	2.7
Green Ext Time (p_c), s	0.0	4.0	0.0	1.6	0.2	2.1	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C



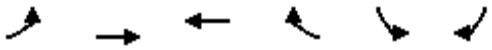
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	590	7	31	1080	236	12	3	14	614	14	170
Future Volume (veh/h)	115	590	7	31	1080	236	12	3	14	614	14	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1811	1870	1767	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	628	7	33	1149	251	13	3	15	664	0	181
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	187	1282	14	56	1158	547	142	33	164	714	0	317
Arrive On Green	0.05	0.37	0.37	0.03	0.34	0.34	0.20	0.20	0.20	0.20	0.00	0.20
Sat Flow, veh/h	3456	3486	39	1781	3357	1585	708	163	817	3563	0	1585
Grp Volume(v), veh/h	122	310	325	33	1149	251	31	0	0	664	0	181
Grp Sat Flow(s),veh/h/ln	1728	1721	1804	1781	1678	1585	1688	0	0	1781	0	1585
Q Serve(g_s), s	3.1	12.5	12.5	1.6	30.6	11.1	1.3	0.0	0.0	16.5	0.0	9.3
Cycle Q Clear(g_c), s	3.1	12.5	12.5	1.6	30.6	11.1	1.3	0.0	0.0	16.5	0.0	9.3
Prop In Lane	1.00		0.02	1.00		1.00	0.42		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	187	633	664	56	1158	547	338	0	0	714	0	317
V/C Ratio(X)	0.65	0.49	0.49	0.59	0.99	0.46	0.09	0.00	0.00	0.93	0.00	0.57
Avail Cap(c_a), veh/h	192	633	664	117	1158	547	338	0	0	714	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	21.9	21.9	43.0	29.3	22.9	29.3	0.0	0.0	35.3	0.0	32.4
Incr Delay (d2), s/veh	7.3	0.6	0.6	9.7	24.5	0.6	0.5	0.0	0.0	18.8	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.8	5.0	0.9	15.3	4.0	0.6	0.0	0.0	8.5	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	22.5	22.5	52.7	53.8	23.5	29.8	0.0	0.0	54.1	0.0	34.9
LnGrp LOS	D	C	C	D	D	C	C	A	A	D	A	C
Approach Vol, veh/h		757			1433			31			845	
Approach Delay, s/veh		26.8			48.5			29.8			50.0	
Approach LOS		C			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	37.6		22.5	9.4	35.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	30.1		18.0	5.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	14.5		18.5	5.1	32.6		3.3				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	0.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	43.4	
HCM 6th LOS	D	

Notes

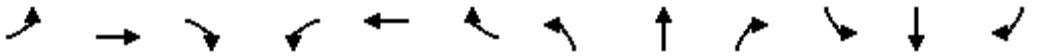
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	1144	1008	887	288	339
Future Volume (veh/h)	100	1144	1008	887	288	339
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	101	1156	1018	896	291	342
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	130	1822	1287	608	1074	608
Arrive On Green	0.07	0.53	0.38	0.38	0.31	0.31
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	101	1156	1018	896	291	342
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	3.2	13.8	15.5	22.2	3.7	9.8
Cycle Q Clear(g_c), s	3.2	13.8	15.5	22.2	3.7	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	1822	1287	608	1074	608
V/C Ratio(X)	0.78	0.63	0.79	1.47	0.27	0.56
Avail Cap(c_a), veh/h	194	1945	1287	608	1074	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	9.5	15.8	17.9	15.0	14.0
Incr Delay (d2), s/veh	11.0	0.6	3.4	222.4	0.6	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.8	5.4	44.0	1.3	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.4	10.1	19.2	240.3	15.6	17.8
LnGrp LOS	D	B	B	F	B	B
Approach Vol, veh/h		1257	1914		633	
Approach Delay, s/veh		12.3	122.7		16.8	
Approach LOS		B	F		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.4		22.5	8.7	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		15.8		11.8	5.2	24.2
Green Ext Time (p_c), s		7.5		1.3	0.0	0.0

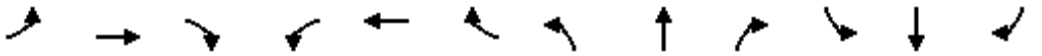
Intersection Summary	
HCM 6th Ctrl Delay	68.6
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1197	27	13	1645	37	95	39	21	10	9	140
Future Volume (veh/h)	197	1197	27	13	1645	37	95	39	21	10	9	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1234	28	13	1696	38	98	40	22	10	9	144
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	219	2024	46	27	1629	36	115	245	135	21	306	454
Arrive On Green	0.12	0.59	0.59	0.01	0.49	0.49	0.06	0.22	0.22	0.01	0.16	0.16
Sat Flow, veh/h	1781	3411	77	1781	3356	75	1781	1134	624	1781	1870	1585
Grp Volume(v), veh/h	203	617	645	13	846	888	98	0	62	10	9	144
Grp Sat Flow(s),veh/h/ln	1781	1706	1782	1781	1678	1753	1781	0	1758	1781	1870	1585
Q Serve(g_s), s	12.4	25.3	25.4	0.8	53.4	53.4	6.0	0.0	3.2	0.6	0.4	7.8
Cycle Q Clear(g_c), s	12.4	25.3	25.4	0.8	53.4	53.4	6.0	0.0	3.2	0.6	0.4	7.8
Prop In Lane	1.00		0.04	1.00		0.04	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	219	1012	1057	27	815	851	115	0	380	21	306	454
V/C Ratio(X)	0.93	0.61	0.61	0.49	1.04	1.04	0.85	0.00	0.16	0.47	0.03	0.32
Avail Cap(c_a), veh/h	219	1012	1057	81	815	851	115	0	380	81	306	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	14.3	14.3	53.8	28.3	28.3	50.9	0.0	35.0	54.0	38.7	30.8
Incr Delay (d2), s/veh	41.5	1.1	1.0	13.3	41.9	42.7	42.4	0.0	0.9	15.2	0.2	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	7.9	9.1	9.5	0.4	29.1	30.6	4.0	0.0	1.5	0.4	0.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.3	15.3	15.3	67.1	70.2	71.0	93.3	0.0	35.9	69.2	38.8	32.6
LnGrp LOS	F	B	B	E	F	F	F	A	D	E	D	C
Approach Vol, veh/h		1465			1747			160			163	
Approach Delay, s/veh		25.6			70.6			71.1			35.2	
Approach LOS		C			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	69.8	11.6	22.5	18.0	57.9	5.8	28.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	61.9	7.1	18.0	13.5	53.4	5.0	20.1
Max Q Clear Time (g_c+I1), s	2.8	27.4	8.0	9.8	14.4	55.4	2.6	5.2
Green Ext Time (p_c), s	0.0	10.1	0.0	0.3	0.0	0.0	0.0	0.2

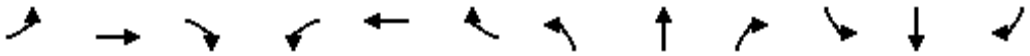
Intersection Summary	
HCM 6th Ctrl Delay	50.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	929	106	36	1465	20	76	55	10	10	47	134
Future Volume (veh/h)	206	929	106	36	1465	20	76	55	10	10	47	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	958	109	37	1510	21	78	57	10	10	48	138
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	255	1874	213	64	1748	869	213	191	33	75	206	195
Arrive On Green	0.14	0.66	0.66	0.04	0.55	0.55	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	2859	325	1781	3188	1585	1198	1550	272	141	1673	1585
Grp Volume(v), veh/h	212	529	538	37	1510	21	78	0	67	58	0	138
Grp Sat Flow(s),veh/h/ln	1781	1580	1604	1781	1594	1585	1198	0	1821	1814	0	1585
Q Serve(g_s), s	8.4	12.7	12.7	1.5	29.7	0.4	4.6	0.0	2.4	0.0	0.0	6.1
Cycle Q Clear(g_c), s	8.4	12.7	12.7	1.5	29.7	0.4	6.6	0.0	2.4	2.0	0.0	6.1
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.15	0.17		1.00
Lane Grp Cap(c), veh/h	255	1036	1052	64	1748	869	213	0	224	281	0	195
V/C Ratio(X)	0.83	0.51	0.51	0.57	0.86	0.02	0.37	0.00	0.30	0.21	0.00	0.71
Avail Cap(c_a), veh/h	330	1134	1152	149	1966	978	360	0	449	497	0	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.4	6.5	6.5	34.6	14.1	7.5	32.0	0.0	29.1	28.9	0.0	30.7
Incr Delay (d2), s/veh	13.0	0.4	0.4	7.8	3.9	0.0	1.1	0.0	0.7	0.4	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	4.2	2.8	2.9	0.7	9.0	0.1	1.3	0.0	1.1	0.9	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	6.9	6.9	42.4	18.0	7.6	33.0	0.0	29.9	29.3	0.0	35.4
LnGrp LOS	D	A	A	D	B	A	C	A	C	C	A	D
Approach Vol, veh/h		1279			1568			145			196	
Approach Delay, s/veh		12.9			18.5			31.6			33.6	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	52.3		13.5	15.0	44.5		13.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.1	52.4		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s	3.5	14.7		8.1	10.4	31.7		8.6				
Green Ext Time (p_c), s	0.0	7.8		0.5	0.2	8.4		0.3				

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	765	174	16	937	167	575	326	7	64	79	8
Future Volume (veh/h)	10	765	174	16	937	167	575	326	7	64	79	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	781	176	16	956	170	587	333	7	65	81	8
Peak Hour Factor	0.98	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	22	1033	233	33	1080	192	620	1272	27	84	185	18
Arrive On Green	0.01	0.37	0.37	0.02	0.38	0.38	0.35	0.36	0.36	0.05	0.06	0.06
Sat Flow, veh/h	1781	2767	624	1781	2848	506	1781	3559	75	1781	3271	319
Grp Volume(v), veh/h	10	482	475	16	563	563	587	166	174	65	43	46
Grp Sat Flow(s),veh/h/ln	1781	1706	1684	1781	1678	1676	1781	1777	1857	1781	1777	1813
Q Serve(g_s), s	0.5	21.8	21.8	0.8	27.7	27.7	28.3	5.9	5.9	3.2	2.1	2.1
Cycle Q Clear(g_c), s	0.5	21.8	21.8	0.8	27.7	27.7	28.3	5.9	5.9	3.2	2.1	2.1
Prop In Lane	1.00		0.37	1.00		0.30	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	22	637	629	33	637	636	620	635	664	84	101	103
V/C Ratio(X)	0.46	0.76	0.76	0.49	0.88	0.89	0.95	0.26	0.26	0.77	0.43	0.44
Avail Cap(c_a), veh/h	101	713	703	101	701	700	647	814	851	194	362	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	24.2	24.2	43.0	25.6	25.6	28.0	20.1	20.1	41.6	40.3	40.3
Incr Delay (d2), s/veh	14.0	4.2	4.2	10.8	12.1	12.3	22.7	0.2	0.2	13.9	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.7	8.6	0.4	12.0	12.0	15.2	2.4	2.5	1.7	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	28.3	28.4	53.8	37.8	37.9	50.7	20.3	20.3	55.6	43.2	43.3
LnGrp LOS	E	C	C	D	D	D	D	C	C	E	D	D
Approach Vol, veh/h		967			1142			927			154	
Approach Delay, s/veh		28.7			38.1			39.6			48.5	
Approach LOS		C			D			D			D	

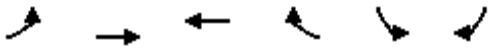
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	37.5	35.3	9.5	5.6	38.0	8.7	36.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	36.9	32.1	18.0	5.0	36.9	9.6	40.5
Max Q Clear Time (g_c+I1), s	2.8	23.8	30.3	4.1	2.5	29.7	5.2	7.9
Green Ext Time (p_c), s	0.0	4.7	0.4	0.3	0.0	3.8	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	532	25	6	769	207	58	165	17	78	25	249
Future Volume (veh/h)	338	532	25	6	769	207	58	165	17	78	25	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	356	560	26	6	809	218	61	174	18	82	26	262
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	394	1849	86	14	896	241	83	245	25	105	298	591
Arrive On Green	0.23	0.56	0.56	0.01	0.34	0.34	0.05	0.15	0.15	0.06	0.16	0.16
Sat Flow, veh/h	1697	3294	153	1781	2658	716	1781	1667	172	1781	1870	1510
Grp Volume(v), veh/h	356	287	299	6	519	508	61	0	192	82	26	262
Grp Sat Flow(s),veh/h/ln	1697	1692	1754	1781	1706	1667	1781	0	1839	1781	1870	1510
Q Serve(g_s), s	16.3	7.2	7.2	0.3	23.2	23.2	2.7	0.0	8.0	3.6	0.9	10.2
Cycle Q Clear(g_c), s	16.3	7.2	7.2	0.3	23.2	23.2	2.7	0.0	8.0	3.6	0.9	10.2
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	394	950	984	14	575	562	83	0	270	105	298	591
V/C Ratio(X)	0.90	0.30	0.30	0.43	0.90	0.90	0.74	0.00	0.71	0.78	0.09	0.44
Avail Cap(c_a), veh/h	435	950	984	111	602	588	114	0	414	118	426	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	9.3	9.3	39.5	25.3	25.3	37.6	0.0	32.5	37.1	28.6	17.9
Incr Delay (d2), s/veh	20.8	0.2	0.2	19.7	16.6	16.9	14.9	0.0	3.5	25.2	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	2.2	2.3	0.2	11.2	10.9	1.5	0.0	3.7	2.3	0.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	9.4	9.4	59.2	41.9	42.2	52.6	0.0	36.0	62.3	28.8	18.4
LnGrp LOS	D	A	A	E	D	D	D	A	D	E	C	B
Approach Vol, veh/h		942			1033			253			370	
Approach Delay, s/veh		25.0			42.1			40.0			28.9	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	49.4	8.2	17.2	23.1	31.4	9.2	16.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.7	5.1	18.2	20.5	28.2	5.3	18.0
Max Q Clear Time (g_c+I1), s	2.3	9.2	4.7	12.2	18.3	25.2	5.6	10.0
Green Ext Time (p_c), s	0.0	3.4	0.0	0.5	0.3	1.7	0.0	0.6

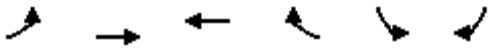
Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	67	1543	782	828	252	94
Future Volume (veh/h)	67	1543	782	828	252	94
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	74	1714	869	920	280	104
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	110	2230	1793	1099	453	305
Arrive On Green	0.06	0.71	0.56	0.56	0.13	0.13
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	74	1714	869	920	280	104
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	2.2	19.2	9.0	23.4	4.2	3.1
Cycle Q Clear(g_c), s	2.2	19.2	9.0	23.4	4.2	3.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	110	2230	1793	1099	453	305
V/C Ratio(X)	0.68	0.77	0.48	0.84	0.62	0.34
Avail Cap(c_a), veh/h	233	2448	1793	1099	1148	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	5.2	7.3	6.2	22.6	19.2
Incr Delay (d2), s/veh	7.0	1.4	0.9	7.6	1.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	2.2	9.7	1.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.4	6.6	8.2	13.8	24.0	19.9
LnGrp LOS	C	A	A	B	C	B
Approach Vol, veh/h		1788	1789		384	
Approach Delay, s/veh		7.7	11.1		22.9	
Approach LOS		A	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		43.4		11.7	7.9	35.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		42.7		18.3	7.2	31.0
Max Q Clear Time (g_c+I1), s		21.2		6.2	4.2	25.4
Green Ext Time (p_c), s		13.5		1.0	0.0	4.1

Intersection Summary		
HCM 6th Ctrl Delay		10.7
HCM 6th LOS		B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	1144	1008	887	288	339
Future Volume (veh/h)	100	1144	1008	887	288	339
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	101	1156	1018	896	291	342
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	130	1819	1284	1101	1078	610
Arrive On Green	0.07	0.53	0.38	0.38	0.31	0.31
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	101	1156	1018	896	291	342
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	3.2	13.9	15.6	22.2	3.7	9.8
Cycle Q Clear(g_c), s	3.2	13.9	15.6	22.2	3.7	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	1819	1284	1101	1078	610
V/C Ratio(X)	0.78	0.64	0.79	0.81	0.27	0.56
Avail Cap(c_a), veh/h	190	1935	1284	1101	1078	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	9.6	15.9	6.1	15.0	14.0
Incr Delay (d2), s/veh	11.6	0.6	3.5	4.8	0.6	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.8	5.5	12.9	1.3	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.0	10.2	19.4	10.9	15.6	17.7
LnGrp LOS	D	B	B	B	B	B
Approach Vol, veh/h		1257	1914		633	
Approach Delay, s/veh		12.4	15.4		16.7	
Approach LOS		B	B		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.4		22.6	8.7	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		32.9		18.1	6.2	22.2
Max Q Clear Time (g_c+I1), s		15.9		11.8	5.2	24.2
Green Ext Time (p_c), s		7.5		1.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	267	679	7	626	303	12	523	533	179
v/c Ratio	0.92	0.64	0.07	0.95	0.53	0.04	1.02	1.03	0.29
Control Delay	79.3	30.5	42.0	61.2	7.6	22.6	77.7	81.7	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.3	30.5	42.0	61.2	7.6	22.6	77.7	81.7	5.2
Queue Length 50th (ft)	79	165	4	186	0	3	~322	~346	0
Queue Length 95th (ft)	#153	#291	18	#294	66	17	#538	#551	45
Internal Link Dist (ft)		736		1055		231		252	
Turn Bay Length (ft)	170		80		285				
Base Capacity (vph)	289	1060	98	659	571	292	513	515	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.64	0.07	0.95	0.53	0.04	1.02	1.03	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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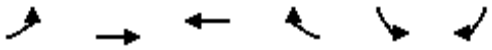

