Visalia Center

Updated Traffic Impact Analysis (Category III)

CERTIFICATION

I hereby certify this report was prepared by me or under my direct supervision, and I am a duly licensed Professional Engineer under the laws of the State of California.

By:

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Date: June 28, 2019

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

This Traffic Impact Analysis (TIA) was prepared to assess the traffic impacts due to the development of the proposed Visalia Center development. This impact analysis focuses on the anticipated effect of vehicle traffic resulting from the project and was performed in accordance with the City of Visalia *Procedures for Traffic Impact Analysis* (TIA) dated October of 2014 & the Caltrans *Guide for the Preparation of Traffic Impact Studies* dated December 2002. The project will be located northeast of the intersection of Dinuba Boulevard (State Route 63) and Shannon Parkway in Visalia, California and is expected to be completed by the year of 2022. The approximate ±6-acre site is currently vacant. Exhibit 1 shows the project location.

The project will consist of commercial mixed use with the following land uses:

Phase I - West Parcel (±2 acres)

- 3,300 S.F. – Gas Station with 8 fueling pumps (16 fueling positions)/ Service Station with Convenience Market
- 810 S.F - 3,000 S.F. - Fast Food Restaurant/ Coffee Shop with a Drive-through

Phase II – East Parcel (±4 acres)

- 4,700 S.F. - Retail Store
- 1 Tunnel Automated Car Wash
- 14,000 S.F. - 2 Story Medical Building
- 6,600 S.F. - 2 Story Medical Building
- 14,000 S.F. - 2 Story Medical Building

1.1 Site Location and Study Area

The study locations are based on the Category III requirements of the City of Visalia (analysis of all intersections within 1 mile of site), and based on correspondence with Caltrans staff, the following intersections are included in the analysis:

Study Area Intersections:
1. Avenue 320/ Dinuba Boulevard (two-way stop Caltrans intersection)
2. Riverway Drive/ Giddings Street (one-way stop City of Visalia intersection)
3. Riverway Drive/ Dinuba Boulevard (one-way stop Caltrans intersection)
4. Riverway Sports Park Driveway/ Dinuba Boulevard (one-way stop Caltrans intersection)
5. Shannon Parkway/ Giddings Street (City of Visalia roundabout)
6. Shannon Parkway/ Dinuba Boulevard (Signalized Caltrans intersection)
7. Shannon Parkway/ Court Street (one-way stop City of Visalia intersection)
8. Riggin Avenue / Giddings Street (two-way stop City of Visalia intersection)
9. Riggin Avenue / Dinuba Boulevard (signalized Caltrans intersection)
10. Riggin Avenue/ Court Street (two-way stop City of Visalia intersection)
11. Ferguson Avenue/ Giddings Street (four-way stop City of Visalia intersection)
12. Ferguson Avenue/ Dinuba Boulevard (Signalized Caltrans intersection)
13. Ferguson Avenue/ Court Street (four-way stop City of Visalia intersection)

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14. St. John's Parkway/ Burke Street (four-way stop City of Visalia intersection)

Caltrans requested that road segment analysis be performed on State Route 63 from Ferguson Avenue to Riverway Drive. As recommended by the Highway Capacity Manual (HCM) procedures for calculating road segment levels of service (LOS), the road segment analysis was not included in this analysis because signal-controlled intersections are at or less than 1 mile apart, the capacity of the roadway is generally dominated by the capacity of the adjacent signal-controlled intersections as recommend by the HCM. Section 4.10 provides a summary of each road segment that has been reviewed.

The analysis time periods include the weekday a.m. and p.m. peak hours, which were determined to be from the hours of 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The study horizons which have been analyzed as outlined in the City Procedures, are as follows:

- ✓ 2018, 2020, & 2022 Existing Conditions
- ✓ Existing with Project (Phases 1, Opening Year) 2020 Conditions;
- ✓ Existing with Project (Phases 1 & 2, Opening Year) 2022 Conditions;
- ✓ 5-Year Cumulative Conditions without Project;
- ✓ 5-Year Cumulative Conditions with Project (Phases 1 and 2);
- ✓ 10-Year Cumulative Conditions without Project;
- ✓ 10-Year Cumulative Conditions with Project (Phases 1 and 2);
- ✓ 20-Year Cumulative Conditions without Project (Caltrans intersections only); and
- ✓ 20-Year Cumulative Conditions with Project (Caltrans intersections only)

1.2 Development Description

The proposed Visalia Center (Project) is located northeast of the intersection of Dinuba Boulevard (State Route 63) and Shannon Parkway in Visalia, California. Phase 1 of the Project consists of a 16 fueling positions gas station with a 3,000 square-foot convenience market and a 810 S.F - 3,000 S.F. - Fast Food Restaurant/ Coffee Shop with a Drive-through. Access for Phase 1 will be via one driveway connecting to Dinuba Avenue and one driveway connecting to Shannon Parkway.

Phase 2 of the Project includes a 4,700 square-foot retail store, a 1 tunnel automated car wash, two separate 7,000 square-feet 2-story medical buildings, and a separate 3,300 square-feet 2-story medical building. Phase 2 will share access with Phase 1 and will also include a second driveway connecting to Shannon Parkway.

1.3 Principal Findings

The principal findings of this study are:

- The proposed Visalia Center development (Phase 1 & 2) is expected to generate 588 new trips during the a.m. peak hour and 601 new trips during the p.m. peak hour.

- The project appears to interrupt a planned Class I (Shared Use Path) bikeway on the northside of Shannon Parkway between Dinuba Blvd and Court Street, and a planned Class II bike lane on the eastside of Dinuba Blvd. The project site appears to interrupt

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the planned bikeways & pedestrian facilities along these sections by not providing the required park strip for a Class I bikeway along the southside of the project and the required Class II striping along the westside of the project.

- The project is expected to cause significant impacts, or contribute to significant cumulative impacts, at multiple intersections within the 5 & 10-year horizon as covered in Section 1.4.

1.4 Conclusions/Recommendations

Generally-accepted engineering principles and practices have been utilized to estimate the amount of traffic expected to be generated by the project, to analyze the existing traffic conditions, and to analyze the traffic conditions projected to occur in the future.

The traffic impact analysis found that the intersection of Riggin Avenue/ Giddings Street is currently operating below the target LOS. The project is expected to cause significant impacts, or contribute to significant cumulative impacts, at the following existing City of Visalia intersections within the 5-year horizon and again in the 10-year horizon:

- Riggin/ Giddings (two-way stop)
- Riggin/ Court (two-way stop)
- Ferguson/ Giddings (four-way stop)

Once the recommended mitigation measures are implemented in the 5-year horizon, those measures will also mitigate the traffic impacts caused by the Visalia Center development in the 10-year horizon. The recommended mitigation measures are as follows:

<u>2027 5-Year Horizon</u>

- Riggin/ Giddings (two-way stop): It is recommended that the project mitigate its share of significant cumulative impact by participating in signalization of the intersection through payment of City development/ impact fees or a fair share.

- Riggin/ Court (two-way stop): It is recommended that the project mitigate its share of significant cumulative impact by participating in signalization of the intersection through payment of City development/ impact fees or a fair share.

- Ferguson/ Giddings (four-way stop): It is recommended that the project mitigate its share of significant cumulative impact by participating in signalization of the intersection through payment of City development/ impact fees or a fair share.

This study is based upon a concept development plan titled “Visalia Center” and dated July 18, 2017. Assuming the general characteristics of the proposed development remain approximately the same as documented, minor changes in the final design are not expected to alter the results or recommendations of this study.

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2.0 PROPOSED DEVELOPMENT

2.1 Site Location

The project will be located northeast of the intersection of Dinuba Boulevard (State Route 63) and Shannon Parkway in Visalia, California and is expected to be completed by 2022. The approximate 6-acre site is currently vacant. Exhibit 1 shows the project location.

2.2 Land Use and Intensity

The Visalia Center development encompasses a residential low-density zone which has been rezoned to Commercial Mixed Use (approximately 6-acres). The development will provide a new 16 pump fueling station, fast food restaurants, car wash, commercial retail facilities, and medical clinic facilities.

2.3 Access geometrics

Access for Phase 1 will be via one driveway connecting to Dinuba Avenue and one driveway connecting to Shannon Parkway. Phase 2 will share access with Phase 1 and will also include a second driveway connecting to Shannon Parkway.

2.4 Development phasing and timing

The proposed Visalia Center development will be phased to 2 Phases. The projected opening years are as shown below on Table 1 (Project Phasing and Timing).

Table 1 – Project Phasing and Timing

Project Phase	Period
Phase I	January 2020 (Opening Year)
Phase II	January 2022 (Opening Year)

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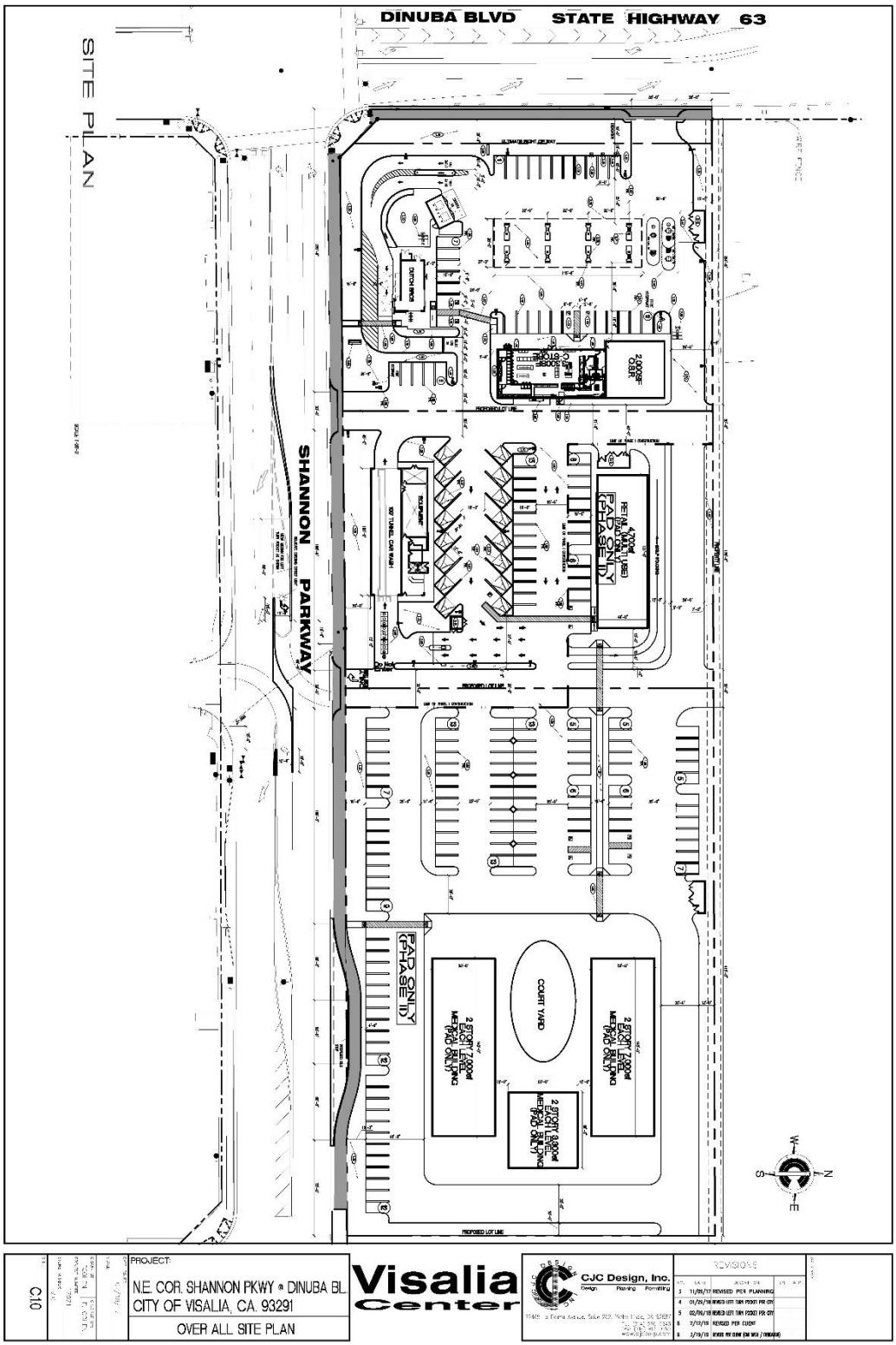
2.5 Site plan



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3.0 STUDY AREA CONDITIONS

3.1 Study area

The area of Significant Traffic Impact (including road segments, intersections and driveways) was based on the Category III requirements of the City of Visalia (analysis of all intersections within 1 mile of site), the following intersections are included in the analysis:

Table 2 - Study Area Intersections

Intersections
Avenue 320/ Dinuba Boulevard (two-way stop Caltrans intersection)
Riverway Drive/ Giddings Street (one-way stop City of Visalia intersection)
Riverway Drive/ Dinuba Boulevard (one-way stop Caltrans intersection)
Riverway Sports Park Driveway/ Dinuba Boulevard (one-way stop Caltrans intersection)
Shannon Parkway/ Giddings Street (City of Visalia roundabout)
Shannon Parkway/ Dinuba Boulevard (Signalized Caltrans intersection)
Shannon Parkway/ Court Street (one-way stop City of Visalia intersection)
Riggin Avenue / Giddings Street (two-way stop City of Visalia intersection)
Riggin Avenue / Dinuba Boulevard (signalized Caltrans intersection)
Riggin Avenue/ Court Street (two-way stop City of Visalia intersection)
Ferguson Avenue/ Giddings Street (four-way stop City of Visalia intersection)
Ferguson Avenue/ Dinuba Boulevard (Signalized Caltrans intersection)
Ferguson Avenue/ Court Street (four-way stop City of Visalia intersection)
St. John's Parkway/ Burke Street (four-way stop City of Visalia intersection)

The Project study area for the analysis of traffic impacts was extended out to a maximum of 1 mile. This report analyzes fourteen (14) intersections for two (2) time periods (A.M. and P.M. peak hour). Signalized & unsignalized intersection levels of service (LOS) were calculated using Synchro 10, which is an industry standard. The Synchro software is based on the 2010 Highway Capacity Manual (HCM 2010) methodology, which is also an industry standard. Signal warrants were prepared using the California Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways.

Approaches to unsignalized intersections that have been analyzed for traffic signal warrants, are as follows:

Table 3 - Study Area Traffic Signal Warrants at Intersections

Intersections
Riggin Avenue/ Giddings Street (two-way stop City of Visalia intersection)
Riggin Avenue/ Court Street (two-way stop City of Visalia intersection)
Ferguson Avenue/ Giddings Street (four-way stop City of Visalia intersection)

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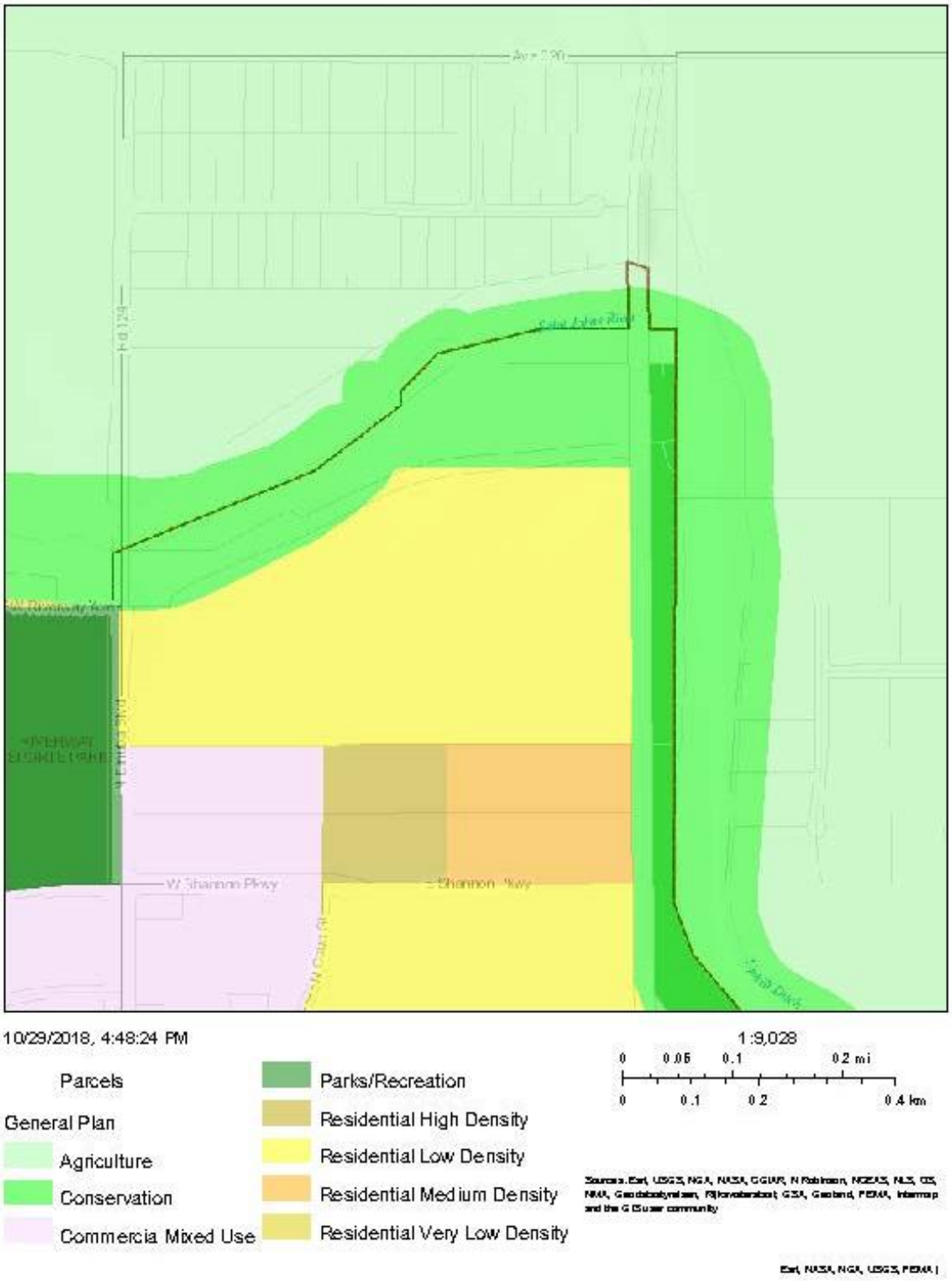
3.2 Land use



The Visalia Center development encompasses a residential low-density zone which has been rezoned to Commercial Mixed Use (approximately 6-acres).

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3.3 Anticipated Future Development

As required by the City of Visalia *Procedures for Traffic Impact Analysis (TIA)* updated October 2014 (City Procedures), the traffic analysis for the cumulative conditions consider traffic that is anticipated from future development within the study area. The projects listed below are assumed to be constructed in the 5-year cumulative conditions at the time of this project study. The location of each of these future developments in relation to the Visalia Center development is shown in Exhibit 3.

- Riverway Sports Park Phase V
- 212-Unit Multi-family residential project (N.E. of the intersection of Shannon Parkway and Court Street)
- 103-Lot Single-family residential subdivision (S.E. of the intersection of Shannon Parkway and Court Street)
- 239-Lot Single-family residential subdivision (N.E. of the intersection of Riverway Sports Park Driveway and Dinuba Boulevard [State Route 63])

3.4 Site Circulation & Accessibility

A review of the site plan was performed to identify potential issues with site circulation & site accessibility. The site plan appears to provide adequate site circulation & accessibility by providing access for Phase 1 via one driveway connecting to State Route (SR) 63 (Dinuba Boulevard) and one driveway connecting to Shannon Parkway. Phase 2 will share access with Phase 1 and will also include a second driveway connecting to Shannon Parkway.

A potential concern with the proposed access driveway connecting to SR 63 is that the site plan does not provide adequate vehicular storage capacity. An access driveway to a state highway is an intersection and thus, should be analyzed with respect to capacity, traffic operations and safety; however, as required by Caltrans' letter *City of Visalia – Community Development – Site Plan Review* dated November 21, 2018, the proposed driveway with access to SR 63 shall be removed when the property adjacent to the north of the project site is developed. At the time, a new "shared driveway would be constructed across from the Sports Park entrance to replace the temporary right-in/right-out driveway and allow cross-access through the property to the north.

As previously discussed in 2017 with Caltrans, Caltrans requested that a raised median (minimum 4-feet wide) be constructed on SR 63 from the SR 63/Shannon Parkway intersection, extending north to the existing Visalia Sports Park entrance. The median will prevent illegal U-turn movements on SR 63. Furthermore, Caltrans also recommends constructing a raised median on Shannon Parkway and recommends that the storage length of the new eastbound left-turn lane on Shannon Parkway into the Project's eastern driveway be divided equally (in length) with the existing westbound left-turn lane. Lastly, Caltrans recommends, if long queues occur from the proposed Dutch Bros drive-thru traffic, vehicles should not be allowed to back into the SR 63 right-of-way.

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3.5 Existing and Future Area Roadway System

According to the *City of Visalia General Plan, Element 4 Circulation, Roadway Classifications* & correspondence with Caltrans, the following are descriptions of the existing and future roadway segments that are being considering as part of the Traffic Impact Analysis study.

Roadway Segment	**Functional Classification**
Avenue 320	Deferred Arterial
Riverway Drive	Unclassified
Giddings Street	Collector
Shannon Parkway	Collector
Court Street	Arterial
Riggin Avenue	Arterial
Ferguson Avenue	Collector
St. John's Parkway	Arterial
Burke Street	Collector
Dinuba Blvd (State Route 63)	Arterial

It is planned to have Shannon Parkway extended to the east which will continue past the proposed Visalia Center development on the north side of the street. Caltrans recommends constructing a raised median on Shannon Parkway and the storage length of the new eastbound left-turn lane on Shannon Parkway into the project's eastern driveway be divided equally (in length) with the existing west bound left-turn lane. Furthermore, Caltrans recommended that the minimum pavement width (cross section) for northbound SR 63 to be 34 feet.

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4.0 ANALYSIS OF EXISTING CONDITIONS

4.1 Physical Characteristics

Visalia's roadway system is set up around a hierarchy of street types, which are commonly referred to as functional classifications. These functional classifications for most major streets are summarized in the *Visalia General Plan Circulation Element* as follows:

> **Arterials**
> Arterials collect and distribute traffic from freeways and expressways to collector streets and vice versa. On arterials, the optimum distance between intersections is approximately one quarter mile. Driveways to major traffic generators may be permitted within the quarter-mile spacing. Other intersections closer than one quarter mile should be restricted to right turn access. Based upon the Visalia Improvement Standards (2008), the arterial right-of-way widths range from 84 feet to 110 feet. Arterials feature two to three through lanes of traffic in each direction with a left turn channelization. (pg. 4-4)
>
> **Collectors**
> Collectors connect local and arterial streets and provide direct access to parcels. At major intersections, driveways on collector streets should be no closer than 50 feet to the intersection per the City of Visalia Improvement Standards. Non-residential driveways and/or intersecting streets on collector streets should be no closer than 300 to 400 feet apart. Major collectors carry four lanes of traffic within an 84-foot right-of-way and two bicycle lanes within an additional 10 feet of right-of-way. Collectors generally carry two lanes of traffic and are a minimum of 60 feet wide. (pg. 4-4)
>
> **Local Streets**
> Local streets provide direct access to parcels. Local streets represent the largest part of the city's circulation system. Access to local streets is unrestricted and right-of-way widths vary between 48 and 66 feet depending on surrounding land uses (2008 City of Visalia Design and Improvement Standards). (pg. 4-4)

4.2 Roadway Characteristics

The existing roadway characteristics at the study locations are shown in Exhibit 4, Existing Transportation Systems. For the purposes of this traffic impact study, it is assumed that the existing traffic roadway characteristics at the study intersections will remain the same until the end of the study periods. For reference, a summary of the roadway functional classifications type is summarized in Table 4.

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Table 4 – Road Functional Classifications

Roadway Segment	Functional Classification
Avenue 320	Deferred Arterial
Riverway Drive	Unclassified
Giddings Street	Collector
Shannon Parkway	Collector
Court Street	Arterial
Riggin Avenue	Arterial
Ferguson Avenue	Collector
St. John's Parkway	Arterial
Burke Street	Collector
Dinuba Blvd (State Route 63)	Arterial

Reference: *City of Visalia General Plan, Element 4 Circulation, Roadway Classifications*

4.3 Traffic Control Devices

The existing traffic control devices at the study locations are shown in Exhibit 4, Existing Transportation Systems. For the purposes of this traffic impact study, it is assumed that the existing traffic control devices & traffic control signal timing at the study intersections will remain the same until the end of the study periods.

4.4 Transit Service

Local transit systems that serve the City of Visalia are: Visalia Transit, Tulare County Area Transit (TCaT), and Kings Area Rapid Transit (KART). Visalia Transit currently offers 13 fixed routes throughout the city. The nearest transit routes to the project site are serviced by Visalia Transit Routes 7A, 7B, 8A and 8B and travel on Dinuba Boulevard and east of Shannon Parkway while serving a nearby point of interest of Orchard Walk Shopping Center. TCaT also has a "yellow" 10 route which travels southbound on Dinuba Boulevard. Kings Area Rapid Transit's (KART) nearest route to the development is Route 15, which connects Hanford and Visalia. The nearest route stop to the development is located at the City of Visalia's Transit Transfer Center at the intersection of Oak Avenue and Santa Fe Street.

A significant impact is noted if the proposed development project will interrupt or hinder existing or planned transit facilities. The project site appears to provide access to a transit stop turnout on the south-east side of the project site. The transit turnout will provide westbound access to all available transit routes. The project is not expected to interrupt or hinder the existing or planned transit facilities.

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4.5 Pedestrian/Bicycle Facilities

The City of Visalia Bikeway Plan adopted on February 2011 & the City of Visalia Active Transportation Plan (ATP) dated March 2017 is intended to provide the necessary bikeway & pedestrian facility plans and policy documents. In specific, the city's ATP provides the means to support active transportation, specifically bicycling and walking, as an alternative mode of transportation for work, daily activities, and recreational trips. Visalia's Bikeway Plan & ATP outlines the different bikeway classifications as reference below:

According to the Highway Design Manual (HDM) and the CA Manual of Uniform Traffic Control Devices (MUTCD) the following are descriptions of the different bikeway classifications:

> **Bike Path (Class I)** - Class I bikeways, also known as bike paths or shared-use paths, are facilities with exclusive right of way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized. Some systems provide separate pedestrian facilities. Class I facilities support both recreational and commuting opportunities. Common applications include along rivers, shorelines, canals, utility rights-of-way, railroad rights-of-way, within school campuses, or within and between parks.
>
> **Bike Lane (Class II)** - Class II bikeways are bike lanes established along streets and are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel. Bike lanes are one-way facilities, typically striped adjacent to motor traffic travelling in the same direction. Contraflow bike lanes can be provided on one-way streets for bicyclists travelling in the opposite direction.
>
> **Bike Route (Class III)** - Class III bikeways, or bike routes, designate a preferred route for bicyclists on streets shared with motor traffic not served by dedicated bikeways to provide continuity to the bikeway network. Bike routes are generally not appropriate for roadways with higher motor traffic speeds or volumes. Bike routes are established by placing bike route signs and optional shared roadway markings (sharrow) along roadways. (HDM index 1003.1; CAMUTCD Section 9C.03)

According to Caltrans design information Bulletin 89 - Class IV Bikeway Guidance FHWA Separated Bike Lane Planning and Design Guide, NACTO Urban Bikeway Design Guide/ Cycle Tracks, the following is a description of Class IV bikeway:

> **Class IV Bikeway** - A Class IV separated bikeway, often referred to as a cycle track or protected bike lane, is for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature. The separation may include, but is not limited to, grade separation, flexible posts, inflexible barriers, or on-street parking. Separated bikeways can provide for one-way or two-way travel. By providing physical separation from motor traffic, Class IV bikeways can reduce the level of stress, improve comfort for more types of bicyclists, and contribute to an increase in bicycle volumes and mode share. (Caltrans Design Bulletin 89).

Currently, the nearest bikeways exist on Dinuba Boulevard, Shannon Parkway, and along the St. Johns River. The Class II bikeway on Dinuba Boulevard begins south of Avenue 320 and

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ends near Robin Avenue. The Class I (Shared Use Path) bikeway exists on Shannon Parkway from Demaree Street to just east of Mooney Blvd. The Class I bikeway on St. Johns River begins near Shannon Parkway and Court Street and continues to Cutler Park paralleling the St. Johns River.

The *City of Visalia Bikeway Plan* has a Class I route planned along Shannon Parkway connecting to the existing Class I bikeway from just east of Mooney Blvd all the way to the existing St. Johns River bikeway. The St. Johns River Class I bikeway route is planned to be extended parallel to the St Johns River from where it currently ends today all the way up to Road 100. A Class II and III bikeway route is planned along Giddings Street from Houston Avenue to Riverway Drive. A Class II bikeway route is planned along Riverway Drive from Dinuba Blvd to Mooney Blvd. A Class II bikeway route is also planned to run the entire length of Riggin Avenue from where it merges with Betty Drive in the West to where it merges with St Johns Parkway in the East.

A significant impact is noted if the proposed development project will interrupt or hinder existing or planned pedestrian/bicycle facilities. After reviewing the proposed site plan, the project appears to interrupt a planned Class I bikeway on the northside of Shannon Parkway between Dinuba Blvd and Court Street, and a planned Class II bike lane on the eastside of Dinuba Blvd.

The project site is expected to interrupt the planned bikeways & pedestrian facilities along these sections by not providing the required park strip for Class I bikeways along the southside of the project and the required Class II striping along the westside of the project.

4.6 Traffic Volumes

The methodology for conducting traffic volume consisted of collecting on-site traffic count data, turning movement counts, at intersections followed by analysis of the data using Synchro 10. Synchro 10 is a macroscopic analysis and optimization software application. Synchro supports the Highway Capacity Manual's (HCM) 6th Edition, 2010 and 2000 for signalized intersections, unsignalized intersections and roundabouts. Synchro also implements the Intersection Capacity Utilization method for determining intersection capacity. Traffic volume data collection & data analysis was performed by A&M staff. The existing peak-hour turning movement volumes for the major intersection are shown in Exhibit 9, Existing 2018 Peak Hour Turning Volumes.

4.7 Daily, Morning, Afternoon Peak Periods and others as required

Data Collection—Intersection turning movement counts were collected for the A.M. & P.M. peak hour period. Typically, the A.M. & P.M. peak hour is defined as the one-hour period of peak traffic flow counted between 7:00 A.M. – 9:00 A.M. & 4:00 P.M. - 6:00 P.M. Intersection counts consisted of the total number of turning movements per direction per approach during the peak 1-hour period. Data was collected by A&M staff using on-site tally and intersection video methods, where applicable. Intersection geometry was determined either by field inspection or use of the latest aerial photo coverage obtained through Google Earth Pro. Intersection locations, geometrics, and turning volumes are shown in Exhibit 4 & 9.