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	74	1714	869	920	280	104
v/c Ratio	0.46	0.84	0.53	0.73	0.46	0.17
Control Delay	36.1	12.9	11.1	4.9	23.4	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	12.9	11.1	4.9	23.4	6.1
Queue Length 50th (ft)	25	178	97	0	44	6
Queue Length 95th (ft)	#71	#349	161	54	74	32
Internal Link Dist (ft)		1055	699		464	
Turn Bay Length (ft)	475			350		
Base Capacity (vph)	161	2160	1649	1268	1129	606
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.79	0.53	0.73	0.25	0.17

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	79	1735	8	1408	39	15	23	18	309
v/c Ratio	0.48	0.84	0.07	0.87	0.36	0.04	0.21	0.04	0.49
Control Delay	48.4	20.7	41.9	28.1	49.9	16.2	45.1	29.3	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	20.7	41.9	28.1	49.9	16.2	45.1	29.3	19.7
Queue Length 50th (ft)	43	382	4	373	22	1	13	8	104
Queue Length 95th (ft)	88	#690	18	#520	54	17	38	26	185
Internal Link Dist (ft)		699		2643		176		411	
Turn Bay Length (ft)	350		110		75				
Base Capacity (vph)	182	2070	109	1726	109	400	109	408	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.84	0.07	0.82	0.36	0.04	0.21	0.04	0.48

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	149	1541	22	1029	11	103	83	68	293
v/c Ratio	0.56	0.81	0.14	0.75	0.01	0.43	0.25	0.22	0.68
Control Delay	37.3	16.3	33.3	18.6	0.0	29.8	19.3	24.6	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	16.3	33.3	18.6	0.0	29.8	19.3	24.6	18.4
Queue Length 50th (ft)	49	146	7	151	0	33	18	21	35
Queue Length 95th (ft)	#145	#517	31	268	0	82	55	57	114
Internal Link Dist (ft)		2643		1335			324	380	
Turn Bay Length (ft)	230		270			95			140
Base Capacity (vph)	290	2081	153	1846	966	413	571	534	620
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.74	0.14	0.56	0.01	0.25	0.15	0.13	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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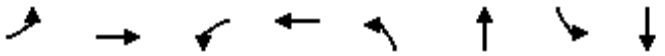

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	9	1468	38	794	293	130	178	288
v/c Ratio	0.09	0.98	0.43	0.49	0.93	0.21	0.73	0.59
Control Delay	46.3	42.1	59.6	16.3	75.8	32.4	56.5	42.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	42.1	59.6	16.3	75.8	32.4	56.5	42.0
Queue Length 50th (ft)	5	~461	23	140	178	34	103	86
Queue Length 95th (ft)	22	#635	#64	252	#359	61	#201	128
Internal Link Dist (ft)		1335		1631		403		268
Turn Bay Length (ft)	225		105		240		130	
Base Capacity (vph)	97	1493	88	1615	315	781	276	703
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	0.09	0.98	0.43	0.49	0.93	0.17	0.64	0.41

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	214	855	21	513	9	25	262	79	413
v/c Ratio	0.71	0.56	0.15	0.65	0.06	0.14	0.74	0.12	0.42
Control Delay	41.6	14.9	31.9	25.8	30.4	23.8	39.9	17.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	14.9	31.9	25.8	30.4	23.8	39.9	17.8	5.1
Queue Length 50th (ft)	77	109	8	92	3	6	94	19	22
Queue Length 95th (ft)	#192	217	29	141	17	28	#224	61	108
Internal Link Dist (ft)		1631		879		405		428	
Turn Bay Length (ft)	320		340		120		125		145
Base Capacity (vph)	304	1526	140	1048	140	511	359	761	994
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.56	0.15	0.49	0.06	0.05	0.73	0.10	0.42

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	122	635	33	1149	251	31	333	335	181
v/c Ratio	0.64	0.49	0.29	1.01	0.35	0.10	0.99	0.99	0.39
Control Delay	58.0	23.8	46.8	59.3	4.4	20.2	85.1	85.8	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	23.8	46.8	59.3	4.4	20.2	85.1	85.8	7.7
Queue Length 50th (ft)	35	153	18	~344	0	7	200	202	0
Queue Length 95th (ft)	#72	208	48	#491	49	31	#381	#383	53
Internal Link Dist (ft)		736		1055		195		252	
Turn Bay Length (ft)	170		80		285				
Base Capacity (vph)	190	1294	116	1140	709	299	336	337	461
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.49	0.28	1.01	0.35	0.10	0.99	0.99	0.39

Intersection Summary

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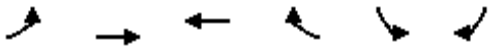

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	101	1156	1018	896	291	342
v/c Ratio	0.55	0.62	0.83	0.78	0.28	0.44
Control Delay	38.6	11.1	24.9	7.5	17.0	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	11.1	24.9	7.5	17.0	11.7
Queue Length 50th (ft)	35	134	171	2	41	69
Queue Length 95th (ft)	#88	190	#274	#81	68	127
Internal Link Dist (ft)		1055	699		464	
Turn Bay Length (ft)	475			350		
Base Capacity (vph)	185	1858	1227	1145	1030	774
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.62	0.83	0.78	0.28	0.44

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	203	1262	13	1734	98	62	10	9	144
v/c Ratio	0.94	0.61	0.16	1.08	0.86	0.13	0.12	0.03	0.26
Control Delay	95.2	15.4	55.2	76.4	104.9	24.6	54.0	39.1	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	15.4	55.2	76.4	104.9	24.6	54.0	39.1	17.1
Queue Length 50th (ft)	144	240	9	~723	70	21	7	5	42
Queue Length 95th (ft)	#286	384	30	#864	#169	62	25	20	92
Internal Link Dist (ft)		699		2643		176		411	
Turn Bay Length (ft)	350		110		75				
Base Capacity (vph)	217	2068	80	1604	114	460	80	304	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.61	0.16	1.08	0.86	0.13	0.13	0.03	0.26

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	212	1067	37	1510	21	78	67	58	138
v/c Ratio	0.75	0.51	0.28	0.89	0.02	0.47	0.28	0.26	0.43
Control Delay	51.1	8.3	42.9	24.8	0.1	42.7	31.9	35.3	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	8.3	42.9	24.8	0.1	42.7	31.9	35.3	10.7
Queue Length 50th (ft)	105	137	18	331	0	38	28	28	0
Queue Length 95th (ft)	#220	221	50	#554	0	80	64	62	48
Internal Link Dist (ft)		2643		1335			324	380	
Turn Bay Length (ft)	230		270			95			140
Base Capacity (vph)	301	2115	136	1783	954	304	420	399	466
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.50	0.27	0.85	0.02	0.26	0.16	0.15	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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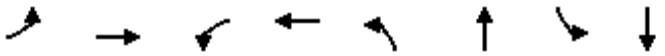


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	957	16	1126	587	340	65	89
v/c Ratio	0.11	0.73	0.17	0.84	0.97	0.27	0.42	0.31
Control Delay	47.7	28.4	49.4	31.8	62.1	23.7	50.7	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	28.4	49.4	31.8	62.1	23.7	50.7	40.8
Queue Length 50th (ft)	6	225	9	291	317	72	35	23
Queue Length 95th (ft)	24	363	32	#508	#628	124	84	51
Internal Link Dist (ft)		1335		1631		403		268
Turn Bay Length (ft)	225		105		240		130	
Base Capacity (vph)	94	1308	94	1348	607	1542	181	678
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	0.11	0.73	0.17	0.84	0.97	0.22	0.36	0.13

Intersection Summary

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

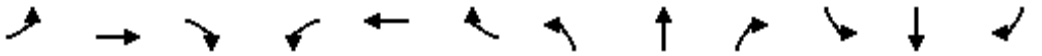
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	356	586	6	1027	61	192	82	26	262
v/c Ratio	0.88	0.29	0.06	0.90	0.56	0.64	0.73	0.09	0.36
Control Delay	56.7	9.4	41.0	38.9	61.4	42.4	76.3	30.5	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	9.4	41.0	38.9	61.4	42.4	76.3	30.5	12.0
Queue Length 50th (ft)	187	68	3	271	33	95	45	12	61
Queue Length 95th (ft)	#367	142	16	#433	#93	163	#127	34	116
Internal Link Dist (ft)		1631		879		405		428	
Turn Bay Length (ft)	320		340		120		125		145
Base Capacity (vph)	414	2052	107	1141	109	404	113	410	736
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.29	0.06	0.90	0.56	0.48	0.73	0.06	0.36

Intersection Summary

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

Appendix E – Existing plus Approved Projects Conditions

Intersection Level of Service Worksheets



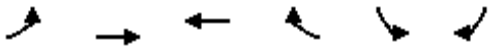
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	684	3	7	676	337	11	1	6	997	9	198
Future Volume (veh/h)	277	684	3	7	676	337	11	1	6	997	9	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1752	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	292	720	3	7	712	355	12	1	6	1055	0	208
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	292	971	4	16	669	333	217	18	109	1089	0	484
Arrive On Green	0.08	0.29	0.29	0.01	0.21	0.21	0.20	0.20	0.20	0.31	0.00	0.31
Sat Flow, veh/h	3456	3399	14	1781	3188	1585	1085	90	543	3563	0	1585
Grp Volume(v), veh/h	292	352	371	7	712	355	19	0	0	1055	0	208
Grp Sat Flow(s),veh/h/ln	1728	1664	1749	1781	1594	1585	1718	0	0	1781	0	1585
Q Serve(g_s), s	7.6	17.3	17.3	0.4	18.9	18.9	0.8	0.0	0.0	26.3	0.0	9.4
Cycle Q Clear(g_c), s	7.6	17.3	17.3	0.4	18.9	18.9	0.8	0.0	0.0	26.3	0.0	9.4
Prop In Lane	1.00		0.01	1.00		1.00	0.63		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	292	475	499	16	669	333	344	0	0	1089	0	484
V/C Ratio(X)	1.00	0.74	0.74	0.44	1.06	1.07	0.06	0.00	0.00	0.97	0.00	0.43
Avail Cap(c_a), veh/h	292	475	499	99	669	333	344	0	0	1089	0	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	29.1	29.1	44.4	35.5	35.5	29.1	0.0	0.0	30.8	0.0	25.0
Incr Delay (d2), s/veh	52.8	6.2	5.9	18.0	52.9	68.1	0.3	0.0	0.0	20.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.3	7.6	0.2	11.9	13.2	0.4	0.0	0.0	13.4	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.0	35.3	35.0	62.4	88.5	103.6	29.4	0.0	0.0	51.0	0.0	25.6
LnGrp LOS	F	D	D	E	F	F	C	A	A	D	A	C
Approach Vol, veh/h		1015			1074			19			1263	
Approach Delay, s/veh		52.1			93.3			29.4			46.8	
Approach LOS		D			F			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	30.2		32.0	12.1	23.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	21.5		27.5	7.6	18.9		18.0				
Max Q Clear Time (g_c+I1), s	2.4	19.3		28.3	9.6	20.9		2.8				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		63.1	
HCM 6th LOS		E	

Notes

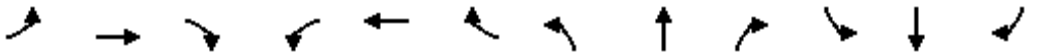
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	95	1545	893	855	262	115
Future Volume (veh/h)	95	1545	893	855	262	115
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	106	1717	992	950	291	128
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	135	2193	1702	846	475	338
Arrive On Green	0.08	0.69	0.53	0.53	0.14	0.14
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	106	1717	992	950	291	128
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	3.1	19.4	11.2	28.5	4.2	3.7
Cycle Q Clear(g_c), s	3.1	19.4	11.2	28.5	4.2	3.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	135	2193	1702	846	475	338
V/C Ratio(X)	0.78	0.78	0.58	1.12	0.61	0.38
Avail Cap(c_a), veh/h	167	2249	1702	846	1165	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	5.5	8.4	12.4	21.7	18.0
Incr Delay (d2), s/veh	17.4	1.8	1.5	70.5	1.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.8	2.9	23.1	1.6	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.7	7.3	9.9	83.0	23.0	18.7
LnGrp LOS	D	A	A	F	C	B
Approach Vol, veh/h		1823	1942		419	
Approach Delay, s/veh		9.3	45.6		21.7	
Approach LOS		A	D		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		41.6		11.8	8.6	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		38.0		18.0	5.0	28.5
Max Q Clear Time (g_c+I1), s		21.4		6.2	5.1	30.5
Green Ext Time (p_c), s		11.3		1.1	0.0	0.0

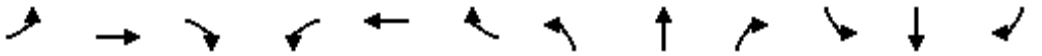
Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1593	27	8	1374	8	36	2	12	38	17	330
Future Volume (veh/h)	85	1593	27	8	1374	8	36	2	12	38	17	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	1677	28	8	1446	8	39	2	13	41	18	355
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	1839	31	18	1667	9	64	47	308	66	414	452
Arrive On Green	0.06	0.51	0.51	0.01	0.46	0.46	0.04	0.22	0.22	0.04	0.22	0.22
Sat Flow, veh/h	1781	3577	60	1781	3624	20	1781	216	1402	1781	1870	1585
Grp Volume(v), veh/h	89	832	873	8	709	745	39	0	15	41	18	355
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1867	1781	0	1618	1781	1870	1585
Q Serve(g_s), s	4.0	35.2	35.4	0.4	29.5	29.5	1.8	0.0	0.6	1.9	0.6	17.0
Cycle Q Clear(g_c), s	4.0	35.2	35.4	0.4	29.5	29.5	1.8	0.0	0.6	1.9	0.6	17.0
Prop In Lane	1.00		0.03	1.00		0.01	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	115	913	956	18	817	859	64	0	356	66	414	452
V/C Ratio(X)	0.78	0.91	0.91	0.44	0.87	0.87	0.61	0.00	0.04	0.62	0.04	0.78
Avail Cap(c_a), veh/h	184	944	988	110	870	914	110	0	356	110	414	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	18.3	18.3	40.5	20.0	20.0	39.1	0.0	25.3	39.1	25.2	27.1
Incr Delay (d2), s/veh	10.7	12.5	12.3	16.0	8.9	8.5	9.1	0.0	0.2	9.2	0.2	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	2.0	15.3	16.1	0.2	12.6	13.2	0.9	0.0	0.2	1.0	0.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	30.7	30.7	56.5	28.8	28.5	48.2	0.0	25.5	48.3	25.4	39.9
LnGrp LOS	D	C	C	E	C	C	D	A	C	D	C	D
Approach Vol, veh/h		1794			1462			54			414	
Approach Delay, s/veh		31.6			28.8			41.9			40.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	46.8	7.4	22.7	9.8	42.3	7.5	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	8.5	40.3	5.1	18.1
Max Q Clear Time (g_c+I1), s	2.4	37.4	3.8	19.0	6.0	31.5	3.9	2.6
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	0.0	5.7	0.0	0.0

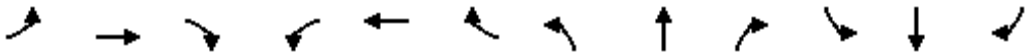
Intersection Summary	
HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1376	76	38	970	10	174	72	40	17	53	280
Future Volume (veh/h)	143	1376	76	38	970	10	174	72	40	17	53	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	151	1448	80	40	1021	11	183	76	42	18	56	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	190	1610	89	69	1470	731	316	268	148	128	349	375
Arrive On Green	0.11	0.53	0.53	0.04	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3045	168	1781	3188	1585	1030	1132	626	269	1476	1585
Grp Volume(v), veh/h	151	749	779	40	1021	11	183	0	118	74	0	295
Grp Sat Flow(s),veh/h/ln	1781	1580	1633	1781	1594	1585	1030	0	1758	1745	0	1585
Q Serve(g_s), s	5.7	29.3	29.6	1.5	17.5	0.3	11.8	0.0	3.8	0.0	0.0	12.0
Cycle Q Clear(g_c), s	5.7	29.3	29.6	1.5	17.5	0.3	14.0	0.0	3.8	2.2	0.0	12.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.36	0.24		1.00
Lane Grp Cap(c), veh/h	190	835	863	69	1470	731	316	0	416	477	0	375
V/C Ratio(X)	0.80	0.90	0.90	0.58	0.69	0.02	0.58	0.00	0.28	0.15	0.00	0.79
Avail Cap(c_a), veh/h	246	883	912	129	1573	782	341	0	459	519	0	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	14.5	14.6	32.6	14.7	10.1	26.5	0.0	21.5	20.9	0.0	24.7
Incr Delay (d2), s/veh	12.9	11.5	11.7	7.4	1.2	0.0	2.1	0.0	0.4	0.1	0.0	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	10.4	10.9	0.7	5.3	0.1	2.9	0.0	1.5	0.9	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	26.0	26.3	40.0	16.0	10.1	28.6	0.0	21.9	21.1	0.0	33.6
LnGrp LOS	D	C	C	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1679			1072			301			369	
Approach Delay, s/veh		27.7			16.8			26.0			31.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	40.9		20.8	11.8	36.3		20.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	38.5		18.0	9.5	34.0		18.0				
Max Q Clear Time (g_c+I1), s	3.5	31.6		14.0	7.7	19.5		16.0				
Green Ext Time (p_c), s	0.0	4.8		0.5	0.1	5.8		0.3				