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4.8 Level of Service (LOS) & Significant Impact Criteria

The traffic analysis focuses on key intersections within the study area during the A.M. and P.M. commute periods, when peak traffic volumes typically occur. A level of service (LOS) ranking scale is used to identify the operating condition at intersections. This scale compares traffic volumes to intersection capacity and assigns a letter value to this relationship. The letter scale ranges from A to F with LOS A representing free flow conditions and LOS F representing congested conditions.

The previous General Plan established LOS "D" as the minimum acceptable LOS standard on city roadways. Although Caltrans has not designated a LOS standard, Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) indicates that when the LOS of a State highway facility falls below the LOS "C/D" cusp in rural areas and the LOS "D/E" cusp in urban areas, additional traffic may have a significant impact. The level of service criteria is summarized in Table 5. All study area intersections are located within the City of Visalia except for Avenue 320 which is shown for reference only due to the City's future planned growth.

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday A.M or P.M. peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 5 summarizes the LOS criteria for signalized intersections, as described in the Highway Capacity Manual 2010 (Transportation Research Board, 2010).

Unsignalized intersection LOS criteria can be further reduced into three intersection types: all-way stop, two-way stop, and roundabout control. All-way stop and roundabout control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 5 shows LOS criteria for unsignalized intersections.

Based on the language contained on the *City of Visalia General Plan*, a significant traffic impact will be noted if the project will decrease the LOS below a level of D at an existing intersection. Where an intersection is already operating below a LOS of D for the no project scenario, a significant impact will be noted if the project adds a vehicle delay of five seconds or more.

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Table 5 – Intersection Level of Service Criteria

LOS	Signalized Intersections (V/C Ratio)	Signalized Intersections (Sec. of Delay)	Unsignalized Intersections (Sec. of Delay)	Definition
A	<0.60	≤10	≤10	Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.
B	0.61 – 0.70	> 10 and < 20	> 10 and < 15	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	0.71- 0.80	> 20 and < 35	> 15 and < 25	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	0.81 – 0.90	> 35 and < 55	> 25 and < 35	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	0.91 – 1.00	> 55 and < 80	> 35 and < 50	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.
F	> 1.00	> 80	> 50	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal.

Source: *Highway Capacity Manual, 2010 Edition.*

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4.9 Level of Service (LOS) for Existing Intersection Conditions

Signalized & unsignalized intersection levels of service (LOS) were calculated using Synchro 10, which is an industry standard and is recognized for use by the industry. The Synchro software is based on the 2010 Highway Capacity Manual (HCM 2010) methodology, which is also an industry standard. The intersection analysis sheets are included in the Appendix B.

Intersections which have been determined to fall below the acceptable condition are presented in a bold type and shaded in red.

Table 7 – LOS Summary – Existing 2018 Conditions

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	B	13.2	B	13.9
Riverway/ Giddings	One-way stop	A	8.5	A	8.4
Riverway/ Dinuba	One-way stop	B	10.6	B	14.2
Sports Park/ Dinuba	One-way stop	B	12.5	C	17.4
Shannon/ Giddings	Roundabout	A	5.7	A	4.5
Shannon/ Dinuba	Signals	B	16.0	B	17.6
Shannon/ Court	One-way stop	A	8.7	A	8.7
Riggin/ Giddings	Two-way stop	D	32.1	D	32.6
Riggin/ Dinuba	Signals	C	25.2	C	29.9
Riggin/ Court	Two-way stop	B	13.1	C	16.7
Ferguson/ Giddings	Four-way stop	C	18.0	C	17.2
Ferguson/ Dinuba	Signals	C	28.1	C	24.8
Ferguson/ Court	Four-way stop	A	9.4	A	8.5
St. John's/ Burke	Four-way stop	B	12.0	B	10.4

The results of the existing 2018 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – This two-way stop control intersection is operating at a LOS D for both a.m. & p.m. peak hours; however, for the north and southbound approaches the LOS is found to be F & E, respectively. This intersection satisfies Traffic Warrant 1, Traffic Warrant 2, and Traffic Warrant 3 from the CA Manual of Uniform Traffic Control Devices (MUTCD). Refer to Table 41 and Appendix C for the documentation supporting this determination.

The remaining intersections are found to be operating at acceptable LOS.

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Table 8 – LOS Summary – Existing 2020 Conditions

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	B	14.0	C	15.1
Riverway/ Giddings	One-way stop	A	8.6	A	8.5
Riverway/ Dinuba	One-way stop	B	10.9	B	14.9
Sports Park/ Dinuba	One-way stop	B	12.9	C	18.5
Shannon/ Giddings	Roundabout	A	5.8	A	4.6
Shannon/ Dinuba	Signals	B	16.2	B	17.8
Shannon/ Court	One-way stop	A	8.7	A	8.7
Riggin/ Giddings	**Two-way stop**	**E**	**42.6**	**E**	**43.2**
Riggin/ Dinuba	Signals	C	25.9	C	31.2
Riggin/ Court	Two-way stop	B	13.5	C	17.9
Ferguson/ Giddings	Four-way stop	C	19.8	C	19.0
Ferguson/ Dinuba	Signals	C	29.3	C	25.5
Ferguson/ Court	Four-way stop	A	9.7	A	8.3
St. John's/ Burke	Four-way stop	B	12.5	B	10.7

The results of the existing 2020 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – This two-way stop control intersection is operating at a LOS E for both a.m. & p.m. peak hours; however, for the north and southbound approaches the LOS is found to be F & E, respectively. This intersection satisfied the conditions for Traffic Warrants 1, 2, 3 since the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination. The City of Visalia has planned to improve the intersection to a four-way stop beginning January 2019.

The remaining intersections are found to be operating at acceptable LOS.

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Table 9 – LOS Summary – Existing 2022 Conditions

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	B	14.7	C	15.9
Riverway/ Giddings	One-way stop	A	8.7	A	8.5
Riverway/ Dinuba	One-way stop	B	11.2	C	15.9
Sports Park/ Dinuba	One-way stop	B	13.3	C	19.4
Shannon/ Giddings	Roundabout	A	6.0	A	4.7
Shannon/ Dinuba	Signals	B	16.3	B	18.0
Shannon/ Court	One-way stop	A	8.7	A	8.7
Riggin/ Giddings	**Two-way stop**	**F**	**57.7**	**F**	**58.4**
Riggin/ Dinuba	Signals	C	26.4	C	32.5
Riggin/ Court	Two-way stop	B	13.9	C	19.0
Ferguson/ Giddings	Four-way stop	C	22.3	C	21.1
Ferguson/ Dinuba	Signals	C	30.5	C	26.3
Ferguson/ Court	Four-way stop	A	9.9	A	8.7
St. John's/ Burke	Four-way stop	B	12.9	B	10.9

The results of the existing 2022 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – This two-way stop control intersection is operating at a LOS F for both a.m. & p.m. peak hours. This intersection satisfied the conditions for Warrants 1, 2, 3 since the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination.

The remaining intersections are found to be operating at acceptable LOS.

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4.10 Level of Service (LOS) for Existing Roadway Segment Conditions

The level of service on State Route (SR) 63 from Ferguson Avenue to Riverway Drive using the Highway Capacity Manual (HCM) procedures for calculating road segment levels of service (LOS) was not performed because signal-controlled intersections are at or less than 1 mile apart, the capacity of the roadway is generally dominated by the capacity of the adjacent signal-controlled intersection as recommend by the HCM. Therefore, roadway segment level of services for this road segment was determined for each segment as summarized below. Segments which have been determined to fall below the acceptable condition are presented in a bold type and shaded in red.

Road Segment (SR 63 between Ferguson Avenue & Riggin Avenue)

Horizon	Without Project		With Project	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
2018 Existing Conditions	C	C	-	-
2020 Cumulative Conditions	C	C	C	C
2022 Cumulative Conditions	C	C	C	C
2027 5-Year Cumulative Conditions	C	D	D	D
2032 10-Year Cumulative Conditions	D	D	D	D
2042 20-Year Cumulative Conditions	**E**	**D**	**E**	**D**

Road Segment (SR 63 between Riggin Avenue & Riverway Drive)

Horizon	Without Project		With Project	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
2018 Existing Conditions	C	C	-	-
2020 Cumulative Conditions	C	C	C	C
2022 Cumulative Conditions	C	C	C	C
2027 5-Year Cumulative Conditions	C	D	C	D
2032 10-Year Cumulative Conditions	C	D	C	D
2042 20-Year Cumulative Conditions	C	**F**	D	**F**

4.11 Safety Related Deficiencies, Crash Experience

Crash records and safety related deficiencies were obtained by reviewing records from the Statewide Integrated Traffic Records System (SWITRS) and the Transportation Injury Mapping System (TIMS) for the past 36 months. The jurisdiction records that have been reviewed are from the Visalia Police Department (PD) & the Visalia California Highway Patrol (CHP). Table 10 summarizes all found crash records & safety related deficiencies within the past 36 months for the unsignalized intersections listed, from November 2015 through November 2018.

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Table 10 – Crash Records for Past 36 Months/ November 2015 - 2018 (Unsignalized)

Intersections	Crash Report	Collision Type	Correctable with Traffic Signals?
Avenue 320 / Dinuba Blvd	No Crashes Reported	-	-
Riverway Drive/ Giddings Street	No Crashes Reported	-	-
Riverway Drive/ Dinuba Blvd	June 11, 2016	Broadside	Yes
	March 10, 2017	Hit Object	No
	May 13, 2017	Rear End	No
	August 4, 2017	Rear End	No
	November 9. 2017	Hit Object	No
	September 29, 2018	Rear End	No
	October 27, 2018	Rear End	No
Visalia Riverway Sports Park Driveway/ Dinuba Boulevard	September 12, 2018	Rear End	No
	May 19, 2018	Rear End	No
Shannon Parkway/ Giddings Street	No Crashes Reported	-	-
Shannon Parkway/ Court Street	May 9, 2016	Rear End	No
	October 10, 2018	Broadside	Yes
Riggin Avenue / Giddings Street	June 27, 2016	Mid side	No
	February 6, 2017	Broadside	Yes
	June 2, 2017	Broadside	Yes
	September 24, 2017	Broadside	Yes
	October 07, 2017	Broadside	Yes
	December 18, 2017	Hit Object	No
	February 28, 2018	Broadside	Yes
	March 6, 2018	Broadside	Yes
	June 6, 2018	Sideswipe	No
Riggin Avenue/ Court Street	September 22, 2016	Head-on	No
	September 23, 2016	Lost Control	No
	March 10, 2017	Broadside	Yes
	April 21, 2017	Broadside	Yes
	August 5, 2017	Hit Object	No
	December 22, 2017	Rear End	No
	August 25, 2018	Hit Object	No

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	December 5, 2017	Hit Object	No
Ferguson Avenue/ Giddings Street	November 11, 2016	Bicycle/ Broadside	No
	December 24, 2016	Hit Object	No
	February 23, 2017	Broadside	Yes
	October 30, 2017	Broadside	Yes
	April 8, 2018	Sideswipe	No
Ferguson Avenue/ Court Street	May 18, 2017	Broadside	Yes
	May 3, 2018	Rear End	No
	May 23, 2018	Broadside	Yes
	April 16, 2018	Broadside	Yes
St. John's Parkway/ Burke Street	November 3, 2015	Broadside	Yes
	May 4, 2016	Bicycle/ Broadside	No
	June 16, 2016	Bicycle/ Broadside	No
	October 2, 2017	Pedestrian	No
	November 22, 2018	Hit Object	No

4.12 Data Sources

- City of Visalia Public Records
- City of Visalia Police Department Public Records
- Statewide Integrated Traffic Records System (SWITRS)
- Transportation Injury Mapping System (TIMS)

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5.0 PROJECTED TRAFFIC

5.1 Site Traffic Forecasting (each horizon year)

The full buildout of the Visalia Center development project, which will include both phases of the project, is classified as a Category III (Estimated 588 [A.M.] & 601 [P.M.] Peak Hour Trip Ends) as classified by the *Procedures for Traffic Impact Analysis (TIA), City of Visalia, updated October of 2014*.

On one hand, Phase 1 of the project is classified as a Category II (Estimated 376 [A.M.] & 396 [P.M.] Peak Hour Trip Ends), which is set to open on the year of 2020. On the other hand, Phase 2 of the development project is classified as a Category III (Estimated 588 [A.M.] & 601 [P.M.] Peak Hour Trip Ends) because Phase 2 will increase the estimated A.M. and P.M. Peak Hour Trip Ends of Phase 1 by 212 and 205, respectively. The following are the site study horizon conditions:

- ✓ 2018, 2020, & 2022 Existing Conditions
- ✓ Existing with Project (Phases 1, Opening Year) 2020 Conditions;
- ✓ Existing with Project (Phases 1 & 2, Opening Year) 2022 Conditions;
- ✓ 5-Year Cumulative Conditions without Project;
- ✓ 5-Year Cumulative Conditions with Project (Phases 1 and 2);
- ✓ 10-Year Cumulative Conditions without Project;
- ✓ 10-Year Cumulative Conditions with Project (Phases 1 and 2);
- ✓ 20-Year Cumulative Conditions Without Project (Caltrans intersections only); and
- ✓ 20-Year Cumulative Conditions with Project (Caltrans intersections only)

2018, 2020, & 2022 Existing Conditions – The existing 2018 traffic volumes were obtained using manual tallies at each intersection and the existing traffic volume conditions for the 2020 & 2022 years were estimated by increasing the existing 2018 traffic volumes by two percent per year. The growth rate was obtained based on a review of the growth projected by the Tulare County travel model.

Existing with Project (Phase 1) 2020 & Existing with Project (Phases 1 & 2) 2022 Conditions – the turning movement volumes are presented on Exhibit 11 and Exhibit 13, respectively.

5-Year Cumulative Conditions with & without Project (Phases 1 & 2) – the 5-year cumulative traffic volumes without the project were estimated by increasing the existing traffic by two percent per year for five years after the opening year. As previously indicated, the growth rate was obtained based on a review of the growth projected by the Tulare County Association of Governments (TCAG) travel model and was combined with other future projects identified in Section 3.3 Anticipated Future Development that may increase traffic volumes within the next five years. These traffic volume conditions are presented in Appendix E.

10-Year Cumulative Conditions with & without Project (Phases 1 & 2) – the 10-year cumulative traffic volumes without the project were estimated by increasing the existing traffic by two percent per year for ten years after the opening year. As previously indicated, the growth rate was obtained based on a review of the growth projected by the TCAG travel model and was

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combined with other future projects that may increase traffic volumes within the next ten years. These traffic volume conditions are presented in Appendix E.

20-Year Cumulative Conditions with & without Project (Caltrans intersections only) – the cumulative turning movement conditions are presented on Appendix E. The Tulare County Association of Governments (TCAG) provided a travel model which is typically used to forecast future traffic volumes. The travel demand model is used for transportation project development, transportation planning and land use planning. The model is adapted to represent the project/development characteristics and report on the areas affected by the project. An increment method was then utilized to forecast traffic volumes for future conditions. The TCAG travel model data is included in Appendix E.

Forecast of future turning movements were based on the methods found in the Transportation Research Board, National Cooperative Highway Research Program (NCHRP), which addresses issues integral to the state Departments of Transportation (DOTs) and transportation professionals at all levels of government and the private sector. The NCHRP provides practical, ready-to-implement solutions to pressing problems facing the industry. The NCHRP is administered by the Transportation Research Board (TRB) and sponsored by the member departments (i.e., individual state departments of transportation) of the American Association of State Highway and Transportation Officials (AASHTO), in cooperation with the Federal Highway Administration (FHWA).

5.2 Land Use Type & Site Characteristics

The proposed Visalia Center development project is located northeast of the intersection of Dinuba Boulevard (State Route 63) and Shannon Parkway in Visalia, California. Phase 1 of the Project consists of a 16 fueling positions gas station with a 3,000 square-foot convenience market and a 810 - 3,000 square-foot Fast Food Restaurant/ Coffee Shop with a Drive-through. Access for Phase 1 will be via one driveway connecting to Dinuba Avenue and one driveway connecting to Shannon Parkway.

Phase 2 of the Project includes a 4,700 square-foot retail store, a 1 tunnel automated car wash, two separate 7,000 square-feet 2-story medical buildings, and a separate 3,300 square-feet 2-story medical building. Phase 2 will share access with Phase 1 and will also include a second driveway connecting to Shannon Parkway

5.3 Trip Generation

Trip generation estimates developed for this study are based on the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). The Manual is the most widely used industry resource for this type of data. The trip generation data are organized by land use types, with more than 170 different categories of land uses. For each category the Manual provides a data set for use in estimating the number of vehicle and person trips generated by a site based on its characteristics such as physical size or intensity.

Trips may be estimated by direction (entering or exiting the site) and for time periods typically pertaining to a full day (weekday or weekend), peak hours of the adjacent roadway, and peak

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hours of the particular land use. Used properly, the Trip Generation Manual provides an objective basis for estimating trips generated by a proposed development.

The proposed development utilized the following land use codes from the *ITE Trip Generation Manual* and estimated the Trip Ends as follows:

Table 11 – Project Trip Generation Estimates

ITE Land Use	Independent variable	Weekday, A.M. P.H. of Generator			Weekday, P.M. P.H. of Generator			Weekday Traffic Volume	
		D.D.	Entry	Exit	D.D.	Entry	Exit	Rate	Total
945 – Gasoline/ Service Station with Convenience Market	16 Vehicle Fueling Positions	50/50	112	111	50/50	127	127	205.36	3,286
934 – Fast Food Restaurant/ Coffee Shop with Drive-through	810 - 3,000 S.F.	52/48	80	73	51/49	72	70	470.95	1,413
814 – Retail Store	4,700 S.F.	50/50	10	11	50/50	17	18	63.47	298
948 – Automated Car Wash	1 Tunnel	50/50	21	20	50/50	23	22	77.5	78
630 – 2 Story Medical Building	14,000 S.F.	58/42	38	27	46/54	23	27	38.16	534
630 – 2 Story Medical Building	6,600 S.F.	58/42	12	8	46/54	11	14	30.18	252
630 – 2 Story Medical Building	14,000 S.F.	58/42	38	27	46/54	23	27	38.16	534

Reference: ITETripGen Web-based App, Trip Generation Manual, 10th Edition; Table values contain rounding. Phase 1 is shown as shaded gray for clarification.
P.H. – Peak Hour
D.D. – Directional Distribution

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Phase 1 – Category II (Estimated 376 [A.M.] & 396 [P.M.] Peak Hour Trip Ends)

- 16 Fueling Positions Gas Station, Convenience Market (Land Use Code 945) - This land use includes gasoline/service stations with convenience markets where the primary business is the fueling of motor vehicles. These service stations may also have ancillary facilities for servicing and repairing motor vehicles and may have a car wash. Some commonly sold convenience items are newspapers, coffee or other beverages, and snack items that are usually consumed in the car.

    - Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 223 Trip Ends
    - Weekday, PM Peak Hour of Generator, one hour between 4:00 P.M. & 6:00 P.M.– 254 Trip Ends (Governs)

- 810 - 3,000 SF, Fast Food (Land Use Code 934) - This category includes fast-food restaurants/ coffee shops with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat.

    - Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 153 Trip Ends (Governs)
    - Weekday, PM Peak Hour of Generator, one hour between 4:00 P.M. & 6:00 P.M.– 142 Trip Ends

Phase 2 – This phase alone is classified as Category II (Estimated 212 [A.M.] & 205 [P.M.] Peak Hour Trip Ends), but once combined with Phase I, this Phase becomes a Category III considering the total traffic trips.

- 4,700 SF, Retail Multi-Use (Land Use Code 814) - A variety store is a retail store that sells a broad range of inexpensive items often at a single price. These stores are typically referred to as “dollar stores.” Items sold at these stores typically include kitchen supplies, cleaning products, home office supplies, food products, household goods, decorations, and toys. These stores are sometimes stand-alone sites, but they may also be located in small strip shopping centers. Free-standing discount store (Land Use 815) is a related use.

    - Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 21 Trip Ends

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  - Weekday, PM Peak Hour of Generator, one hour between 4:00 P.M. & 6:00 P.M.– 35 Trip Ends (Governs)

- 1-Tunnel Automated Car Wash (Land Use Code 948) - This category refers to a facility that allows for the mechanical cleaning of the exterior of vehicles. Manual cleaning services may also be available at these facilities. A Self-service car wash (Land Use 947) and car wash and detail center (Land Use 949) are related uses.

  - Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 41 Trip Ends
  - Weekday, PM Peak Hour of Generator, one hour between 4:00 P.M. & 6:00 P.M.– 45 Trip Ends (Governs)

- 7,000 SF, 2-Story Medical Building (Land Use Code 630) – This category refers to a medical clinic. A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office, which may only have specialized or individual physicians). Hospital (Land Use 610), free-standing emergency room (Land Use 650), and medical-dental office building (Land Use 720) are related uses.

  - Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 65 Trip Ends (Governs)
  - Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4:00 P.M. & 6:00 P.M.– 50 Trip Ends

- 3,300 SF, 2-Story Medical Building (Land Use Code 630) – This category refers to a medical clinic. A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office, which may only have specialized or individual physicians). Hospital (Land Use 610), free-standing emergency room (Land Use 650), and medical-dental office building (Land Use 720) are related uses.

  - Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 20 Trip Ends
  - Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4:00 P.M. & 6:00 P.M.– 25 Trip Ends (Governs)

- 7,000 SF, 2-Story Medical Building (Land Use Code 630) – This category refers to a medical clinic. A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office, which may only have specialized or individual physicians). Hospital

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(Land Use 610), free-standing emergency room (Land Use 650), and medical-dental office building (Land Use 720) are related uses.

- Weekday, AM Peak Hour of Generator, one hour between 7:00 A.M. & 9:00 A.M.– 65 Trip Ends (Governs)
- Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4:00 P.M. & 6:00 P.M.– 50 Trip Ends

5.4 Trip Distribution

Considering the available routes and roadway classifications, engineering judgement & an analogy method was used for the distribution of the project trips. The determined trip distribution was provided to the City of Visalia staff and Caltrans for review. The adjacent road networks received the peak-hour project traffic volumes as shown in Exhibit 5 - Phase 1 AM Trip Distribution and Assignment, Exhibit 6 - Phase 1 PM Trip Distribution and Assignment, Exhibit 7 - Phase 1 and 2 AM Trip Distribution and Assignment, and Exhibit 8 – Phase 1 and 2 PM Trip Distribution and Assignment.

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6.0 TRAFFIC AND IMPROVEMENTS ANALYSIS

6.1 Level of Service Analysis

Signalized & unsignalized intersection levels of service (LOS) were calculated using Synchro 10, which is an industry standard. The Synchro software is based on the 2010 Highway Capacity Manual (HCM 2010) methodology, which is also an industry standard. The intersection analysis sheets are included in the Appendix B. Intersections which have been determined to fall below the acceptable condition are presented in a bold type and shaded in red.

Table 12 – LOS Summary – Existing 2020 Conditions with Phase 1

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	C	15.4	C	17.1
Riverway/ Giddings	One-way stop	A	8.7	A	8.6
Riverway/ Dinuba	One-way stop	B	11.4	C	16.1
Sports Park/ Dinuba	One-way stop	B	13.4	C	19.6
Shannon/ Giddings	Roundabout	A	6.7	A	5.4
Shannon/ Dinuba	Signals	B	19.4	C	20.7
Shannon/ Court	One-way stop	A	8.8	A	8.8
Riggin/ Giddings	**Two-way stop**	**F**	**151.4**	**F**	**163.5**
Riggin/ Dinuba	Signals	C	26.4	C	31.8
Riggin/ Court	Two-way stop	B	14.6	C	21.0
Ferguson/ Giddings	Four-way stop	C	22.3	C	20.9
Ferguson/ Dinuba	Signals	C	30.1	C	26.0
Ferguson/ Court	Four-way stop	A	9.8	A	8.8
St. John's/ Burke	Four-way stop	B	13.3	B	11.1

The results of the existing 2020 conditions with Phase 1 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – This two-way stop control intersection is operating at a LOS F for both a.m. & p.m. peak hours for the north and southbound approaches. Most of the delays are experienced by the vehicles which are attempting to proceed through or make a left turn movement from the north and southbound approaches. This intersection satisfied the conditions for Traffic Warrants 1, 2, 3 at the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination.

The remaining intersections are found to be operating at acceptable LOS.

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Table 13 – LOS Summary – Existing 2022 Conditions with Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	C	17.4	C	20.2
Riverway/ Giddings	One-way stop	A	8.8	A	8.7
Riverway/ Dinuba	One-way stop	B	12.1	C	18.0
Sports Park/ Dinuba	One-way stop	B	14.2	C	21.4
Shannon/ Giddings	Roundabout	A	7.4	A	6.0
Shannon/ Dinuba	Signals	C	20.8	C	22.0
Shannon/ Court	One-way stop	A	8.9	A	8.9
Riggin/ Giddings	**Two-way stop**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	27.3	C	33.4
Riggin/ Court	Two-way stop	C	15.9	D	26.3
Ferguson/ Giddings	Four-way stop	D	27.1	D	25.2
Ferguson/ Dinuba	Signals	C	31.9	C	27.3
Ferguson/ Court	Two-way stop	B	10.2	A	9.0
St. John's/ Burke	Four-way stop	B	14.3	B	11.8

The results of the existing 2022 conditions with Phases 1 & 2 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – There is no significant change in expected LOS from the "Existing 2020 with Phase 1" condition for this intersection. This two-way stop control intersection is operating at a LOS F for both a.m. & p.m. peak hours for the north and southbound approaches. Most of the delays are experienced by the vehicles which are attempting to proceed through or make a left turn movement from the north and southbound approaches. This intersection satisfied the conditions for Traffic Warrants 1, 2, 3 at the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination.

The remaining intersections are found to be operating at acceptable LOS.

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Table 14 – LOS Summary – 2027 5-Year Horizon Cumulative Conditions without Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	C	16.8	C	18.5
Riverway/ Giddings	One-way stop	A	8.7	A	8.6
Riverway/ Dinuba	One-way stop	B	12.1	C	19.5
Sports Park/ Dinuba	One-way stop	B	14.2	C	22.6
Shannon/ Giddings	Roundabout	A	6.3	A	4.8
Shannon/ Dinuba	Signals	B	16.7	B	18.5
Shannon/ Court	One-way stop	A	8.5	A	8.5
Riggin/ Giddings	**Two-way stop**	**F**	**144.4**	**F**	**121.3**
Riggin/ Dinuba	Signals	C	28.1	D	35.9
Riggin/ Court	Two-way stop	C	15.1	C	22.9
Ferguson/ Giddings	Four-way stop	D	30.7	D	30.3
Ferguson/ Dinuba	Signals	C	34.1	C	28.5
Ferguson/ Court	Four-way stop	B	10.5	A	9.0
St. John's/ Burke	Four-way stop	B	14.3	B	11.5

The results of the existing 2027 5-year horizon cumulative conditions without Phase 1 & 2 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – There is no significant change in expected LOS from the "Existing 2022 with Phase 1 & 2" condition for this intersection. This two-way stop control intersection is operating at a LOS F for both a.m. & p.m. peak hours for the north and southbound approaches. Most of the delays are experienced by the vehicles which are attempting to proceed through or make a left turn movement from the north and southbound approaches. This intersection satisfied the conditions for Traffic Warrants 1, 2, 3 at the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination.

The remaining intersections are found to be operating at acceptable LOS.

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Table 15 – LOS Summary – 2027 5-Year Horizon Cumulative Conditions with Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	C	21.4	D	25.3
Riverway/ Giddings	One-way stop	A	8.9	A	8.7
Riverway/ Dinuba	One-way stop	B	13.3	C	22.9
Sports Park/ Dinuba	One-way stop	C	15.3	D	25.2
Shannon/ Giddings	Roundabout	A	7.8	A	6.1
Shannon/ Dinuba	Signals	C	21.3	C	22.6
Shannon/ Court	One-way stop	A	9.0	A	9.0
Riggin/ Giddings	**Two-way stop**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	29.1	D	36.8
Riggin/ Court	**Two-way stop**	C	17.5	**E**	**37.7**
Ferguson/ Giddings	**Four-way stop**	**E**	**41.5**	**E**	**37.7**
Ferguson/ Dinuba	Signals	D	36.2	C	29.7
Ferguson/ Court	Four-way stop	B	10.8	A	9.2
St. John's/ Burke	Four-way stop	C	16.4	B	12.6

The results of the existing 2027 5-year horizon cumulative conditions with Phase 1 & 2 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – This two-way stop control intersection is operating at a LOS F for both a.m. & p.m. peak hours for the north and southbound approaches. This intersection satisfied the conditions for Traffic Warrants 1, 2, 3 at the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project scenario.

Riggin/ Court – This two-way stop control intersection is expected to operate at an LOS C & E for the a.m. & p.m. peak hours respectively. The majority of the delays occur for the north and southbound approaches. This intersection has been identified as a significant impact.

Ferguson/ Giddings – This four-way stop control intersection is expected to operate at an overall LOS E for the a.m. & p.m. peak hours. The majority of the delays occur for the east & westbound approaches. This intersection has been identified as a significant impact.

The remaining intersections are found to be operating at acceptable LOS.

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Table 16 – LOS Summary – 2032 10-Year Horizon Cumulative Conditions without Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	C	20.5	C	22.6
Riverway/ Giddings	One-way stop	A	8.9	A	8.6
Riverway/ Dinuba	One-way stop	B	13.5	D	25.1
Sports Park/ Dinuba	One-way stop	C	15.3	D	26.5
Shannon/ Giddings	Roundabout	A	6.6	A	5.0
Shannon/ Dinuba	Signals	B	17.0	B	19.0
Shannon/ Court	One-way stop	A	8.7	A	8.8
Riggin/ Giddings	**Two-way stop**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	30.0	D	39.4
Riggin/ Court	Two-way stop	C	16.5	D	29.3
Ferguson/ Giddings	**Four-way stop**	**F**	**50.2**	**E**	**43.4**
Ferguson/ Dinuba	Signals	D	39.2	C	31.1
Ferguson/ Court	Four-way stop	B	11.2	A	9.3
St. John's/ Burke	Four-way stop	C	16.4	B	12.4

The results of the existing 2032 10-year horizon cumulative conditions without Phase 1 & 2 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Riggin/ Giddings – This two-way stop control intersection is expected to operate at an overall LOS F for both the a.m. & p.m. peak hours. The majority of the delays occur for the north and southbound approaches.

Ferguson/ Giddings – This four-way stop control intersection is expected to operate at an overall LOS F & E for the a.m. & p.m. peak hours respectively.

The remaining intersections are found to be operating at acceptable LOS.

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Table 17 – LOS Summary – 2032 10-Year Horizon Cumulative Conditions with Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	**Two-way stop**	D	28.5	**E**	**35.2**
Riverway/ Giddings	One-way stop	A	9.0	A	8.8
Riverway/ Dinuba	One-way stop	B	14.9	D	30.6
Sports Park/ Dinuba	One-way stop	C	16.5	D	30.2
Shannon/ Giddings	Roundabout	A	8.3	A	6.4
Shannon/ Dinuba	Signals	C	21.9	C	23.2
Shannon/ Court	One-way stop	A	9.0	A	9.0
Riggin/ Giddings	**Two-way stop**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	31.1	D	40.5
Riggin/ Court	**Two-way stop**	C	19.7	**F**	**60.6**
Ferguson/ Giddings	**Four-way stop**	**F**	**61.5**	**F**	**52.5**
Ferguson/ Dinuba	Signals	D	43.2	C	32.7
Ferguson/ Court	Four-way stop	B	11.6	A	9.5
St. John's/ Burke	Four-way stop	C	18.9	B	13.5

The results of the existing 2032 10-year horizon cumulative conditions with Phase 1 & 2 Level of Service (LOS) conditions indicate that the following intersections are operating below the City of Visalia target LOS:

Avenue 320/ Dinuba – This two-way stop control intersection is outside of the city's limits; the intersection is expected to operate at an overall LOS D & E for the a.m. & p.m. peak hours respectively. The majority of the delays occur for the eastbound & westbound approaches.

Riggin/ Giddings – This two-way stop control intersection is operating at an overall LOS F for both a.m. & p.m. peak hours. The majority of the delays occur on the north and southbound approaches. This intersection satisfied the conditions for Traffic Warrants 1, 2, 3 at the 2018 Existing Conditions. Refer to Table 41 and Appendix C for the documentation supporting this determination. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project scenario.

Riggin/ Court – This two-way stop control intersection is expected to operate at a LOS C & F for the a.m. and p.m. peak hours respectively for the north and southbound approaches. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project scenario.

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Ferguson/ Giddings – This four-way stop control intersection is expected to operate at an overall LOS F for the a.m. & p.m. peak hours.

The remaining intersections are found to be operating at acceptable LOS.

Table 18 – LOS Summary – 2042 20-Year Horizon Cumulative Conditions without Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	**Two-way stop**	**E**	**37.6**	**E**	**40.8**
Riverway/ Dinuba	**One-way stop**	C	17.8	**F**	**60.7**
Sports Park/ Dinuba	**One-way stop**	C	17.9	**E**	**38.8**
Shannon/ Dinuba	Signals	B	17.8	C	20.0
Riggin/ Dinuba	Signals	C	34.8	D	49.4
Ferguson/ Dinuba	**Signals**	**E**	**62.1**	D	38.3

The 2042 20-year horizon cumulative conditions without Phase 1 & 2 are based on the estimated cumulative traffic volumes without the project. The 20-year horizon analysis is only for Caltrans intersections because the City of Visalia does not require a 20-year analysis for a Category III traffic impact analysis. The results of the analysis indicate that the following intersections are operating below the City of Visalia target LOS:

Avenue 320/ Dinuba – This two-way stop control intersection is outside of the city's limits; the intersection is expected to operate at an overall LOS E for the a.m. & p.m. peak hour. The east & westbound approaches experience the majority of the delays.

Riverway/ Dinuba – This one-way stop control intersection is expected to operate at an overall LOS C & F for the a.m. & p.m. peak hours, respectively. The majority of the delays occur for the eastbound approach, all other approaches are found to be operating at acceptable LOS.

Sports Park/ Dinuba – This one-way stop control intersection is expected to operate at an overall LOS C & E for the p.m. peak hour, respectively. The majority of the delays occur for the eastbound approach, all other approaches are found to be operating at acceptable LOS.

Ferguson/ Dinuba – This signalized intersection is expected to operate at LOS E for the a.m. & LOS D for the p.m. peak hours. The eastbound, westbound, northbound and southbound approaches are expected to operate at a LOS of E, D, C, & F, respectively, for the a.m. peak hour & a LOS of D, D, C, & D, respectively for the p.m. peak hour.

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Table 19 – LOS Summary – 2042 20-Year Horizon Cumulative Conditions with Phase 1 & 2

Intersections	Traffic Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	**Two-way stop**	**F**	**62.5**	**F**	**86.6**
Riverway/ Dinuba	**One-way stop**	C	20.8	**F**	**90.0**
Sports Park/ Dinuba	**One-way stop**	C	19.7	**E**	**45.1**
Shannon/ Dinuba	Signals	C	22.9	C	24.4
Riggin/ Dinuba	Signals	D	36.2	D	51.3
Ferguson/ Dinuba	**Signals**	**E**	**72.8**	D	42.6

The 2042 20-year horizon cumulative conditions with Phase 1 & 2 are based on the estimated cumulative traffic volumes with the project. The 20-year horizon analysis is only for Caltrans intersections because the city of Visalia does not require a 20-year analysis for a Category III traffic impact analysis. The results of the analysis indicate that the following intersections are operating below the City of Visalia target LOS:

Avenue 320/ Dinuba – This two-way stop control intersection is outside of the city's limits; the intersection is expected to operate at an overall LOS F for both the a.m. & p.m. peak hours. The majority of the delays occur for the eastbound & westbound approaches. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project.

Riverway/ Dinuba – This one-way stop control intersection is expected to operate at an overall LOS C & F for the a.m. & p.m. peak hours, respectively. The majority of the delays occur on the eastbound approach, all other approaches are found to be operating at acceptable LOS. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project scenario.

Sports Park/ Dinuba – This one-way stop control intersection is expected to operate at an overall LOS C & E for the a.m. and p.m. peak hour, respectively. The majority of the delays occur for the eastbound approach, all other approaches are found to be operating at acceptable LOS. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project scenario.

Ferguson/ Dinuba – This signalized intersection is expected to operate at an overall LOS E for the a.m. & at an overall LOS D for the p.m. peak hours. The eastbound, westbound, northbound and southbound approaches are expected to operate at a LOS of E, D, C, & F, respectively, for the a.m. peak hour & at a LOS D, D, C, & D, respectively, for the p.m. peak hour. The majority of the delays occur for the southbound approach. This intersection has been identified as a significant impact due to the project adding a vehicle delay of five seconds or more, where an intersection is already operating below a LOS of D for the no project scenario.

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6.2 Queuing Analysis

As outlined in the City of Visalia Procedures, a queuing analysis has been conducted for all turn lanes under stop or signal control within the study area. For purposes of this analysis, a queuing deficiency is identified in the existing condition if the calculated 95th percentile queue length exceeds the existing storage length provided.

A significant queuing impact is determined if the proposed development causes the calculated 95th percentile queue length to exceed the existing or planned storage capacity of the lane. When a lane is already deficient, a significant queuing impact is determined when the proposed development calculated 95th percentile queue length increases by 25 feet, which is the determined storage length for one vehicle on average. The intersection analysis sheets are included in the Appendix B. Lanes which have been determined to fall below the acceptable condition are presented in a bold type and shaded in red and intersections found to contain a significant traffic impact will be shown in bold font and shaded in yellow.

Table Abbreviations

EBL – Eastbound Left
EBT – Eastbound Through
EBR – Eastbound Right
WBL – Westbound Left
WBT – Westbound Through
WBR – Westbound Right
NBL – Northbound Left
NBT – Northbound Through
NBR – Northbound Right
SBL – Southbound Left
SBT – Southbound Through
SBR – Southbound Right
AWSC – All-way Stop Control
SH – Shared with adjacent Lane
NA – Not Applicable
NSC – No Stop Control
¤ - Exceeds 1000 feet or AWSC intersection
+ - Additional Storage via Two-Way Left-Turn Lane
◊ - Storage Does Not Exist
≠ - Not a Storage Lane

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Table 20 – Queues for Existing 2018 Conditions

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	5	--	--	30	--	0	NSC	--	3	NSC	--
	P.M.	--	3	--	--	23	--	3	NSC	--	0	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	3	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
Riverway/ Dinuba	S	25≠	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	15	--	NSC	--	--	--	--	0	--	--	NSC	--
	P.M.	20	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	0	--	3	--	--	--	0	NSC	--	--	NSC	NSC
	P.M.	3	--	5	--	--	--	8	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	0	--	0	--	25	--	--	25	--
	P.M.	0	--	0	0	--	0	--	0	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	22	23	--	12	15	--	23	80	0	31	145	0
	P.M.	23	17	--	42	26	--	36	168	0	37	157	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	3	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	950	SH
	A.M.	5	NSC	--	3	NSC	--	--	103	--	--	90	--
	P.M.	8	NSC	--	5	NSC	--	--	113	--	--	45	--
Riggin/ Dinuba	S	260	¤	305	280	775	300	370/370	890	190	375/375	¤	330
	A.M.	149	133	52	115	112	0	57	110	0	45	150	24
	P.M.	251	122	8	181	156	0	87	266	0	58	146	35
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	10	5	--	5	5	--
	P.M.	5	NSC	--	3	NSC	--	18	20	--	23	10	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	10	68	--	8	103	--	--	75	--	--	78	10
	P.M.	10	55	--	8	148	--	--	48	--	--	33	8
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	200+	¤	SH	100	¤	SH
	A.M.	**104 (150)**	89	70	72	84	--	76	142	--	37	307	--
	P.M.	**139 (150)**	117	55	69	117	--	174	309	--	54	296	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	18	--	--	28	--	--	20	--	--	25	--
	P.M.	--	15	--	--	5	--	--	23	--	--	15	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	98	--	15	60	--	--	35	--	--	8	--
	P.M.	3	58	--	5	50	--	--	25	--	--	3	--

(##) Numbers shown in parenthesis are the recommended storage lengths to be provided.

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Table 21 – Queues for Existing 2020 Conditions

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	5	--	--	38	--	0	NSC	--	3	NSC	--
	P.M.	--	5	--	--	28	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
Riverway/ Dinuba	S	25≠	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	15	--	NSC	--	--	--	--	0	--	--	NSC	--
	P.M.	25	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	0	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	3	--	5	--	--	--	8	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	0	--	0	--	25	--	--	25	--
	P.M.	0	--	0	0	--	0	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	23	24	--	15	16	--	24	83	0	33	151	0
	P.M.	25	18	--	44	27	--	38	177	0	38	165	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	3	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	950	SH
	A.M.	5	NSC	--	3	NSC	--	--	133	--	--	115	--
	P.M.	8	NSC	--	5	NSC	--	--	145	--	--	60	--
Riggin/ Dinuba	S	**260**	¤	305	280	775	300	370/370	890	190	375/375	¤	330
	A.M.	**158 (300)**	140	53	122	117	0	59	116	0	47	157	27
	P.M.	**268 (300)**	126	11	198	163	0	90	283	0	60	153	40
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	10	5	--	5	5	--
	P.M.	5	NSC	--	3	NSC	--	20	23	--	28	13	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	13	78	--	8	120	--	--	88	--	--	88	10
	P.M.	10	60	--	8	170	--	--	53	--	--	38	10
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	200+	¤	SH	100	¤	SH
	A.M.	**109 (150)**	93	72	76	89	--	79	151	--	38	328	--
	P.M.	**145 (150)**	123	56	72	123	--	181	332	--	57	318	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	18	--	--	30	--	--	23	--	--	28	--
	P.M.	--	15	--	--	5	--	--	23	--	--	15	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	108	--	15	68	--	--	40	--	--	10	--
	P.M.	3	65	--	5	55	--	--	25	--	--	5	--

(##) Numbers shown in parenthesis are the recommended storage lengths to be provided.

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Table 22 – Queues for Existing 2020 Conditions with Phase 1

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	8	--	--	50	--	0	NSC	--	3	NSC	--
	P.M.	--	5	--	--	40	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**18 (50)**	--	NSC	--	--	--	--	0	--	--	NSC	--
	P.M.	**28 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	0	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	3	--	5	--	--	--	8	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	25	--	25	--	25	--	--	25	--
	P.M.	0	--	0	25	--	25	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	25	54	--	65	48	--	26	99	8	63	172	0
	P.M.	28	56	--	98	62	--	43	217	11	75	192	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	8	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	8	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	950	SH
	A.M.	8	NSC	--	3	NSC	--	--	310	--	--	265	--
	P.M.	10	NSC	--	5	NSC	--	--	320	--	--	213	--
Riggin/ Dinuba	S	**260**	¤	305	**280**	775	300	370/370	890	190	375/375	¤	330
	A.M.	**162 (300)**	143	54	125	120	0	60	135	0	49	178	26
	P.M.	**268 (300)**	126	11	198	163	0	90	307	0	60	175	40
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	13	10	--	15	8	--
	P.M.	5	NSC	--	3	NSC	--	20	30	--	58	18	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	15	85	--	8	133	--	--	110	--	--	110	13
	P.M.	13	65	--	8	188	--	--	65	--	--	45	13
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	200+	¤	SH	100	¤	SH
	A.M.	**118 (200)**	93	71	77	90	--	80	167	--	39	**358 (400)**	--
	P.M.	**157 (200)**	123	55	72	124	--	182	358	--	58	**353 (400)**	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	20	--	--	30	--	--	23	--	--	30	--
	P.M.	--	15	--	--	8	--	--	25	--	--	18	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	120	--	15	75	--	--	48	--	--	10	--
	P.M.	3	73	--	5	58	--	--	33	--	--	5	--

(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

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Table 23 – Queues for Existing 2022 Conditions

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	8	--	--	43	--	0	NSC	--	3	NSC	--
	P.M.	--	5	--	--	30	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**18 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**28 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	0	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	3	--	8	--	--	--	8	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	0	--	0	--	25	--	--	25	--
	P.M.	0	--	0	0	--	0	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	23	25	--	15	16	--	24	86	0	34	157	0
	P.M.	25	19	--	46	28	--	40	185	0	40	172	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	950	SH
	A.M.	5	NSC	--	3	NSC	--	--	168	--	--	138	--
	P.M.	8	NSC	--	8	NSC	--	--	180	--	--	63	--
Riggin/ Dinuba	S	**260**	¤	305	280	775	300	370/370	890	190	375/375	¤	330
	A.M.	**166 (300)**	146	54	128	123	0	62	122	0	50	165	29
	P.M.	**285 (300)**	132	14	213	170	0	93	298	0	62	161	42
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	13	5	--	5	5	--
	P.M.	5	NSC	--	3	NSC	--	23	25	--	30	13	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	13	90	--	8	140	--	--	100	--	--	103	13
	P.M.	10	68	--	8	198	--	--	58	--	--	40	10
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	200+	¤	SH	100	¤	SH
	A.M.	**112 (200)**	95	73	79	93	--	82	160	--	40	351	--
	P.M.	**151 (200)**	128	56	75	129	--	190	357	--	59	340	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	20	--	--	33	--	--	23	--	--	30	--
	P.M.	--	15	--	--	8	--	--	25	--	--	18	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	115	--	15	70	--	--	43	--	--	10	--
	P.M.	3	68	--	5	58	--	--	28	--	--	5	--

(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

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Table 24 – Queues for Existing 2022 Conditions with Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	8	--	--	65	--	0	NSC	--	3	NSC	--
	P.M.	--	5	--	--	58	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	8	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**20 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**33 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	0	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	3	--	8	--	--	--	8	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	25	--	25	--	25	--	--	25	--
	P.M.	25	--	25	25	--	25	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	27	79	--	94	70	--	28	114	25	83	195	0
	P.M.	29	83	--	128	81	--	47	252	29	95	219	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	10	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	10	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	**950**	SH
	A.M.	10	NSC	--	3	NSC	--	--	##	--	--	##	--
	P.M.	13	NSC	--	8	NSC	--	--	##	--	--	##	--
Riggin/ Dinuba	S	**260**	¤	305	280	775	300	370/370	890	190	375/375	¤	330
	A.M.	**179 (300)**	153	55	135	129	0	64	152	0	52	198	28
	P.M.	**285 (300)**	132	14	213	170	10	93	338	0	62	195	42
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	13	13	--	25	10	--
	P.M.	5	NSC	--	3	NSC	--	25	38	--	95	23	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	18	100	--	8	160	--	--	140	--	--	143	15
	P.M.	15	78	--	8	230	--	--	83	--	--	58	15
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	200+	¤	SH	100	¤	SH
	A.M.	**128 (200)**	95	72	80	94	--	83	185	--	40	432	--
	P.M.	**169 (200)**	129	56	77	131	--	193	398	--	60	422	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	20	--	--	33	--	--	28	--	--	33	--
	P.M.	--	18	--	--	8	--	--	28	--	--	20	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	143	--	18	83	--	--	58	--	--	10	--
	P.M.	3	83	--	5	65	--	--	38	--	--	5	--

##: Queue length significantly exceeds storage capacity, as expected for stop-sign-controlled intersections operating at LOS E and F.
(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

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Table 25 – Queues for 2027 5-Year Horizon Cumulative Conditions without Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	8	--	--	58	--	0	NSC	--	3	NSC	--
	P.M.	--	5	--	--	43	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**23 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**40 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	0	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	3	--	8	--	--	--	10	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	0	--	0	--	25	--	--	25	--
	P.M.	0	--	0	0	--	0	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	26	27	--	15	18	--	27	93	0	37	173	0
	P.M.	28	21	--	49	30	--	43	207	0	44	192	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	950	SH
	A.M.	8	NSC	--	3	NSC	--	--	285	--	--	208	--
	P.M.	10	NSC	--	8	NSC	--	--	268	--	--	115	--
Riggin/ Dinuba	S	**260**	¤	305	280	775	300	370/370	890	190	375/375	¤	330
	A.M.	**213 (400)**	166	57	145	138	0	70	136	0	56	186	36
	P.M.	**326 (400)**	143	19	248	185	1	102	340	0	68	181	45
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	15	8	--	8	5	--
	P.M.	3	NSC	--	3	NSC	--	30	33	--	45	18	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	15	125	--	10	203	--	--	140	--	--	143	15
	P.M.	13	90	--	8	290	--	--	75	--	--	50	13
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	**200+**	¤	SH	100	¤	SH
	A.M.	**124 (200)**	104	77	86	103	--	**90 (250)**	181	--	43	441	--
	P.M.	**166 (200)**	141	59	81	143	--	**211 (250)**	412	--	65	423	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	23	--	--	38	--	--	28	--	--	35	--
	P.M.	--	18	--	--	8	--	--	28	--	--	18	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	145	--	18	88	--	--	50	--	--	10	--
	P.M.	3	80	--	5	68	--	--	33	--	--	5	--

##: Queue length significantly exceeds storage capacity, as expected for stop-sign-controlled intersections operating at LOS E and F.
(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

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Table 26 – Queues for 2027 5-Year Horizon Cumulative Conditions with Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	8	--	--	93	--	0	NSC	--	3	NSC	--
	P.M.	--	5	--	--	80	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	8	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	8	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**28 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**48 (50)**	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	3	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	5	--	8	--	--	--	10	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	25	--	25	--	50	--	--	50	--
	P.M.	25	--	25	25	--	25	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	30	81	--	96	72	--	31	125	25	87	217	0
	P.M.	33	85	--	132	83	--	51	284	30	99	246	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	10	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	10	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	**¤**	SH	SH	**950**	SH
	A.M.	10	NSC	--	3	NSC	--	--	**##**	--	--	**##**	--
	P.M.	15	NSC	--	8	NSC	--	--	**##**	--	--	**##**	--
Riggin/ Dinuba	S	**260**	¤	305	280	775	300	370/370	**890**	190	375/375	¤	330
	A.M.	**224 (400)**	172	58	151	144	0	72	167	0	58	221	35
	P.M.	**328 (400)**	143	19	248	185	1	102	385	0	68	218	45
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	**125**	¤	SH
	A.M.	3	NSC	--	3	NSC	--	18	15	--	**30 (150)**	13	--
	P.M.	5	NSC	--	3	NSC	--	35	50	--	**140 (150)**	30	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	23	145	--	10	238	--	--	205	--	--	205	20
	P.M.	18	100	--	10	340	--	--	105	--	--	70	18
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	**200+**	¤	SH	100	¤	SH
	A.M.	**139 (200)**	105	76	87	104	--	**91 (250)**	210	--	43	516	--
	P.M.	**187 (200)**	141	58	83	146	--	**214 (250)**	462	--	66	514	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	25	--	--	40	--	--	30	--	--	40	--
	P.M.	--	18	--	--	8	--	--	33	--	--	23	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	185	--	20	103	--	--	70	--	--	13	--
	P.M.	3	98	--	5	78	--	--	45	--	--	5	--

##: Queue length significantly exceeds storage capacity, as expected for stop-sign-controlled intersections operating at LOS E and F.
(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

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Table 27 – Queues for 2032 10-Year Horizon Cumulative Conditions without Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	10	--	--	80	--	3	NSC	--	5	NSC	--
	P.M.	--	5	--	--	60	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	5	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**30 (75)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**58 (75)**	--	NSC	--	--	--	--	3	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	3	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	5	--	8	--	--	--	10	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	0	--	0	--	25	--	--	25	--
	P.M.	0	--	0	0	--	0	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	28	29	--	18	20	--	30	101	0	39	190	0
	P.M.	29	22	--	52	32	--	45	231	0	46	213	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	5	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	950	SH
	A.M.	8	NSC	--	3	NSC	--	--	##	--	--	323	--
	P.M.	10	NSC	--	8	NSC	--	--	373	--	--	233	--
Riggin/ Dinuba	S	**260**	¤	305	**280**	775	300	370/370	890	190	375/375	¤	330
	A.M.	**252 (400)**	185	60	**164 (300)**	154	0	77	150	0	62	207	43
	P.M.	**367 (400)**	155	25	**284 (300)**	202	6	110	387	0	74	203	47
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	125	¤	SH
	A.M.	3	NSC	--	3	NSC	--	20	10	--	10	8	--
	P.M.	5	NSC	--	5	NSC	--	43	43	--	65	20	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	20	180	--	10	303	--	--	210	--	--	208	18
	P.M.	13	110	--	10	398	--	--	90	--	--	58	13
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	**200+**	¤	SH	100	¤	SH
	A.M.	**134 (200)**	113	80	93	113	--	**98 (250)**	204	--	46	528	--
	P.M.	**183 (200)**	153	61	88	157	--	**234 (250)**	476	--	70	510	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	28	--	--	45	--	--	33	--	--	40	--
	P.M.	--	20	--	--	8	--	--	33	--	--	20	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	188	--	23	110	--	--	63	--	--	13	--
	P.M.	5	95	--	5	83	--	--	38	--	--	5	--

##: Queue length significantly exceeds storage capacity, as expected for stop-sign-controlled intersections operating at LOS E and F.
(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

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Table 28 – Queues for 2032 10-Year Horizon Cumulative Conditions with Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	10	--	--	128	--	3	NSC	--	5	NSC	--
	P.M.	--	8	--	--	113	--	3	NSC	--	3	NSC	--
Riverway/ Giddings	S	NA	¤	SH	SH	¤	NA	¤	NA	SH	NA	NA	NA
	A.M.	--	NSC	--	--	3	--	8	--	--	--	--	--
	P.M.	--	NSC	--	--	3	--	8	--	--	--	--	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**35 (100)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**70 (100)**	--	NSC	--	--	--	--	5	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	3	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	5	--	10	--	--	--	13	NSC	--	--	NSC	NSC
Shannon/ Giddings	S	235	SH	¤	¤	SH	¤	SH	950	SH	SH	¤	SH
	A.M.	25	--	25	25	--	25	--	50	--	--	50	--
	P.M.	25	--	25	25	--	25	--	25	--	--	0	--
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	31	80	--	97	73	--	34	137	26	88	241	0
	P.M.	33	87	--	135	84	--	54	316	32	101	274	0
Shannon/ Court	S	NA	NA	860	NA	NA	NA	SH	¤	NA	NA	NA	NA
	A.M.	--	--	NSC	--	--	--	--	10	--	--	--	--
	P.M.	--	--	NSC	--	--	--	--	10	--	--	--	--
Riggin/ Giddings	S	155+	¤	SH	155+	¤	SH	SH	¤	SH	SH	**950**	SH
	A.M.	13	NSC	--	3	NSC	--	--	##	--	--	##	--
	P.M.	18	NSC	--	8	NSC	--	--	##	--	--	##	--
Riggin/ Dinuba	S	**260**	¤	305	**280**	775	300	370/370	890	190	375/375	¤	330
	A.M.	**266 (400)**	193	61	**170 (300)**	161	0	80	183	0	64	245	43
	P.M.	**375 (400)**	156	25	**290 (300)**	203	5	111	439	0	75	243	48
Riggin/ Court	S	150	780	SH	185	¤	SH	100	¤	SH	**125**	¤	SH
	A.M.	3	NSC	--	3	NSC	--	23	18	--	**38 (200)**	15	--
	P.M.	5	NSC	--	5	NSC	--	53	68	--	**195 (200)**	38	--
Ferguson/ Giddings	S	50+	¤	SH	50	¤	SH	SH	¤	SH	SH	¤	100
	A.M.	25	185	--	13	333	--	--	260	--	--	260	23
	P.M.	20	123	--	10	450	--	--	125	--	--	80	18
Ferguson/ Dinuba	S	**95**	¤	80	125	¤	SH	**200+**	¤	SH	100	¤	SH
	A.M.	**149 (250)**	113	79	94	115	--	**99 (250)**	234	--	47	606	--
	P.M.	**202 (250)**	152	61	90	159	--	**238 (250)**	533	--	71	600	--
Ferguson/ Court	S	SH	¤	SH	SH	950	SH	SH	600	SH	SH	¤	SH
	A.M.	--	28	--	--	48	--	--	35	--	--	45	--
	P.M.	--	23	--	--	8	--	--	35	--	--	25	--
St. John's/ Burke	S	155	¤	SH	150	¤	SH	SH	975	SH	SH	◊	SH
	A.M.	3	233	--	23	125	--	--	85	--	--	13	--
	P.M.	5	115	--	5	90	--	--	53	--	--	5	--

##: Queue length significantly exceeds storage capacity, as expected for stop-sign-controlled intersections operating at LOS E and F.
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Table 29 – Queues for 2042 20-Year Horizon Cumulative Conditions without Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	15	--	--	158	--	3	NSC	--	5	NSC	--
	P.M.	--	10	--	--	115	--	3	NSC	--	3	NSC	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**55 (150)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**130 (150)**	--	NSC	--	--	--	--	5	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	3	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	10	--	10	--	--	--	15	NSC	--	--	NSC	NSC
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	31	32	--	19	22	--	34	119	0	45	229	0
	P.M.	32	24	--	57	35	--	52	283	0	51	261	0
Riggin/ Dinuba	S	**260**	¤	305	**280**	775	300	370/370	890	190	375/375	¤	330
	A.M.	**350 (500)**	231	65	**238 (400)**	191	0	95	185	0	76	260	47
	P.M.	**469 (500)**	181	38	**367 (400)**	237	14	132	542	4	86	251	52
Ferguson/ Dinuba	S	**95**	¤	**80**	125	¤	SH	**200+**	¤	SH	100	¤	SH
	A.M.	**155 (250)**	130	**86 (100)**	107	134	--	**113 (300)**	256	--	53	709	--
	P.M.	**212 (250)**	175	**87 (100)**	102	181	--	**281 (300)**	680	--	80	671	--

(##) Numbers shown in parenthesis are the recommended storage lengths to be provided

Table 30 – Queues for 2042 20-Year Horizon Cumulative Conditions with Phase 1 & 2

Intersections		Queues & Storage (FT)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Avenue 320/ Dinuba	S	SH	◊	SH	SH	¤	SH	165	¤	SH	465	¤	SH
	A.M.	--	15	--	--	230	--	3	NSC	--	5	NSC	--
	P.M.	--	10	--	--	193	--	3	NSC	--	3	NSC	--
Riverway/ Dinuba	S	**25≠**	NA	¤	NA	NA	NA	SH	600	NA	NA	¤	SH
	A.M.	**68 (170)**	--	NSC	--	--	--	--	3	--	--	NSC	--
	P.M.	**158 (170)**	--	NSC	--	--	--	--	5	--	--	NSC	--
Sports Park/ Dinuba	S	160	NA	160	NA	NA	NA	215	565	NA	NA	600	250
	A.M.	3	--	3	--	--	--	3	NSC	--	--	NSC	NSC
	P.M.	10	--	13	--	--	--	15	NSC	--	--	NSC	NSC
Shannon/ Dinuba	S	300	¤	SH	235	850	SH	180/325	¤	260	305	570	265
	A.M.	35	81	--	99	74	--	38	163	27	94	293	0
	P.M.	38	90	--	141	89	--	61	386	33	106	335	0
Riggin/ Dinuba	S	**260**	¤	305	**280**	775	300	370/370	890	190	375/375	¤	330
	A.M.	**358 (500)**	236	65	**244 (400)**	195	0	97	220	0	77	298	47
	P.M.	**483 (500)**	186	38	**380 (400)**	245	13	136	603	4	88	292	51
Ferguson/ Dinuba	S	**95**	¤	**80**	125	¤	SH	**200+**	¤	SH	100	¤	SH
	A.M.	**173 (250)**	130	**87 (100)**	109	136	--	**114 (480)**	292	--	54	794	--
	P.M.	**232 (250)**	175	**86 (100)**	102	183	--	**284 (480)**	748	--	81	756	--

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After analyzing & identifying the queuing capacity for the intersections, the following recommendations are provided as guidelines to mitigate the impact of the increased traffic volume:

Riverway/Dinuba – The City is planning to construct a cul-de-sac on Riverway Drive approximately 900 feet east of Giddings Street and the portion of Riverway Drive between the new cul-de-sac and SR 63 will be incorporated in the sporks park and used as a right-in/right-out driveway, the recommended storage length shown on the Table 22 through Table 30 serves as an example of the type of storage capacity that would be necessary if Riverway Drive were to remain as it is now. Thus, the left-turn lane storage length issue will be eliminated.

Riggin/Dinuba – It is recommended that the Eastbound and Westbound left-turn lanes be extended to the recommended storage length for the 20-year horizon cumulative conditions, see Table 30. Extending the left-turn lane storage capacity to the recommended length for the 20-year horizon will ensure the 5-year and 10-year horizons will not experience intermediate capacity shortfalls and will prevent having to do work on the intersection multiple times. Enough space exists between this intersection and the preceding eastern and western intersections to accommodate the recommended increased left-turn lane storage length. This would require the replacement of the median island to a median worm to accommodate the increased left-turn lane length. It has been noted that this intersection does not have sufficient right-of-way to fit dual left-turn lanes on the east and west approaches.