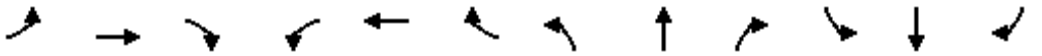
Intersection Summary			
HCM 6th Ctrl Delay		24.5	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	884	519	47	731	59	285	119	18	173	264	16
Future Volume (veh/h)	16	884	519	47	731	59	285	119	18	173	264	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1678	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	911	535	48	754	61	294	123	19	178	272	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	15	15	2	2	2	2	2	2	2
Cap, veh/h	33	916	525	62	1475	119	317	522	79	214	377	22
Arrive On Green	0.02	0.47	0.47	0.04	0.49	0.49	0.18	0.17	0.17	0.12	0.11	0.11
Sat Flow, veh/h	1781	1934	1109	1598	2987	242	1781	3094	469	1781	3412	200
Grp Volume(v), veh/h	16	740	706	48	402	413	294	70	72	178	141	147
Grp Sat Flow(s),veh/h/ln	1781	1580	1463	1598	1594	1634	1781	1777	1786	1781	1777	1834
Q Serve(g_s), s	0.8	42.0	42.8	2.7	15.4	15.5	14.7	3.1	3.2	8.8	6.9	7.0
Cycle Q Clear(g_c), s	0.8	42.0	42.8	2.7	15.4	15.5	14.7	3.1	3.2	8.8	6.9	7.0
Prop In Lane	1.00		0.76	1.00		0.15	1.00		0.26	1.00		0.11
Lane Grp Cap(c), veh/h	33	748	693	62	787	807	317	300	301	214	196	203
V/C Ratio(X)	0.49	0.99	1.02	0.78	0.51	0.51	0.93	0.23	0.24	0.83	0.72	0.72
Avail Cap(c_a), veh/h	99	748	693	90	787	807	317	393	395	278	354	365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	23.6	23.8	43.1	15.5	15.5	36.6	32.5	32.6	38.9	38.8	38.9
Incr Delay (d2), s/veh	11.0	30.2	39.0	22.0	0.6	0.5	32.1	0.4	0.4	15.2	4.9	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	0.4	19.7	20.2	1.4	5.0	5.2	9.0	1.3	1.4	4.7	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	53.8	62.8	65.1	16.0	16.0	68.7	32.9	33.0	54.1	43.7	43.7
LnGrp LOS	D	D	F	E	B	B	E	C	C	D	D	D
Approach Vol, veh/h		1462			863			436			466	
Approach Delay, s/veh		58.1			18.8			57.1			47.7	
Approach LOS		E			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	47.3	20.6	14.5	6.2	49.1	15.3	19.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	42.8	16.1	18.0	5.0	42.9	14.1	20.0
Max Q Clear Time (g_c+I1), s	4.7	44.8	16.7	9.0	2.8	17.5	10.8	5.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	5.0	0.1	0.5

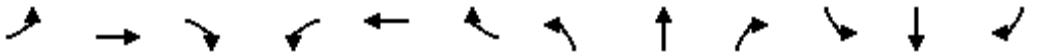
Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	764	56	15	459	35	11	16	7	249	75	396
Future Volume (veh/h)	204	764	56	15	459	35	11	16	7	249	75	396
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	215	804	59	16	483	37	12	17	7	262	79	417
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	265	1122	82	35	690	53	27	148	61	319	527	661
Arrive On Green	0.16	0.35	0.35	0.02	0.21	0.21	0.02	0.12	0.12	0.18	0.28	0.28
Sat Flow, veh/h	1697	3197	235	1781	3213	245	1781	1259	518	1781	1870	1510
Grp Volume(v), veh/h	215	426	437	16	256	264	12	0	24	262	79	417
Grp Sat Flow(s),veh/h/ln	1697	1692	1739	1781	1706	1752	1781	0	1777	1781	1870	1510
Q Serve(g_s), s	6.6	11.8	11.8	0.5	7.5	7.5	0.4	0.0	0.7	7.7	1.7	11.6
Cycle Q Clear(g_c), s	6.6	11.8	11.8	0.5	7.5	7.5	0.4	0.0	0.7	7.7	1.7	11.6
Prop In Lane	1.00		0.13	1.00		0.14	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	265	594	611	35	367	376	27	0	209	319	527	661
V/C Ratio(X)	0.81	0.72	0.72	0.45	0.70	0.70	0.44	0.00	0.11	0.82	0.15	0.63
Avail Cap(c_a), veh/h	360	819	841	164	621	637	164	0	591	421	891	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	15.2	15.2	26.3	19.6	19.7	26.4	0.0	21.4	21.4	14.6	11.8
Incr Delay (d2), s/veh	9.7	1.9	1.8	8.9	2.4	2.4	10.9	0.0	0.2	9.4	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.8	3.9	0.3	2.8	2.9	0.2	0.0	0.3	3.7	0.7	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	17.1	17.1	35.2	22.0	22.0	37.3	0.0	21.6	30.8	14.7	12.8
LnGrp LOS	C	B	B	D	C	C	D	A	C	C	B	B
Approach Vol, veh/h		1078			536			36			758	
Approach Delay, s/veh		20.0			22.4			26.8			19.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	23.5	5.3	19.8	12.9	16.1	14.2	10.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.2	5.0	25.8	11.5	19.7	12.8	18.0
Max Q Clear Time (g_c+I1), s	2.5	13.8	2.4	13.6	8.6	9.5	9.7	2.7
Green Ext Time (p_c), s	0.0	4.0	0.0	1.6	0.2	2.1	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C



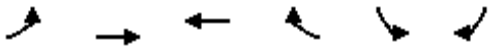
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	687	7	31	1134	257	33	3	14	619	14	202
Future Volume (veh/h)	140	687	7	31	1134	257	33	3	14	619	14	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1811	1870	1767	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	731	7	33	1206	273	35	3	15	670	0	215
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	192	1288	12	56	1156	546	228	20	98	713	0	317
Arrive On Green	0.06	0.37	0.37	0.03	0.34	0.34	0.20	0.20	0.20	0.20	0.00	0.20
Sat Flow, veh/h	3456	3492	33	1781	3357	1585	1139	98	488	3563	0	1585
Grp Volume(v), veh/h	149	360	378	33	1206	273	53	0	0	670	0	215
Grp Sat Flow(s),veh/h/ln	1728	1721	1805	1781	1678	1585	1725	0	0	1781	0	1585
Q Serve(g_s), s	3.8	15.0	15.0	1.6	31.0	12.3	2.3	0.0	0.0	16.7	0.0	11.3
Cycle Q Clear(g_c), s	3.8	15.0	15.0	1.6	31.0	12.3	2.3	0.0	0.0	16.7	0.0	11.3
Prop In Lane	1.00		0.02	1.00		1.00	0.66		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	192	635	666	56	1156	546	345	0	0	713	0	317
V/C Ratio(X)	0.78	0.57	0.57	0.59	1.04	0.50	0.15	0.00	0.00	0.94	0.00	0.68
Avail Cap(c_a), veh/h	192	635	666	117	1156	546	345	0	0	713	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	22.7	22.7	43.0	29.5	23.4	29.7	0.0	0.0	35.5	0.0	33.3
Incr Delay (d2), s/veh	17.9	1.2	1.1	9.7	38.4	0.7	0.9	0.0	0.0	20.5	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.9	6.2	0.9	17.7	4.4	1.0	0.0	0.0	8.8	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	23.9	23.8	52.7	67.9	24.1	30.7	0.0	0.0	55.9	0.0	39.0
LnGrp LOS	E	C	C	D	F	C	C	A	A	E	A	D
Approach Vol, veh/h		887			1512			53			885	
Approach Delay, s/veh		29.9			59.7			30.7			51.8	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	37.7		22.5	9.5	35.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	30.1		18.0	5.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	17.0		18.7	5.8	33.0		4.3				
Green Ext Time (p_c), s	0.0	3.5		0.0	0.0	0.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		49.2	
HCM 6th LOS		D	

Notes

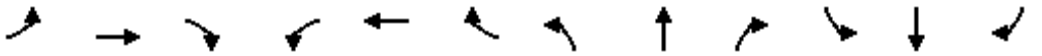
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	133	1233	1062	886	336	364
Future Volume (veh/h)	133	1233	1062	886	336	364
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	134	1245	1073	895	339	368
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	170	1861	1255	593	1048	632
Arrive On Green	0.10	0.55	0.37	0.37	0.30	0.30
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	134	1245	1073	895	339	368
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	4.4	15.5	17.5	22.2	4.5	10.8
Cycle Q Clear(g_c), s	4.4	15.5	17.5	22.2	4.5	10.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	170	1861	1255	593	1048	632
V/C Ratio(X)	0.79	0.67	0.85	1.51	0.32	0.58
Avail Cap(c_a), veh/h	189	1897	1255	593	1048	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	9.7	17.1	18.6	16.0	14.0
Incr Delay (d2), s/veh	18.0	0.9	6.0	238.2	0.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.3	6.6	45.8	1.6	10.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.2	10.6	23.1	256.8	16.8	17.9
LnGrp LOS	D	B	C	F	B	B
Approach Vol, veh/h		1379	1968		707	
Approach Delay, s/veh		13.8	129.4		17.4	
Approach LOS		B	F		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.9		22.5	10.2	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		17.5		12.8	6.4	24.2
Green Ext Time (p_c), s		7.7		1.3	0.0	0.0

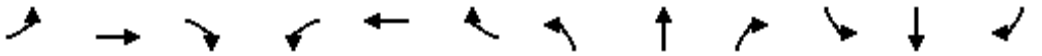
Intersection Summary	
HCM 6th Ctrl Delay	70.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	1259	27	13	1642	54	95	39	21	19	9	163
Future Volume (veh/h)	239	1259	27	13	1642	54	95	39	21	19	9	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	1298	28	13	1693	56	98	40	22	20	9	168
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	219	2027	44	27	1610	53	115	235	129	37	306	454
Arrive On Green	0.12	0.59	0.59	0.01	0.49	0.49	0.06	0.21	0.21	0.02	0.16	0.16
Sat Flow, veh/h	1781	3416	74	1781	3316	109	1781	1134	624	1781	1870	1585
Grp Volume(v), veh/h	246	648	678	13	854	895	98	0	62	20	9	168
Grp Sat Flow(s),veh/h/ln	1781	1706	1783	1781	1678	1747	1781	0	1758	1781	1870	1585
Q Serve(g_s), s	13.5	27.4	27.4	0.8	53.4	53.4	6.0	0.0	3.2	1.2	0.4	9.3
Cycle Q Clear(g_c), s	13.5	27.4	27.4	0.8	53.4	53.4	6.0	0.0	3.2	1.2	0.4	9.3
Prop In Lane	1.00		0.04	1.00		0.06	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	219	1012	1058	27	815	848	115	0	365	37	306	454
V/C Ratio(X)	1.13	0.64	0.64	0.49	1.05	1.06	0.85	0.00	0.17	0.54	0.03	0.37
Avail Cap(c_a), veh/h	219	1012	1058	81	815	848	115	0	365	81	306	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	14.7	14.7	53.8	28.3	28.3	50.9	0.0	35.8	53.3	38.7	31.3
Incr Delay (d2), s/veh	98.6	1.4	1.3	13.3	44.8	46.6	42.4	0.0	1.0	11.7	0.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	9.9	10.3	0.4	29.7	31.4	4.0	0.0	1.5	0.7	0.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	146.9	16.0	16.0	67.1	73.1	74.9	93.3	0.0	36.8	65.0	38.8	33.6
LnGrp LOS	F	B	B	E	F	F	F	A	D	E	D	C
Approach Vol, veh/h		1572			1762			160			197	
Approach Delay, s/veh		36.5			74.0			71.4			37.1	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	69.8	11.6	22.5	18.0	57.9	6.8	27.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	61.9	7.1	18.0	13.5	53.4	5.0	20.1
Max Q Clear Time (g_c+I1), s	2.8	29.4	8.0	11.3	15.5	55.4	3.2	5.2
Green Ext Time (p_c), s	0.0	10.7	0.0	0.3	0.0	0.0	0.0	0.2

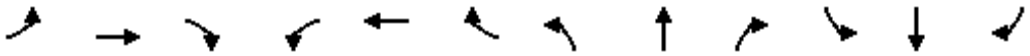
Intersection Summary	
HCM 6th Ctrl Delay	55.9
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	921	185	55	1421	20	121	75	20	10	60	135
Future Volume (veh/h)	208	921	185	55	1421	20	121	75	20	10	60	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	949	191	57	1465	21	125	77	21	10	62	139
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	254	1620	326	80	1659	825	248	235	64	68	287	264
Arrive On Green	0.14	0.62	0.62	0.05	0.52	0.52	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	2621	527	1781	3188	1585	1181	1415	386	100	1726	1585
Grp Volume(v), veh/h	214	572	568	57	1465	21	125	0	98	72	0	139
Grp Sat Flow(s),veh/h/ln	1781	1580	1568	1781	1594	1585	1181	0	1801	1826	0	1585
Q Serve(g_s), s	9.3	17.1	17.2	2.5	32.3	0.5	8.1	0.0	3.8	0.0	0.0	6.3
Cycle Q Clear(g_c), s	9.3	17.1	17.2	2.5	32.3	0.5	10.8	0.0	3.8	2.6	0.0	6.3
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.21	0.14		1.00
Lane Grp Cap(c), veh/h	254	976	969	80	1659	825	248	0	300	356	0	264
V/C Ratio(X)	0.84	0.59	0.59	0.71	0.88	0.03	0.50	0.00	0.33	0.20	0.00	0.53
Avail Cap(c_a), veh/h	304	1046	1038	137	1812	901	320	0	410	463	0	360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.1	9.1	9.1	37.3	16.8	9.2	33.3	0.0	29.1	28.6	0.0	30.2
Incr Delay (d2), s/veh	16.5	0.8	0.8	10.9	5.2	0.0	1.6	0.0	0.6	0.3	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	4.5	4.5	1.3	10.7	0.2	2.3	0.0	1.6	1.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	9.8	9.8	48.2	22.1	9.2	34.9	0.0	29.7	28.9	0.0	31.8
LnGrp LOS	D	A	A	D	C	A	C	A	C	C	A	C
Approach Vol, veh/h		1354			1543			223			211	
Approach Delay, s/veh		16.1			22.8			32.6			30.8	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	53.4		17.7	15.8	45.7		17.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.1	52.4		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s	4.5	19.2		8.3	11.3	34.3		12.8				
Green Ext Time (p_c), s	0.0	8.5		0.5	0.1	6.9		0.4				

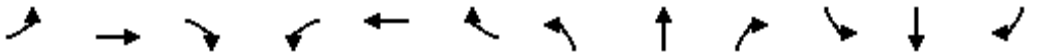
Intersection Summary			
HCM 6th Ctrl Delay		21.3	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	793	139	8	974	167	500	316	4	64	72	17
Future Volume (veh/h)	16	793	139	8	974	167	500	316	4	64	72	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	809	140	8	994	170	510	322	4	65	73	17
Peak Hour Factor	0.98	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	33	1174	203	18	1133	194	556	1167	14	84	172	39
Arrive On Green	0.02	0.40	0.40	0.01	0.40	0.40	0.31	0.32	0.32	0.05	0.06	0.06
Sat Flow, veh/h	1781	2909	503	1781	2867	490	1781	3595	45	1781	2881	650
Grp Volume(v), veh/h	16	475	474	8	581	583	510	159	167	65	44	46
Grp Sat Flow(s),veh/h/ln	1781	1706	1706	1781	1678	1678	1781	1777	1862	1781	1777	1753
Q Serve(g_s), s	0.7	19.3	19.3	0.4	26.9	27.0	23.2	5.6	5.6	3.0	2.0	2.1
Cycle Q Clear(g_c), s	0.7	19.3	19.3	0.4	26.9	27.0	23.2	5.6	5.6	3.0	2.0	2.1
Prop In Lane	1.00		0.30	1.00		0.29	1.00		0.02	1.00		0.37
Lane Grp Cap(c), veh/h	33	689	689	18	663	664	556	577	604	84	106	104
V/C Ratio(X)	0.48	0.69	0.69	0.44	0.88	0.88	0.92	0.28	0.28	0.77	0.42	0.44
Avail Cap(c_a), veh/h	106	750	750	106	738	738	681	857	899	204	381	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	20.7	20.7	41.3	23.5	23.5	27.8	21.0	21.0	39.6	38.1	38.1
Incr Delay (d2), s/veh	10.6	2.4	2.4	16.1	10.8	10.9	15.4	0.3	0.2	14.0	2.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.3	7.2	0.2	11.3	11.4	11.6	2.2	2.4	1.6	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	23.1	23.1	57.4	34.2	34.4	43.2	21.3	21.3	53.5	40.7	41.0
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	D	D
Approach Vol, veh/h		965			1172			836			155	
Approach Delay, s/veh		23.6			34.5			34.7			46.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	38.4	30.7	9.5	6.1	37.7	8.5	31.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	36.9	32.1	18.0	5.0	36.9	9.6	40.5
Max Q Clear Time (g_c+I1), s	2.4	21.3	25.2	4.1	2.7	29.0	5.0	7.6
Green Ext Time (p_c), s	0.0	5.1	1.0	0.3	0.0	4.2	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