Ferguson/Dinuba – It is recommended for the Eastbound/Westbound and Northbound/Southbound left-turn lanes be extended to the recommended storage length for the 20-year horizon cumulative conditions, see Table 30. Extending the left-turn lane storage capacity to the recommended length for the 20-year horizon will ensure the 5-year and 10-year horizons will not experience intermediate capacity shortfalls and will prevent having to do work on the intersection multiple times. Sufficient space exists between this intersection and the preceding intersections to the east, west, north, and south of the intersection in order to accommodate the recommended increased left-turn lane storage length. This would require the restriping of the lane configuration approaching the intersection from all directions.

Riggin/Giddings – The existing roadway geometry of Giddings Street does not allow for the addition of a left-turn storage lane on either the north or south approach. It is recommended that the city convert this two-way stop over to a four-way stop to address queuing for the north and south approaches. The east and west approaches do not require additional left-turn lane storage length.

Riggin/Court – It is recommended for the Northbound/Southbound left-turn lanes be extended to the recommended storage length for the 10-year horizon cumulative conditions, see Table 28. Enough space exists between this intersection and the preceding northern and southern intersections to accommodate the recommended left-turn lane storage length. This would require the restriping of the lane configuration approaching the intersection from the north and south approach.

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6.3 Intersection LOS Comparison & Mitigated Measure Improvements

The roadways and intersections within the study area have been analyzed with and without the proposed development. Based on the language contained on the *City of Visalia General Plan*, a significant traffic impact will be noted if the project will decrease the LOS below a level of D at an existing intersection. Where an intersection is already operating below a LOS of D for the no project scenario, a significant impact will be noted if the project adds a vehicle delay of five seconds or more. Intersections found to contain a significant traffic impact will be shown in bold font and shaded in yellow.

Where a roadway or an intersection is found to operate at a level of service below D, alternatives which mitigate these impacts have been evaluated and included as potential recommendations.

Table 31 - Existing & Existing with Project (Phase 1, Opening Year) 2020 Conditions Comparison

Intersections	Traffic Control	Without Project				With Project			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	B	14.0	C	15.1	C	15.4	C	17.1
Riverway/ Giddings	One-way stop	A	8.6	A	8.5	A	8.7	A	8.6
Riverway/ Dinuba	One-way stop	B	10.9	B	14.9	B	11.4	C	16.1
Sports Park/ Dinuba	One-way stop	B	12.9	C	18.5	B	13.4	C	19.6
Shannon/ Giddings	Roundabout	A	5.8	A	4.6	A	6.7	A	5.4
Shannon/ Dinuba	Signals	B	16.2	B	17.8	B	19.4	C	20.7
Shannon/ Court	One-way stop	A	8.7	A	8.7	A	8.8	A	8.8
Riggin/ Giddings	**Two-way stop**	**E**	**42.6**	**E**	**43.2**	**F**	**151.4**	**F**	**163.5**
Riggin/ Dinuba	Signals	C	25.9	C	31.2	C	26.4	C	31.8
Riggin/ Court	Two-way stop	B	13.5	C	17.9	B	14.6	C	21.0
Ferguson/ Giddings	Four-way stop	C	19.8	C	19.0	C	22.3	C	20.9
Ferguson/ Dinuba	Signals	C	29.3	C	25.5	C	30.1	C	26.0
Ferguson/ Court	Four-way stop	A	9.7	A	8.3	A	9.8	A	8.8
St. John's/ Burke	Four-way stop	B	12.5	B	10.7	B	13.3	B	11.1

Footnote: Intersections found to have been significantly impacted are shaded yellow for clarity

Table 32 presents a summary of the recommended mitigation measure with the corresponding levels of service and delays. Fair share payments may be in the form of payment of City development fees if the mitigation measure is included in the fee program.

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Table 32 – Existing with Project (Phase 1, Opening Year) 2020 Mitigated Conditions

Intersections	Traffic Control Mitigated Measure	Mitigated Condition			
		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Riggin/ Giddings	Signals	C	25.0	C	26.4

Riggin/ Giddings – The intersection is currently operating under a two-way stop control and the current calculated delay without the project is in excess of 40 seconds for the a.m. & p.m. peak hours. This project is expected to add additional traffic to the eastbound, northbound, and southbound approaches. This new traffic will result in an increase of vehicle delay by more than five seconds, which will be considered a significant impact to the intersection.

In order to mitigate the LOS E & F at the intersection for the "without" & "with" project conditions, either traffic signals or a roundabout may be considered. After reviewing the placement of a roundabout for the intersection, a roundabout may not be feasible at this location due to the required right-of-way, which will conflict with existing residential developments on the south approach. Therefore, a traffic signal at this location appears to be the most feasible mitigated solution. The installation of a traffic signal is expected to have the intersection operating at a LOS C or better for the a.m. & p.m. peak hours.

Finally, since the project is expected to add additional vehicle trips into the movements experiencing delays, it is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

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Table 33 - Existing & Existing with Project (Phase 1 & 2, Opening Year) 2022 Conditions Comparison

Intersections	Traffic Control	Without Project				With Project			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	B	14.7	C	15.9	C	17.4	C	20.2
Riverway/ Giddings	One-way stop	A	8.7	A	8.5	A	8.8	A	8.7
Riverway/ Dinuba	One-way stop	B	11.2	C	15.9	B	12.1	C	18.0
Sports Park/ Dinuba	One-way stop	B	13.3	C	19.4	B	14.2	C	21.4
Shannon/ Giddings	Roundabout	A	6.0	A	4.7	A	7.4	A	6.0
Shannon/ Dinuba	Signals	B	16.3	B	18.0	C	20.8	C	22.0
Shannon/ Court	One-way stop	A	8.7	A	8.7	A	8.9	A	8.9
Riggin/ Giddings	**Two-way stop**	**F**	**57.7**	**F**	**58.4**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	26.4	C	32.5	C	27.3	C	33.4
Riggin/ Court	Two-way stop	B	13.9	C	19.0	C	15.9	D	26.3
Ferguson/ Giddings	Four-way stop	C	22.3	C	21.1	D	27.1	D	25.2
Ferguson/ Dinuba	Signals	C	30.5	C	26.3	C	31.9	C	27.3
Ferguson/ Court	Four-way stop	A	9.9	A	8.7	B	10.2	A	9.0
St. John's/ Burke	Four-way stop	B	12.9	B	10.9	B	14.3	B	11.8

Footnote: Intersections found to have been significantly impacted are shaded yellow for clarity.

Table 34 presents a summary of the recommended mitigation measures with the corresponding levels of service and delays. Fair share payments may be in the form of payment of City development fees if the mitigation measure is included in the fee program.

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Table 34 – Existing with Project (Phases 1 & 2, Opening Year) 2022 Mitigated Conditions

Intersections	Traffic Control Mitigated Measure	Mitigated Condition			
		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Riggin/ Giddings	Signals	C	23.3	C	27.9

Riggin/ Giddings – The mitigated measure covered in this section is indistinguishable to the one covered in the "Existing 2020 with & without Phase 1" condition. The intersection is currently operating under a two-way stop control and the calculated delay without the project is in excess of 50 seconds for the a.m. & p.m. peak hours. The project will add traffic in the eastbound, northbound, and southbound directions which will then contribute to additional vehicle delay for drivers on the north and southbound approach. This added vehicle delay is considered a significant impact for the existing intersection.

In order to mitigate the LOS F at the intersection for the "without" & "with" project conditions, either traffic signals or a roundabout may be considered. After reviewing the placement of a roundabout for the intersection, a roundabout may not be feasible at this location due to the required right-of-way, which will conflict with existing residential developments on the south approach. Therefore, a traffic signal at this location appears to be the most feasible mitigated solution. The installation of a traffic signal is expected to have the intersection operating at a LOS C or better for the a.m. & p.m. peak hours.

Finally, since the project is expected to add additional vehicle trips into the movements experiencing delays, it is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

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Table 35 - 2027 5-Year Horizon Cumulative Conditions with & without Phase 1 & 2 Comparison

Intersections	Traffic Control	Without Project				With Project			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Two-way stop	C	16.8	C	18.5	C	21.4	D	25.3
Riverway/ Giddings	One-way stop	A	8.7	A	8.6	A	8.9	A	8.7
Riverway/ Dinuba	One-way stop	B	12.1	C	19.5	B	13.3	C	22.9
Sports Park/ Dinuba	One-way stop	B	14.2	C	22.6	C	15.3	D	25.2
Shannon/ Giddings	Roundabout	A	6.3	A	4.8	A	7.8	A	6.1
Shannon/ Dinuba	Signals	B	16.7	B	18.5	C	21.3	C	22.6
Shannon/ Court	One-way stop	A	8.5	A	8.5	A	9.0	A	9.0
Riggin/ Giddings	**Two-way stop**	**F**	**144.4**	**F**	**121.3**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	28.1	D	35.9	C	29.1	D	36.8
Riggin/ Court	**Two-way stop**	C	15.1	C	22.9	C	17.5	**E**	**37.7**
Ferguson/ Giddings	**Four-way stop**	D	30.7	D	30.3	**E**	**41.5**	**E**	**37.7**
Ferguson/ Dinuba	Signals	C	34.1	C	28.5	D	36.2	C	29.7
Ferguson/ Court	Four-way stop	B	10.5	A	9.0	B	10.8	A	9.2
St. John's/ Burke	Four-way stop	B	14.3	B	11.5	C	16.4	B	12.6

Footnote: Intersections found to have been significantly impacted are shaded yellow for clarity.

Table 36 presents a summary of the recommended mitigation measures with the corresponding levels of service and delays. Fair share payments may be in the form of payment of City development fees if the mitigation measure is included in the fee program.

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Table 36 - 2027 5-Year Horizon Cumulative Conditions with Phase 1 & 2 Mitigated Conditions

Intersections	Traffic Control Mitigated Measure	Mitigated Condition			
		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Riggin/ Giddings	Signals	C	26.8	C	27.8
Riggin/ Court	Signals	B	14.3	C	28.8
Ferguson/ Giddings	Signals	B	19.0	C	29.0

Riggin/ Giddings – The mitigated measures covered in this section are indistinguishable to those covered in the "2022 Existing with project Phase 1 & 2" condition. The intersection is currently operating under a two-way stop control and the calculated delay without the project is in excess of 100 seconds for the a.m. & p.m. peak hours. The project will add traffic in the eastbound, northbound, and southbound directions which will then contribute to additional vehicle delay for drivers on the north and southbound approach. This added delay is considered a significant impact for the existing intersection.

In order to mitigate the LOS F at the intersection for the "without" & "with" project conditions, either traffic signals or a roundabout may be considered. After reviewing the placement of a roundabout for the intersection, a roundabout may not be feasible at this location due to the required right-of-way, which will conflict with existing residential developments on the south approach. Therefore, a traffic signal at this location appears to be the most feasible mitigated solution. The installation of a traffic signal is expected to have the intersection operating at a LOS C or better for the a.m. & p.m. peak hours.

Finally, since the project is expected to add additional vehicle trips into the movements experiencing delays, it is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Riggin/ Court –The intersection is currently operating under a two-way stop control and the calculated LOS without the project is determined to be at a level of C & C for the a.m. & p.m. peak hours, respectively. The intersection is expected to operate at a LOS C & E for the a.m. & p.m. peak hours with the proposed project. In order to mitigate the LOS C & E at the intersection for the "with" project a.m. & p.m. conditions, either traffic signals or a roundabout may be considered. A single lane roundabout would operate at a LOS A during the peak hours, but is a very costly solution, typically in the order of $1 million to $2 million on average per intersection.

Traffic signals appear to be the most feasible solution for the intersection due to the existing configuration which would accommodate signalization with no major roadway modifications. With the installation of traffic signals, the intersection is expected to operate at a LOS B & C for

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the a.m. & p.m. peak hours, respectively. It is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Ferguson/ Giddings – The intersection is currently operating under a four-way stop control and the calculated LOS without the project is D for the a.m. & p.m. peak hours. The intersection is expected to operate at an overall LOS E for both the a.m. & p.m. peak hour with the proposed project. The proposed development is expected to add additional traffic to the eastbound, southbound, and northbound approaches of the intersection. This added delay is considered a significant impact for the existing intersection.

In order to mitigate the LOS E at the intersection for the “with” project a.m. & p.m. conditions, either traffic signals or a roundabout may be considered. After reviewing the placement of a roundabout for the intersection, a roundabout may not be feasible at this location due to the required right-of-way, which will conflict with existing residential developments on the north, south, & east approach. Therefore, a traffic signal at this location appears to be the most feasible mitigated solution. The eastbound, westbound, and southbound approaches appear to have room for designated left turn lanes, while the northbound approach does not appear to accommodate designated left turn lanes. The installation of a traffic signal is expected to have the intersection operating at a LOS B & C or better for the a.m. & p.m. peak hours respectively.

It is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

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Table 37 - 2032 10-Year Horizon Cumulative Conditions with & without Phase 1 & 2 Comparison

Intersections	Traffic Control	Without Project				With Project			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	**Two-way stop**	C	20.5	C	22.6	D	28.5	**E**	**35.2**
Riverway/ Giddings	One-way stop	A	8.9	A	8.6	A	9.0	A	8.8
Riverway/ Dinuba	One-way stop	B	13.5	D	25.1	B	14.9	D	30.6
Sports Park/ Dinuba	One-way stop	C	15.3	D	26.5	C	16.5	D	30.2
Shannon/ Giddings	Roundabout	A	6.6	A	5.0	A	8.3	A	6.4
Shannon/ Dinuba	Signals	B	17.0	B	19.0	C	21.9	C	23.2
Shannon/ Court	One-way stop	A	8.7	A	8.8	A	9.0	A	9.0
Riggin/ Giddings	**Two-way stop**	**F**	**>300**	**F**	**>300**	**F**	**>300**	**F**	**>300**
Riggin/ Dinuba	Signals	C	30.0	D	39.4	C	31.1	D	40.5
Riggin/ Court	**Two-way stop**	C	16.5	D	29.3	C	19.7	**F**	**60.6**
Ferguson/ Giddings	**Four-way stop**	**F**	**50.2**	**E**	**43.4**	**F**	**61.5**	**F**	**52.5**
Ferguson/ Dinuba	Signals	D	39.2	C	31.1	D	43.2	C	32.7
Ferguson/ Court	Four-way stop	B	11.2	A	9.3	B	11.6	A	9.5
St. John's/ Burke	Four-way stop	C	16.4	B	12.4	C	18.9	B	13.5

Footnote: Intersections found to have been significantly impacted are shaded yellow for clarity.

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Table 38 presents a summary of the recommended mitigation measures with the corresponding levels of service and delays. Fair share payments may be in the form of payment of City development fees if the mitigation measure is included in the fee program.

Table 38 - 2032 10-Year Horizon Cumulative Conditions with Phase 1 & 2 Mitigated Conditions

Intersections	Traffic Control Mitigated Measure	Mitigated Condition			
		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Signals	B	11.6	B	10.3
Riggin/ Giddings	Signals	C	27.1	C	31.2
Riggin/ Court	Signals	C	28.3	C	29.1
Ferguson/ Giddings	Signals	C	27.8	C	30.9

Avenue 320/ Dinuba – The intersection is outside the City of Visalia limits and is determined by the City to be classified as a deferred arterial road and is currently operating under a two-way stop control. The calculated LOS without the project is determined to be at an overall level LOS C for the a.m. & p.m. peak hours. The intersection is expected to operate at a LOS D & E for the a.m. & p.m. peak hours respectively with the proposed project. In order to mitigate the LOS D & E at the intersection, either traffic signals or a roundabout may be considered. A single lane roundabout would operate at a LOS B during the peak hours, but is a very costly solution, typically in the order of $1 million to $2 million on average per intersection. Furthermore, given the required right-of-way associated with the construction of a roundabout, this option would not be feasible due to the existing locations of residences on the west approach.

Traffic signals appear to be the most feasible solution for the intersection. With the installation of traffic signals, the intersection is expected to operate at a LOS B during the peak hours. It is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Riggin/ Giddings – The mitigated measures covered in this section are indistinguishable to those covered in the “2027 5-Year Horizon Cumulative Conditions with & without Phase 1 & 2 Comparison” condition. The intersection is currently operating under a two-way stop control and the calculated delay for the northbound and southbound approaches without the project is in excess of 300 seconds for the a.m. & p.m. peak hours. The project will add traffic in the eastbound, northbound, and southbound directions which will then contribute to additional vehicle delay for drivers on the north and southbound approach. This added delay is considered a significant impact for the existing intersection.

In order to mitigate the LOS F at the intersection for the “without” & “with” project conditions, either traffic signals or a roundabout may be considered. After reviewing the placement of a roundabout for the intersection, a roundabout may not be feasible at this location due to the required right-of-way, which will conflict with existing residential developments on the south approach. Therefore, a traffic signal at this location appears to be the most feasible mitigated

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solution. The installation of a traffic signal is expected to have the intersection operating at a LOS C or better for the a.m. & p.m. peak hours.

Finally, since the project is expected to add additional vehicle trips into the movements experiencing delays, it is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Riggin/ Court – The mitigated measures covered in this section are indistinguishable to those covered in the "2027 5-Year Horizon Cumulative Conditions Phase 1 & 2 Comparison" condition. The intersection is currently operating under a two-way stop control and the calculated LOS without the project is determined to be at a level of C & D for the a.m. & p.m. peak hours, respectively. The intersection is expected to operate at a LOS C & F for the a.m. & p.m. peak hours with the proposed project. In order to mitigate the LOS F at the intersection, either traffic signals or a roundabout may be considered. A single lane roundabout would operate at a LOS A & B during the a.m. and p.m. peak hours respectively, but is a very costly solution, typically in the order of $1 million to $2 million on average per intersection.

Traffic signals appear to be the most feasible solution for the intersection due to the existing configuration which would accommodate signalization with no major roadway modifications. With the installation of traffic signals, the intersection is expected to operate at a LOS C during the peak hours. It is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Ferguson/ Giddings – The mitigated measures covered in this section are indistinguishable to those covered in the "2027 5-Year Horizon Cumulative Conditions Phase 1 & 2 Comparison" condition. The intersection is currently operating under a four-way stop control and the calculated LOS without the project is F & E for the a.m. & p.m. peak hours respectively. The intersection is expected to operate at an overall LOS "F" for both the a.m. & p.m. peak hour with the proposed project. The proposed development is expected to add additional traffic to the eastbound, southbound, and northbound approaches of the intersection. This added delay is considered a significant impact for the existing intersection.

In order to mitigate the LOS F at the intersection for the "with" project a.m. & p.m. conditions, either traffic signals or a roundabout may be considered. After reviewing the placement of a roundabout for the intersection, a roundabout may not be feasible at this location due to the required right-of-way, which will conflict with existing residential developments on the north, south, & east approach. Therefore, a traffic signal at this location appears to be the most feasible mitigated solution. The eastbound, westbound, and southbound approaches appear to have room for designated left turn lanes, while the northbound approach does not appear to accommodate designated left turn lanes. The installation of a traffic signal is expected to have the intersection operating at a LOS C or better for the a.m. & p.m. peak hours.

It is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

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Table 39 – 2042 20-Year Cumulative Conditions with & without Project (Caltrans intersections only) Comparison

Intersections	Traffic Control	Without Project				With Project			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	**Two-way stop**	**E**	**37.6**	**E**	**40.8**	**F**	**62.5**	**F**	**86.6**
Riverway/ Dinuba	**One-way stop**	C	17.8	**F**	**60.7**	C	20.8	**F**	**90.0**
Sports Park/ Dinuba	**One-way stop**	C	17.9	**E**	**38.8**	C	19.7	**E**	**45.1**
Shannon/ Dinuba	Signals	B	17.8	C	20.0	C	22.9	C	24.4
Riggin/ Dinuba	Signals	C	34.8	D	49.4	D	36.2	D	51.3
Ferguson/ Dinuba	**Signals**	**E**	**62.1**	D	38.3	**E**	**72.8**	D	42.6

Footnote: Intersections found to have been significantly impacted are shaded yellow for clarity.

Table 40 presents a summary of the recommended mitigation measures with the corresponding levels of service and delays. Fair share payments may be in the form of payment of City development fees if the mitigation measure is included in the fee program.

Table 40 – 2042 20-Year Cumulative Conditions with Project (Caltrans intersections only) Mitigated Conditions

Intersections	Traffic Control Mitigated Measure	Mitigated Condition			
		A.M. Peak Hour		P.M. Peak Hour	
		LOS	Delay (sec)	LOS	Delay (sec)
Avenue 320/ Dinuba	Signal	B	13.3	B	12.0
Riverway/ Dinuba	Median	C	15.6	C	15.5
Sports Park/ Dinuba	Median	B	10.9	B	11.9
Ferguson/ Dinuba	Signal Timing	C	23.1	C	22.5

Avenue 320/ Dinuba – The mitigated measures covered in this section are indistinguishable to those covered in the "2032 10-Year Horizon Cumulative Conditions with & without Phase 1 & 2 Comparison" condition. The intersection is outside the City of Visalia limits and is determined by the City to be classified as a deferred arterial road and is currently operating under a two-way stop control. The calculated LOS without the project is determined to be at an overall level LOS E for the a.m. & p.m. peak hours. The intersection is expected to operate at a LOS F for the a.m. & p.m. peak hours with the proposed project. In order to mitigate the LOS F at the intersection, either traffic signals or a roundabout may be considered. A single lane roundabout would operate at a LOS B & C during the a.m. and p.m. peak hours respectively, but is a very

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costly solution, typically in the order of $1 million to $2 million on average per intersection. Furthermore, given the required right-of-way associated with the construction of a roundabout, this option would not be feasible due to the existing locations of residences on the west approach.

Traffic signals appear to be the most feasible solution for the intersection. With the installation of traffic signals, the intersection is expected to operate at LOS B during the peak hours. It is suggested that a reasonable mitigation measure would be for the project to participate in signalization of the intersection through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Riverway/ Dinuba – The intersection is currently operating under a one-way stop control. The calculated LOS without the project is determined to be at an overall level LOS F for the p.m. hour. The intersection is expected to operate at a LOS C & F for the a.m. & p.m. peak hour respectively with the proposed project. In order to mitigate the LOS F at the intersection, traffic signals, a roundabout, or center median to prevent left turns at the intersection may be considered. It is determined that a single lane roundabout is a very costly solution, typically in the order of $1 million to $2 million on average per intersection therefore this option would not be feasible.

Traffic signals may be a feasible solution for this intersection in terms of regulating traffic volumes only, but since there is an existing traffic signal already installed nearby on Shannon & Dinuba, it wouldn't be a feasible solution to install a traffic signal near another traffic signal on a state route. A center median appears to be the most feasible solution for the intersection.

With the installation of the center median to prevent left turn movements for the eastbound direction at the intersection, the intersection is expected to operate at LOS C during the a.m. and p.m. peak hours. It is suggested that a reasonable mitigation measure would be for the project to participate in the construction of a center median through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Sports Park/ Dinuba – The intersection is currently operating under a one-way stop control. The mitigated measures covered in this section are indistinguishable to the mitigated measures covered in the Riverway/Dinuba intersection due to proximity and intersection configuration. The calculated LOS without the project is determined to be at an overall level LOS E for the p.m. peak hour. The intersection is expected to continue to operate at a LOS E for the p.m. peak hour with the proposed project. In order to mitigate the LOS E at the intersection, traffic signals, a roundabout, or center median to prevent left turns at the intersection may be considered. A two-lane roundabout would operate at a LOS A & C during the a.m. and p.m. peak hours respectively, but is a very costly solution, typically in the order of $2 million to $3 million on average per intersection therefore this option would not be feasible at this time for this intersection.

Traffic signals may be a feasible solution for this intersection in terms of regulating traffic volumes only, but since there is an existing traffic signal already installed nearby on Shannon & Dinuba, it wouldn't be a feasible solution to install a traffic signal near another traffic signal on a state route. A center median appears to be the most feasible solution for the intersection.

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With the installation of the center median to prevent left turn movements for the eastbound and westbound directions at the intersection, the intersection is expected to operate at a LOS B during the a.m. and p.m. peak hours. It is suggested that a reasonable mitigation measure would be for the project to participate in the construction of a center median through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

Ferguson/ Dinuba – The intersection is currently operating under signalization control and the calculated LOS without the project is determined to be at a level of E & D for the a.m. & p.m. peak hours, respectively. The intersection is expected to operate at a LOS E & D for the a.m. & p.m. peak hours respectively with the proposed project. Although the LOS grade remains the same with the proposed project, the vehicle delay is increased by more than 5 seconds which makes it a significant impact to the intersection. In order to mitigate the LOS E at the intersection, either updating the existing cycle lengths/splits or a roundabout may be considered. A two-lane roundabout is a very costly solution, typically in the order of $2 million to $3 million on average per intersection. Given the amount of right-of-way associated with a roundabout, this solution would not be feasible at this location due to existing commercial developments in the area which will be infringed.

Updating the existing traffic signal cycle lengths/splits appear to be the most feasible solution for the intersection which would require the least amount of roadway modifications. With the updating of traffic signal cycle lengths/splits, the intersection is expected to operate at a LOS C during the a.m. and p.m. peak hours. It is suggested that a reasonable mitigation measure would be for the project to participate in updating the signal cycle lengths/splits through payment of City development/ impact fees or a fair share. The mitigated intersection analysis sheets are shown in Appendix B for reference.

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6.4 Improvements by City of Visalia or others to accommodate non-site traffic

As the city continues to develop in the northside region of Visalia, it is expected that traffic volumes will continue to increase in the area. The results of the analysis indicate that the following study intersections are expected to operate below the target LOS without the cumulative and project conditions within the 2027 (5-year) & 2032 (10-year) horizon from opening of Phases 1 & 2; a summary of suggested improvements are presented below which are within the City limits:

2027 5-Year Horizon

- Riggin/ Giddings (two-way stop) | Installation of Traffic Signals
- Riggin/ Court (two-way stop) | Installation of Traffic Signals
- Ferguson/ Giddings (four-way stop) | Installation of Traffic Signals

2032 10-Year Horizon

- Riggin/ Giddings (two-way stop) | Installation of Traffic Signals
- Riggin/ Court (two-way stop) | Installation of Traffic Signals
- Ferguson/ Giddings (four-way stop) | Installation of Traffic Signals

As covered in the roadway improvements, Section 6.3, multiple intersection improvements will be necessary to accommodate the growing traffic volumes in the area.

6.5 Additional improvements necessary to accommodate site traffic

No additional improvements are necessary at this time other than those already covered on Section 6.3 under mitigated measures.

6.6 Traffic safety

There are no noted traffic safety concerns at this time, other than those expected with the installation of new traffic signals and the potential for collisions with the use of permissive phasing.

6.6.1 Adequacy of location and design of driveway access

A review of the site plan was performed to identify potential issues with adequacy of location and design of driveway access. The site plan appears to provide adequate driveway accessibility by providing access for Phase 1 via one driveway connecting to State Route (SR) 63 (Dinuba Boulevard) and one driveway connecting to Shannon Parkway. Phase 2 will share access with Phase 1 and will also include a second driveway connecting to Shannon Parkway.

A potential concern with the proposed access driveway connecting to SR 63 is that the site plan does not provide adequate vehicular storage capacity. An access driveway to a state highway is an intersection and thus, should be analyzed with respect to capacity, traffic operations and safety; however, as required by Caltrans' letter *City of Visalia – Community Development – Site*

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Plan Review dated November 21, 2018, the proposed driveway with access to SR 63 shall be removed when the property adjacent to the north of the project site is developed. At the time, a new "shared driveway would be constructed across from the Sports Park entrance to replace the temporary right-in/right-out driveway and allow cross-access through the property to the north.

As previously discussed in 2017 with Caltrans, Caltrans requested that a raised median (minimum 4-feet wide) be constructed on SR 63 from the SR 63/Shannon Parkway intersection, extending north to the existing Visalia Sports Park entrance. The median will prevent illegal U-turn movements on SR 63. Furthermore, Caltrans also recommends constructing a raised median on Shannon Parkway and recommends that the storage length of the new eastbound left-turn lane on Shannon Parkway into the Project's eastern driveway be divided equally (in length) with the existing westbound left-turn lane.

6.7 Pedestrian Considerations

After reviewing the proposed site plan, the project appears to interrupt a planned Class I bikeway on the northside of Shannon Parkway between Dinuba Blvd and Court Street, and a planned Class II bike lane on the eastside of Dinuba Blvd. The project site is expected to interrupt the planned bikeways & pedestrian facilities along the sections by not providing the required park strip along the southside of the project and the required Class II striping along the westside.

6.8 Traffic Control Needs

Traffic control continues to become an ever-growing concern as development continues. There is a high need for the installation of traffic controls within the study area. There are several intersections that are currently controlled with one-way, two-way and four-way stop controls which are experiencing poor level of services. Section 6.9 covers in more depth the intersections that have been identified for the installation of traffic signals. It is also recommended that the City start to review modern traffic signal controls one of which is the Dallas Permitted and the Dallas Permitted plus Protected signal head "flashing yellow arrow". This is a special type of phasing developed in the Dallas, Texas area. The left turn lane has its own signal head. The left signal head is louvered to make it invisible from adjacent lanes. The ball in the left lane displays the same phase displayed to oncoming through traffic. The configuration eliminates the lagging left turn trap problem and allows for higher level of services at intersections.

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6.9 Traffic Signal Warrants

A traffic signal warrant analysis has been performed for the intersections that have been identified to be below the target level of service. The *California Manual on Uniform Traffic Control Devices, 2014 Edition (Revision 3 dated March 9, 2018)* (CMUTCD) outlines the studies and factors for justifying traffic control signals. The CMUTCD states the following standard, "An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of traffic control signal is justified at a particular location. The investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants":

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Experience
- Warrant 9, Intersection Near a Grade Crossing

The installation of traffic signals may be appropriate if one or more traffic warrants are met with the ultimate guidance of engineering judgement. The installation of traffic signals may serve as a mitigation measure where a significant impact is identified at a unsignalized intersection and where traffic signal warrants are met.

For purposes of this traffic impact analysis study, the report has reviewed three intersections for traffic warrants that are located within the City limits. The warrant analysis focused on warrants 1, 2, 3, & 7. Table 41 summarizes the traffic signal warrant findings. Warrants which have been determined to be met are presented in a bold type and shaded in red.

Table 41 – Traffic Signal Warrant Analysis at Existing Conditions

Intersection	Warrant 1	Warrant 2	Warrant 3	Warrant 4	Warrant 5	Warrant 6	Warrant 7	Warrant 8	Warrant 9
Riggin/ Giddings	**Met**	**Met**	**Met**	N/A	N/A	N/A	**Not Met**	N/A	N/A
Riggin/ Court	Not Met	Not Met	Not Met	N/A	N/A	N/A	**Not Met**	N/A	N/A
Ferguson/ Giddings	Not Met	Not Met	Not Met	N/A	N/A	N/A	**Not Met**	N/A	N/A

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6.10 Traffic Signal Needs (base plus 5-year horizon)

As a result of this analysis, the following intersections have been determined to contain a need for the installation of traffic signals within the 5-year horizon with the year 2022 as the base year.

2027 5-Year Horizon

- Riggin/ Giddings (two-way stop)
- Riggin/ Court (two-way stop)
- Ferguson/ Giddings (four-way stop)

7.0 CONCLUSIONS/ RECOMMENDATIONS

7.1 Roadway Improvements

Generally-accepted engineering principles and practices have been utilized to estimate the amount of traffic expected to be generated by the project, to analyze the existing traffic conditions, and to analyze the traffic conditions projected to occur in the future.

The traffic impact analysis found that the intersection of Riggin Avenue/ Giddings Street is currently operating below the target LOS. The project is expected to cause significant impacts, or contribute to significant cumulative impacts, at the following existing intersection configurations within the 5-year and 10-year horizons:

- Riggin/ Giddings (two-way stop)
- Riggin/ Court (two-way stop)
- Ferguson/ Giddings (four-way stop)

7.2 Phasing of Improvements

The recommended mitigation measures and phasing of improvements are as follows:

2027 5-Year Horizon

- Riverway/Dinuba (one-way stop): It is known that the City is planning to construct a cul-de-sac on Riverway Drive approximately 900 feet east of Giddings Street and the portion of Riverway Drive between the new cul-de-sac and SR 63 will be incorporated in the sporks park and used as a right-in/right-out driveway. It is recommended that a median or similar measure be constructed to prevent left turns from the eastbound approach to Dinuba Boulevard.

- Riggin/ Giddings (two-way stop): It is recommended that the project mitigate its share of significant cumulative impact by participating in signalization of the intersection through payment of City development/ impact fees or a fair share.

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- Riggin/ Court (two-way stop): It is recommended that the project mitigate its share of significant cumulative impact by participating in signalization of the intersection through payment of City development/ impact fees or a fair share.

- Ferguson/ Giddings (four-way stop): It is recommended that the project mitigate its share of significant cumulative impact by participating in signalization of the intersection through payment of City development/ impact fees or a fair share.

- Shannon Parkway: Caltrans recommends constructing a raised median on Shannon Parkway and recommends that the storage length of the new eastbound left-turn lane on Shannon Parkway into the Project's eastern driveway be divided equally (in length) with the existing westbound left-turn lane.

2032 10-Year Horizon

- Riggin/ Giddings (two-way stop): With the projects participation in mitigating its share of significant cumulative impact through the signalization of the intersection during the 5-year horizon, this intersection will be capable to handle the 10-year horizon significant cumulative impacts caused by the project.

- Riggin/ Court (two-way stop): With the projects participation in mitigating its share of significant cumulative impact through the signalization of the intersection during the 5-year horizon, this intersection will be capable to handle the 10-year horizon significant cumulative impacts caused by the project.

- Ferguson/ Giddings (four-way stop): With the projects participation in mitigating its share of significant cumulative impact through the signalization of the intersection during the 5-year horizon, this intersection will be capable to handle the 10-year horizon significant cumulative impacts caused by the project.

7.3 Site access

The proposed site layout appears to provide adequate site access throughout the site. A review of the site plan was performed to identify potential issues with adequacy of location and design of driveway access. The site plan appears to provide adequate driveway accessibility by providing access for Phase 1 via one driveway connecting to State Route (SR) 63 (Dinuba Boulevard) and one driveway connecting to Shannon Parkway. Phase 2 will share access with Phase 1 and will also include a second driveway connecting to Shannon Parkway.

A potential concern with the proposed access driveway connecting to SR 63 is that the site plan does not provide adequate vehicular storage capacity. An access driveway to a state highway is

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an intersection and thus, should be analyzed with respect to capacity, traffic operations and safety; however, as required by Caltrans' letter *City of Visalia – Community Development – Site Plan Review* dated November 21, 2018, the proposed driveway with access to SR 63 shall be removed when the property adjacent to the north of the project site is developed. At the time, a new "shared driveway would be constructed across from the Sports Park entrance to replace the temporary right-in/right-out driveway and allow cross-access through the property to the north.

As previously discussed in 2017 with Caltrans, Caltrans requested that a raised median (minimum 4-feet wide) be constructed on SR 63 from the SR 63/Shannon Parkway intersection, extending north to the existing Visalia Sports Park entrance. The median will prevent illegal U-turn movements on SR 63. Furthermore, Caltrans also recommends constructing a raised median on Shannon Parkway and recommends that the storage length of the new eastbound left-turn lane on Shannon Parkway into the Project's eastern driveway be divided equally (in length) with the existing westbound left-turn lane. Lastly, Caltrans recommends, if long queues occur from the proposed Dutch Bros drive-thru traffic, vehicles should not be allowed to back into the SR 63 right-of-way.

EXHIBITS

Exhibit 1 - Site Location
Exhibit 2 - Site Plan
Exhibit 3 - Existing and Future Area Development
Exhibit 4 - Existing Transportation System(s) (Number of lanes, traffic control, etc.)
Exhibit 5 - Phase 1 AM Trip Distribution and Assignment
Exhibit 6 - Phase 1 PM Trip Distribution and Assignment
Exhibit 7 - Phase 1 and 2 AM Trip Distribution and Assignment
Exhibit 8 - Phase 1 and 2 PM Trip Distribution and Assignment
Exhibit 9 - Existing 2018 Peak Hour Turning Volumes
Exhibit 10 - Existing 2020 Peak Hour Turning Volumes
Exhibit 11 - Existing 2020 With Project (Phase 1) Peak Hour Turning Volumes
Exhibit 12 - Existing 2022 Peak Hour Turning Volumes
Exhibit 13 - Existing 2022 Plus Project (Phase 1 & 2) Peak Hour Turning Volumes

APPENDICES

Appendix A - Traffic counts
Appendix B - Capacity Analysis Worksheets
Appendix C - Traffic Signal Warrant Worksheets
Appendix D - All Supporting Documentation for any, studies, etc.
Appendix E - Forecasted Traffic Volume Conditions

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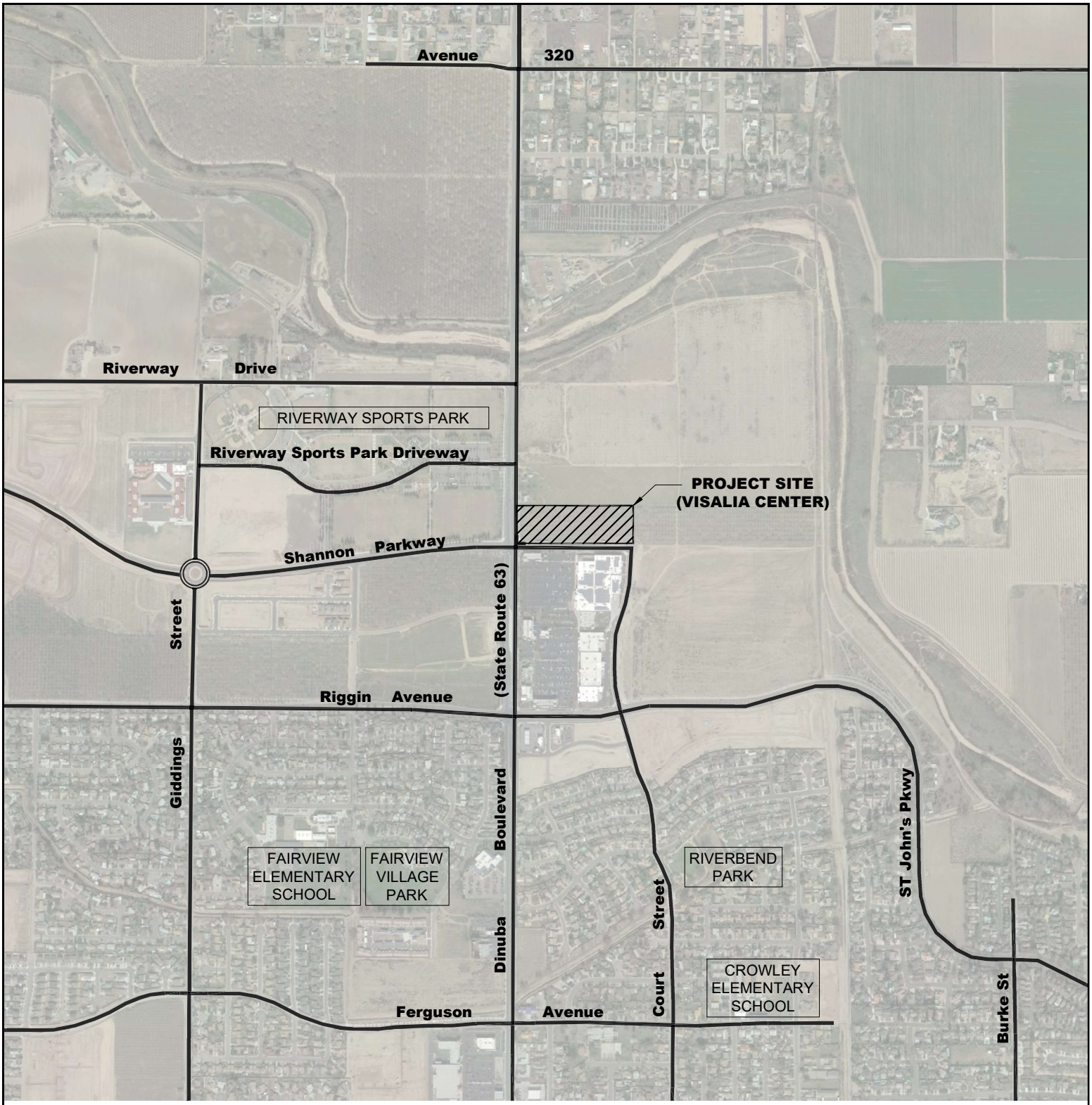

EXHIBIT 1 - SITE LOCATION

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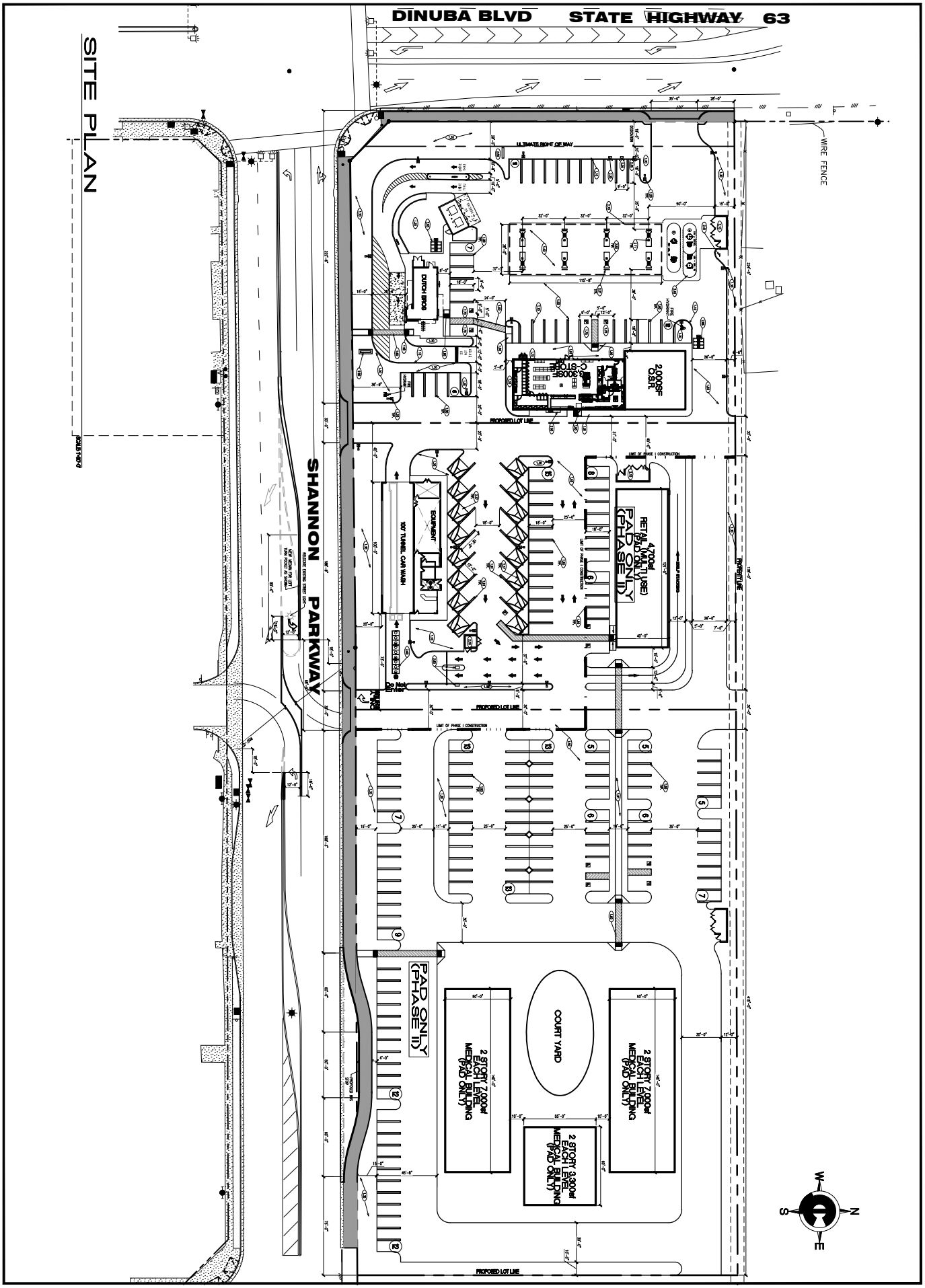

SHEET:	C.10
PROJECT NUMBER:	17071
STORE NUMBER:	V.C.
DRAWN BY:	FC/HEN
CHECKED BY:	F. COHEN
SCALE:	
DATE ISSUED:	07/18/17

PROJECT:

N.E. COR. SHANNON PKWY • DINUBA BL.
CITY OF VISALIA, CA. 93291

OVER ALL SITE PLAN

Visalia Center

Exhibit 2

CJC Design, Inc.
Design Planning Permitting
22485 La Palma Avenue, Suite 202, Yorba Linda, CA 92887
Tel: (714) 920-9643
Fax: (714) 917-0250
www.cjccorp.com

REVISIONS

NO.:	DATE:	DESCRIPTION:	BY:	APP.:
3	11/09/17	REVISED PER PLANNING		
4	01/29/18	REVISED LOT TURN POCKET PER CITY		
5	02/09/18	REVISED LOT TURN POCKET PER CITY		
6	2/12/19	REVISED PER CLIENT		
6	3/19/19	REVISED PER CLIENT (CAR WASH / DESIGNER)		

PE STAMP

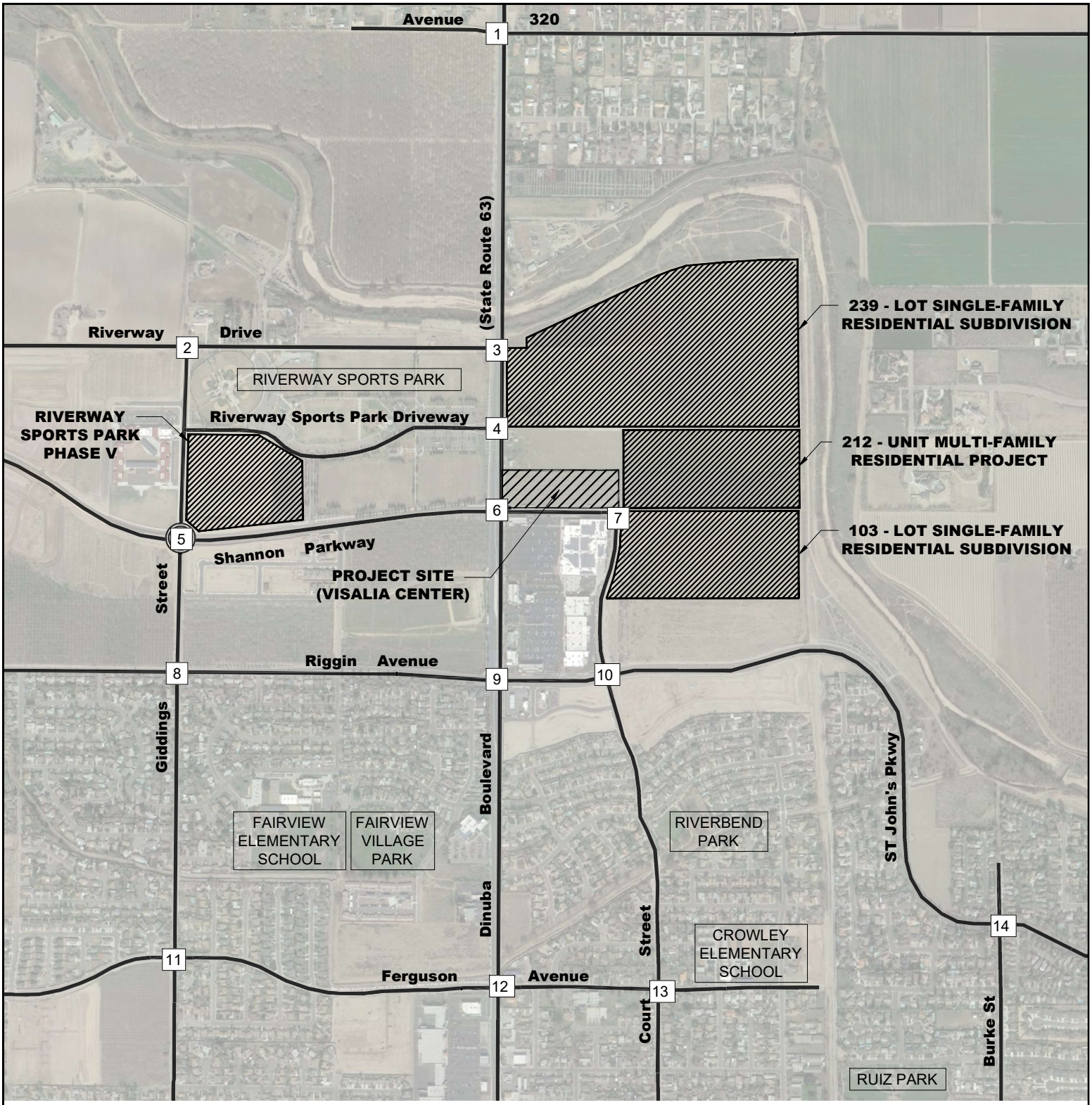

EXHIBIT 3 - EXISTING AND FUTURE AREA DEVELOPMENT

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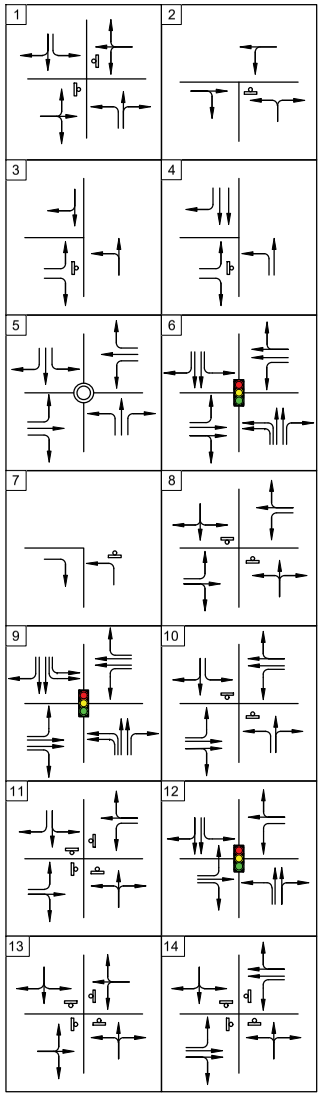
EXHIBIT 4 - EXISTING TRANSPORTATION SYSTEMS



1. Avenue 320 & Dinuba Blvd (Two-way stop Caltrans intersection)
2. Riverway Drive & Giddings Street (One-way stop City of Visalia Intersection)
3. Riverway Drive & Dinuba Blvd (One-way stop Caltrans intersection)
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12. Ferguson Avenue & Dinuba Blvd (Signalized Caltrans intersection)
13. Ferguson Avenue & Court Street (Two-way stop City of Visalia intersection)
14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

- Stop Sign
- Traffic Signal
- Lane Assignment
- Roundabout

N

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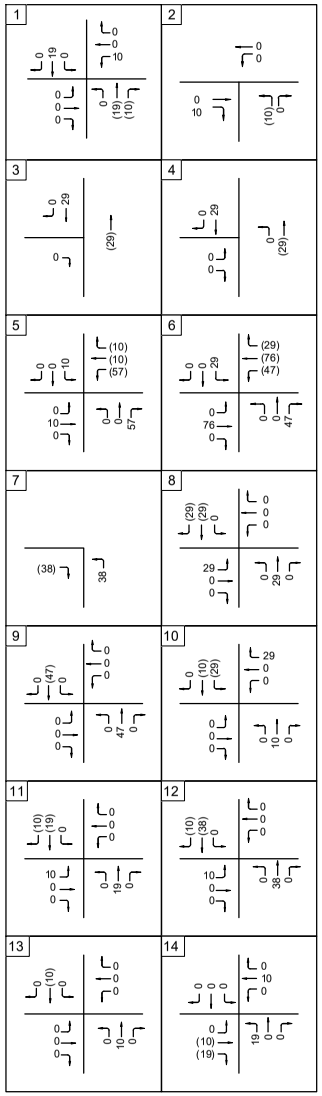
EXHIBIT 5 - PHASE 1
AM TRIP DISTRIBUTION AND ASSIGNMENT



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13. Ferguson Avenue & Court Street (Two-way stop City of Visalia intersection)
14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

- ##% — Traffic Distribution
- Movement Direction
- XX — Inbound Traffic
- (XX) — Outbound Traffic
- Outbound Traffic
- Inbound Traffic

N

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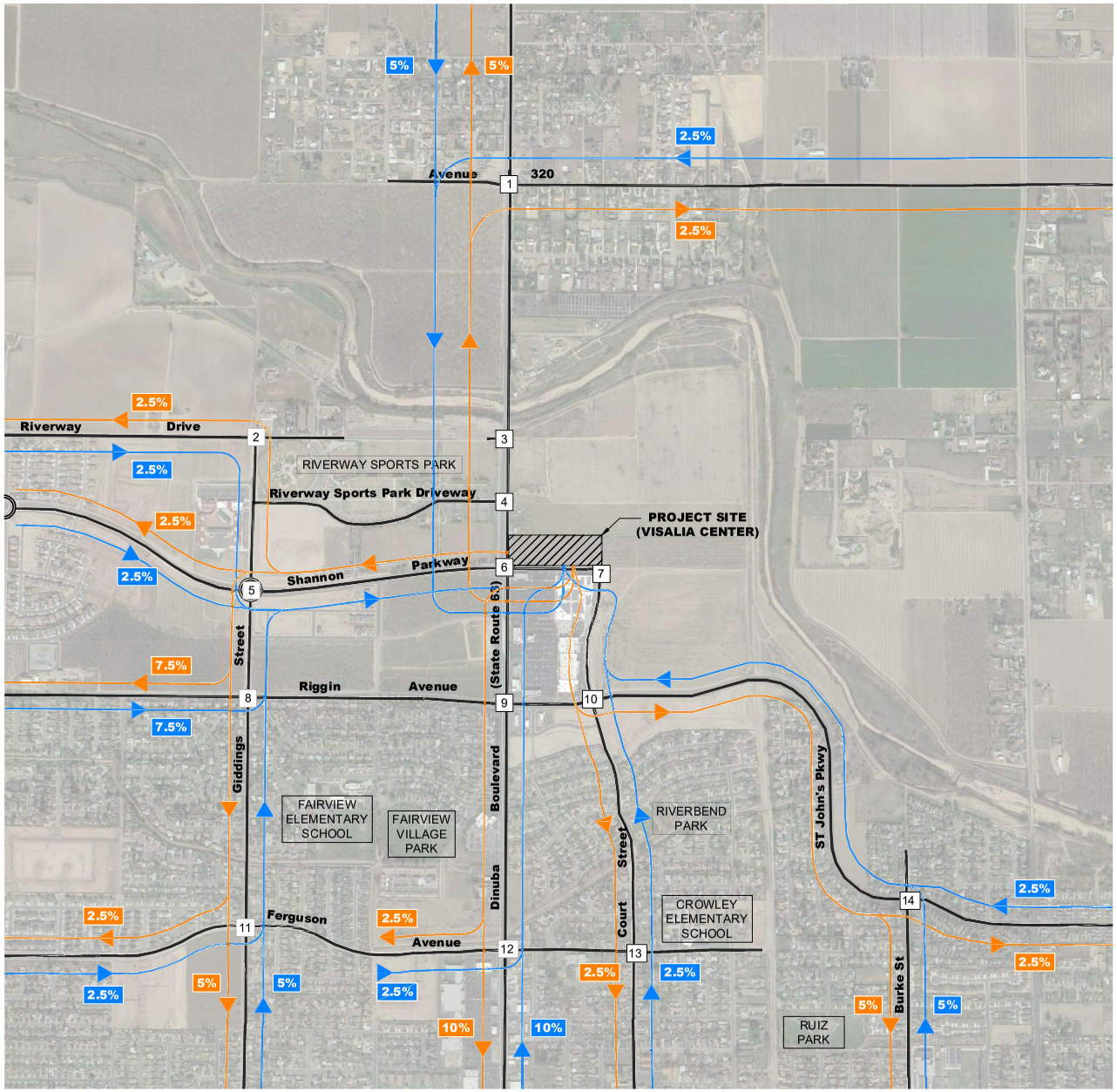

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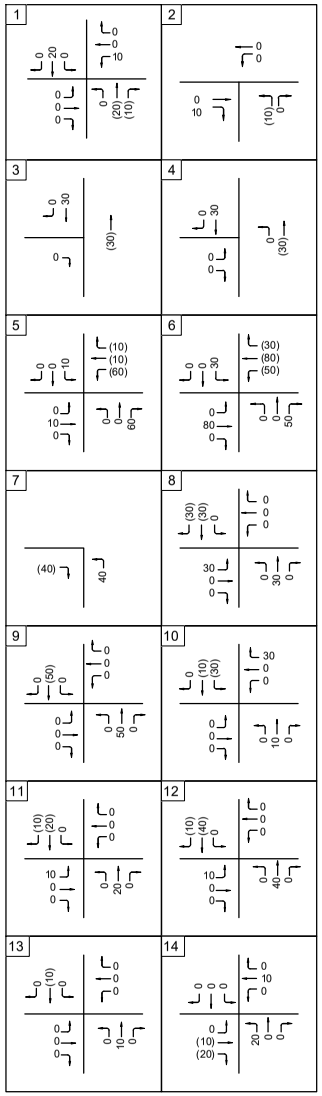
EXHIBIT 6 - PHASE 1
PM TRIP DISTRIBUTION AND ASSIGNMENT



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Legend

##%	Traffic Distribution
	Movement Direction
XX	Inbound Traffic
(XX)	Outbound Traffic
	Outbound Traffic
	Inbound Traffic

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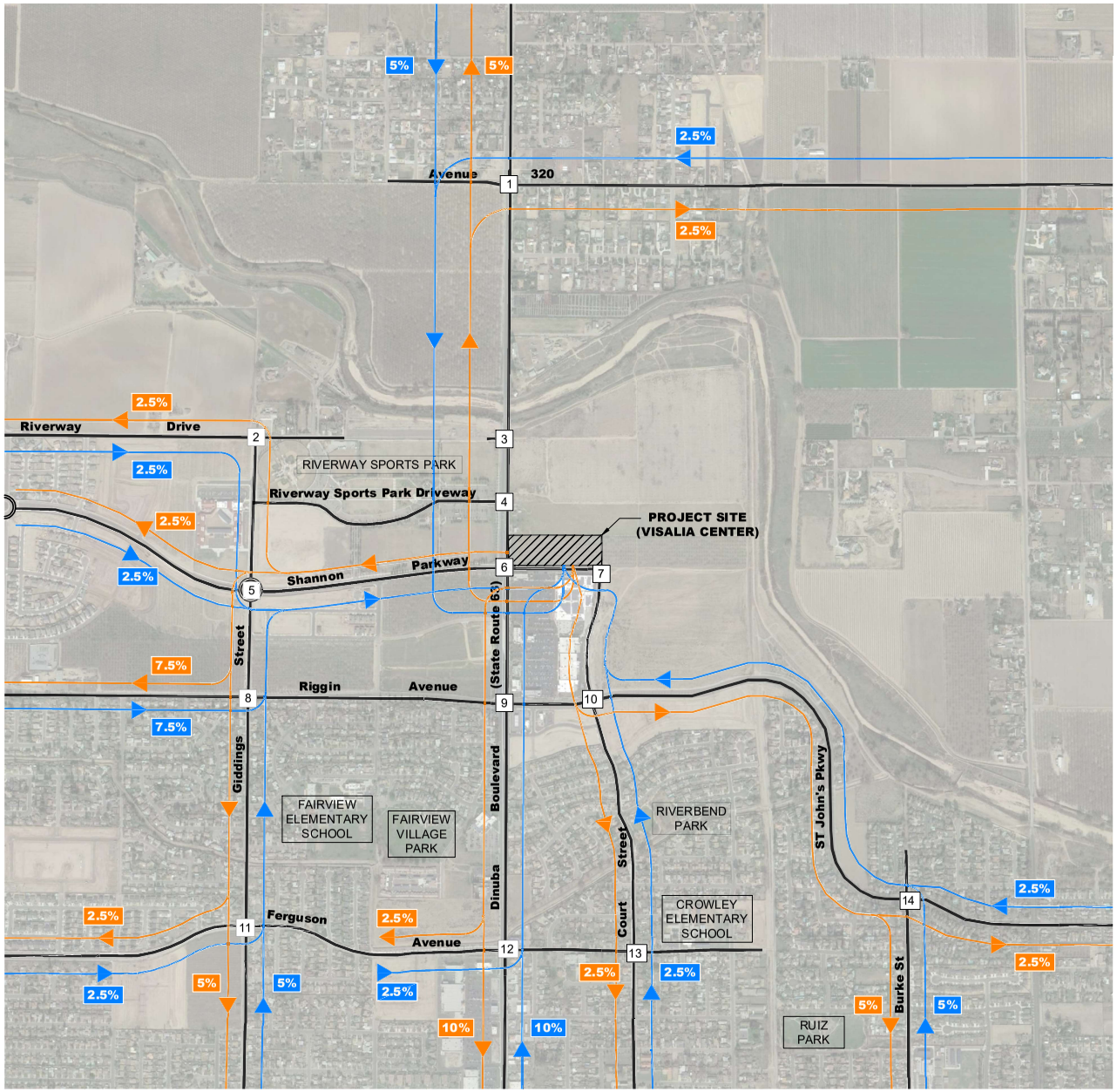
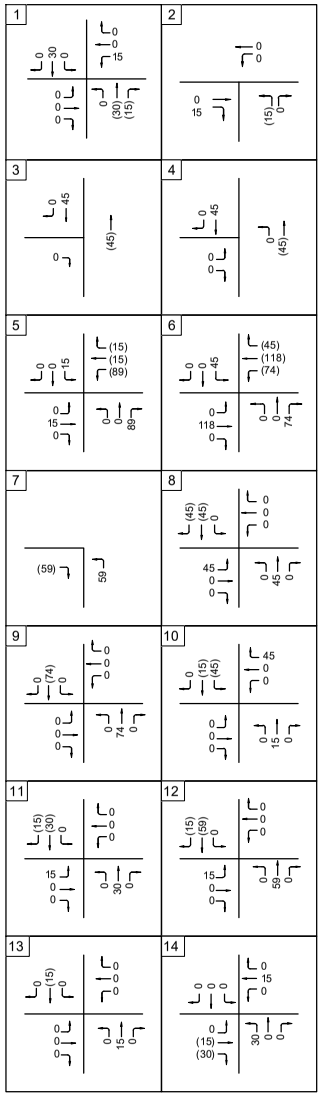