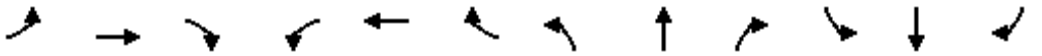


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	539	27	5	773	207	64	156	12	78	25	250
Future Volume (veh/h)	342	539	27	5	773	207	64	156	12	78	25	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	360	567	28	5	814	218	67	164	13	82	26	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	397	1849	91	12	894	239	86	254	20	105	298	593
Arrive On Green	0.23	0.56	0.56	0.01	0.34	0.34	0.05	0.15	0.15	0.06	0.16	0.16
Sat Flow, veh/h	1697	3283	162	1781	2662	713	1781	1710	136	1781	1870	1510
Grp Volume(v), veh/h	360	292	303	5	522	510	67	0	177	82	26	263
Grp Sat Flow(s),veh/h/ln	1697	1692	1752	1781	1706	1668	1781	0	1846	1781	1870	1510
Q Serve(g_s), s	16.7	7.4	7.4	0.2	23.6	23.6	3.0	0.0	7.3	3.7	1.0	10.3
Cycle Q Clear(g_c), s	16.7	7.4	7.4	0.2	23.6	23.6	3.0	0.0	7.3	3.7	1.0	10.3
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	397	953	987	12	573	560	86	0	274	105	298	593
V/C Ratio(X)	0.91	0.31	0.31	0.43	0.91	0.91	0.78	0.00	0.65	0.78	0.09	0.44
Avail Cap(c_a), veh/h	430	953	987	110	595	582	112	0	411	117	421	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	9.3	9.3	40.0	25.7	25.7	38.0	0.0	32.4	37.5	29.0	18.0
Incr Delay (d2), s/veh	21.7	0.2	0.2	22.8	17.8	18.1	22.3	0.0	2.5	25.7	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	2.2	2.3	0.2	11.5	11.3	1.8	0.0	3.4	2.3	0.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	9.5	9.5	62.8	43.4	43.8	60.4	0.0	35.0	63.2	29.1	18.5
LnGrp LOS	D	A	A	E	D	D	E	A	C	E	C	B
Approach Vol, veh/h		955			1037			244			371	
Approach Delay, s/veh		25.5			43.7			41.9			29.2	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	50.0	8.4	17.4	23.4	31.7	9.3	16.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.7	5.1	18.2	20.5	28.2	5.3	18.0
Max Q Clear Time (g_c+I1), s	2.2	9.4	5.0	12.3	18.7	25.6	5.7	9.3
Green Ext Time (p_c), s	0.0	3.5	0.0	0.5	0.2	1.5	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Appendix F – Existing plus Approved plus Proposed Project Conditions Intersection Level of Service Worksheets



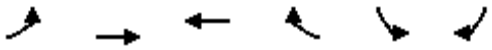
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	717	3	7	682	339	11	1	6	1030	9	198
Future Volume (veh/h)	277	717	3	7	682	339	11	1	6	1030	9	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1752	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	292	755	3	7	718	357	12	1	6	1090	0	208
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	292	971	4	16	669	333	217	18	109	1089	0	484
Arrive On Green	0.08	0.29	0.29	0.01	0.21	0.21	0.20	0.20	0.20	0.31	0.00	0.31
Sat Flow, veh/h	3456	3400	14	1781	3188	1585	1085	90	543	3563	0	1585
Grp Volume(v), veh/h	292	370	388	7	718	357	19	0	0	1090	0	208
Grp Sat Flow(s),veh/h/ln	1728	1664	1749	1781	1594	1585	1718	0	0	1781	0	1585
Q Serve(g_s), s	7.6	18.4	18.4	0.4	18.9	18.9	0.8	0.0	0.0	27.5	0.0	9.4
Cycle Q Clear(g_c), s	7.6	18.4	18.4	0.4	18.9	18.9	0.8	0.0	0.0	27.5	0.0	9.4
Prop In Lane	1.00		0.01	1.00		1.00	0.63		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	292	475	499	16	669	333	344	0	0	1089	0	484
V/C Ratio(X)	1.00	0.78	0.78	0.44	1.07	1.07	0.06	0.00	0.00	1.00	0.00	0.43
Avail Cap(c_a), veh/h	292	475	499	99	669	333	344	0	0	1089	0	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	29.5	29.5	44.4	35.5	35.5	29.1	0.0	0.0	31.3	0.0	25.0
Incr Delay (d2), s/veh	52.8	8.0	7.6	18.0	55.9	69.9	0.3	0.0	0.0	27.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	8.0	8.3	0.2	12.2	13.4	0.4	0.0	0.0	15.0	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.0	37.5	37.2	62.4	91.4	105.5	29.4	0.0	0.0	58.8	0.0	25.6
LnGrp LOS	F	D	D	E	F	F	C	A	A	F	A	C
Approach Vol, veh/h		1050			1082			19			1298	
Approach Delay, s/veh		53.1			95.9			29.4			53.5	
Approach LOS		D			F			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	30.2		32.0	12.1	23.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	21.5		27.5	7.6	18.9		18.0				
Max Q Clear Time (g_c+I1), s	2.4	20.4		29.5	9.6	20.9		2.8				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		66.6	
HCM 6th LOS		E	

Notes

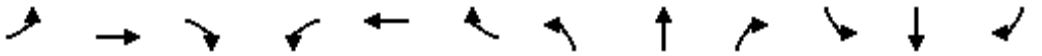
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	95	1611	901	862	271	115
Future Volume (veh/h)	95	1611	901	862	271	115
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	106	1790	1001	958	301	128
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	135	2185	1695	843	485	343
Arrive On Green	0.08	0.69	0.53	0.53	0.14	0.14
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	106	1790	1001	958	301	128
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	3.1	21.6	11.5	28.5	4.4	3.7
Cycle Q Clear(g_c), s	3.1	21.6	11.5	28.5	4.4	3.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	135	2185	1695	843	485	343
V/C Ratio(X)	0.78	0.82	0.59	1.14	0.62	0.37
Avail Cap(c_a), veh/h	166	2240	1695	843	1161	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	5.9	8.6	12.5	21.7	17.9
Incr Delay (d2), s/veh	17.6	2.5	1.5	75.9	1.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.4	3.0	24.3	1.6	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.9	8.4	10.1	88.4	23.0	18.6
LnGrp LOS	D	A	B	F	C	B
Approach Vol, veh/h		1896	1959		429	
Approach Delay, s/veh		10.2	48.4		21.7	
Approach LOS		B	D		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		41.6		12.0	8.6	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		38.0		18.0	5.0	28.5
Max Q Clear Time (g_c+I1), s		23.6		6.4	5.1	30.5
Green Ext Time (p_c), s		10.5		1.1	0.0	0.0

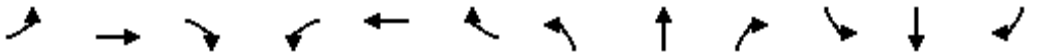
Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1668	27	8	1389	8	36	2	12	38	17	330
Future Volume (veh/h)	85	1668	27	8	1389	8	36	2	12	38	17	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	1756	28	8	1462	8	39	2	13	41	18	355
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1860	30	18	1686	9	64	47	305	66	409	448
Arrive On Green	0.06	0.52	0.52	0.01	0.47	0.47	0.04	0.22	0.22	0.04	0.22	0.22
Sat Flow, veh/h	1781	3580	57	1781	3624	20	1781	216	1402	1781	1870	1585
Grp Volume(v), veh/h	89	870	914	8	717	753	39	0	15	41	18	355
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1867	1781	0	1618	1781	1870	1585
Q Serve(g_s), s	4.1	38.4	38.7	0.4	30.1	30.1	1.8	0.0	0.6	1.9	0.6	17.2
Cycle Q Clear(g_c), s	4.1	38.4	38.7	0.4	30.1	30.1	1.8	0.0	0.6	1.9	0.6	17.2
Prop In Lane	1.00		0.03	1.00		0.01	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	114	923	966	18	827	869	64	0	352	66	409	448
V/C Ratio(X)	0.78	0.94	0.95	0.44	0.87	0.87	0.61	0.00	0.04	0.63	0.04	0.79
Avail Cap(c_a), veh/h	182	933	976	109	860	904	109	0	352	109	409	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	18.8	18.9	41.0	19.9	20.0	39.6	0.0	25.7	39.5	25.7	27.6
Incr Delay (d2), s/veh	10.7	17.2	17.2	16.1	9.1	8.7	9.2	0.0	0.2	9.4	0.2	13.4
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	2.1	17.7	18.6	0.2	12.9	13.5	0.9	0.0	0.3	1.0	0.3	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	36.0	36.1	57.0	29.0	28.7	48.8	0.0	26.0	48.9	25.9	41.0
LnGrp LOS	D	D	D	E	C	C	D	A	C	D	C	D
Approach Vol, veh/h		1873			1478			54			414	
Approach Delay, s/veh		36.7			29.0			42.5			41.1	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	47.7	7.5	22.7	9.8	43.2	7.6	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	8.5	40.3	5.1	18.1
Max Q Clear Time (g_c+I1), s	2.4	40.7	3.8	19.2	6.1	32.1	3.9	2.6
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	5.4	0.0	0.0

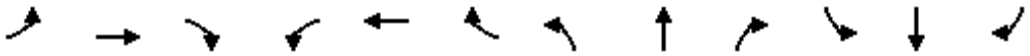
Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1451	76	38	985	10	174	72	40	17	53	280
Future Volume (veh/h)	143	1451	76	38	985	10	174	72	40	17	53	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	151	1527	80	40	1037	11	183	76	42	18	56	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	189	1634	85	69	1490	741	312	266	147	127	347	373
Arrive On Green	0.11	0.54	0.54	0.04	0.47	0.47	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3055	159	1781	3188	1585	1030	1132	626	271	1473	1585
Grp Volume(v), veh/h	151	787	820	40	1037	11	183	0	118	74	0	295
Grp Sat Flow(s),veh/h/ln	1781	1580	1634	1781	1594	1585	1030	0	1758	1744	0	1585
Q Serve(g_s), s	5.8	32.6	33.1	1.6	18.1	0.3	12.1	0.0	3.9	0.0	0.0	12.3
Cycle Q Clear(g_c), s	5.8	32.6	33.1	1.6	18.1	0.3	14.4	0.0	3.9	2.2	0.0	12.3
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.36	0.24		1.00
Lane Grp Cap(c), veh/h	189	845	874	69	1490	741	312	0	414	474	0	373
V/C Ratio(X)	0.80	0.93	0.94	0.58	0.70	0.01	0.59	0.00	0.29	0.16	0.00	0.79
Avail Cap(c_a), veh/h	240	861	891	126	1535	763	332	0	448	507	0	404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.8	15.2	15.3	33.4	14.8	10.1	27.2	0.0	22.1	21.5	0.0	25.4
Incr Delay (d2), s/veh	13.8	16.3	16.9	7.6	1.3	0.0	2.4	0.0	0.4	0.2	0.0	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	12.5	13.3	0.8	5.6	0.1	3.0	0.0	1.5	0.9	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	31.5	32.3	41.0	16.2	10.1	29.6	0.0	22.5	21.6	0.0	34.9
LnGrp LOS	D	C	C	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1758			1088			301			369	
Approach Delay, s/veh		33.0			17.0			26.8			32.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	42.3		21.1	12.0	37.5		21.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	38.5		18.0	9.5	34.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	35.1		14.3	7.8	20.1		16.4				
Green Ext Time (p_c), s	0.0	2.7		0.5	0.1	5.8		0.2				

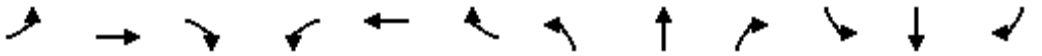
Intersection Summary			
HCM 6th Ctrl Delay		27.5	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	884	594	47	731	59	300	121	18	173	274	16
Future Volume (veh/h)	16	884	594	47	731	59	300	121	18	173	274	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1678	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	911	612	48	754	61	309	125	19	178	282	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	15	15	2	2	2	2	2	2	2
Cap, veh/h	33	867	562	62	1470	119	316	530	79	214	387	22
Arrive On Green	0.02	0.47	0.47	0.04	0.49	0.49	0.18	0.17	0.17	0.12	0.11	0.11
Sat Flow, veh/h	1781	1838	1191	1598	2987	242	1781	3101	463	1781	3419	193
Grp Volume(v), veh/h	16	778	745	48	402	413	309	71	73	178	146	152
Grp Sat Flow(s),veh/h/ln	1781	1580	1449	1598	1594	1634	1781	1777	1787	1781	1777	1836
Q Serve(g_s), s	0.8	42.8	42.8	2.7	15.5	15.6	15.7	3.1	3.2	8.9	7.2	7.3
Cycle Q Clear(g_c), s	0.8	42.8	42.8	2.7	15.5	15.6	15.7	3.1	3.2	8.9	7.2	7.3
Prop In Lane	1.00		0.82	1.00		0.15	1.00		0.26	1.00		0.11
Lane Grp Cap(c), veh/h	33	746	684	62	785	805	316	304	306	214	201	208
V/C Ratio(X)	0.49	1.04	1.09	0.78	0.51	0.51	0.98	0.23	0.24	0.83	0.72	0.73
Avail Cap(c_a), veh/h	98	746	684	90	785	805	316	392	394	277	353	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	23.9	23.9	43.2	15.6	15.6	37.1	32.5	32.5	39.0	38.8	38.9
Incr Delay (d2), s/veh	11.0	45.0	61.1	22.3	0.6	0.6	44.2	0.4	0.4	15.4	4.9	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	0.4	23.1	24.2	1.4	5.1	5.2	10.5	1.3	1.4	4.7	3.3	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	69.0	85.1	65.5	16.2	16.2	81.3	32.8	32.9	54.4	43.7	43.8
LnGrp LOS	E	F	F	E	B	B	F	C	C	D	D	D
Approach Vol, veh/h		1539			863			453			476	
Approach Delay, s/veh		76.6			18.9			65.9			47.7	
Approach LOS		E			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	47.3	20.6	14.8	6.2	49.1	15.4	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	42.8	16.1	18.0	5.0	42.9	14.1	20.0
Max Q Clear Time (g_c+I1), s	4.7	44.8	17.7	9.3	2.8	17.6	10.9	5.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	5.0	0.1	0.6

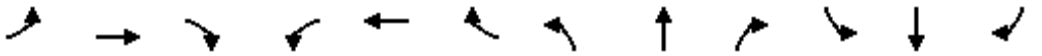
Intersection Summary	
HCM 6th Ctrl Delay	56.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	764	56	24	459	35	11	16	9	249	75	396
Future Volume (veh/h)	204	764	56	24	459	35	11	16	9	249	75	396
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	215	804	59	25	483	37	12	17	9	262	79	417
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	265	1093	80	52	690	53	27	135	72	319	527	661
Arrive On Green	0.16	0.34	0.34	0.03	0.21	0.21	0.02	0.12	0.12	0.18	0.28	0.28
Sat Flow, veh/h	1697	3197	235	1781	3213	245	1781	1151	609	1781	1870	1510
Grp Volume(v), veh/h	215	426	437	25	256	264	12	0	26	262	79	417
Grp Sat Flow(s),veh/h/ln	1697	1692	1739	1781	1706	1752	1781	0	1761	1781	1870	1510
Q Serve(g_s), s	6.6	12.0	12.0	0.7	7.5	7.5	0.4	0.0	0.7	7.7	1.7	11.6
Cycle Q Clear(g_c), s	6.6	12.0	12.0	0.7	7.5	7.5	0.4	0.0	0.7	7.7	1.7	11.6
Prop In Lane	1.00		0.13	1.00		0.14	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	265	579	595	52	367	376	27	0	207	319	527	661
V/C Ratio(X)	0.81	0.74	0.74	0.48	0.70	0.70	0.44	0.00	0.13	0.82	0.15	0.63
Avail Cap(c_a), veh/h	360	819	841	164	621	637	164	0	585	421	891	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	15.7	15.7	25.9	19.6	19.7	26.4	0.0	21.4	21.4	14.6	11.8
Incr Delay (d2), s/veh	9.7	2.1	2.1	6.9	2.4	2.4	10.9	0.0	0.3	9.4	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.9	4.0	0.4	2.8	2.9	0.2	0.0	0.3	3.7	0.7	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	17.8	17.7	32.8	22.0	22.0	37.3	0.0	21.7	30.8	14.7	12.8
LnGrp LOS	C	B	B	C	C	C	D	A	C	C	B	B
Approach Vol, veh/h		1078			545			38			758	
Approach Delay, s/veh		20.6			22.5			26.6			19.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	23.0	5.3	19.8	12.9	16.1	14.2	10.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.2	5.0	25.8	11.5	19.7	12.8	18.0
Max Q Clear Time (g_c+I1), s	2.7	14.0	2.4	13.6	8.6	9.5	9.7	2.7
Green Ext Time (p_c), s	0.0	4.0	0.0	1.6	0.2	2.1	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C



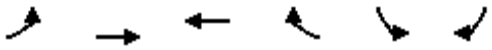
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	696	7	31	1164	266	33	3	14	628	14	202
Future Volume (veh/h)	140	696	7	31	1164	266	33	3	14	628	14	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1811	1870	1767	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	740	7	33	1238	283	35	3	15	679	0	215
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	192	1288	12	56	1156	546	228	20	98	713	0	317
Arrive On Green	0.06	0.37	0.37	0.03	0.34	0.34	0.20	0.20	0.20	0.20	0.00	0.20
Sat Flow, veh/h	3456	3493	33	1781	3357	1585	1139	98	488	3563	0	1585
Grp Volume(v), veh/h	149	365	382	33	1238	283	53	0	0	679	0	215
Grp Sat Flow(s),veh/h/ln	1728	1721	1805	1781	1678	1585	1725	0	0	1781	0	1585
Q Serve(g_s), s	3.8	15.3	15.3	1.6	31.0	12.8	2.3	0.0	0.0	17.0	0.0	11.3
Cycle Q Clear(g_c), s	3.8	15.3	15.3	1.6	31.0	12.8	2.3	0.0	0.0	17.0	0.0	11.3
Prop In Lane	1.00		0.02	1.00		1.00	0.66		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	192	635	666	56	1156	546	345	0	0	713	0	317
V/C Ratio(X)	0.78	0.57	0.57	0.59	1.07	0.52	0.15	0.00	0.00	0.95	0.00	0.68
Avail Cap(c_a), veh/h	192	635	666	117	1156	546	345	0	0	713	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	22.7	22.7	43.0	29.5	23.5	29.7	0.0	0.0	35.6	0.0	33.3
Incr Delay (d2), s/veh	17.9	1.3	1.2	9.7	47.6	0.9	0.9	0.0	0.0	22.8	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.0	6.3	0.9	19.1	4.6	1.0	0.0	0.0	9.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	24.0	24.0	52.7	77.1	24.4	30.7	0.0	0.0	58.4	0.0	39.0
LnGrp LOS	E	C	C	D	F	C	C	A	A	E	A	D
Approach Vol, veh/h		896			1554			53			894	
Approach Delay, s/veh		30.0			67.0			30.7			53.7	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	37.7		22.5	9.5	35.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	30.1		18.0	5.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	17.3		19.0	5.8	33.0		4.3				
Green Ext Time (p_c), s	0.0	3.5		0.0	0.0	0.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		53.2	
HCM 6th LOS		D	

Notes

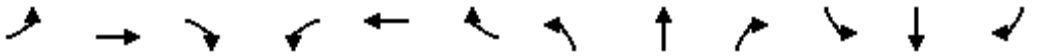
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	133	1251	1101	917	339	364
Future Volume (veh/h)	133	1251	1101	917	339	364
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	134	1264	1112	926	342	368
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	170	1861	1255	593	1048	632
Arrive On Green	0.10	0.55	0.37	0.37	0.30	0.30
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	134	1264	1112	926	342	368
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	4.4	15.9	18.4	22.2	4.5	10.8
Cycle Q Clear(g_c), s	4.4	15.9	18.4	22.2	4.5	10.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	170	1861	1255	593	1048	632
V/C Ratio(X)	0.79	0.68	0.89	1.56	0.33	0.58
Avail Cap(c_a), veh/h	189	1897	1255	593	1048	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	9.8	17.4	18.6	16.0	14.0
Incr Delay (d2), s/veh	18.0	1.0	7.9	261.2	0.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.4	7.2	49.6	1.6	10.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.2	10.7	25.3	279.8	16.8	17.9
LnGrp LOS	D	B	C	F	B	B
Approach Vol, veh/h		1398	2038		710	
Approach Delay, s/veh		13.9	141.0		17.4	
Approach LOS		B	F		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.9		22.5	10.2	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		17.9		12.8	6.4	24.2
Green Ext Time (p_c), s		7.7		1.3	0.0	0.0

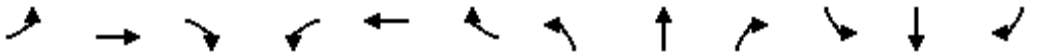
Intersection Summary	
HCM 6th Ctrl Delay	77.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	1280	27	13	1712	54	95	39	21	19	9	163
Future Volume (veh/h)	239	1280	27	13	1712	54	95	39	21	19	9	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	1320	28	13	1765	56	98	40	22	20	9	168
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	219	2027	43	27	1612	51	115	235	129	37	306	454
Arrive On Green	0.12	0.59	0.59	0.01	0.49	0.49	0.06	0.21	0.21	0.02	0.16	0.16
Sat Flow, veh/h	1781	3417	72	1781	3321	105	1781	1134	624	1781	1870	1585
Grp Volume(v), veh/h	246	659	689	13	888	933	98	0	62	20	9	168
Grp Sat Flow(s),veh/h/ln	1781	1706	1783	1781	1678	1748	1781	0	1758	1781	1870	1585
Q Serve(g_s), s	13.5	28.1	28.2	0.8	53.4	53.4	6.0	0.0	3.2	1.2	0.4	9.3
Cycle Q Clear(g_c), s	13.5	28.1	28.2	0.8	53.4	53.4	6.0	0.0	3.2	1.2	0.4	9.3
Prop In Lane	1.00		0.04	1.00		0.06	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	219	1012	1058	27	815	848	115	0	365	37	306	454
V/C Ratio(X)	1.13	0.65	0.65	0.49	1.09	1.10	0.85	0.00	0.17	0.54	0.03	0.37
Avail Cap(c_a), veh/h	219	1012	1058	81	815	848	115	0	365	81	306	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	14.8	14.8	53.8	28.3	28.3	50.9	0.0	35.8	53.3	38.7	31.3
Incr Delay (d2), s/veh	98.6	1.5	1.4	13.3	59.0	61.7	42.4	0.0	1.0	11.7	0.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	10.2	10.6	0.4	32.9	34.9	4.0	0.0	1.5	0.7	0.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	146.9	16.3	16.3	67.1	87.3	90.0	93.3	0.0	36.8	65.0	38.8	33.6
LnGrp LOS	F	B	B	E	F	F	F	A	D	E	D	C
Approach Vol, veh/h		1594			1834			160			197	
Approach Delay, s/veh		36.4			88.5			71.4			37.1	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	69.8	11.6	22.5	18.0	57.9	6.8	27.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	61.9	7.1	18.0	13.5	53.4	5.0	20.1
Max Q Clear Time (g_c+I1), s	2.8	30.2	8.0	11.3	15.5	55.4	3.2	5.2
Green Ext Time (p_c), s	0.0	10.9	0.0	0.3	0.0	0.0	0.0	0.2

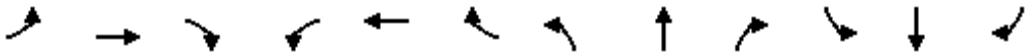
Intersection Summary	
HCM 6th Ctrl Delay	63.2
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	942	185	55	1491	20	121	75	20	10	60	135
Future Volume (veh/h)	208	942	185	55	1491	20	121	75	20	10	60	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	971	191	57	1537	21	125	77	21	10	62	139
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	253	1645	323	79	1681	836	244	234	64	67	285	262
Arrive On Green	0.14	0.62	0.62	0.04	0.53	0.53	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	2632	517	1781	3188	1585	1181	1415	386	102	1723	1585
Grp Volume(v), veh/h	214	582	580	57	1537	21	125	0	98	72	0	139
Grp Sat Flow(s),veh/h/ln	1781	1580	1570	1781	1594	1585	1181	0	1801	1825	0	1585
Q Serve(g_s), s	9.6	17.9	17.9	2.6	35.9	0.5	8.4	0.0	3.9	0.0	0.0	6.6
Cycle Q Clear(g_c), s	9.6	17.9	17.9	2.6	35.9	0.5	11.1	0.0	3.9	2.7	0.0	6.6
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.21	0.14		1.00
Lane Grp Cap(c), veh/h	253	987	981	79	1681	836	244	0	298	352	0	262
V/C Ratio(X)	0.85	0.59	0.59	0.72	0.91	0.03	0.51	0.00	0.33	0.20	0.00	0.53
Avail Cap(c_a), veh/h	294	1014	1007	133	1757	873	309	0	397	449	0	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	9.1	9.1	38.5	17.6	9.2	34.4	0.0	30.1	29.6	0.0	31.2
Incr Delay (d2), s/veh	17.9	0.9	0.9	11.6	7.6	0.0	1.7	0.0	0.6	0.3	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	4.8	4.8	1.3	12.4	0.2	2.4	0.0	1.7	1.2	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	10.0	10.0	50.1	25.3	9.3	36.1	0.0	30.7	29.9	0.0	32.8
LnGrp LOS	D	A	A	D	C	A	D	A	C	C	A	C
Approach Vol, veh/h		1376			1615			223			211	
Approach Delay, s/veh		16.5			25.9			33.7			31.8	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	55.5		18.0	16.1	47.6		18.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.1	52.4		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s	4.6	19.9		8.6	11.6	37.9		13.1				
Green Ext Time (p_c), s	0.0	8.6		0.5	0.1	5.1		0.4				

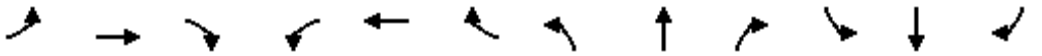
Intersection Summary												
HCM 6th Ctrl Delay			23.0									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	793	160	8	974	167	570	325	4	64	75	17
Future Volume (veh/h)	16	793	160	8	974	167	570	325	4	64	75	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	809	162	8	994	170	582	332	4	65	77	17
Peak Hour Factor	0.98	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	33	1110	222	18	1100	188	613	1266	15	84	161	34
Arrive On Green	0.02	0.39	0.39	0.01	0.38	0.38	0.34	0.35	0.35	0.05	0.06	0.06
Sat Flow, veh/h	1781	2833	567	1781	2867	490	1781	3596	43	1781	2911	624
Grp Volume(v), veh/h	16	487	484	8	581	583	582	164	172	65	46	48
Grp Sat Flow(s),veh/h/ln	1781	1706	1694	1781	1678	1678	1781	1777	1863	1781	1777	1758
Q Serve(g_s), s	0.8	22.0	22.0	0.4	29.6	29.7	28.8	6.0	6.0	3.3	2.3	2.4
Cycle Q Clear(g_c), s	0.8	22.0	22.0	0.4	29.6	29.7	28.8	6.0	6.0	3.3	2.3	2.4
Prop In Lane	1.00		0.33	1.00		0.29	1.00		0.02	1.00		0.35
Lane Grp Cap(c), veh/h	33	669	664	18	644	644	613	626	656	84	98	97
V/C Ratio(X)	0.49	0.73	0.73	0.45	0.90	0.91	0.95	0.26	0.26	0.77	0.47	0.49
Avail Cap(c_a), veh/h	98	696	691	98	684	684	632	795	834	189	353	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	23.4	23.4	44.5	26.3	26.3	28.9	20.9	20.9	42.6	41.5	41.5
Incr Delay (d2), s/veh	11.0	3.7	3.7	16.4	14.9	15.1	23.7	0.2	0.2	13.9	3.5	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	8.7	8.6	0.3	13.3	13.3	15.6	2.4	2.5	1.7	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	27.2	27.2	60.9	41.2	41.4	52.7	21.1	21.1	56.6	44.9	45.4
LnGrp LOS	D	C	C	E	D	D	D	C	C	E	D	D
Approach Vol, veh/h		987			1172			918			159	
Approach Delay, s/veh		27.6			41.4			41.1			49.8	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	40.0	35.6	9.5	6.2	39.2	8.8	36.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	36.9	32.1	18.0	5.0	36.9	9.6	40.5
Max Q Clear Time (g_c+I1), s	2.4	24.0	30.8	4.4	2.8	31.7	5.3	8.0
Green Ext Time (p_c), s	0.0	4.7	0.3	0.3	0.0	3.1	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D



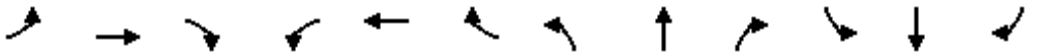
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	539	27	7	773	207	64	156	21	78	25	250
Future Volume (veh/h)	342	539	27	7	773	207	64	156	21	78	25	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	360	567	28	7	814	218	67	164	22	82	26	263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	397	1841	91	16	894	239	86	240	32	105	298	593
Arrive On Green	0.23	0.56	0.56	0.01	0.34	0.34	0.05	0.15	0.15	0.06	0.16	0.16
Sat Flow, veh/h	1697	3283	162	1781	2662	713	1781	1615	217	1781	1870	1510
Grp Volume(v), veh/h	360	292	303	7	522	510	67	0	186	82	26	263
Grp Sat Flow(s),veh/h/ln	1697	1692	1752	1781	1706	1668	1781	0	1831	1781	1870	1510
Q Serve(g_s), s	16.7	7.4	7.4	0.3	23.6	23.6	3.0	0.0	7.8	3.7	1.0	10.3
Cycle Q Clear(g_c), s	16.7	7.4	7.4	0.3	23.6	23.6	3.0	0.0	7.8	3.7	1.0	10.3
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	397	949	983	16	573	560	86	0	272	105	298	593
V/C Ratio(X)	0.91	0.31	0.31	0.44	0.91	0.91	0.78	0.00	0.68	0.78	0.09	0.44
Avail Cap(c_a), veh/h	430	949	983	110	595	582	112	0	408	117	421	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	9.4	9.4	39.8	25.7	25.7	38.0	0.0	32.6	37.5	29.0	18.0
Incr Delay (d2), s/veh	21.7	0.2	0.2	17.6	17.8	18.1	22.3	0.0	3.0	25.7	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	2.3	2.3	0.2	11.5	11.3	1.8	0.0	3.6	2.3	0.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	9.6	9.6	57.4	43.4	43.8	60.4	0.0	35.7	63.2	29.1	18.5
LnGrp LOS	D	A	A	E	D	D	E	A	D	E	C	B
Approach Vol, veh/h		955			1039			253			371	
Approach Delay, s/veh		25.5			43.7			42.2			29.2	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	49.8	8.4	17.4	23.4	31.7	9.3	16.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.7	5.1	18.2	20.5	28.2	5.3	18.0
Max Q Clear Time (g_c+I1), s	2.3	9.4	5.0	12.3	18.7	25.6	5.7	9.8
Green Ext Time (p_c), s	0.0	3.5	0.0	0.5	0.2	1.5	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C

Appendix G – Cumulative Conditions

Intersection Level of Service Worksheets



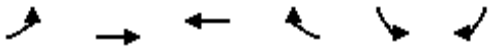
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	926	10	6	757	360	5	5	7	925	5	298
Future Volume (veh/h)	310	926	10	6	757	360	5	5	7	925	5	298
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1752	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	326	975	11	6	797	379	5	5	7	978	0	314
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	294	976	11	14	675	336	102	102	143	1066	0	474
Arrive On Green	0.09	0.29	0.29	0.01	0.21	0.21	0.20	0.20	0.20	0.30	0.00	0.30
Sat Flow, veh/h	3456	3371	38	1781	3188	1585	505	505	707	3563	0	1585
Grp Volume(v), veh/h	326	481	505	6	797	379	17	0	0	978	0	314
Grp Sat Flow(s),veh/h/ln	1728	1664	1745	1781	1594	1585	1718	0	0	1781	0	1585
Q Serve(g_s), s	7.6	25.8	25.8	0.3	18.9	18.9	0.7	0.0	0.0	23.6	0.0	15.4
Cycle Q Clear(g_c), s	7.6	25.8	25.8	0.3	18.9	18.9	0.7	0.0	0.0	23.6	0.0	15.4
Prop In Lane	1.00		0.02	1.00		1.00	0.29		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	294	482	505	14	675	336	347	0	0	1066	0	474
V/C Ratio(X)	1.11	1.00	1.00	0.43	1.18	1.13	0.05	0.00	0.00	0.92	0.00	0.66
Avail Cap(c_a), veh/h	294	482	505	100	675	336	347	0	0	1098	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	31.7	31.7	44.1	35.1	35.1	28.7	0.0	0.0	30.2	0.0	27.3
Incr Delay (d2), s/veh	84.3	40.9	39.9	20.1	95.7	88.5	0.3	0.0	0.0	11.8	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	15.1	15.7	0.2	15.9	15.2	0.3	0.0	0.0	11.1	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.1	72.5	71.6	64.2	130.9	123.7	29.0	0.0	0.0	42.0	0.0	30.5
LnGrp LOS	F	E	E	E	F	F	C	A	A	D	A	C
Approach Vol, veh/h		1312			1182			17			1292	
Approach Delay, s/veh		85.2			128.2			29.0			39.2	
Approach LOS		F			F			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	30.3		31.2	12.1	23.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	21.5		27.5	7.6	18.9		18.0				
Max Q Clear Time (g_c+I1), s	2.3	27.8		25.6	9.6	20.9		2.7				
Green Ext Time (p_c), s	0.0	0.0		1.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		82.7
HCM 6th LOS		F

Notes

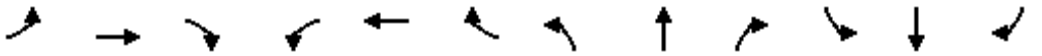
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	132	1499	1086	782	307	118
Future Volume (veh/h)	132	1499	1086	782	307	118
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	147	1666	1207	869	341	131
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	161	2168	1641	816	523	383
Arrive On Green	0.09	0.69	0.51	0.51	0.15	0.15
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	147	1666	1207	869	341	131
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	4.5	19.4	16.4	28.5	5.1	3.8
Cycle Q Clear(g_c), s	4.5	19.4	16.4	28.5	5.1	3.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	161	2168	1641	816	523	383
V/C Ratio(X)	0.91	0.77	0.74	1.07	0.65	0.34
Avail Cap(c_a), veh/h	161	2168	1641	816	1123	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	5.8	10.5	13.4	22.1	17.4
Incr Delay (d2), s/veh	46.7	1.7	3.0	50.4	1.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	3.2	4.7	18.3	1.9	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	71.6	7.5	13.5	63.8	23.5	17.9
LnGrp LOS	E	A	B	F	C	B
Approach Vol, veh/h		1813	2076		472	
Approach Delay, s/veh		12.7	34.5		22.0	
Approach LOS		B	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.5		12.9	9.5	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		38.0		18.0	5.0	28.5
Max Q Clear Time (g_c+I1), s		21.4		7.1	6.5	30.5
Green Ext Time (p_c), s		11.0		1.2	0.0	0.0