EXHIBIT 7 - PHASE 1 AND 2
AM TRIP DISTRIBUTION AND ASSIGNMENT



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Legend

- ##% — Traffic Distribution
- Movement Direction
- XX — Inbound Traffic
- (XX) — Outbound Traffic
- Outbound Traffic
- Inbound Traffic

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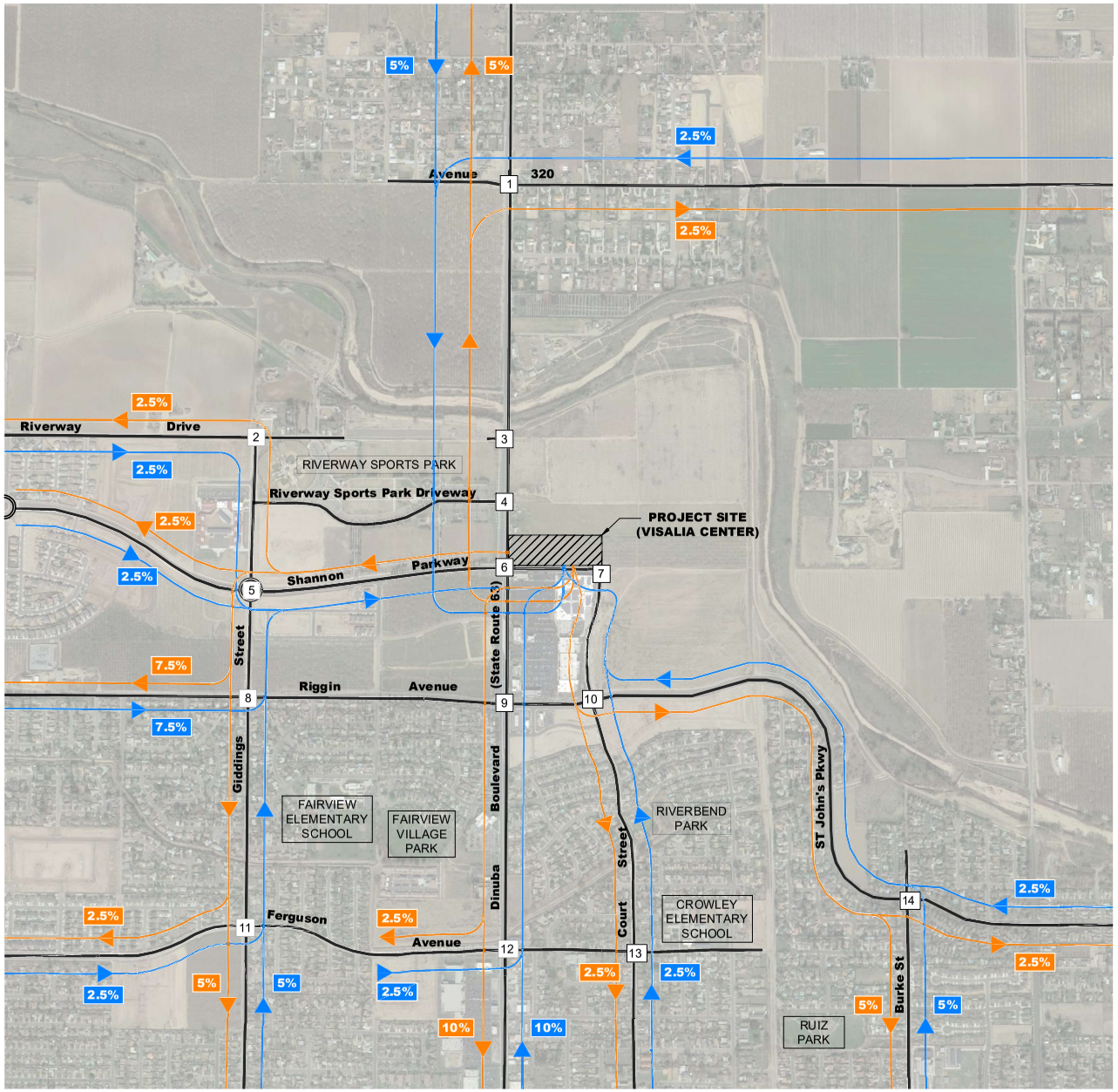
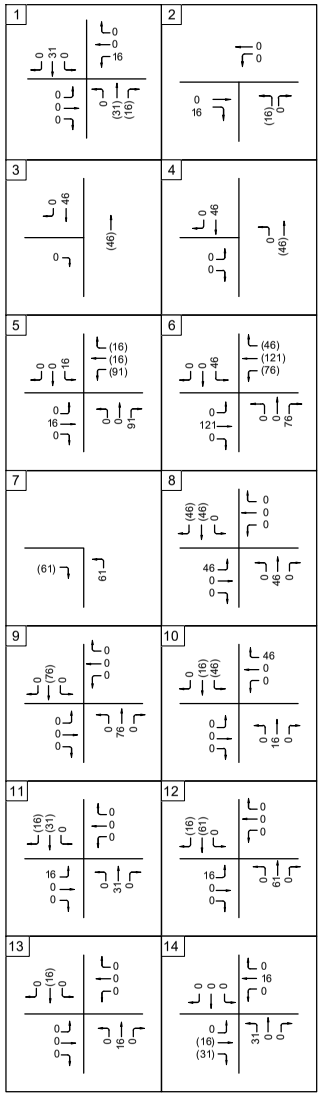


EXHIBIT 8 - PHASE 1 AND 2
PM TRIP DISTRIBUTION AND ASSIGNMENT



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Legend

- ##% — Traffic Distribution
- Movement Direction
- XX — Inbound Traffic
- (XX) — Outbound Traffic
- Outbound Traffic
- Inbound Traffic

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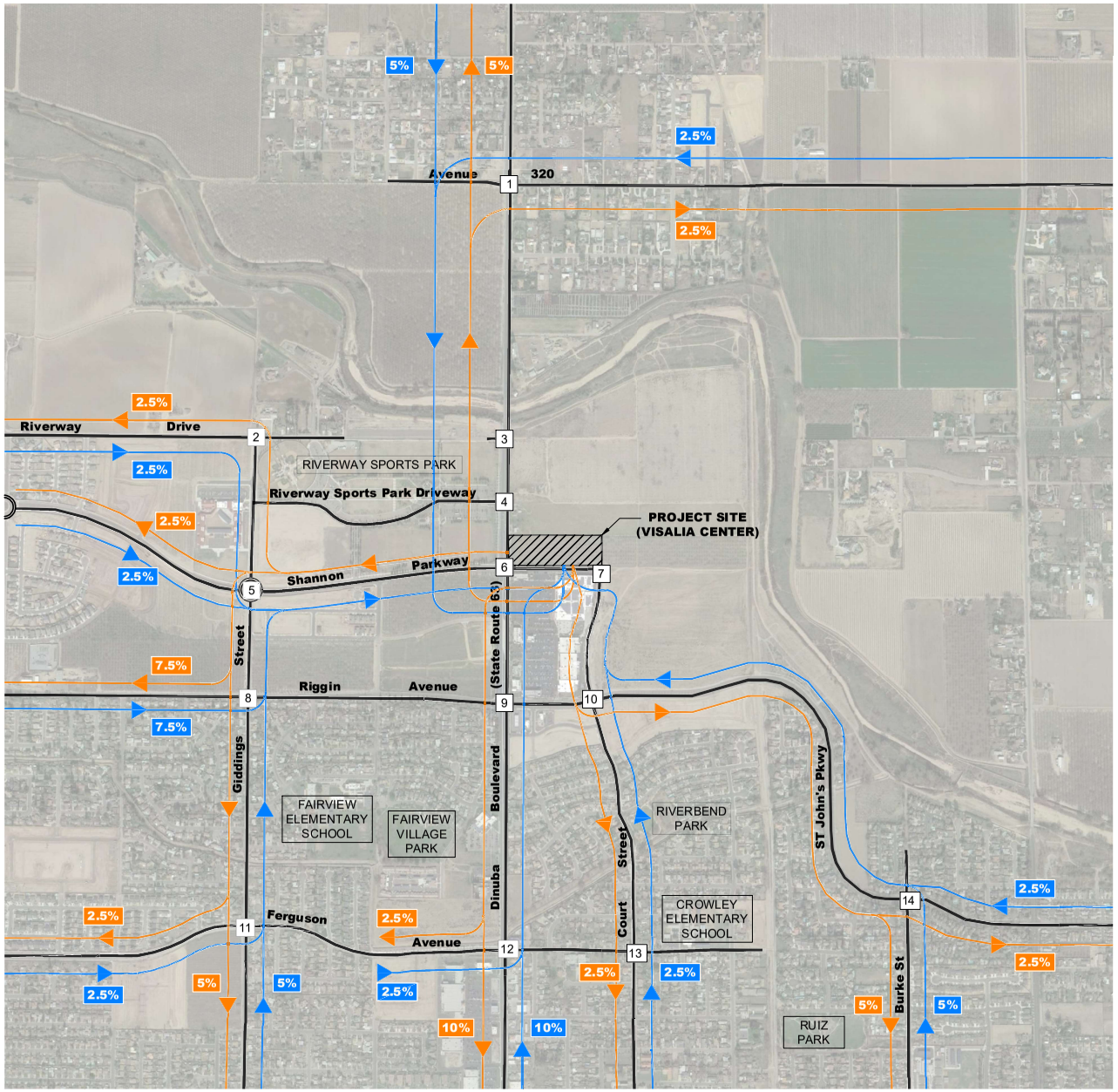
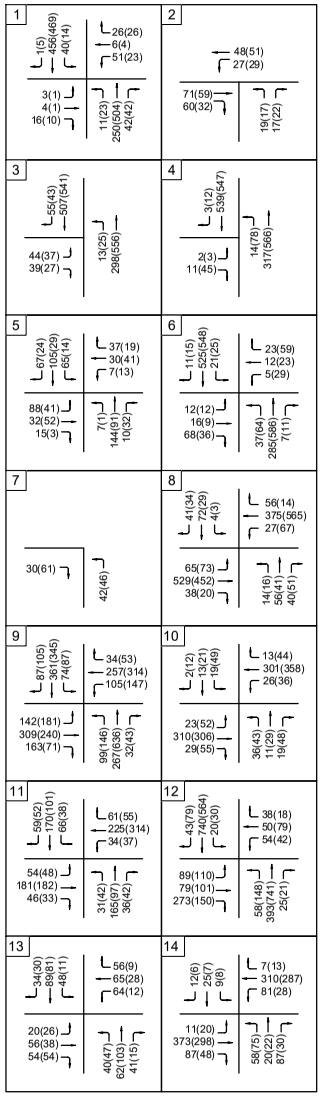


EXHIBIT 9

EXISTING 2018 PEAK HOUR TURNING VOLUMES



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14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

- Movement Direction
- XX AM Peak Traffic
- (XX) PM Peak Traffic

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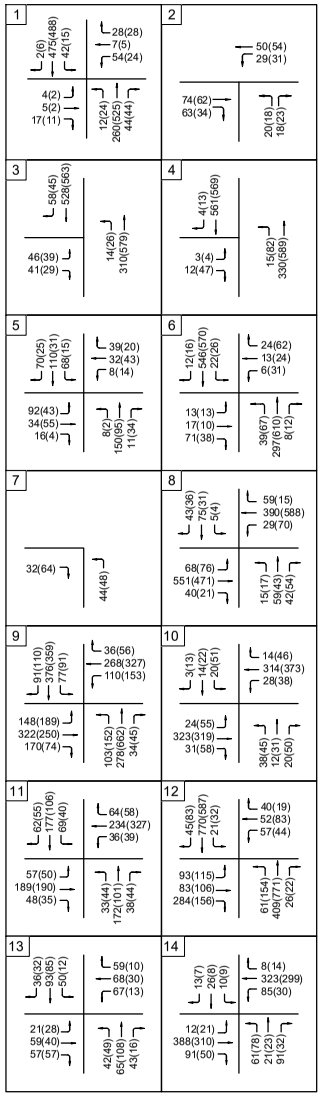
A & M CONSULTING ENGINEERS

EXHIBIT 10
EXISTING 2020 PEAK HOUR TURNING VOLUMES



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12. Ferguson Avenue & Dinuba Blvd (Signalized Caltrans intersection)
13. Ferguson Avenue & Court Street (Two-way stop City of Visalia intersection)
14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

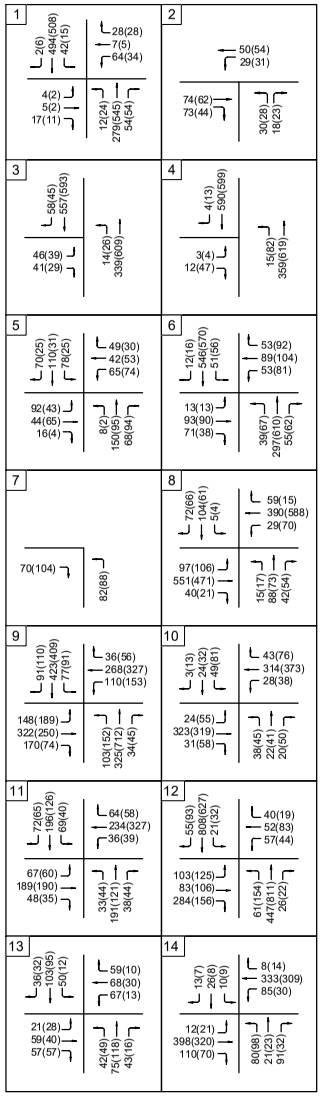
- Movement Direction
- XX AM Peak Traffic
- (XX) PM Peak Traffic

N

N.T.S.

A & M CONSULTING ENGINEERS

EXHIBIT 11
EXISTING 2020 WITH PROJECT (PHASE 1)
PEAK HOUR TURNING VOLUMES



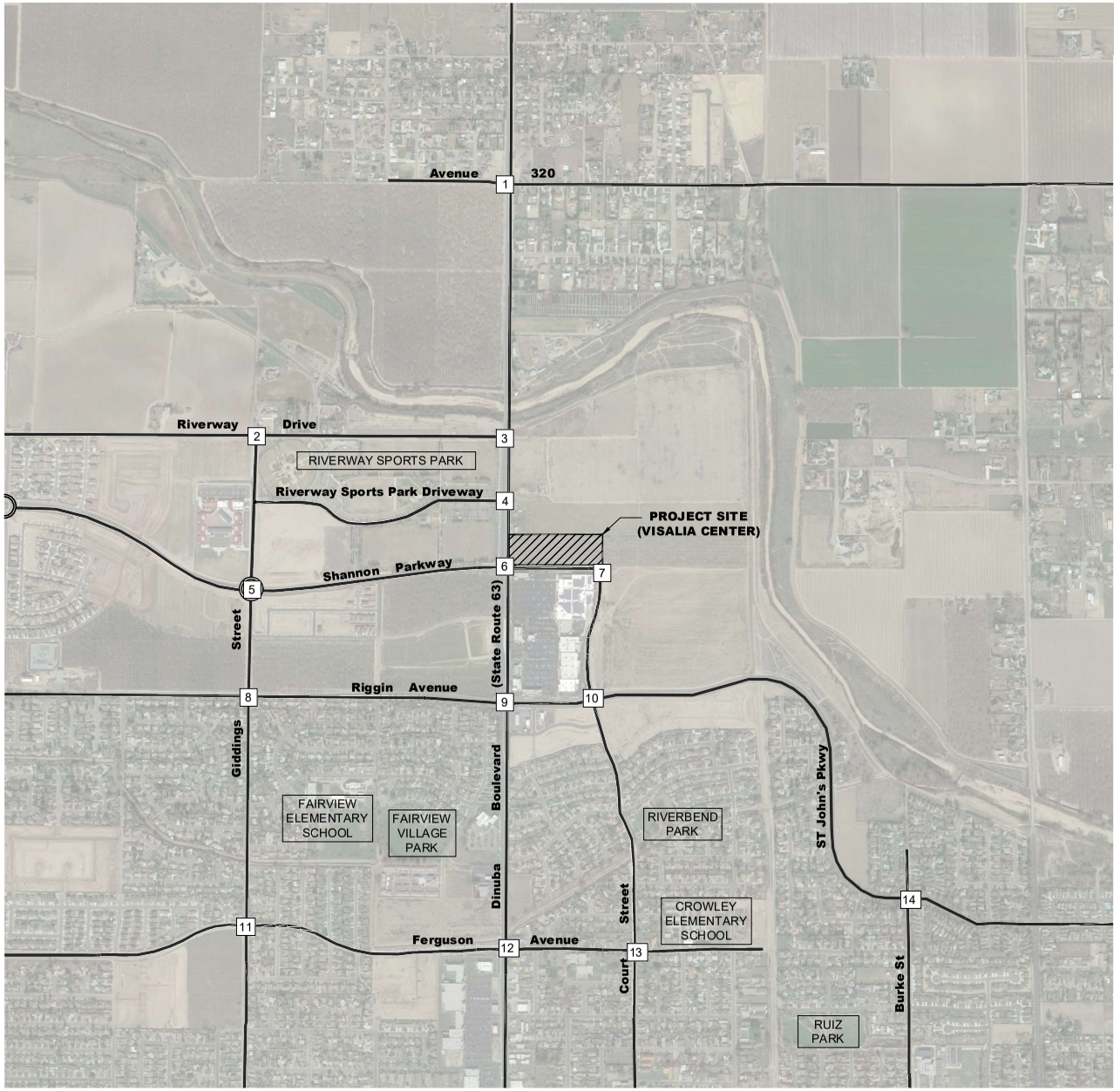
1. Avenue 320 & Dinuba Blvd (Two-way stop Caltrans intersection)
2. Riverway Drive & Giddings Street (One-way stop City of Visalia Intersection)
3. Riverway Drive & Dinuba Blvd (One-way stop Caltrans intersection)
4. Riverway Sports Park Driveway & Dinuba Blvd (One-way stop Caltrans intersection)
5. Shannon Parkway & Giddings Street (City of Visalia roundabout)
6. Shannon Parkway & Dinuba Blvd (Signalized Caltrans intersection)
7. Shannon Parkway & Court Street (One-way stop City of Visalia intersection)
8. Riggin Avenue & Giddings Street (Two-way stop City of Visalia intersection)
9. Riggin Avenue & Dinuba Blvd (Signalized Caltrans intersection)
10. Riggin Avenue & Court Street (Two-way stop City of Visalia intersection)
11. Ferguson Avenue & Giddings Street (Four-way stop City of Visalia intersection)
12. Ferguson Avenue & Dinuba Blvd (Signalized Caltrans intersection)
13. Ferguson Avenue & Court Street (Two-way stop City of Visalia intersection)
14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

- Movement Direction
- XX AM Peak Traffic
- (XX) PM Peak Traffic

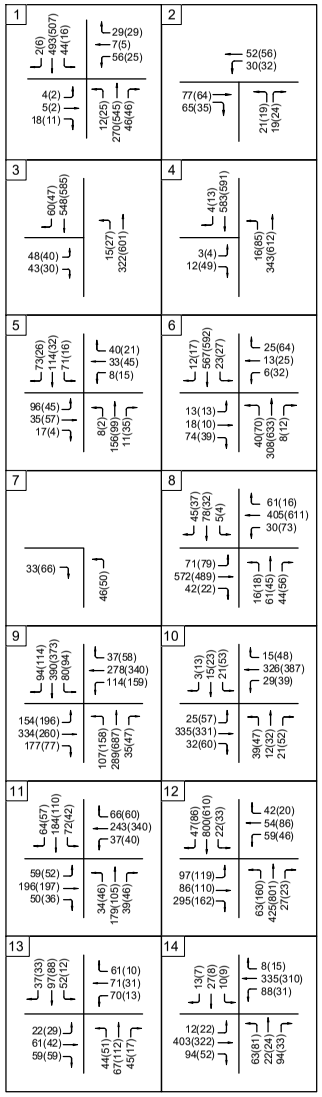
N

N.T.S.



A & M CONSULTING ENGINEERS

EXHIBIT 12
EXISTING 2022 PEAK HOUR TURNING VOLUMES



1. Avenue 320 & Dinuba Blvd (Two-way stop Caltrans intersection)
2. Riverway Drive & Giddings Street (One-way stop City of Visalia Intersection)
3. Riverway Drive & Dinuba Blvd (One-way stop Caltrans intersection)
4. Riverway Sports Park Driveway & Dinuba Blvd (One-way stop Caltrans intersection)
5. Shannon Parkway & Giddings Street (City of Visalia roundabout)
6. Shannon Parkway & Dinuba Blvd (Signalized Caltrans intersection)
7. Shannon Parkway & Court Street (One-way stop City of Visalia intersection)
8. Riggin Avenue & Giddings Street (Two-way stop City of Visalia intersection)
9. Riggin Avenue & Dinuba Blvd (Signalized Caltrans intersection)
10. Riggin Avenue & Court Street (Two-way stop City of Visalia intersection)
11. Ferguson Avenue & Giddings Street (Four-way stop City of Visalia intersection)
12. Ferguson Avenue & Dinuba Blvd (Signalized Caltrans intersection)
13. Ferguson Avenue & Court Street (Two-way stop City of Visalia intersection)
14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

- Movement Direction
- XX AM Peak Traffic
- (XX) PM Peak Traffic

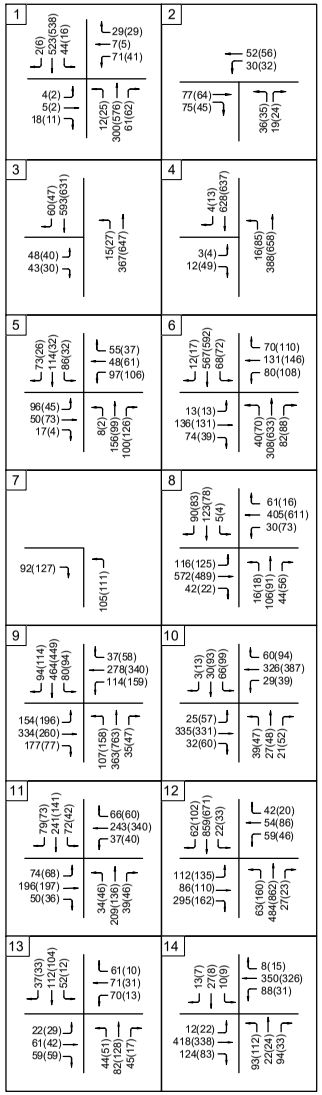
N

N.T.S.

A & M CONSULTING ENGINEERS

EXHIBIT 13

EXISTING 2022 WITH PROJECT (PHASE 1&2) PEAK HOUR TURNING VOLUMES



1. Avenue 320 & Dinuba Blvd (Two-way stop Caltrans intersection)
2. Riverway Drive & Giddings Street (One-way stop City of Visalia Intersection)
3. Riverway Drive & Dinuba Blvd (One-way stop Caltrans intersection)
4. Riverway Sports Park Driveway & Dinuba Blvd (One-way stop Caltrans intersection)
5. Shannon Parkway & Giddings Street (City of Visalia roundabout)
6. Shannon Parkway & Dinuba Blvd (Signalized Caltrans intersection)
7. Shannon Parkway & Court Street (One-way stop City of Visalia intersection)
8. Riggin Avenue & Giddings Street (Two-way stop City of Visalia intersection)
9. Riggin Avenue & Dinuba Blvd (Signalized Caltrans intersection)
10. Riggin Avenue & Court Street (Two-way stop City of Visalia intersection)
11. Ferguson Avenue & Giddings Street (Four-way stop City of Visalia intersection)
12. Ferguson Avenue & Dinuba Blvd (Signalized Caltrans intersection)
13. Ferguson Avenue & Court Street (Two-way stop City of Visalia intersection)
14. St John's Parkway & Burke Street (Four-way stop City of Visalia intersection)

Legend

- Movement Direction
- XX AM Peak Traffic
- (XX) PM Peak Traffic

N

N.T.S.

A & M CONSULTING ENGINEERS

Appendix A

24-Hour Traffic Count Report

Street Court Street **Date** 11/27/2018

Intersection Approach North of Riggin Ave **Weather** Clear

Number of Lanes 2

	Northbound					Southbound					
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Direction Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Direction Total	Hourly Totals
12:00 AM	1	0	0	0	1	12:00 AM	2	1	0	0	3	4
1:00 AM	0	0	0	0	0	1:00 AM	0	0	1	0	1	1
2:00 AM	0	1	0	0	1	2:00 AM	0	0	0	0	0	1
3:00 AM	0	0	1	0	1	3:00 AM	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	4:00 AM	0	0	2	1	3	3
5:00 AM	1	0	0	2	3	5:00 AM	2	6	3	8	19	22
6:00 AM	2	2	2	1	7	6:00 AM	4	4	2	5	15	22
7:00 AM	3	2	3	7	15	7:00 AM	10	12	8	11	41	56
8:00 AM	5	8	3	5	21	8:00 AM	10	7	8	5	30	51
9:00 AM	5	13	9	10	37	9:00 AM	10	11	15	17	53	90
10:00 AM	5	13	7	9	34	10:00 AM	9	11	7	14	41	75
11:00 AM	8	14	8	11	41	11:00 AM	9	6	12	13	40	81
12:00 PM	10	11	8	11	40	12:00 PM	7	5	6	9	27	67
1:00 PM	5	12	14	16	47	1:00 PM	10	9	15	11	45	92
2:00 PM	15	17	11	17	60	2:00 PM	16	13	12	9	50	110
3:00 PM	17	12	14	10	53	3:00 PM	13	11	14	16	54	107
4:00 PM	16	15	13	14	58	4:00 PM	17	9	12	16	54	112
5:00 PM	20	17	16	20	73	5:00 PM	20	16	17	19	72	145
6:00 PM	25	24	22	12	83	6:00 PM	17	16	17	15	65	148
7:00 PM	13	18	16	13	60	7:00 PM	16	10	11	18	55	115
8:00 PM	13	16	14	13	56	8:00 PM	13	10	12	7	42	98
9:00 PM	10	7	10	5	32	9:00 PM	11	9	5	3	28	60
10:00 PM	5	3	1	1	10	10:00 PM	2	1	1	2	6	16
11:00 PM	1	0	0	1	2	11:00 PM	1	0	1	0	2	4
					24-Hour Total						24-Hour Total	24-Hour Total
					735						746	1481

Morning Peak Hour: 9:00 AM - 10:00 AM **Morning Peak Traffic:** 90 **Morning PHF:** 0.833

Afternoon Peak Hour: 5:45 PM - 6:45 PM **Afternoon Peak Traffic:** 160 **Afternoon PHF:** 0.952

Street Court Street

Intersection Approach South of Riggin Ave

Number of Lanes 2

	Northbound					Southbound					
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Movement Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Movement Total	Hourly Totals
12:00 AM	5	2	2	3	12	12:00 AM	2	3	1	4	10	22
1:00 AM	0	3	2	2	7	1:00 AM	2	2	3	0	7	14
2:00 AM	1	0	1	0	2	2:00 AM	3	2	2	1	8	10
3:00 AM	2	1	0	0	3	3:00 AM	1	2	2	1	6	9
4:00 AM	3	0	2	1	6	4:00 AM	1	2	5	2	10	16
5:00 AM	3	3	2	5	13	5:00 AM	8	6	5	11	30	43
6:00 AM	10	9	6	10	35	6:00 AM	7	7	6	8	28	63
7:00 AM	13	17	19	20	69	7:00 AM	8	12	24	25	69	138
8:00 AM	22	21	18	15	76	8:00 AM	33	21	20	16	90	166
9:00 AM	15	12	14	12	53	9:00 AM	17	15	16	17	65	118
10:00 AM	13	15	18	20	66	10:00 AM	17	14	22	18	71	137
11:00 AM	12	17	9	17	55	11:00 AM	13	14	22	20	69	124
12:00 PM	10	12	7	16	45	12:00 PM	16	23	19	28	86	131
1:00 PM	15	20	22	27	84	1:00 PM	17	16	22	23	78	162
2:00 PM	35	23	19	18	95	2:00 PM	27	26	16	20	89	184
3:00 PM	25	26	24	40	115	3:00 PM	30	29	28	28	115	230
4:00 PM	30	31	29	32	122	4:00 PM	28	26	32	33	119	241
5:00 PM	24	22	22	19	87	5:00 PM	16	12	17	26	71	158
6:00 PM	28	20	19	22	89	6:00 PM	21	28	27	25	101	190
7:00 PM	25	20	10	16	71	7:00 PM	15	13	14	18	60	131
8:00 PM	22	27	23	17	89	8:00 PM	15	21	22	17	75	164
9:00 PM	17	19	16	13	65	9:00 PM	17	14	12	11	54	119
10:00 PM	10	7	6	4	27	10:00 PM	8	11	7	5	31	58
11:00 PM	7	4	3	3	17	11:00 PM	5	4	2	3	14	31
					24-Hour Total						24-Hour Total	24-Hour Total
					1303						1356	2659

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 185 **Morning PHF:** 0.841

Afternoon Peak Hour: 4:00 PM - 5:00 PM **Afternoon Peak Traffic:** 241 **Afternoon PHF:** 0.927