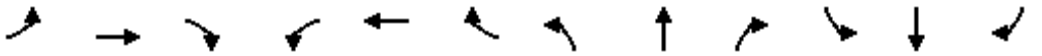
Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1793	39	16	1299	35	28	10	14	32	23	335
Future Volume (veh/h)	77	1793	39	16	1299	35	28	10	14	32	23	335
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	1887	41	17	1367	37	30	11	15	34	25	360
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1846	40	35	1696	46	53	154	210	58	407	438
Arrive On Green	0.06	0.52	0.52	0.02	0.48	0.48	0.03	0.22	0.22	0.03	0.22	0.22
Sat Flow, veh/h	1781	3556	77	1781	3534	96	1781	717	978	1781	1870	1585
Grp Volume(v), veh/h	81	939	989	17	687	717	30	0	26	34	25	360
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1853	1781	0	1694	1781	1870	1585
Q Serve(g_s), s	3.8	43.7	43.7	0.8	27.6	27.7	1.4	0.0	1.0	1.6	0.9	17.9
Cycle Q Clear(g_c), s	3.8	43.7	43.7	0.8	27.6	27.7	1.4	0.0	1.0	1.6	0.9	17.9
Prop In Lane	1.00		0.04	1.00		0.05	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	104	922	964	35	853	889	53	0	364	58	407	438
V/C Ratio(X)	0.78	1.02	1.03	0.49	0.81	0.81	0.56	0.00	0.07	0.59	0.06	0.82
Avail Cap(c_a), veh/h	180	922	964	108	853	889	108	0	364	108	407	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	20.2	20.2	40.9	18.6	18.6	40.3	0.0	26.3	40.2	26.1	28.5
Incr Delay (d2), s/veh	11.6	34.3	35.7	10.3	5.7	5.5	9.0	0.0	0.4	9.0	0.3	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	24.0	25.4	0.4	11.2	11.7	0.7	0.0	0.4	0.8	0.4	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	54.6	56.0	51.2	24.2	24.1	49.2	0.0	26.7	49.2	26.4	44.4
LnGrp LOS	D	F	F	D	C	C	D	A	C	D	C	D
Approach Vol, veh/h		2009			1421			56			419	
Approach Delay, s/veh		55.1			24.5			38.8			43.7	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	48.2	7.0	22.8	9.4	44.9	7.2	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	8.5	40.3	5.1	18.1
Max Q Clear Time (g_c+I1), s	2.8	45.7	3.4	19.9	5.8	29.7	3.6	3.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.1

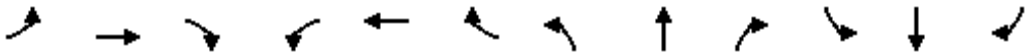
Intersection Summary	
HCM 6th Ctrl Delay	42.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	1561	40	18	1150	45	85	58	28	29	43	268
Future Volume (veh/h)	227	1561	40	18	1150	45	85	58	28	29	43	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	1643	42	19	1211	47	89	61	29	31	45	282
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	252	1784	46	40	1426	709	283	251	119	184	236	332
Arrive On Green	0.14	0.57	0.57	0.02	0.45	0.45	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3148	80	1781	3188	1585	1053	1198	570	518	1128	1585
Grp Volume(v), veh/h	239	823	862	19	1211	47	89	0	90	76	0	282
Grp Sat Flow(s),veh/h/ln	1781	1580	1648	1781	1594	1585	1053	0	1768	1645	0	1585
Q Serve(g_s), s	8.9	31.6	31.9	0.7	22.7	1.1	5.2	0.0	2.8	0.0	0.0	11.5
Cycle Q Clear(g_c), s	8.9	31.6	31.9	0.7	22.7	1.1	8.0	0.0	2.8	2.8	0.0	11.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.32	0.41		1.00
Lane Grp Cap(c), veh/h	252	895	934	40	1426	709	283	0	371	421	0	332
V/C Ratio(X)	0.95	0.92	0.92	0.48	0.85	0.07	0.31	0.00	0.24	0.18	0.00	0.85
Avail Cap(c_a), veh/h	252	907	946	133	1616	804	345	0	475	514	0	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	13.1	13.2	32.4	16.5	10.6	25.4	0.0	22.1	21.8	0.0	25.5
Incr Delay (d2), s/veh	42.2	14.0	14.1	8.7	4.1	0.0	0.6	0.0	0.3	0.2	0.0	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	11.2	11.8	0.4	7.4	0.3	1.3	0.0	1.1	0.9	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.7	27.2	27.3	41.1	20.6	10.6	26.0	0.0	22.4	22.0	0.0	37.6
LnGrp LOS	E	C	C	D	C	B	C	A	C	C	A	D
Approach Vol, veh/h		1924			1277			179			358	
Approach Delay, s/veh		32.6			20.5			24.2			34.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	42.5		18.6	14.0	34.5		18.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	38.5		18.0	9.5	34.0		18.0				
Max Q Clear Time (g_c+I1), s	2.7	33.9		13.5	10.9	24.7		10.0				
Green Ext Time (p_c), s	0.0	3.7		0.6	0.0	5.3		0.5				

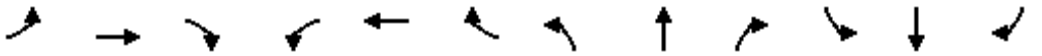
Intersection Summary			
HCM 6th Ctrl Delay		28.3	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1008	591	44	844	70	319	136	11	205	307	13
Future Volume (veh/h)	11	1008	591	44	844	70	319	136	11	205	307	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1678	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1039	609	45	870	72	329	140	11	211	316	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	15	15	2	2	2	2	2	2	2
Cap, veh/h	24	915	511	60	1466	121	314	534	42	246	423	17
Arrive On Green	0.01	0.47	0.47	0.04	0.49	0.49	0.18	0.16	0.16	0.14	0.12	0.12
Sat Flow, veh/h	1781	1954	1092	1598	2980	247	1781	3340	260	1781	3479	143
Grp Volume(v), veh/h	11	831	817	45	465	477	329	74	77	211	161	168
Grp Sat Flow(s),veh/h/ln	1781	1580	1466	1598	1594	1633	1781	1777	1824	1781	1777	1845
Q Serve(g_s), s	0.6	42.8	42.8	2.6	19.1	19.1	16.1	3.3	3.4	10.6	8.0	8.1
Cycle Q Clear(g_c), s	0.6	42.8	42.8	2.6	19.1	19.1	16.1	3.3	3.4	10.6	8.0	8.1
Prop In Lane	1.00		0.75	1.00		0.15	1.00		0.14	1.00		0.08
Lane Grp Cap(c), veh/h	24	740	686	60	784	804	314	284	291	246	216	224
V/C Ratio(X)	0.46	1.12	1.19	0.76	0.59	0.59	1.05	0.26	0.26	0.86	0.74	0.75
Avail Cap(c_a), veh/h	97	740	686	89	784	804	314	389	399	275	350	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	24.3	24.3	43.6	16.7	16.7	37.7	33.7	33.7	38.5	38.8	38.8
Incr Delay (d2), s/veh	13.4	72.4	100.0	18.0	1.2	1.2	64.2	0.5	0.5	21.2	5.0	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	0.3	28.7	31.9	1.3	6.4	6.5	12.4	1.4	1.5	5.9	3.7	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	96.7	124.3	61.6	17.9	17.8	101.9	34.2	34.2	59.7	43.8	43.8
LnGrp LOS	E	F	F	E	B	B	F	C	C	E	D	D
Approach Vol, veh/h		1659			987			480			540	
Approach Delay, s/veh		110.0			19.8			80.6			50.0	
Approach LOS		F			B			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	47.3	20.6	15.6	5.7	49.5	17.1	19.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	42.8	16.1	18.0	5.0	42.9	14.1	20.0
Max Q Clear Time (g_c+I1), s	4.6	44.8	18.1	10.1	2.6	21.1	12.6	5.4
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.0	5.7	0.1	0.6

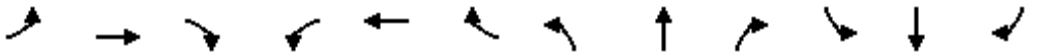
Intersection Summary	
HCM 6th Ctrl Delay	73.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	903	61	7	913	246	11	19	7	296	89	465
Future Volume (veh/h)	241	903	61	7	913	246	11	19	7	296	89	465
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	254	951	64	7	961	259	12	20	7	312	94	489
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	271	1364	92	16	727	195	26	185	65	316	566	697
Arrive On Green	0.16	0.42	0.42	0.01	0.27	0.27	0.01	0.14	0.14	0.18	0.30	0.30
Sat Flow, veh/h	1697	3218	217	1781	2659	715	1781	1324	463	1781	1870	1510
Grp Volume(v), veh/h	254	500	515	7	616	604	12	0	27	312	94	489
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1781	1706	1668	1781	0	1787	1781	1870	1510
Q Serve(g_s), s	10.7	17.4	17.4	0.3	19.7	19.7	0.5	0.0	1.0	12.6	2.7	18.6
Cycle Q Clear(g_c), s	10.7	17.4	17.4	0.3	19.7	19.7	0.5	0.0	1.0	12.6	2.7	18.6
Prop In Lane	1.00		0.12	1.00		0.43	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	271	717	739	16	467	456	26	0	249	316	566	697
V/C Ratio(X)	0.94	0.70	0.70	0.43	1.32	1.33	0.45	0.00	0.11	0.99	0.17	0.70
Avail Cap(c_a), veh/h	271	717	739	124	467	456	124	0	446	316	670	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	17.0	17.0	35.5	26.2	26.2	35.2	0.0	27.1	29.5	18.5	15.4
Incr Delay (d2), s/veh	38.3	3.0	2.9	17.2	158.2	161.1	11.7	0.0	0.2	46.6	0.1	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	6.8	6.2	6.4	0.2	27.7	27.4	0.3	0.0	0.4	9.2	1.1	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.2	19.9	19.9	52.7	184.4	187.3	46.9	0.0	27.3	76.2	18.6	17.9
LnGrp LOS	E	B	B	D	F	F	D	A	C	E	B	B
Approach Vol, veh/h		1269			1227			39			895	
Approach Delay, s/veh		29.6			185.1			33.3			38.3	
Approach LOS		C			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	35.0	5.6	26.3	16.0	24.2	17.3	14.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.2	5.0	25.8	11.5	19.7	12.8	18.0
Max Q Clear Time (g_c+I1), s	2.3	19.4	2.5	20.6	12.7	21.7	14.6	3.0
Green Ext Time (p_c), s	0.0	3.2	0.0	1.2	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	87.5
HCM 6th LOS	F



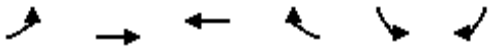
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1096	15	32	1364	272	25	5	10	674	5	377
Future Volume (veh/h)	160	1096	15	32	1364	272	25	5	10	674	5	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1811	1870	1767	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	1166	16	34	1451	289	27	5	11	721	0	401
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	192	1280	18	57	1156	546	218	40	89	713	0	317
Arrive On Green	0.06	0.37	0.37	0.03	0.34	0.34	0.20	0.20	0.20	0.20	0.00	0.20
Sat Flow, veh/h	3456	3475	48	1781	3357	1585	1090	202	444	3563	0	1585
Grp Volume(v), veh/h	170	577	605	34	1451	289	43	0	0	721	0	401
Grp Sat Flow(s),veh/h/ln	1728	1721	1802	1781	1678	1585	1736	0	0	1781	0	1585
Q Serve(g_s), s	4.4	28.7	28.7	1.7	31.0	13.2	1.8	0.0	0.0	18.0	0.0	18.0
Cycle Q Clear(g_c), s	4.4	28.7	28.7	1.7	31.0	13.2	1.8	0.0	0.0	18.0	0.0	18.0
Prop In Lane	1.00		0.03	1.00		1.00	0.63		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	192	633	664	57	1156	546	347	0	0	713	0	317
V/C Ratio(X)	0.89	0.91	0.91	0.60	1.26	0.53	0.12	0.00	0.00	1.01	0.00	1.26
Avail Cap(c_a), veh/h	192	633	664	117	1156	546	347	0	0	713	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	27.0	27.0	43.0	29.5	23.7	29.5	0.0	0.0	36.0	0.0	36.0
Incr Delay (d2), s/veh	35.3	17.5	16.9	9.8	122.0	1.0	0.7	0.0	0.0	36.7	0.0	142.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	13.9	14.4	0.9	31.1	4.7	0.8	0.0	0.0	11.0	0.0	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	44.5	43.9	52.8	151.5	24.6	30.3	0.0	0.0	72.7	0.0	178.0
LnGrp LOS	E	D	D	D	F	C	C	A	A	F	A	F
Approach Vol, veh/h		1352			1774			43			1122	
Approach Delay, s/veh		48.4			128.9			30.3			110.3	
Approach LOS		D			F			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	37.6		22.5	9.5	35.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	30.1		18.0	5.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	3.7	30.7		20.0	6.4	33.0		3.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		97.7	
HCM 6th LOS		F	

Notes

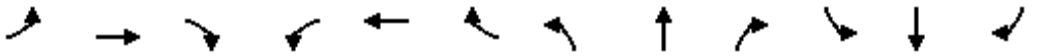
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	159	1591	1494	847	250	237
Future Volume (veh/h)	159	1591	1494	847	250	237
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	161	1607	1509	856	253	239
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	187	1877	1242	586	1037	642
Arrive On Green	0.11	0.55	0.37	0.37	0.30	0.30
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	161	1607	1509	856	253	239
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	5.3	24.0	22.2	22.2	3.3	6.3
Cycle Q Clear(g_c), s	5.3	24.0	22.2	22.2	3.3	6.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	187	1877	1242	586	1037	642
V/C Ratio(X)	0.86	0.86	1.22	1.46	0.24	0.37
Avail Cap(c_a), veh/h	187	1877	1242	586	1037	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	11.5	18.9	18.9	15.9	12.5
Incr Delay (d2), s/veh	31.1	4.2	104.4	216.1	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.4	25.1	41.9	1.2	6.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.5	15.6	123.3	235.0	16.4	14.2
LnGrp LOS	E	B	F	F	B	B
Approach Vol, veh/h		1768	2365		492	
Approach Delay, s/veh		19.4	163.7		15.3	
Approach LOS		B	F		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.8	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		26.0		8.3	7.3	24.2
Green Ext Time (p_c), s		5.3		1.2	0.0	0.0

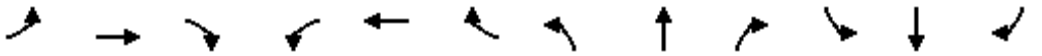
Intersection Summary	
HCM 6th Ctrl Delay	92.8
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	1301	32	18	1552	40	119	37	19	27	12	157
Future Volume (veh/h)	221	1301	32	18	1552	40	119	37	19	27	12	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	1341	33	19	1600	41	123	38	20	28	12	162
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	219	2002	49	36	1623	42	115	233	123	47	306	454
Arrive On Green	0.12	0.59	0.59	0.02	0.49	0.49	0.06	0.20	0.20	0.03	0.16	0.16
Sat Flow, veh/h	1781	3404	84	1781	3344	86	1781	1154	607	1781	1870	1585
Grp Volume(v), veh/h	228	672	702	19	801	840	123	0	58	28	12	162
Grp Sat Flow(s),veh/h/ln	1781	1706	1781	1781	1678	1751	1781	0	1761	1781	1870	1585
Q Serve(g_s), s	13.5	29.4	29.5	1.2	51.7	52.1	7.1	0.0	3.0	1.7	0.6	8.9
Cycle Q Clear(g_c), s	13.5	29.4	29.5	1.2	51.7	52.1	7.1	0.0	3.0	1.7	0.6	8.9
Prop In Lane	1.00		0.05	1.00		0.05	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	219	1004	1048	36	815	850	115	0	356	47	306	454
V/C Ratio(X)	1.04	0.67	0.67	0.53	0.98	0.99	1.07	0.00	0.16	0.60	0.04	0.36
Avail Cap(c_a), veh/h	219	1004	1048	81	815	850	115	0	356	81	306	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	15.4	15.4	53.4	27.9	28.0	51.5	0.0	36.2	53.0	38.7	31.2
Incr Delay (d2), s/veh	72.6	1.7	1.7	11.8	27.4	27.7	103.9	0.0	1.0	11.8	0.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	10.7	11.2	0.6	25.2	26.5	6.5	0.0	1.4	0.9	0.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.8	17.1	17.1	65.2	55.3	55.7	155.4	0.0	37.2	64.8	39.0	33.4
LnGrp LOS	F	B	B	E	E	E	F	A	D	E	D	C
Approach Vol, veh/h		1602			1660			181			202	
Approach Delay, s/veh		31.9			55.6			117.5			38.1	
Approach LOS		C			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	69.2	11.6	22.5	18.0	57.9	7.4	26.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	61.9	7.1	18.0	13.5	53.4	5.0	20.1
Max Q Clear Time (g_c+I1), s	3.2	31.5	9.1	10.9	15.5	54.1	3.7	5.0
Green Ext Time (p_c), s	0.0	11.1	0.0	0.3	0.0	0.0	0.0	0.2

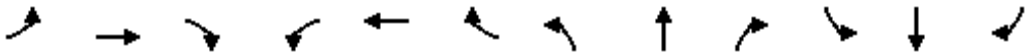
Intersection Summary	
HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	1247	79	33	1503	80	96	75	16	20	56	140
Future Volume (veh/h)	299	1247	79	33	1503	80	96	75	16	20	56	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	308	1286	81	34	1549	82	99	77	16	21	58	144
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	290	1982	125	58	1677	834	217	222	46	96	218	234
Arrive On Green	0.16	0.66	0.66	0.03	0.53	0.53	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3019	190	1781	3188	1585	1180	1502	312	275	1476	1585
Grp Volume(v), veh/h	308	672	695	34	1549	82	99	0	93	79	0	144
Grp Sat Flow(s),veh/h/ln	1781	1580	1629	1781	1594	1585	1180	0	1814	1751	0	1585
Q Serve(g_s), s	13.5	21.1	21.2	1.6	37.1	2.1	6.7	0.0	3.8	0.0	0.0	7.1
Cycle Q Clear(g_c), s	13.5	21.1	21.2	1.6	37.1	2.1	9.9	0.0	3.8	3.1	0.0	7.1
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.17	0.27		1.00
Lane Grp Cap(c), veh/h	290	1037	1069	58	1677	834	217	0	268	314	0	234
V/C Ratio(X)	1.06	0.65	0.65	0.58	0.92	0.10	0.46	0.00	0.35	0.25	0.00	0.61
Avail Cap(c_a), veh/h	290	1037	1069	131	1732	861	299	0	394	430	0	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	8.5	8.5	39.5	18.1	9.8	35.8	0.0	31.7	31.4	0.0	33.1
Incr Delay (d2), s/veh	69.7	1.4	1.4	8.9	8.6	0.1	1.5	0.0	0.8	0.4	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	5.5	5.7	0.8	13.1	0.6	2.0	0.0	1.7	1.4	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.4	9.9	9.9	48.4	26.7	9.9	37.3	0.0	32.5	31.8	0.0	35.7
LnGrp LOS	F	A	A	D	C	A	D	A	C	C	A	D
Approach Vol, veh/h		1675			1665			192			223	
Approach Delay, s/veh		27.3			26.3			35.0			34.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	58.9		16.7	18.0	48.1		16.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.1	52.4		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	23.2		9.1	15.5	39.1		11.9				
Green Ext Time (p_c), s	0.0	10.6		0.5	0.0	4.5		0.4				

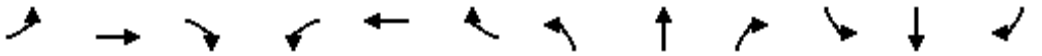
Intersection Summary			
HCM 6th Ctrl Delay		27.7	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	868	173	18	1063	190	571	360	8	73	86	9
Future Volume (veh/h)	11	868	173	18	1063	190	571	360	8	73	86	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	886	175	18	1085	194	583	367	8	74	88	9
Peak Hour Factor	0.98	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	24	1108	219	36	1129	201	610	1219	27	96	175	18
Arrive On Green	0.01	0.39	0.39	0.02	0.40	0.40	0.34	0.34	0.34	0.05	0.05	0.05
Sat Flow, veh/h	1781	2841	561	1781	2846	507	1781	3556	77	1781	3259	329
Grp Volume(v), veh/h	11	532	529	18	638	641	583	183	192	74	47	50
Grp Sat Flow(s),veh/h/ln	1781	1706	1695	1781	1678	1675	1781	1777	1856	1781	1777	1811
Q Serve(g_s), s	0.6	25.7	25.7	0.9	34.4	34.7	29.7	7.0	7.0	3.8	2.4	2.5
Cycle Q Clear(g_c), s	0.6	25.7	25.7	0.9	34.4	34.7	29.7	7.0	7.0	3.8	2.4	2.5
Prop In Lane	1.00		0.33	1.00		0.30	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	24	665	661	36	666	664	610	609	636	96	96	97
V/C Ratio(X)	0.46	0.80	0.80	0.51	0.96	0.96	0.96	0.30	0.30	0.77	0.50	0.51
Avail Cap(c_a), veh/h	96	678	673	96	667	665	615	775	809	184	344	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	25.1	25.1	45.1	27.3	27.4	29.9	22.4	22.4	43.4	42.7	42.8
Incr Delay (d2), s/veh	13.5	6.7	6.7	10.6	25.1	26.1	25.6	0.3	0.3	12.4	3.9	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	10.6	10.6	0.5	17.0	17.3	16.3	2.9	3.0	2.0	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	31.8	31.9	55.7	52.4	53.5	55.4	22.7	22.6	55.8	46.7	46.8
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		1072			1297			958			171	
Approach Delay, s/veh		32.1			53.0			42.6			50.7	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	40.7	36.3	9.5	5.7	41.4	9.5	36.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	36.9	32.1	18.0	5.0	36.9	9.6	40.5
Max Q Clear Time (g_c+I1), s	2.9	27.7	31.7	4.5	2.6	36.7	5.8	9.0
Green Ext Time (p_c), s	0.0	4.2	0.1	0.3	0.0	0.1	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	43.6
HCM 6th LOS	D



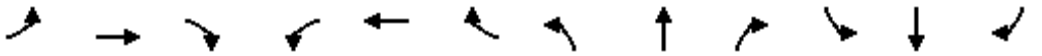
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	604	28	5	873	235	66	177	9	89	28	283
Future Volume (veh/h)	384	604	28	5	873	235	66	177	9	89	28	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	404	636	29	5	919	247	69	186	9	94	29	298
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	405	1849	84	12	874	235	89	285	14	110	324	622
Arrive On Green	0.24	0.56	0.56	0.01	0.33	0.33	0.05	0.16	0.16	0.06	0.17	0.17
Sat Flow, veh/h	1697	3297	150	1781	2660	714	1781	1769	86	1781	1870	1510
Grp Volume(v), veh/h	404	326	339	5	589	577	69	0	195	94	29	298
Grp Sat Flow(s),veh/h/ln	1697	1692	1754	1781	1706	1668	1781	0	1855	1781	1870	1510
Q Serve(g_s), s	20.4	9.0	9.0	0.2	28.2	28.2	3.3	0.0	8.5	4.5	1.1	12.4
Cycle Q Clear(g_c), s	20.4	9.0	9.0	0.2	28.2	28.2	3.3	0.0	8.5	4.5	1.1	12.4
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	405	949	984	12	561	548	89	0	299	110	324	622
V/C Ratio(X)	1.00	0.34	0.34	0.43	1.05	1.05	0.78	0.00	0.65	0.85	0.09	0.48
Avail Cap(c_a), veh/h	405	949	984	104	561	548	106	0	389	110	397	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	10.2	10.3	42.5	28.8	28.8	40.3	0.0	33.8	39.9	29.8	18.5
Incr Delay (d2), s/veh	43.8	0.2	0.2	23.0	51.8	53.2	25.9	0.0	2.4	44.3	0.1	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	12.7	2.8	2.9	0.2	18.7	18.4	2.1	0.0	3.9	3.3	0.5	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.5	10.5	10.5	65.4	80.7	82.0	66.2	0.0	36.2	84.1	29.9	19.1
LnGrp LOS	E	B	B	E	F	F	E	A	D	F	C	B
Approach Vol, veh/h		1069			1171			264			421	
Approach Delay, s/veh		35.4			81.3			44.0			34.3	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	52.6	8.8	19.4	25.0	32.7	9.8	18.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.7	5.1	18.2	20.5	28.2	5.3	18.0
Max Q Clear Time (g_c+I1), s	2.2	11.0	5.3	14.4	22.4	30.2	6.5	10.5
Green Ext Time (p_c), s	0.0	4.0	0.0	0.4	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Appendix H – Cumulative plus Project Conditions

Intersection Level of Service Worksheets



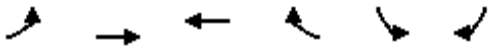
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	959	10	6	763	362	5	5	7	958	5	298
Future Volume (veh/h)	310	959	10	6	763	362	5	5	7	958	5	298
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1752	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	326	1009	11	6	803	381	5	5	7	1012	0	314
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	10	10	2	15	2	2	2	2	2	2	2
Cap, veh/h	293	970	11	14	671	334	101	101	142	1081	0	481
Arrive On Green	0.08	0.29	0.29	0.01	0.21	0.21	0.20	0.20	0.20	0.30	0.00	0.30
Sat Flow, veh/h	3456	3373	37	1781	3188	1585	505	505	707	3563	0	1585
Grp Volume(v), veh/h	326	498	522	6	803	381	17	0	0	1012	0	314
Grp Sat Flow(s),veh/h/ln	1728	1664	1745	1781	1594	1585	1718	0	0	1781	0	1585
Q Serve(g_s), s	7.6	25.8	25.8	0.3	18.9	18.9	0.7	0.0	0.0	24.8	0.0	15.4
Cycle Q Clear(g_c), s	7.6	25.8	25.8	0.3	18.9	18.9	0.7	0.0	0.0	24.8	0.0	15.4
Prop In Lane	1.00		0.02	1.00		1.00	0.29		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	293	479	502	14	671	334	345	0	0	1081	0	481
V/C Ratio(X)	1.11	1.04	1.04	0.44	1.20	1.14	0.05	0.00	0.00	0.94	0.00	0.65
Avail Cap(c_a), veh/h	293	479	502	99	671	334	345	0	0	1092	0	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	32.0	32.0	44.3	35.4	35.4	29.0	0.0	0.0	30.4	0.0	27.1
Incr Delay (d2), s/veh	86.7	52.0	51.0	20.1	102.3	93.2	0.3	0.0	0.0	14.4	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	16.6	17.3	0.2	16.5	15.6	0.3	0.0	0.0	11.9	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.8	83.9	83.0	64.5	137.7	128.6	29.2	0.0	0.0	44.8	0.0	30.2
LnGrp LOS	F	F	F	E	F	F	C	A	A	D	A	C
Approach Vol, veh/h		1346			1190			17			1326	
Approach Delay, s/veh		94.2			134.4			29.2			41.3	
Approach LOS		F			F			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	30.3		31.7	12.1	23.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	21.5		27.5	7.6	18.9		18.0				
Max Q Clear Time (g_c+I1), s	2.3	27.8		26.8	9.6	20.9		2.7				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		88.2	
HCM 6th LOS		F	

Notes

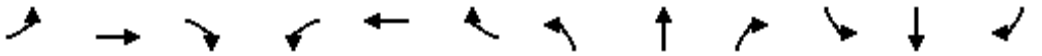
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	132	1565	1094	789	316	118
Future Volume (veh/h)	132	1565	1094	789	316	118
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1663	1678	1870	1870	1870
Adj Flow Rate, veh/h	147	1739	1216	877	351	131
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	16	15	2	2	2
Cap, veh/h	160	2161	1635	813	533	387
Arrive On Green	0.09	0.68	0.51	0.51	0.15	0.15
Sat Flow, veh/h	1781	3243	3272	1585	3456	1585
Grp Volume(v), veh/h	147	1739	1216	877	351	131
Grp Sat Flow(s),veh/h/ln	1781	1580	1594	1585	1728	1585
Q Serve(g_s), s	4.5	21.5	16.7	28.5	5.3	3.8
Cycle Q Clear(g_c), s	4.5	21.5	16.7	28.5	5.3	3.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	160	2161	1635	813	533	387
V/C Ratio(X)	0.92	0.80	0.74	1.08	0.66	0.34
Avail Cap(c_a), veh/h	160	2161	1635	813	1119	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	6.2	10.7	13.5	22.1	17.3
Incr Delay (d2), s/veh	47.5	2.3	3.1	55.0	1.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	3.7	4.8	19.4	2.0	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.6	8.5	13.8	68.5	23.5	17.8
LnGrp LOS	E	A	B	F	C	B
Approach Vol, veh/h		1886	2093		482	
Approach Delay, s/veh		13.5	36.7		22.0	
Approach LOS		B	D		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.5		13.1	9.5	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		38.0		18.0	5.0	28.5
Max Q Clear Time (g_c+I1), s		23.5		7.3	6.5	30.5
Green Ext Time (p_c), s		10.3		1.3	0.0	0.0

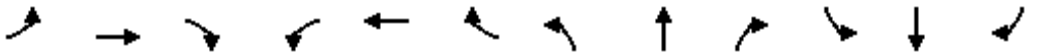
Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1868	39	16	1314	35	28	10	14	32	23	335
Future Volume (veh/h)	77	1868	39	16	1314	35	28	10	14	32	23	335
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	1966	41	17	1383	37	30	11	15	34	25	360
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1848	38	35	1697	45	53	154	210	58	407	438
Arrive On Green	0.06	0.52	0.52	0.02	0.48	0.48	0.03	0.22	0.22	0.03	0.22	0.22
Sat Flow, veh/h	1781	3560	74	1781	3536	95	1781	717	978	1781	1870	1585
Grp Volume(v), veh/h	81	978	1029	17	694	726	30	0	26	34	25	360
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1853	1781	0	1694	1781	1870	1585
Q Serve(g_s), s	3.8	43.7	43.7	0.8	28.1	28.2	1.4	0.0	1.0	1.6	0.9	17.9
Cycle Q Clear(g_c), s	3.8	43.7	43.7	0.8	28.1	28.2	1.4	0.0	1.0	1.6	0.9	17.9
Prop In Lane	1.00		0.04	1.00		0.05	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	104	922	964	35	853	890	53	0	364	58	407	438
V/C Ratio(X)	0.78	1.06	1.07	0.49	0.81	0.82	0.56	0.00	0.07	0.59	0.06	0.82
Avail Cap(c_a), veh/h	180	922	964	108	853	890	108	0	364	108	407	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	20.2	20.2	40.9	18.7	18.7	40.3	0.0	26.3	40.2	26.1	28.5
Incr Delay (d2), s/veh	11.6	46.9	48.8	10.3	6.1	5.9	9.0	0.0	0.4	9.0	0.3	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	27.2	28.9	0.4	11.5	12.0	0.7	0.0	0.4	0.8	0.4	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	67.1	69.1	51.2	24.8	24.7	49.2	0.0	26.7	49.2	26.4	44.4
LnGrp LOS	D	F	F	D	C	C	D	A	C	D	C	D
Approach Vol, veh/h		2088			1437			56			419	
Approach Delay, s/veh		67.4			25.0			38.8			43.7	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	48.2	7.0	22.8	9.4	44.9	7.2	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	8.5	40.3	5.1	18.1
Max Q Clear Time (g_c+I1), s	2.8	45.7	3.4	19.9	5.8	30.2	3.6	3.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.1

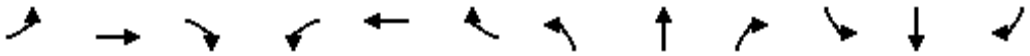
Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	1636	40	18	1165	45	85	58	28	29	43	268
Future Volume (veh/h)	227	1636	40	18	1165	45	85	58	28	29	43	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	1722	42	19	1226	47	89	61	29	31	45	282
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	251	1791	44	40	1434	713	282	251	119	183	236	332
Arrive On Green	0.14	0.57	0.57	0.02	0.45	0.45	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3152	77	1781	3188	1585	1053	1198	570	517	1126	1585
Grp Volume(v), veh/h	239	861	903	19	1226	47	89	0	90	76	0	282
Grp Sat Flow(s),veh/h/ln	1781	1580	1649	1781	1594	1585	1053	0	1768	1643	0	1585
Q Serve(g_s), s	9.0	34.9	35.3	0.7	23.2	1.1	5.2	0.0	2.9	0.0	0.0	11.5
Cycle Q Clear(g_c), s	9.0	34.9	35.3	0.7	23.2	1.1	8.1	0.0	2.9	2.9	0.0	11.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.32	0.41		1.00
Lane Grp Cap(c), veh/h	251	898	937	40	1434	713	282	0	370	419	0	332
V/C Ratio(X)	0.95	0.96	0.96	0.48	0.86	0.07	0.32	0.00	0.24	0.18	0.00	0.85
Avail Cap(c_a), veh/h	251	902	941	132	1606	799	343	0	472	511	0	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	13.8	13.9	32.6	16.6	10.5	25.6	0.0	22.2	22.0	0.0	25.7
Incr Delay (d2), s/veh	43.8	20.5	21.0	8.8	4.4	0.0	0.6	0.0	0.3	0.2	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	6.5	13.7	14.5	0.4	7.6	0.3	1.3	0.0	1.1	1.0	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	34.3	34.9	41.4	21.0	10.6	26.2	0.0	22.6	22.2	0.0	38.0
LnGrp LOS	E	C	C	D	C	B	C	A	C	C	A	D
Approach Vol, veh/h		2003			1292			179			358	
Approach Delay, s/veh		39.1			20.9			24.4			34.7	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	42.8		18.6	14.0	34.8		18.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	38.5		18.0	9.5	34.0		18.0				
Max Q Clear Time (g_c+I1), s	2.7	37.3		13.5	11.0	25.2		10.1				
Green Ext Time (p_c), s	0.0	1.1		0.6	0.0	5.1		0.5				

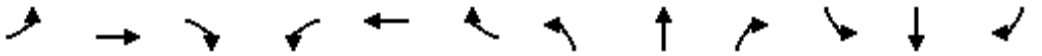
Intersection Summary												
HCM 6th Ctrl Delay			31.9									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1008	666	44	844	70	334	138	11	205	317	13
Future Volume (veh/h)	11	1008	666	44	844	70	334	138	11	205	317	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1678	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1039	687	45	870	72	344	142	11	211	327	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	15	15	2	2	2	2	2	2	2
Cap, veh/h	24	874	541	59	1462	121	313	542	42	246	434	17
Arrive On Green	0.01	0.47	0.47	0.04	0.49	0.49	0.18	0.16	0.16	0.14	0.12	0.12
Sat Flow, veh/h	1781	1874	1160	1598	2980	247	1781	3344	257	1781	3484	138
Grp Volume(v), veh/h	11	865	861	45	465	477	344	75	78	211	166	174
Grp Sat Flow(s),veh/h/ln	1781	1580	1454	1598	1594	1633	1781	1777	1824	1781	1777	1845
Q Serve(g_s), s	0.6	42.8	42.8	2.6	19.3	19.3	16.1	3.4	3.4	10.6	8.3	8.3
Cycle Q Clear(g_c), s	0.6	42.8	42.8	2.6	19.3	19.3	16.1	3.4	3.4	10.6	8.3	8.3
Prop In Lane	1.00		0.80	1.00		0.15	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	24	737	678	59	782	801	313	288	296	246	221	230
V/C Ratio(X)	0.46	1.17	1.27	0.76	0.60	0.60	1.10	0.26	0.26	0.86	0.75	0.76
Avail Cap(c_a), veh/h	97	737	678	89	782	801	313	387	398	274	349	362
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	24.5	24.5	43.8	16.8	16.8	37.8	33.6	33.6	38.7	38.8	38.8
Incr Delay (d2), s/veh	13.4	92.2	132.6	18.3	1.2	1.2	80.6	0.5	0.5	21.3	5.1	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	0.3	32.7	37.7	1.3	6.5	6.6	13.8	1.5	1.5	6.0	3.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	116.7	157.1	62.1	18.1	18.0	118.4	34.1	34.1	60.0	43.8	43.8
LnGrp LOS	E	F	F	E	B	B	F	C	C	E	D	D
Approach Vol, veh/h		1737			987			497			551	
Approach Delay, s/veh		136.3			20.0			92.5			50.0	
Approach LOS		F			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	47.3	20.6	15.9	5.7	49.5	17.2	19.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	42.8	16.1	18.0	5.0	42.9	14.1	20.0
Max Q Clear Time (g_c+I1), s	4.6	44.8	18.1	10.3	2.6	21.3	12.6	5.4
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.0	5.7	0.1	0.6