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

24-Hour Traffic Count Report

Street Ferguson Avenue **Date** 12/12/2018

Intersection Approach East of Giddings St **Weather** Clear

Number of Lanes 2

	Eastbound					Westbound					
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Direction Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Direction Total	Hourly Totals
12:00 AM	5	4	4	5	18	12:00 AM	3	0	3	4	10	28
1:00 AM	3	1	3	1	8	1:00 AM	5	3	2	3	13	21
2:00 AM	6	5	1	3	15	2:00 AM	1	2	1	1	5	20
3:00 AM	3	1	3	3	10	3:00 AM	0	1	2	3	6	16
4:00 AM	5	5	4	10	24	4:00 AM	5	8	7	4	24	48
5:00 AM	8	10	13	18	49	5:00 AM	11	13	14	20	58	107
6:00 AM	19	19	24	43	105	6:00 AM	20	14	23	19	76	181
7:00 AM	27	49	92	132	300	7:00 AM	27	33	45	60	165	465
8:00 AM	111	79	30	38	258	8:00 AM	72	38	23	31	164	422
9:00 AM	31	28	23	29	111	9:00 AM	21	20	35	27	103	214
10:00 AM	47	30	35	35	147	10:00 AM	25	31	26	26	108	255
11:00 AM	40	31	37	45	153	11:00 AM	41	42	50	44	177	330
12:00 PM	52	38	47	50	187	12:00 PM	63	47	45	49	204	391
1:00 PM	49	48	50	54	201	1:00 PM	55	43	40	55	193	394
2:00 PM	55	98	60	56	269	2:00 PM	54	50	58	44	206	475
3:00 PM	72	87	76	78	313	3:00 PM	56	49	69	61	235	548
4:00 PM	55	58	75	69	257	4:00 PM	58	49	70	63	240	497
5:00 PM	80	86	71	82	319	5:00 PM	72	88	78	64	302	621
6:00 PM	58	37	48	43	186	6:00 PM	72	47	63	47	229	415
7:00 PM	33	36	26	27	122	7:00 PM	42	44	41	43	170	292
8:00 PM	30	31	28	19	108	8:00 PM	37	35	35	27	134	242
9:00 PM	17	21	15	17	70	9:00 PM	25	17	17	15	74	144
10:00 PM	21	11	14	9	55	10:00 PM	15	10	12	4	41	96
11:00 PM	14	10	9	8	41	11:00 PM	6	1	4	1	12	53
				24-Hour Total	3326					24-Hour Total	2949	24-Hour Total 6275

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 629 **Morning PHF:** 0.819

Afternoon Peak Hour: 5:00 PM - 6:00 PM **Afternoon Peak Traffic:** 621 **Afternoon PHF:** 0.892

Street Ferguson Avenue

Intersection Approach West of Giddings St

Number of Lanes 2

	Eastbound					Westbound					
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Movement Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Movement Total	Hourly Totals
12:00 AM	7	5	4	7	23	12:00 AM	3	2	4	3	12	35
1:00 AM	3	2	3	1	9	1:00 AM	4	2	2	3	11	20
2:00 AM	8	6	1	4	19	2:00 AM	1	2	1	1	5	24
3:00 AM	4	1	3	3	11	3:00 AM	1	1	2	4	8	19
4:00 AM	7	5	3	11	26	4:00 AM	4	7	6	5	22	48
5:00 AM	8	12	13	19	52	5:00 AM	11	12	13	20	56	108
6:00 AM	20	19	28	50	117	6:00 AM	20	15	22	22	79	196
7:00 AM	31	57	104	147	339	7:00 AM	25	34	53	75	187	526
8:00 AM	121	86	34	48	289	8:00 AM	80	47	24	27	178	467
9:00 AM	35	29	24	32	120	9:00 AM	22	23	32	26	103	223
10:00 AM	56	34	40	39	169	10:00 AM	26	29	26	26	107	276
11:00 AM	48	33	43	52	176	11:00 AM	35	38	43	40	156	332
12:00 PM	53	36	48	51	188	12:00 PM	65	49	48	52	214	402
1:00 PM	48	48	50	50	196	1:00 PM	59	47	47	62	215	411
2:00 PM	45	89	59	55	248	2:00 PM	67	80	64	53	264	512
3:00 PM	74	92	71	82	319	3:00 PM	64	60	81	67	272	591
4:00 PM	49	59	78	70	256	4:00 PM	67	54	75	70	266	522
5:00 PM	78	82	72	89	321	5:00 PM	82	97	80	68	327	648
6:00 PM	55	34	50	44	183	6:00 PM	76	51	62	49	238	421
7:00 PM	34	33	24	26	117	7:00 PM	42	47	41	43	173	290
8:00 PM	28	30	27	19	104	8:00 PM	39	37	37	26	139	243
9:00 PM	15	21	17	18	71	9:00 PM	26	19	17	16	78	149
10:00 PM	21	9	14	9	53	10:00 PM	19	13	13	6	51	104
11:00 PM	15	12	11	9	47	11:00 PM	7	1	4	3	15	62
				24-Hour Total	3453					24-Hour Total	3176	24-Hour Total 6629

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 713 **Morning PHF:** 0.803

Afternoon Peak Hour: 5:00 PM - 6:00 PM **Afternoon Peak Traffic:** 648 **Afternoon PHF:** 0.905

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

24-Hour Traffic Count Report

Street Giddings Street **Date** 12/12/2018

Intersection Approach North of Ferguson Ave **Weather** Clear

Number of Lanes 2

	Northbound				Direction		Southbound				Direction	Hourly
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Totals
12:00 AM	2	3	3	3	11	12:00 AM	3	2	4	2	11	22
1:00 AM	3	1	2	2	8	1:00 AM	1	0	2	1	4	12
2:00 AM	3	3	1	1	8	2:00 AM	1	2	0	2	5	13
3:00 AM	2	2	1	4	9	3:00 AM	1	0	3	1	5	14
4:00 AM	2	5	5	5	17	4:00 AM	2	3	5	9	19	36
5:00 AM	8	8	11	16	43	5:00 AM	8	4	10	13	35	78
6:00 AM	17	16	15	24	72	6:00 AM	12	12	15	21	60	132
7:00 AM	21	31	54	81	187	7:00 AM	14	27	61	89	191	378
8:00 AM	73	46	19	19	157	8:00 AM	81	60	22	16	179	336
9:00 AM	18	19	20	18	75	9:00 AM	24	26	20	22	92	167
10:00 AM	27	24	21	21	93	10:00 AM	20	18	18	22	78	171
11:00 AM	23	25	23	28	99	11:00 AM	21	21	23	30	95	194
12:00 PM	27	23	24	27	101	12:00 PM	32	24	23	23	102	203
1:00 PM	27	25	23	33	108	1:00 PM	29	23	34	33	119	227
2:00 PM	36	41	31	26	134	2:00 PM	50	103	38	40	231	365
3:00 PM	34	37	42	38	151	3:00 PM	43	42	54	36	175	326
4:00 PM	34	29	38	31	132	4:00 PM	43	30	35	48	156	288
5:00 PM	39	50	40	36	165	5:00 PM	57	52	32	34	175	340
6:00 PM	35	23	26	20	104	6:00 PM	36	29	22	28	115	219
7:00 PM	16	25	16	16	73	7:00 PM	19	18	20	17	74	147
8:00 PM	19	20	15	14	68	8:00 PM	17	14	21	6	58	126
9:00 PM	15	12	8	6	41	9:00 PM	6	9	5	10	30	71
10:00 PM	9	8	8	4	29	10:00 PM	15	10	7	7	39	68
11:00 PM	6	2	4	3	15	11:00 PM	4	2	0	7	13	28
				24-Hour Total	1900					24-Hour Total	2061	24-Hour Total 3961

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 545 **Morning PHF:** 0.801

Afternoon Peak Hour: 2:00 PM - 3:00 PM **Afternoon Peak Traffic:** 365 **Afternoon PHF:** 0.634

Street Giddings Street

Intersection Approach South of Ferguson Ave

Number of Lanes 2

	Northbound				Movement		Southbound				Movement	Hourly
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Totals
12:00 AM	1	4	2	2	9	12:00 AM	3	2	4	3	12	21
1:00 AM	2	0	3	2	7	1:00 AM	2	1	2	1	6	13
2:00 AM	2	3	1	1	7	2:00 AM	2	3	1	2	8	15
3:00 AM	2	3	0	5	10	3:00 AM	1	1	2	1	5	15
4:00 AM	1	5	5	4	15	4:00 AM	3	3	5	8	19	34
5:00 AM	9	7	10	16	42	5:00 AM	7	6	11	13	37	79
6:00 AM	17	18	12	20	67	6:00 AM	13	12	17	23	65	132
7:00 AM	19	27	48	76	170	7:00 AM	17	30	59	85	191	361
8:00 AM	69	42	16	12	139	8:00 AM	77	55	22	21	175	314
9:00 AM	14	18	18	15	65	9:00 AM	23	23	21	22	89	154
10:00 AM	22	22	18	18	80	10:00 AM	25	20	20	23	88	168
11:00 AM	14	21	15	20	70	11:00 AM	26	24	27	33	110	180
12:00 PM	25	24	24	28	101	12:00 PM	29	22	22	23	96	197
1:00 PM	28	27	22	39	116	1:00 PM	26	22	27	28	103	219
2:00 PM	45	45	31	27	148	2:00 PM	36	67	32	31	166	314
3:00 PM	33	38	47	39	157	3:00 PM	36	37	43	34	150	307
4:00 PM	39	30	38	28	135	4:00 PM	33	27	34	39	133	268
5:00 PM	39	55	40	33	167	5:00 PM	45	45	33	35	158	325
6:00 PM	37	24	25	17	103	6:00 PM	32	23	24	24	103	206
7:00 PM	13	30	15	15	73	7:00 PM	18	18	17	16	69	142
8:00 PM	21	23	13	15	72	8:00 PM	16	15	17	8	56	128
9:00 PM	19	14	8	5	46	9:00 PM	8	9	6	9	32	78
10:00 PM	9	10	9	4	32	10:00 PM	12	8	6	5	31	63
11:00 PM	7	0	4	2	13	11:00 PM	5	3	2	5	15	28
				24-Hour Total	1844					24-Hour Total	1917	24-Hour Total 3761

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 511 **Morning PHF:** 0.793

Afternoon Peak Hour: 5:00 PM - 6:00 PM **Afternoon Peak Traffic:** 325 **Afternoon PHF:** 0.813

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

24-Hour Traffic Count Report

Street Giddings Street **Date** 11/27/2018

Intersection Approach North of Riggin Ave **Weather** Clear

Number of Lanes 2

	Northbound				Direction	Southbound				Direction	Hourly
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	00 - 15	15 - 30	30 - 45	45 - 00	Total	Totals
12:00 AM	0	1	0	0	1	0	0	0	1	1	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	1	0	0	1	1
3:00 AM	0	0	0	0	0	0	1	1	0	2	2
4:00 AM	1	2	1	1	5	0	1	0	2	3	8
5:00 AM	1	0	2	2	5	2	1	3	2	8	13
6:00 AM	1	2	1	3	7	3	11	4	2	20	27
7:00 AM	7	10	26	32	75	7	11	39	46	103	178
8:00 AM	36	38	21	8	103	59	32	12	9	112	215
9:00 AM	4	6	4	2	16	7	6	3	13	29	45
10:00 AM	6	7	2	5	20	3	3	5	3	14	34
11:00 AM	7	5	3	9	24	8	4	3	4	19	43
12:00 PM	7	8	10	6	31	6	9	3	8	26	57
1:00 PM	8	9	6	11	34	5	6	7	18	36	70
2:00 PM	31	29	14	12	86	33	17	6	13	69	155
3:00 PM	35	11	9	10	65	16	3	4	7	30	95
4:00 PM	10	8	9	8	35	5	11	9	16	41	76
5:00 PM	18	17	12	23	70	28	23	25	34	110	180
6:00 PM	21	14	8	12	55	22	20	13	16	71	126
7:00 PM	16	9	8	18	51	14	11	14	12	51	102
8:00 PM	24	22	16	11	73	4	3	5	2	14	87
9:00 PM	27	13	14	9	63	4	2	3	3	12	75
10:00 PM	5	3	1	2	11	3	1	0	0	4	15
11:00 PM	2	0	0	0	2	1	1	0	0	2	4
					24-Hour Total					24-Hour Total	24-Hour Total
					832					778	1610

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 308 **Morning PHF:** 0.811

Afternoon Peak Hour: 5:00 PM - 6:00 PM **Afternoon Peak Traffic:** 180 **Afternoon PHF:** 0.901

Street Giddings Street

Intersection Approach South of Riggin Ave

Number of Lanes 2

	Northbound				Movement	Southbound				Movement	Hourly
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	00 - 15	15 - 30	30 - 45	45 - 00	Total	Totals
12:00 AM	1	0	1	0	2	0	2	0	1	3	5
1:00 AM	0	0	1	0	1	0	0	1	1	2	3
2:00 AM	0	1	2	0	3	0	1	0	3	4	7
3:00 AM	1	0	2	0	3	2	2	1	3	8	11
4:00 AM	5	2	4	6	17	2	3	6	9	20	37
5:00 AM	5	4	2	6	17	11	17	13	10	51	68
6:00 AM	7	3	4	5	19	8	11	12	15	46	65
7:00 AM	8	9	28	31	76	11	17	27	33	88	164
8:00 AM	33	36	21	15	105	31	27	20	11	89	194
9:00 AM	15	9	5	6	35	11	8	7	9	35	70
10:00 AM	12	7	7	9	35	12	13	9	7	41	76
11:00 AM	17	16	12	14	59	11	10	15	14	50	109
12:00 PM	16	15	12	11	54	13	17	17	16	63	117
1:00 PM	20	16	13	15	64	16	9	15	22	62	126
2:00 PM	38	29	23	20	110	30	22	19	18	89	199
3:00 PM	38	26	28	31	123	27	25	18	16	86	209
4:00 PM	21	25	17	15	78	17	18	36	24	95	173
5:00 PM	28	33	13	27	101	28	24	21	31	104	205
6:00 PM	18	20	14	15	67	21	23	18	20	82	149
7:00 PM	15	17	16	17	65	15	18	17	15	65	130
8:00 PM	17	19	15	15	66	17	10	14	12	53	119
9:00 PM	21	14	13	15	63	18	8	10	9	45	108
10:00 PM	5	5	4	5	19	4	3	4	1	12	31
11:00 PM	4	3	1	2	10	4	1	2	1	8	18
					24-Hour Total					24-Hour Total	24-Hour Total
					1192					1201	2393

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 246 **Morning PHF:** 0.961

Afternoon Peak Hour: 4:00 PM - 5:00 PM **Afternoon Peak Traffic:** 209 **Afternoon PHF:** 0.804

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

24-Hour Traffic Count Report

Street Riggin Avenue **Date** 11/27/2018

Intersection Approach East of Court St **Weather** Clear

Number of Lanes 4

	Eastbound					Westbound					
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Direction Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Direction Total	Hourly Totals
12:00 AM	16	3	7	5	31	12:00 AM	10	8	6	4	28	59
1:00 AM	5	3	3	2	13	1:00 AM	3	5	7	8	23	36
2:00 AM	4	4	3	1	12	2:00 AM	5	4	7	5	21	33
3:00 AM	4	5	2	2	13	3:00 AM	3	5	4	8	20	33
4:00 AM	6	4	10	15	35	4:00 AM	9	6	10	13	38	73
5:00 AM	17	22	25	26	90	5:00 AM	11	13	17	26	67	157
6:00 AM	37	32	47	41	157	6:00 AM	22	19	34	37	112	269
7:00 AM	35	68	71	80	254	7:00 AM	35	45	100	109	289	543
8:00 AM	107	96	60	41	304	8:00 AM	92	74	46	55	267	571
9:00 AM	45	52	48	43	188	9:00 AM	45	33	51	52	181	369
10:00 AM	33	47	52	66	198	10:00 AM	53	55	42	49	199	397
11:00 AM	55	71	63	53	242	11:00 AM	61	49	46	52	208	450
12:00 PM	58	42	47	52	199	12:00 PM	65	69	54	63	251	450
1:00 PM	58	67	63	71	259	1:00 PM	72	53	62	77	264	523
2:00 PM	78	75	76	54	283	2:00 PM	69	87	82	83	321	604
3:00 PM	90	88	123	111	412	3:00 PM	96	103	109	97	405	817
4:00 PM	83	90	93	99	365	4:00 PM	97	92	77	93	359	724
5:00 PM	107	90	93	103	393	5:00 PM	86	93	99	111	389	782
6:00 PM	99	97	76	73	345	6:00 PM	99	83	72	72	326	671
7:00 PM	82	83	71	54	290	7:00 PM	65	63	60	61	249	539
8:00 PM	65	71	50	46	232	8:00 PM	72	61	58	66	257	489
9:00 PM	60	55	28	29	172	9:00 PM	61	52	44	33	190	362
10:00 PM	21	15	21	20	77	10:00 PM	35	27	23	22	107	184
11:00 PM	15	11	13	8	47	11:00 PM	18	10	11	16	55	102
				24-Hour Total	4611					24-Hour Total	4626	24-Hour Total 9237

Morning Peak Hour: 9:00 AM - 10:00 AM **Morning Peak Traffic:** 729 **Morning PHF:** 0.916

Afternoon Peak Hour: 3:00 PM - 4:00 PM **Afternoon Peak Traffic:** 817 **Afternoon PHF:** 0.880

Street Riggin Avenue

Intersection Approach West of Court St

Number of Lanes 4

	Eastbound					Westbound					
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Movement Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Movement Total	Hourly Totals
12:00 AM	12	1	5	2	20	12:00 AM	10	6	5	0	21	41
1:00 AM	7	5	5	2	19	1:00 AM	3	8	9	10	30	49
2:00 AM	3	5	2	1	11	2:00 AM	2	2	5	4	13	24
3:00 AM	6	7	3	2	18	3:00 AM	2	6	2	7	17	35
4:00 AM	3	6	8	16	33	4:00 AM	8	6	7	14	35	68
5:00 AM	23	22	27	29	101	5:00 AM	13	16	19	29	77	178
6:00 AM	29	25	43	32	129	6:00 AM	19	16	30	34	99	228
7:00 AM	25	68	55	94	242	7:00 AM	37	60	84	122	303	545
8:00 AM	90	110	45	52	297	8:00 AM	69	87	34	65	255	552
9:00 AM	52	56	49	43	200	9:00 AM	55	32	56	54	197	397
10:00 AM	25	45	41	55	166	10:00 AM	45	52	27	45	169	335
11:00 AM	59	79	73	60	271	11:00 AM	65	52	47	58	222	493
12:00 PM	58	41	48	47	194	12:00 PM	56	51	41	44	192	386
1:00 PM	48	74	55	83	260	1:00 PM	65	45	55	88	253	513
2:00 PM	89	69	80	53	291	2:00 PM	89	74	90	72	325	616
3:00 PM	82	106	113	123	424	3:00 PM	79	117	95	127	418	842
4:00 PM	69	74	77	81	301	4:00 PM	86	75	57	76	294	595
5:00 PM	103	86	87	110	386	5:00 PM	90	98	99	110	397	783
6:00 PM	96	101	79	63	339	6:00 PM	95	71	62	62	290	629
7:00 PM	81	86	74	54	295	7:00 PM	77	65	54	64	260	555
8:00 PM	56	60	41	42	199	8:00 PM	70	50	48	56	224	423
9:00 PM	53	60	22	37	172	9:00 PM	55	64	37	41	197	369
10:00 PM	16	11	16	17	60	10:00 PM	29	17	17	19	82	142
11:00 PM	19	15	14	11	59	11:00 PM	24	14	14	18	70	129
				24-Hour Total	4487					24-Hour Total	4440	24-Hour Total 8927

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 656 **Morning PHF:** 0.823

Afternoon Peak Hour: 3:00 PM - 4:00 PM **Afternoon Peak Traffic:** 878 **Afternoon PHF:** 0.842

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

24-Hour Traffic Count Report

Street Riggin Avenue **Date** 11/27/2018

Intersection Approach East of Giddings St **Weather** Clear

Number of Lanes 2

	Eastbound				Direction	Westbound				Direction	Hourly
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Totals
12:00 AM	13	9	6	11	39	12:00 AM	10	9	6	4	29	68
1:00 AM	6	5	7	4	22	1:00 AM	4	6	5	4	19	41
2:00 AM	5	4	9	3	21	2:00 AM	3	2	7	6	18	39
3:00 AM	11	6	9	12	38	3:00 AM	7	5	7	13	32	70
4:00 AM	16	6	30	21	73	4:00 AM	14	8	26	12	60	133
5:00 AM	16	17	55	35	123	5:00 AM	25	15	29	43	112	235
6:00 AM	48	44	56	59	207	6:00 AM	42	44	63	82	231	438
7:00 AM	59	60	112	144	375	7:00 AM	69	88	155	163	475	850
8:00 AM	95	116	90	82	383	8:00 AM	116	100	78	75	369	752
9:00 AM	57	69	64	61	251	9:00 AM	64	53	61	73	251	502
10:00 AM	71	58	74	77	280	10:00 AM	83	91	70	77	321	601
11:00 AM	86	94	76	64	320	11:00 AM	74	64	72	79	289	609
12:00 PM	106	89	103	81	379	12:00 PM	108	99	99	101	407	786
1:00 PM	100	97	91	103	391	1:00 PM	84	92	102	115	393	784
2:00 PM	119	133	118	96	466	2:00 PM	98	126	121	97	442	908
3:00 PM	123	95	170	126	514	3:00 PM	123	119	150	108	500	1014
4:00 PM	147	157	161	133	598	4:00 PM	127	128	149	144	548	1146
5:00 PM	161	124	134	122	541	5:00 PM	131	129	122	149	531	1072
6:00 PM	128	136	108	99	471	6:00 PM	116	112	101	108	437	908
7:00 PM	119	114	102	91	426	7:00 PM	75	72	76	85	308	734
8:00 PM	107	115	115	114	451	8:00 PM	83	82	86	74	325	776
9:00 PM	85	75	63	54	277	9:00 PM	72	63	32	55	222	499
10:00 PM	39	38	28	31	136	10:00 PM	41	38	44	26	149	285
11:00 PM	21	25	18	16	80	11:00 PM	23	8	7	12	50	130
				24-Hour Total	6862					24-Hour Total	6518	24-Hour Total 13380

Morning Peak Hour: 9:00 AM - 10:00 AM **Morning Peak Traffic:** **Morning PHF:** 1.186

Afternoon Peak Hour: 3:00 PM - 4:00 PM **Afternoon Peak Traffic:** **Afternoon PHF:** 0.792

Street Riggin Avenue

Intersection Approach West of Giddings St

Number of Lanes 2

	Eastbound				Movement	Westbound				Movement	Hourly
Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Hour	00 - 15	15 - 30	30 - 45	45 - 00	Total	Totals
12:00 AM	12	10	5	11	38	12:00 AM	10	7	6	4	27	65
1:00 AM	6	5	8	5	24	1:00 AM	4	6	6	4	20	44
2:00 AM	5	3	7	3	18	2:00 AM	3	2	7	3	15	33
3:00 AM	10	7	7	12	36	3:00 AM	5	5	7	10	27	63
4:00 AM	12	8	27	28	75	4:00 AM	12	8	20	17	57	132
5:00 AM	25	33	65	43	166	5:00 AM	29	19	29	47	124	290
6:00 AM	42	43	53	57	195	6:00 AM	37	44	55	69	205	400
7:00 AM	58	61	100	131	350	7:00 AM	65	82	157	162	466	816
8:00 AM	98	111	90	84	383	8:00 AM	144	98	70	82	394	777
9:00 AM	61	71	68	57	257	9:00 AM	75	56	62	77	270	527
10:00 AM	65	58	69	73	265	10:00 AM	74	81	66	73	294	559
11:00 AM	89	100	88	74	351	11:00 AM	84	75	81	84	324	675
12:00 PM	97	82	101	76	356	12:00 PM	101	91	85	93	370	726
1:00 PM	88	90	99	107	384	1:00 PM	73	89	109	119	390	774
2:00 PM	116	138	109	101	464	2:00 PM	105	126	108	105	444	908
3:00 PM	120	117	151	135	523	3:00 PM	112	134	136	129	511	1034
4:00 PM	136	140	153	126	555	4:00 PM	115	121	122	136	494	1049
5:00 PM	151	125	133	119	528	5:00 PM	131	145	126	153	555	1083
6:00 PM	131	130	102	96	459	6:00 PM	117	109	96	104	426	885
7:00 PM	120	121	105	94	440	7:00 PM	74	80	84	84	322	762
8:00 PM	114	118	116	110	458	8:00 PM	70	75	77	64	286	744
9:00 PM	99	74	70	48	291	9:00 PM	66	57	31	49	203	494
10:00 PM	39	36	25	28	128	10:00 PM	40	36	40	25	141	269
11:00 PM	24	25	20	17	86	11:00 PM	25	11	8	14	58	144
				24-Hour Total	6830					24-Hour Total	6423	24-Hour Total 13253

Morning Peak Hour: 7:30 AM - 8:30 AM **Morning Peak Traffic:** 1001 **Morning PHF:** 0.854

Afternoon Peak Hour: 4:30 PM - 5:30 PM **Afternoon Peak Traffic:** 1089 **Afternoon PHF:** 0.965

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Dinuba Blvd

E/W Street Avenue 320

Intersection Control Two-way stop

Date 11/27/2018

Weather AM: Clear & PM: Clear

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Avenue 320				Westbound Avenue 320			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	2	2	40	2	4	9	60	0	0	0	1	1	1	5	5	5
7:15 AM - 7:30 AM	2	2	57	6	1	4	72	0	0	2	1	4	0	8	0	7
7:30 AM - 7:45 AM	0	2	65	7	1	9	128	0	0	1	1	4	0	11	0	4
7:45 AM - 8:00 AM	2	2	65	23	1	11	135	1	0	0	2	2	1	17	2	2
8:00 AM - 8:15 AM	3	4	69	9	3	12	99	0	0	1	1	7	1	16	4	15
8:15 AM - 8:30 AM	5	3	51	3	1	8	94	0	0	1	0	3	0	7	0	5
8:30 AM - 8:45 AM	1	2	61	9	3	5	89	0	0	0	0	2	0	4	1	4
8:45 AM - 9:00 AM	4	3	64	5	3	9	95	0	0	0	1	0	0	4	0	3
TOTAL	19	20	472	64	17	67	772	1	0	5	7	23	3	72	12	45

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Avenue 320				Westbound Avenue 320			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	0	5	111	12	5	6	127	0	0	0	0	0	0	4	1	8
4:15 PM - 4:30 PM	2	6	121	13	6	2	114	2	0	0	0	0	0	7	2	6
4:30 PM - 4:45 PM	1	5	112	7	3	7	125	3	0	0	0	3	0	5	0	7
4:45 PM - 5:00 PM	4	7	120	8	3	1	125	0	0	1	0	2	0	7	1	8
5:00 PM - 5:15 PM	1	5	151	14	1	4	105	0	1	0	1	5	0	4	1	5
5:15 PM - 5:30 PM	0	5	113	6	2	6	94	0	0	0	0	3	0	2	0	4
5:30 PM - 5:45 PM	0	6	123	10	2	8	107	0	0	0	1	6	0	5	2	6
5:45 PM - 6:00 PM	0	7	102	16	2	2	94	0	0	1	1	0	0	3	0	6
TOTAL	8	46	953	86	24	36	891	5	1	2	3	19	0	37	7	50

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Avenue 320				Westbound Avenue 320			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	10	11	250	42	6	40	456	1	0	3	4	16	2	51	6	26
4:15 PM - 5:15 PM	8	23	504	42	13	14	469	5	1	1	1	10	0	23	4	26

	PHF	Trucks	NB Dinuba Blvd PHF	SB Dinuba Blvd PHF	EB Ave 320 PHF	WB Ave 320 PHF
Morning Rush Hour	0.865	2.0%	0.842	0.845	0.639	0.593
Afternoon Rush Hour	0.951	2.0%	0.837	0.904	0.500	0.828

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Ave 320	WB Ave 320
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	1	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	1	0	0
8:00 AM - 8:15 AM	1	1	0	0
8:15 AM - 8:30 AM	1	0	0	1
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	1	0	0
TOTAL	2	4	0	1

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Ave 320	WB Ave 320
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	0	0
4:15 PM - 4:30 PM	1	0	0	0
4:30 PM - 4:45 PM	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0
TOTAL	1	0	0	0

	Ped PHF
Morning Rush Hour	0.625
Afternoon Rush Hour	0.250

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Court Street

E/W Street Ferguson Avenue

Intersection Control Four-way stop

Date 10/30/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Court Street				Southbound Court Street				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	2	4	13	3	2	1	12	5	1	4	3	1	0	1	5	1
7:15 AM - 7:30 AM	2	9	19	3	1	4	13	5	0	1	3	5	0	1	4	2
7:30 AM - 7:45 AM	2	9	10	6	0	16	15	8	0	3	11	8	0	11	12	10
7:45 AM - 8:00 AM	0	13	15	10	1	12	40	10	0	8	17	24	1	14	9	10
8:00 AM - 8:15 AM	1	7	22	20	0	16	18	11	0	5	16	13	0	28	35	21
8:15 AM - 8:30 AM	1	11	15	5	1	4	16	5	0	4	12	9	0	11	9	15
8:30 AM - 8:45 AM	1	7	16	0	0	2	19	5	0	0	3	3	0	2	7	1
8:45 AM - 9:00 AM	1	3	8	0	2	0	14	4	1	1	3	4	1	1	3	0
TOTAL	10	63	118	47	7	55	147	53	2	26	68	67	2	69	84	60

Direction	Northbound Court Street				Southbound Court Street				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	1	7	27	3	0	5	29	9	1	11	9	12	0	4	8	7
4:15 PM - 4:30 PM	0	9	27	2	2	3	21	4	1	6	8	10	0	2	9	4
4:30 PM - 4:45 PM	1	14	22	1	0	2	22	11	0	4	12	10	0	1	2	3
4:45 PM - 5:00 PM	0	8	35	1	1	0	25	8	0	3	12	8	0	2	10	1
5:00 PM - 5:15 PM	1	7	26	1	0	1	16	6	0	4	9	14	0	2	5	3
5:15 PM - 5:30 PM	0	12	22	1	1	2	27	6	0	11	10	20	0	1	4	1
5:30 PM - 5:45 PM	1	19	39	4	1	5	17	9	0	8	10	6	0	4	6	0
5:45 PM - 6:00 PM	0	9	16	9	1	3	21	9	0	3	9	14	0	5	13	5
TOTAL	4	85	214	22	6	21	178	62	2	50	79	94	0	21	57	24

Direction	Northbound Court Street				Southbound Court Street				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	4	40	62	41	2	48	89	34	0	20	56	54	1	64	65	56
5:00 PM - 6:00 PM	2	47	103	15	3	11	81	30	0	26	38	54	0	12	28	9