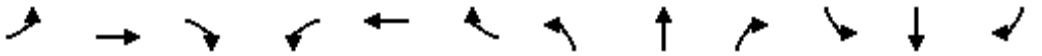
Intersection Summary	
HCM 6th Ctrl Delay	87.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	903	61	16	913	246	11	19	9	296	89	465
Future Volume (veh/h)	241	903	61	16	913	246	11	19	9	296	89	465
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	254	951	64	17	961	259	12	20	9	312	94	489
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	271	1329	89	36	727	195	26	170	77	316	566	697
Arrive On Green	0.16	0.41	0.41	0.02	0.27	0.27	0.01	0.14	0.14	0.18	0.30	0.30
Sat Flow, veh/h	1697	3218	217	1781	2659	715	1781	1222	550	1781	1870	1510
Grp Volume(v), veh/h	254	500	515	17	616	604	12	0	29	312	94	489
Grp Sat Flow(s),veh/h/ln	1697	1692	1742	1781	1706	1668	1781	0	1771	1781	1870	1510
Q Serve(g_s), s	10.7	17.7	17.7	0.7	19.7	19.7	0.5	0.0	1.0	12.6	2.7	18.6
Cycle Q Clear(g_c), s	10.7	17.7	17.7	0.7	19.7	19.7	0.5	0.0	1.0	12.6	2.7	18.6
Prop In Lane	1.00		0.12	1.00		0.43	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	271	699	720	36	467	456	26	0	247	316	566	697
V/C Ratio(X)	0.94	0.72	0.72	0.48	1.32	1.33	0.45	0.00	0.12	0.99	0.17	0.70
Avail Cap(c_a), veh/h	271	699	720	124	467	456	124	0	443	316	670	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	17.6	17.6	34.9	26.2	26.2	35.2	0.0	27.1	29.5	18.5	15.4
Incr Delay (d2), s/veh	38.3	3.5	3.4	9.6	158.2	161.1	11.7	0.0	0.2	46.6	0.1	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	6.8	6.5	6.6	0.4	27.7	27.4	0.3	0.0	0.4	9.2	1.1	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.2	21.1	21.0	44.5	184.4	187.3	46.9	0.0	27.3	76.2	18.6	17.9
LnGrp LOS	E	C	C	D	F	F	D	A	C	E	B	B
Approach Vol, veh/h		1269			1237			41			895	
Approach Delay, s/veh		30.5			183.9			33.1			38.3	
Approach LOS		C			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	34.3	5.6	26.3	16.0	24.2	17.3	14.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	26.2	5.0	25.8	11.5	19.7	12.8	18.0
Max Q Clear Time (g_c+I1), s	2.7	19.7	2.5	20.6	12.7	21.7	14.6	3.0
Green Ext Time (p_c), s	0.0	3.1	0.0	1.2	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	87.7
HCM 6th LOS	F



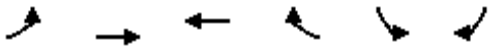
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1105	15	32	1394	281	25	5	10	683	5	377
Future Volume (veh/h)	160	1105	15	32	1394	281	25	5	10	683	5	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1811	1870	1767	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	1176	16	34	1483	299	27	5	11	731	0	401
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	6	2	9	2	2	2	2	2	2	2
Cap, veh/h	192	1280	17	57	1156	546	218	40	89	713	0	317
Arrive On Green	0.06	0.37	0.37	0.03	0.34	0.34	0.20	0.20	0.20	0.20	0.00	0.20
Sat Flow, veh/h	3456	3476	47	1781	3357	1585	1090	202	444	3563	0	1585
Grp Volume(v), veh/h	170	582	610	34	1483	299	43	0	0	731	0	401
Grp Sat Flow(s),veh/h/ln	1728	1721	1803	1781	1678	1585	1736	0	0	1781	0	1585
Q Serve(g_s), s	4.4	29.1	29.1	1.7	31.0	13.7	1.8	0.0	0.0	18.0	0.0	18.0
Cycle Q Clear(g_c), s	4.4	29.1	29.1	1.7	31.0	13.7	1.8	0.0	0.0	18.0	0.0	18.0
Prop In Lane	1.00		0.03	1.00		1.00	0.63		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	192	633	664	57	1156	546	347	0	0	713	0	317
V/C Ratio(X)	0.89	0.92	0.92	0.60	1.28	0.55	0.12	0.00	0.00	1.03	0.00	1.26
Avail Cap(c_a), veh/h	192	633	664	117	1156	546	347	0	0	713	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	27.1	27.2	43.0	29.5	23.8	29.5	0.0	0.0	36.0	0.0	36.0
Incr Delay (d2), s/veh	35.3	18.6	18.0	9.8	133.9	1.2	0.7	0.0	0.0	40.5	0.0	142.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	14.2	14.8	0.9	33.0	5.0	0.8	0.0	0.0	11.3	0.0	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	45.7	45.1	52.8	163.4	25.0	30.3	0.0	0.0	76.5	0.0	178.0
LnGrp LOS	E	D	D	D	F	C	C	A	A	F	A	F
Approach Vol, veh/h		1362			1816			43			1132	
Approach Delay, s/veh		49.4			138.6			30.3			112.4	
Approach LOS		D			F			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	37.6		22.5	9.5	35.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	30.1		18.0	5.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	3.7	31.1		20.0	6.4	33.0		3.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		102.8	
HCM 6th LOS		F	

Notes

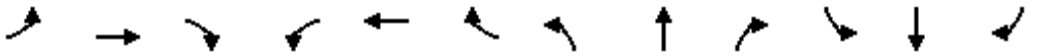
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	159	1609	1533	878	253	237
Future Volume (veh/h)	159	1609	1533	878	253	237
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1796	1767	1870	1870	1870
Adj Flow Rate, veh/h	161	1625	1548	887	256	239
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	7	9	2	2	2
Cap, veh/h	187	1877	1242	586	1037	642
Arrive On Green	0.11	0.55	0.37	0.37	0.30	0.30
Sat Flow, veh/h	1781	3503	3445	1585	3456	1585
Grp Volume(v), veh/h	161	1625	1548	887	256	239
Grp Sat Flow(s),veh/h/ln	1781	1706	1678	1585	1728	1585
Q Serve(g_s), s	5.3	24.5	22.2	22.2	3.4	6.3
Cycle Q Clear(g_c), s	5.3	24.5	22.2	22.2	3.4	6.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	187	1877	1242	586	1037	642
V/C Ratio(X)	0.86	0.87	1.25	1.51	0.25	0.37
Avail Cap(c_a), veh/h	187	1877	1242	586	1037	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	11.6	18.9	18.9	15.9	12.5
Incr Delay (d2), s/veh	31.1	4.5	117.8	239.3	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.6	27.4	45.6	1.2	6.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.5	16.1	136.7	258.2	16.4	14.2
LnGrp LOS	E	B	F	F	B	B
Approach Vol, veh/h		1786	2435		495	
Approach Delay, s/veh		19.9	181.0		15.3	
Approach LOS		B	F		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.8	26.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		26.5		8.3	7.3	24.2
Green Ext Time (p_c), s		5.0		1.2	0.0	0.0

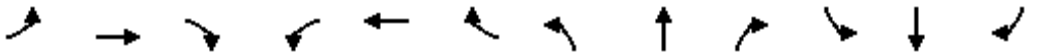
Intersection Summary	
HCM 6th Ctrl Delay	102.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	1322	32	18	1622	40	119	37	19	27	12	157
Future Volume (veh/h)	221	1322	32	18	1622	40	119	37	19	27	12	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	1363	33	19	1672	41	123	38	20	28	12	162
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	219	2003	48	36	1625	40	115	233	123	47	306	454
Arrive On Green	0.12	0.59	0.59	0.02	0.49	0.49	0.06	0.20	0.20	0.03	0.16	0.16
Sat Flow, veh/h	1781	3405	82	1781	3348	82	1781	1154	607	1781	1870	1585
Grp Volume(v), veh/h	228	682	714	19	836	877	123	0	58	28	12	162
Grp Sat Flow(s),veh/h/ln	1781	1706	1781	1781	1678	1752	1781	0	1761	1781	1870	1585
Q Serve(g_s), s	13.5	30.2	30.3	1.2	53.4	53.4	7.1	0.0	3.0	1.7	0.6	8.9
Cycle Q Clear(g_c), s	13.5	30.2	30.3	1.2	53.4	53.4	7.1	0.0	3.0	1.7	0.6	8.9
Prop In Lane	1.00		0.05	1.00		0.05	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	219	1004	1048	36	815	850	115	0	356	47	306	454
V/C Ratio(X)	1.04	0.68	0.68	0.53	1.03	1.03	1.07	0.00	0.16	0.60	0.04	0.36
Avail Cap(c_a), veh/h	219	1004	1048	81	815	850	115	0	356	81	306	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	15.5	15.6	53.4	28.3	28.3	51.5	0.0	36.2	53.0	38.7	31.2
Incr Delay (d2), s/veh	72.6	1.9	1.8	11.8	38.4	39.1	103.9	0.0	1.0	11.8	0.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	11.1	11.6	0.6	28.3	29.7	6.5	0.0	1.4	0.9	0.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.8	17.4	17.4	65.2	66.7	67.4	155.4	0.0	37.2	64.8	39.0	33.4
LnGrp LOS	F	B	B	E	F	F	F	A	D	E	D	C
Approach Vol, veh/h		1624			1732			181			202	
Approach Delay, s/veh		31.9			67.0			117.5			38.1	
Approach LOS		C			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	69.2	11.6	22.5	18.0	57.9	7.4	26.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	61.9	7.1	18.0	13.5	53.4	5.0	20.1
Max Q Clear Time (g_c+I1), s	3.2	32.3	9.1	10.9	15.5	55.4	3.7	5.0
Green Ext Time (p_c), s	0.0	11.3	0.0	0.3	0.0	0.0	0.0	0.2

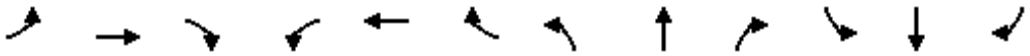
Intersection Summary	
HCM 6th Ctrl Delay	52.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	1268	79	33	1573	80	96	75	16	20	56	140
Future Volume (veh/h)	299	1268	79	33	1573	80	96	75	16	20	56	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1663	1663	1870	1678	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	308	1307	81	34	1622	82	99	77	16	21	58	144
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	16	16	2	15	2	2	2	2	2	2	2
Cap, veh/h	286	1993	123	58	1694	842	215	221	46	95	217	234
Arrive On Green	0.16	0.66	0.66	0.03	0.53	0.53	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3022	187	1781	3188	1585	1180	1502	312	276	1474	1585
Grp Volume(v), veh/h	308	682	706	34	1622	82	99	0	93	79	0	144
Grp Sat Flow(s),veh/h/ln	1781	1580	1629	1781	1594	1585	1180	0	1814	1750	0	1585
Q Serve(g_s), s	13.5	21.7	21.9	1.6	40.8	2.1	6.8	0.0	3.9	0.0	0.0	7.2
Cycle Q Clear(g_c), s	13.5	21.7	21.9	1.6	40.8	2.1	10.0	0.0	3.9	3.2	0.0	7.2
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.17	0.27		1.00
Lane Grp Cap(c), veh/h	286	1042	1074	58	1694	842	215	0	267	312	0	234
V/C Ratio(X)	1.08	0.65	0.66	0.59	0.96	0.10	0.46	0.00	0.35	0.25	0.00	0.62
Avail Cap(c_a), veh/h	286	1042	1074	129	1707	849	294	0	389	424	0	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	8.6	8.6	40.1	18.8	9.7	36.3	0.0	32.2	31.9	0.0	33.6
Incr Delay (d2), s/veh	75.0	1.5	1.5	9.0	13.1	0.0	1.5	0.0	0.8	0.4	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	5.7	5.9	0.8	15.3	0.6	2.0	0.0	1.7	1.4	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.2	10.1	10.1	49.1	31.9	9.8	37.9	0.0	33.0	32.3	0.0	36.2
LnGrp LOS	F	B	B	D	C	A	D	A	C	C	A	D
Approach Vol, veh/h		1696			1738			192			223	
Approach Delay, s/veh		28.3			31.2			35.5			34.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	59.9		16.9	18.0	49.1		16.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.1	52.4		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	23.9		9.2	15.5	42.8		12.0				
Green Ext Time (p_c), s	0.0	10.7		0.5	0.0	1.9		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		30.3	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	194	18	1063	190	641	369	8	73	89	9
Future Volume (veh/h)	0	868	194	18	1063	190	641	369	8	73	89	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1796	1870	1767	1767	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	886	196	18	1085	194	654	377	8	74	91	9
Peak Hour Factor	0.98	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	7	7	2	9	9	2	2	2	2	2	2
Cap, veh/h	2	1014	224	36	1239	221	638	1282	27	96	183	18
Arrive On Green	0.00	0.36	0.36	0.02	0.44	0.44	0.36	0.36	0.36	0.05	0.06	0.06
Sat Flow, veh/h	1781	2778	614	1781	2846	507	1781	3558	75	1781	3271	319
Grp Volume(v), veh/h	0	544	538	18	638	641	654	188	197	74	49	51
Grp Sat Flow(s),veh/h/ln	1781	1706	1686	1781	1678	1675	1781	1777	1857	1781	1777	1813
Q Serve(g_s), s	0.0	26.6	26.7	0.9	31.1	31.3	32.1	6.8	6.8	3.7	2.4	2.5
Cycle Q Clear(g_c), s	0.0	26.6	26.7	0.9	31.1	31.3	32.1	6.8	6.8	3.7	2.4	2.5
Prop In Lane	1.00		0.36	1.00		0.30	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	2	623	615	36	730	729	638	640	669	96	99	101
V/C Ratio(X)	0.00	0.87	0.87	0.50	0.87	0.88	1.02	0.29	0.29	0.77	0.49	0.51
Avail Cap(c_a), veh/h	99	703	694	99	730	729	638	803	839	191	357	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	26.5	26.5	43.4	23.1	23.1	28.7	20.5	20.5	41.9	41.1	41.1
Incr Delay (d2), s/veh	0.0	10.9	11.0	10.4	11.4	11.9	42.1	0.3	0.2	12.4	3.7	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.7	11.6	0.5	13.1	13.3	20.2	2.7	2.9	1.9	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	37.4	37.6	53.9	34.5	35.0	70.8	20.7	20.7	54.3	44.8	45.0
LnGrp LOS	A	D	D	D	C	D	F	C	C	D	D	D
Approach Vol, veh/h		1082			1297			1039			174	
Approach Delay, s/veh		37.5			35.0			52.3			48.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	37.2	36.6	9.5	0.0	43.5	9.3	36.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	36.9	32.1	18.0	5.0	36.9	9.6	40.5
Max Q Clear Time (g_c+I1), s	2.9	28.7	34.1	4.5	0.0	33.3	5.7	8.8
Green Ext Time (p_c), s	0.0	4.0	0.0	0.3	0.0	2.4	0.0	2.3

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	604	28	7	873	235	66	177	18	89	28	283
Future Volume (veh/h)	384	604	28	7	873	235	66	177	18	89	28	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1870	1796	1796	1870	1870	1870	1870	1870	1781
Adj Flow Rate, veh/h	404	636	29	7	919	247	69	186	19	94	29	298
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	2	7	7	2	2	2	2	2	8
Cap, veh/h	405	1841	84	16	874	235	89	269	27	110	324	622
Arrive On Green	0.24	0.56	0.56	0.01	0.33	0.33	0.05	0.16	0.16	0.06	0.17	0.17
Sat Flow, veh/h	1697	3297	150	1781	2660	714	1781	1669	171	1781	1870	1510
Grp Volume(v), veh/h	404	326	339	7	589	577	69	0	205	94	29	298
Grp Sat Flow(s),veh/h/ln	1697	1692	1754	1781	1706	1668	1781	0	1840	1781	1870	1510
Q Serve(g_s), s	20.4	9.0	9.1	0.3	28.2	28.2	3.3	0.0	9.0	4.5	1.1	12.4
Cycle Q Clear(g_c), s	20.4	9.0	9.1	0.3	28.2	28.2	3.3	0.0	9.0	4.5	1.1	12.4
Prop In Lane	1.00		0.09	1.00		0.43	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	405	945	980	16	561	548	89	0	296	110	324	622
V/C Ratio(X)	1.00	0.35	0.35	0.44	1.05	1.05	0.78	0.00	0.69	0.85	0.09	0.48
Avail Cap(c_a), veh/h	405	945	980	104	561	548	106	0	386	110	397	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	10.4	10.4	42.3	28.8	28.8	40.3	0.0	34.0	39.9	29.8	18.5
Incr Delay (d2), s/veh	43.8	0.2	0.2	17.8	51.8	53.2	25.9	0.0	3.5	44.3	0.1	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	12.7	2.9	3.0	0.2	18.7	18.4	2.1	0.0	4.2	3.3	0.5	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.5	10.6	10.6	60.1	80.7	82.0	66.2	0.0	37.5	84.1	29.9	19.1
LnGrp LOS	E	B	B	E	F	F	E	A	D	F	C	B
Approach Vol, veh/h		1069			1173			274			421	
Approach Delay, s/veh		35.5			81.2			44.7			34.3	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	52.4	8.8	19.4	25.0	32.7	9.8	18.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.7	5.1	18.2	20.5	28.2	5.3	18.0
Max Q Clear Time (g_c+I1), s	2.3	11.1	5.3	14.4	22.4	30.2	6.5	11.0
Green Ext Time (p_c), s	0.0	4.0	0.0	0.4	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D