	PHF	Trucks	NB Court St PHF	SB Court St PHF	EB Ferguson Ave PHF	WB Ferguson Ave PHF
Morning Rush Hour	0.742	1.1%	0.730	0.690	0.663	0.551
Afternoon Rush Hour	0.894	1.1%	0.665	0.871	0.720	0.533

Direction	NB Court St	SB Court St	EB Ferguson Ave	WB Ferguson Ave
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	1	2	1	0
7:30 AM - 7:45 AM	0	5	7	3
7:45 AM - 8:00 AM	0	13	20	4
8:00 AM - 8:15 AM	12	21	7	3
8:15 AM - 8:30 AM	3	0	0	0
8:30 AM - 8:45 AM	0	1	2	0
8:45 AM - 9:00 AM	0	1	0	0
TOTAL	16	43	37	10

Direction	NB Court St	SB Court St	EB Ferguson Ave	WB Ferguson Ave
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	0	1
4:15 PM - 4:30 PM	0	11	7	0
4:30 PM - 4:45 PM	7	0	3	0
4:45 PM - 5:00 PM	0	0	1	1
5:00 PM - 5:15 PM	0	1	1	0
5:15 PM - 5:30 PM	0	0	0	1
5:30 PM - 5:45 PM	4	0	0	2
5:45 PM - 6:00 PM	7	0	0	6
TOTAL	18	12	12	11

	Ped PHF
Morning Rush Hour	0.576
Afternoon Rush Hour	0.444

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Dinuba Blvd

E/W Street Ferguson Avenue

Intersection Control Signalized intersection

Date 11/14/2018

Weather AM: Sunny & PM: Sunny

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	1	11	68	2	4	2	96	7	1	6	1	21	1	2	7	2
7:15 AM - 7:30 AM	6	11	63	4	4	1	104	5	1	11	11	44	1	8	7	5
7:30 AM - 7:45 AM	2	9	90	1	2	10	150	7	1	11	21	57	0	10	8	9
7:45 AM - 8:00 AM	8	14	83	8	3	0	263	10	2	30	20	105	0	21	14	10
8:00 AM - 8:15 AM	3	21	118	8	2	6	188	16	3	28	23	65	3	12	17	14
8:15 AM - 8:30 AM	2	14	102	8	3	4	139	10	3	20	15	46	1	11	11	5
8:30 AM - 8:45 AM	6	14	65	6	2	0	123	13	0	13	15	32	0	2	6	3
8:45 AM - 9:00 AM	5	9	62	4	5	0	131	6	1	18	13	30	1	4	7	2
TOTAL	33	103	651	41	25	23	1194	74	12	137	119	400	7	70	77	50

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	7	32	176	4	4	3	135	17	0	30	11	35	0	11	13	8
4:15 PM - 4:30 PM	4	29	149	6	1	7	148	16	0	31	25	36	0	4	12	9
4:30 PM - 4:45 PM	0	35	149	6	4	2	160	28	1	25	29	26	0	9	15	10
4:45 PM - 5:00 PM	1	28	179	6	3	4	109	18	0	23	29	29	0	7	18	10
5:00 PM - 5:15 PM	1	36	200	7	3	6	142	14	0	40	20	31	2	8	26	5
5:15 PM - 5:30 PM	5	40	194	3	0	10	137	23	0	20	25	46	0	17	16	2
5:30 PM - 5:45 PM	2	40	187	7	3	5	150	26	0	30	23	33	3	7	24	7
5:45 PM - 6:00 PM	4	32	160	4	3	9	135	16	0	20	33	40	0	10	13	4
TOTAL	24	272	1394	43	21	46	1116	158	1	219	195	276	5	73	137	55

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	15	58	393	25	10	20	740	43	9	89	79	273	4	54	50	38
5:00 PM - 6:00 PM	12	148	741	21	9	30	564	79	0	110	101	150	5	42	79	18

	PHF	Trucks	NB Dinuba Blvd PHF	SB Dinuba Blvd PHF	EB Ferguson Ave PHF	WB Ferguson Ave PHF
Morning Rush Hour	0.805	2.0%	0.810	0.735	0.711	0.789
Afternoon Rush Hour	0.966	1.2%	0.936	0.930	0.970	0.891

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Ferguson Ave	WB Ferguson Ave
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	1	2	1	0
7:15 AM - 7:30 AM	1	3	0	0
7:30 AM - 7:45 AM	2	2	2	1
7:45 AM - 8:00 AM	3	1	0	0
8:00 AM - 8:15 AM	0	2	0	0
8:15 AM - 8:30 AM	4	1	0	1
8:30 AM - 8:45 AM	1	1	1	0
8:45 AM - 9:00 AM	1	2	1	1
TOTAL	13	14	5	3

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Ferguson Ave	WB Ferguson Ave
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	3	3	2	0
4:15 PM - 4:30 PM	2	5	4	5
4:30 PM - 4:45 PM	3	7	2	4
4:45 PM - 5:00 PM	3	7	2	1
5:00 PM - 5:15 PM	2	1	3	0
5:15 PM - 5:30 PM	1	3	1	2
5:30 PM - 5:45 PM	4	3	2	1
5:45 PM - 6:00 PM	2	3	2	0
TOTAL	20	32	18	13

	Ped PHF
Morning Rush Hour	0.679
Afternoon Rush Hour	0.828

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Giddings Street

E/W Street Ferguson Avenue

Intersection Control Four-way stop

Date 10/31/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	0	9	9	5	2	1	12	6	1	3	18	4	0	4	31	4
7:15 AM - 7:30 AM	2	4	10	2	1	5	14	4	2	7	24	7	3	14	42	8
7:30 AM - 7:45 AM	0	5	29	5	0	13	41	8	1	6	24	11	3	6	58	16
7:45 AM - 8:00 AM	0	8	51	8	0	12	45	21	0	16	31	12	1	14	102	24
8:00 AM - 8:15 AM	0	11	49	12	2	26	42	20	1	21	71	14	1	8	39	14
8:15 AM - 8:30 AM	1	7	36	11	1	15	42	10	2	11	55	9	1	6	26	7
8:30 AM - 8:45 AM	1	3	14	3	1	8	18	9	1	6	39	6	2	7	26	1
8:45 AM - 9:00 AM	2	4	9	5	0	4	13	6	2	5	35	1	2	6	21	8
TOTAL	6	51	207	51	7	84	227	84	10	75	297	64	13	65	345	82

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	2	6	16	6	1	6	22	13	0	4	48	8	2	11	61	10
4:15 PM - 4:30 PM	1	4	16	9	2	10	18	11	2	10	49	8	1	9	58	6
4:30 PM - 4:45 PM	0	11	24	6	1	12	20	7	0	4	41	12	0	7	48	8
4:45 PM - 5:00 PM	1	5	24	9	0	11	20	10	0	8	49	7	0	7	52	8
5:00 PM - 5:15 PM	1	14	21	9	1	12	34	14	0	9	35	5	0	10	70	15
5:15 PM - 5:30 PM	1	9	30	8	0	9	16	13	1	7	48	8	1	11	76	15
5:30 PM - 5:45 PM	0	5	18	13	1	6	20	11	0	12	47	10	1	9	73	11
5:45 PM - 6:00 PM	1	14	28	12	1	11	31	14	0	20	52	10	0	7	95	14
TOTAL	7	68	177	72	7	77	181	93	3	74	369	68	5	71	533	87

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Ferguson Avenue				Westbound Ferguson Avenue			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	1	31	165	36	3	66	170	59	4	54	181	46	6	34	225	61
5:00 PM - 6:00 PM	3	42	97	42	3	38	101	52	1	48	182	33	2	37	314	55

	PHF	Trucks	NB Giddings St PHF	SB Giddings St PHF	EB Ferguson Ave PHF	WB Ferguson Ave PHF
Morning Rush Hour	0.820	1.2%	0.806	0.838	0.663	0.571
Afternoon Rush Hour	0.845	0.9%	0.838	0.796	0.802	0.875

Direction	NB Giddings St	SB Giddings St	EB Ferguson Ave	WB Ferguson Ave
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	1	0	0	0
7:15 AM - 7:30 AM	3	0	2	0
7:30 AM - 7:45 AM	1	0	0	4
7:45 AM - 8:00 AM	2	0	0	6
8:00 AM - 8:15 AM	3	0	0	0
8:15 AM - 8:30 AM	0	0	0	2
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	2	1	1	0
TOTAL	12	1	3	12

Direction	NB Giddings St	SB Giddings St	EB Ferguson Ave	WB Ferguson Ave
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	2	6	0	0
4:15 PM - 4:30 PM	4	0	5	1
4:30 PM - 4:45 PM	0	1	1	0
4:45 PM - 5:00 PM	0	0	2	0
5:00 PM - 5:15 PM	0	1	1	1
5:15 PM - 5:30 PM	1	6	0	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	1	2	2	0
TOTAL	8	16	11	2

	Ped PHF
Morning Rush Hour	0.656
Afternoon Rush Hour	0.550

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

Traffic Count Report

N/S Street Court Street

E/W Street Riggin Avenue

Intersection Control Two-way stop

Date 10/25/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Court Street				Southbound Court Street				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	0	5	1	3	1	2	0	0	3	2	48	3	3	10	42	2
7:15 AM - 7:30 AM	1	7	1	5	1	1	2	0	4	4	57	5	1	9	53	4
7:30 AM - 7:45 AM	2	10	4	6	1	3	3	0	3	6	73	7	2	6	74	2
7:45 AM - 8:00 AM	0	7	2	4	2	2	1	1	4	4	75	5	1	8	72	3
8:00 AM - 8:15 AM	0	9	1	6	1	7	4	0	3	6	86	9	5	5	78	5
8:15 AM - 8:30 AM	0	10	4	3	1	7	5	1	5	7	76	8	4	7	77	3
8:30 AM - 8:45 AM	0	5	2	7	1	5	2	0	2	4	74	5	4	9	68	4
8:45 AM - 9:00 AM	0	9	3	5	2	4	1	0	1	4	68	4	2	6	45	4
TOTAL	3	62	18	39	10	31	18	2	25	37	557	46	22	60	509	27

Direction	Northbound Court Street				Southbound Court Street				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	1	12	7	6	0	9	6	3	4	10	56	16	3	6	86	10
4:15 PM - 4:30 PM	1	9	6	5	0	16	2	1	1	12	63	11	3	5	59	9
4:30 PM - 4:45 PM	1	7	6	4	0	7	5	1	4	11	65	4	1	12	76	8
4:45 PM - 5:00 PM	0	14	8	5	2	8	3	0	2	5	60	15	3	11	92	5
5:00 PM - 5:15 PM	0	16	8	9	0	19	6	1	1	15	71	7	1	12	87	13
5:15 PM - 5:30 PM	0	7	2	13	1	5	4	9	0	12	85	16	0	8	93	8
5:30 PM - 5:45 PM	0	11	11	16	0	17	3	2	1	13	72	18	2	7	86	16
5:45 PM - 6:00 PM	0	9	8	10	2	8	8	0	1	12	78	14	1	9	92	7
TOTAL	3	85	56	68	5	89	37	17	14	90	550	101	14	70	671	76

Direction	Northbound Court Street				Southbound Court Street				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	2	36	11	19	5	19	13	2	15	23	310	29	12	26	301	13
5:00 PM - 6:00 PM	0	43	29	48	3	49	21	12	3	52	306	55	4	36	358	44

	PHF	Trucks	NB Court St PHF	SB Court St PHF	EB Riggin Ave PHF	WB Riggin Ave PHF
Morning Rush Hour	0.928	4.2%	0.825	0.654	0.896	0.966
Afternoon Rush Hour	0.968	0.9%	0.789	0.788	0.914	0.978

Direction	NB Court St	SB Court St	EB Riggin Ave	WB Riggin Ave
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	1	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	0	1	0
8:00 AM - 8:15 AM	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	1	0	1	0

Direction	NB Court St	SB Court St	EB Riggin Ave	WB Riggin Ave
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	2	0
4:15 PM - 4:30 PM	1	1	0	0
4:30 PM - 4:45 PM	2	0	2	1
4:45 PM - 5:00 PM	0	0	0	1
5:00 PM - 5:15 PM	0	0	1	1
5:15 PM - 5:30 PM	0	2	0	1
5:30 PM - 5:45 PM	0	2	0	0
5:45 PM - 6:00 PM	0	1	7	0
TOTAL	3	6	12	4

	Ped PHF
Morning Rush Hour	0.500
Afternoon Rush Hour	0.469

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Dinuba Blvd

E/W Street Riggin Avenue

Intersection Control Signalized intersection

Date 11/13/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	7	10	45	5	2	11	48	12	6	20	40	19	3	16	35	6
7:15 AM - 7:30 AM	5	12	53	4	3	15	63	22	4	23	49	21	4	18	26	4
7:30 AM - 7:45 AM	3	18	65	4	2	18	94	19	4	28	68	35	4	23	51	5
7:45 AM - 8:00 AM	7	21	66	11	1	17	122	23	2	37	84	56	8	30	72	10
8:00 AM - 8:15 AM	4	32	64	9	3	24	80	25	1	36	81	31	6	22	81	12
8:15 AM - 8:30 AM	3	28	72	8	2	15	65	20	3	41	76	41	3	30	53	7
8:30 AM - 8:45 AM	5	22	73	10	3	7	73	16	2	22	40	18	5	27	41	11
8:45 AM - 9:00 AM	6	24	68	9	1	6	56	13	1	34	37	20	6	28	33	7
TOTAL	40	167	506	60	17	113	601	150	23	241	475	241	39	194	392	62

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	2	50	113	11	3	19	80	21	2	41	48	22	3	43	91	10
4:15 PM - 4:30 PM	3	29	110	14	4	18	78	27	2	41	62	21	3	40	73	7
4:30 PM - 4:45 PM	3	23	122	12	3	11	77	18	1	37	55	25	1	32	58	8
4:45 PM - 5:00 PM	2	40	120	23	2	10	70	25	0	44	57	23	2	38	69	11
5:00 PM - 5:15 PM	0	38	161	19	2	19	98	26	3	45	61	11	0	30	87	15
5:15 PM - 5:30 PM	3	42	174	8	1	22	87	27	3	46	74	17	1	37	65	12
5:30 PM - 5:45 PM	2	37	142	6	1	21	90	22	3	45	60	24	1	34	84	9
5:45 PM - 6:00 PM	1	29	159	10	0	25	70	30	2	45	45	19	4	46	78	17
TOTAL	16	288	1101	103	16	145	650	196	16	344	462	162	15	300	605	89

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	17	99	267	32	8	74	361	87	10	142	309	163	21	105	257	34
5:00 PM - 6:00 PM	6	146	636	43	4	87	345	105	11	181	240	71	6	147	314	53

	PHF	Trucks	NB Dinuba Blvd PHF	SB Dinuba Blvd PHF	EB Riggin Ave PHF	WB Riggin Ave PHF
Morning Rush Hour	0.879	2.9%	0.921	0.806	0.867	0.861
Afternoon Rush Hour	0.969	1.1%	0.921	0.939	0.898	0.911

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Riggin Ave	WB Riggin Ave
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	2	1
7:30 AM - 7:45 AM	0	2	3	2
7:45 AM - 8:00 AM	2	0	2	0
8:00 AM - 8:15 AM	0	1	1	1
8:15 AM - 8:30 AM	1	1	0	2
8:30 AM - 8:45 AM	0	0	2	0
8:45 AM - 9:00 AM	0	2	1	0
TOTAL	3	6	11	6

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Riggin Ave	WB Riggin Ave
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	2	3	0
4:15 PM - 4:30 PM	1	0	2	1
4:30 PM - 4:45 PM	0	0	2	0
4:45 PM - 5:00 PM	0	1	0	0
5:00 PM - 5:15 PM	1	2	0	1
5:15 PM - 5:30 PM	0	0	1	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	2
TOTAL	2	5	8	4

	Ped PHF
Morning Rush Hour	0.643
Afternoon Rush Hour	0.600

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Giddings Street

E/W Street Riggin Avenue

Intersection Control Two-way stop

Date 11/1/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	1	4	1	5	0	0	0	0	10	6	67	0	2	2	52	1
7:15 AM - 7:30 AM	2	2	2	8	2	2	1	1	2	5	88	4	4	7	69	5
7:30 AM - 7:45 AM	2	4	14	7	0	2	11	7	5	16	133	10	5	6	75	9
7:45 AM - 8:00 AM	1	5	16	19	0	0	17	10	2	16	149	9	4	10	117	18
8:00 AM - 8:15 AM	1	4	17	5	0	0	26	14	7	27	122	11	10	6	99	22
8:15 AM - 8:30 AM	0	1	9	9	0	2	18	10	2	6	125	8	4	5	84	7
8:30 AM - 8:45 AM	1	3	4	5	0	0	4	7	6	1	82	3	4	6	72	1
8:45 AM - 9:00 AM	1	3	1	7	0	2	1	1	3	1	78	1	4	6	63	1
TOTAL	9	26	64	65	2	8	78	50	37	78	844	46	37	48	631	64

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	1	2	19	8	0	1	4	6	3	4	82	6	7	14	91	1
4:15 PM - 4:30 PM	1	10	1	9	0	0	0	4	0	8	79	11	3	11	139	4
4:30 PM - 4:45 PM	0	6	4	16	0	1	5	6	4	4	113	6	5	9	136	2
4:45 PM - 5:00 PM	1	3	12	13	0	1	2	7	2	18	128	4	3	11	116	2
5:00 PM - 5:15 PM	0	1	12	14	0	0	11	15	3	25	105	6	2	19	155	5
5:15 PM - 5:30 PM	1	7	8	14	0	1	7	10	0	15	114	2	0	13	159	2
5:30 PM - 5:45 PM	1	5	9	10	0	1	9	2	2	15	105	8	0	24	135	5
5:45 PM - 6:00 PM	1	3	3	17	0	2	4	4	2	12	113	6	0	16	123	6
TOTAL	6	37	68	101	0	7	42	54	16	101	839	49	20	117	1054	27

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Riggin Avenue				Westbound Riggin Avenue			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	4	14	56	40	0	4	72	41	16	65	529	38	23	27	375	56
4:45 PM - 5:45 PM	3	16	41	51	0	3	29	34	7	73	452	20	5	67	565	14

	PHF	Trucks	NB Giddings St PHF	SB Giddings St PHF	EB Riggin Ave PHF	WB Riggin Ave PHF
Morning Rush Hour	0.853	3.3%	0.688	0.731	0.908	0.790
Afternoon Rush Hour	0.927	1.1%	0.931	0.635	0.908	0.902

Direction	NB Giddings St	SB Giddings St	EB Riggin Ave	WB Riggin Ave
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0
8:00 AM - 8:15 AM	4	0	0	0
8:15 AM - 8:30 AM	0	2	1	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	4	2	1	0

Direction	NB Giddings St	SB Giddings St	EB Riggin Ave	WB Riggin Ave
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	0	0
4:15 PM - 4:30 PM	1	0	1	0
4:30 PM - 4:45 PM	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0
5:00 PM - 5:15 PM	1	0	0	0
5:15 PM - 5:30 PM	0	0	1	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0
TOTAL	2	0	2	0

	Ped PHF
Morning Rush Hour	0.438
Afternoon Rush Hour	0.375

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Dinuba Blvd

E/W Street Riverway Drive

Intersection Control One-way stop

Date 11/7/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riverway Drive				Westbound Riverway Drive			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	5	2	54	0	2	0	77	5	1	7	0	2	0	0	0	0
7:15 AM - 7:30 AM	2	1	63	0	3	0	100	3	1	7	0	4	0	0	0	0
7:30 AM - 7:45 AM	3	1	81	0	1	0	121	15	0	6	0	8	0	0	0	0
7:45 AM - 8:00 AM	4	3	68	0	2	0	154	16	0	11	0	13	0	0	0	0
8:00 AM - 8:15 AM	2	5	73	0	3	0	136	20	1	13	0	12	0	0	0	0
8:15 AM - 8:30 AM	1	4	76	0	3	0	96	4	0	14	0	6	0	0	0	0
8:30 AM - 8:45 AM	4	2	63	0	2	0	88	2	0	5	0	5	0	0	0	0
8:45 AM - 9:00 AM	3	2	72	0	1	0	89	3	0	3	0	4	0	0	0	0
TOTAL	24	20	550	0	17	0	861	68	3	66	0	54	0	0	0	0

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riverway Drive				Westbound Riverway Drive			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	2	4	110	0	6	0	108	8	0	8	0	10	0	0	0	0
4:15 PM - 4:30 PM	4	5	106	0	4	0	138	6	1	8	0	4	0	0	0	0
4:30 PM - 4:45 PM	2	6	140	0	1	0	109	4	0	11	0	8	0	0	0	0
4:45 PM - 5:00 PM	5	8	125	0	0	0	130	11	0	7	0	10	0	0	0	0
5:00 PM - 5:15 PM	4	4	150	0	2	0	140	14	0	9	0	7	0	0	0	0
5:15 PM - 5:30 PM	3	7	144	0	1	0	139	12	0	12	0	5	0	0	0	0
5:30 PM - 5:45 PM	2	6	128	0	0	0	126	7	0	9	0	6	0	0	0	0
5:45 PM - 6:00 PM	1	8	134	0	1	0	136	10	0	7	0	9	0	0	0	0
TOTAL	23	48	1037	0	15	0	1026	72	1	71	0	59	0	0	0	0

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riverway Drive				Westbound Riverway Drive			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	10	13	298	0	9	0	507	55	1	44	0	39	0	0	0	0
5:00 PM - 6:00 PM	10	25	556	0	4	0	541	43	0	37	0	27	0	0	0	0

	PHF	Trucks	NB Dinuba Blvd PHF	SB Dinuba Blvd PHF	EB Riverway Dr PHF	WB Riverway Dr PHF
Morning Rush Hour	0.902	2.1%	0.948	0.826	0.830	N/A
Afternoon Rush Hour	0.948	1.1%	0.943	0.948	0.941	N/A

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Riverway Dr	WB Riverway Dr
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	1	0	0
8:00 AM - 8:15 AM	0	0	1	0
8:15 AM - 8:30 AM	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	0	1	1	0

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Riverway Dr	WB Riverway Dr
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	3	0	0
4:15 PM - 4:30 PM	2	0	0	0
4:30 PM - 4:45 PM	2	1	1	0
4:45 PM - 5:00 PM	0	2	1	0
5:00 PM - 5:15 PM	1	0	0	0
5:15 PM - 5:30 PM	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0
TOTAL	5	6	2	0

	Ped PHF
Morning Rush Hour	0.500
Afternoon Rush Hour	0.750

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Giddings Street

E/W Street Riverway Drive

Intersection Control One-way stop

Date 11/6/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Riverway Drive				Westbound Riverway Drive			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	1	0	7	0	1	0	10	0
7:15 AM - 7:30 AM	1	3	0	0	0	0	0	0	2	0	11	0	0	3	3	0
7:30 AM - 7:45 AM	0	2	0	2	0	0	0	0	0	0	14	10	0	5	12	0
7:45 AM - 8:00 AM	0	3	0	3	0	0	0	0	0	0	20	14	1	10	7	0
8:00 AM - 8:15 AM	0	10	0	7	0	0	0	0	1	0	23	29	0	9	18	0
8:15 AM - 8:30 AM	0	4	0	5	0	0	0	0	0	0	14	7	0	3	11	0
8:30 AM - 8:45 AM	0	0	0	1	0	0	0	0	0	0	12	1	0	0	2	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	10	0
TOTAL	1	22	0	18	0	0	0	0	4	0	108	61	2	30	73	0

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Riverway Drive				Westbound Riverway Drive			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	0	0	0	5	0	0	0	0	0	0	16	4	1	4	10	0
4:15 PM - 4:30 PM	0	4	0	2	0	0	0	0	0	0	12	5	0	2	9	0
4:30 PM - 4:45 PM	0	2	0	3	0	0	0	0	1	0	15	3	0	2	13	0
4:45 PM - 5:00 PM	0	5	0	3	0	0	0	0	0	0	9	10	0	8	19	0
5:00 PM - 5:15 PM	0	7	0	7	0	0	0	0	0	0	13	11	0	13	8	0
5:15 PM - 5:30 PM	0	3	0	9	0	0	0	0	1	0	22	8	0	6	11	0
5:30 PM - 5:45 PM	0	3	0	5	0	0	0	0	0	0	20	9	0	2	6	0
5:45 PM - 6:00 PM	0	1	0	4	0	0	0	0	0	0	19	3	0	3	21	0
TOTAL	0	25	0	38	0	0	0	0	2	0	126	53	1	40	97	0

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Riverway Drive				Westbound Riverway Drive			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	0	19	0	17	0	0	0	0	1	0	71	60	1	27	48	0
4:30 PM - 5:30 PM	0	17	0	22	0	0	0	0	2	0	59	32	0	29	51	0

	PHF	Trucks	NB Giddings St PHF	SB Giddings St PHF	EB Riverway Dr PHF	WB Riverway Dr PHF
Morning Rush Hour	0.630	0.8%	0.529	N/A	0.630	0.694
Afternoon Rush Hour	0.890	1.0%	0.696	N/A	0.758	0.741

Direction	NB Giddings St	SB Giddings St	EB Riverway Dr	WB Riverway Dr
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	0	0	0	0

Direction	NB Giddings St	SB Giddings St	EB Riverway Dr	WB Riverway Dr
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0
TOTAL	0	0	0	0

	Ped PHF
Morning Rush Hour	N/A
Afternoon Rush Hour	N/A

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Dinuba Blvd

E/W Street Riverway Park Driveway

Intersection Control One-way stop

Date 11/8/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riverway Park Driveway				Westbound Riverway Park Driveway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	4	2	60	0	3	0	77	1	0	0	0	2	0	0	0	0
7:15 AM - 7:30 AM	3	1	65	0	2	0	103	1	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	4	2	82	0	4	0	133	0	0	1	0	2	0	0	0	0
7:45 AM - 8:00 AM	3	3	77	0	2	0	172	0	0	0	0	3	0	0	0	0
8:00 AM - 8:15 AM	2	4	76	0	2	0	138	1	0	1	0	3	0	0	0	0
8:15 AM - 8:30 AM	3	5	82	0	0	0	96	2	0	0	0	3	0	0	0	0
8:30 AM - 8:45 AM	2	4	65	0	5	0	93	1	0	1	0	0	0	0	0	0
8:45 AM - 9:00 AM	4	2	70	0	3	0	89	0	0	1	0	1	0	0	0	0
TOTAL	25	23	577	0	21	0	901	6	0	4	0	14	0	0	0	0

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riverway Park Driveway				Westbound Riverway Park Driveway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	2	3	114	0	4	0	119	1	0	1	0	5	0	0	0	0
4:15 PM - 4:30 PM	2	6	113	0	3	0	133	1	0	0	0	3	0	0	0	0
4:30 PM - 4:45 PM	3	5	131	0	3	0	126	2	0	0	0	5	0	0	0	0
4:45 PM - 5:00 PM	1	5	146	0	2	0	122	1	0	2	0	4	0	0	0	0
5:00 PM - 5:15 PM	2	14	148	0	2	0	137	3	0	0	0	10	0	0	0	0
5:15 PM - 5:30 PM	4	16	143	0	1	0	144	2	0	0	0	11	0	0	0	0
5:30 PM - 5:45 PM	2	20	120	0	0	0	123	2	0	2	0	14	0	0	0	0
5:45 PM - 6:00 PM	2	28	155	0	0	0	143	5	0	1	0	10	0	0	0	0
TOTAL	18	97	1070	0	15	0	1047	17	0	6	0	62	0	0	0	0

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Riverway Park Driveway				Westbound Riverway Park Driveway			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	12	14	317	0	8	0	539	3	0	2	0	11	0	0	0	0
5:00 PM - 6:00 PM	10	78	566	0	3	0	547	12	0	3	0	45	0	0	0	0

	PHF	Trucks	NB Dinuba Blvd PHF	SB Dinuba Blvd PHF	EB Riverway Park PHF	WB Riverway Park PHF
Morning Rush Hour	0.869	2.3%	0.951	0.788	0.813	N/A
Afternoon Rush Hour	0.914	1.0%	0.880	0.944	0.750	N/A

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Riverway Park	WB Riverway Park
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	1	0	0
7:30 AM - 7:45 AM	0	0	0	3
7:45 AM - 8:00 AM	2	0	0	4
8:00 AM - 8:15 AM	1	0	0	2
8:15 AM - 8:30 AM	0	0	0	2
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	3	1	0	11

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Riverway Park	WB Riverway Park
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	1	0	3
4:15 PM - 4:30 PM	0	1	0	3
4:30 PM - 4:45 PM	0	0	1	2
4:45 PM - 5:00 PM	0	0	0	0
5:00 PM - 5:15 PM	2	1	0	0
5:15 PM - 5:30 PM	3	0	0	0
5:30 PM - 5:45 PM	0	0	0	1
5:45 PM - 6:00 PM	0	0	0	0
TOTAL	5	3	1	9

	Ped PHF
Morning Rush Hour	0.583
Afternoon Rush Hour	0.688

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

Traffic Count Report

N/S Street Court Street

E/W Street Shannon Parkway

Intersection Control One-way Stop

Date 11/29/2018

Weather AM: Cloudy & PM: Rain

Direction	Northbound Court St				Southbound Court St				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	1	6	0	0	0	0	0	0	0	0	0	4	0	0	0	0
7:15 AM - 7:30 AM	2	3	0	0	0	0	0	0	2	0	0	3	0	0	0	0
7:30 AM - 7:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	1	18	0	0	0	0	0	0	3	0	0	7	0	0	0	0
8:00 AM - 8:15 AM	1	10	0	0	0	0	0	0	1	0	0	9	0	0	0	0
8:15 AM - 8:30 AM	0	10	0	0	0	0	0	0	2	0	0	7	0	0	0	0
8:30 AM - 8:45 AM	1	4	0	0	0	0	0	0	0	0	0	7	0	0	0	0
8:45 AM - 9:00 AM	1	4	0	0	0	0	0	0	2	0	0	1	0	0	0	0
TOTAL	7	61	0	0	0	0	0	0	10	0	0	38	0	0	0	0

Direction	Northbound Court St				Southbound Court St				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	1	13	0	0	0	0	0	0	0	0	0	19	0	0	0	0
4:15 PM - 4:30 PM	1	12	0	0	0	0	0	0	2	0	0	15	0	0	0	0
4:30 PM - 4:45 PM	0	15	0	0	0	0	0	0	0	0	0	16	0	0	0	0
4:45 PM - 5:00 PM	1	6	0	0	0	0	0	0	3	0	0	11	0	0	0	0
5:00 PM - 5:15 PM	1	15	0	0	0	0	0	0	1	0	0	15	0	0	0	0
5:15 PM - 5:30 PM	0	17	0	0	0	0	0	0	2	0	0	11	0	0	0	0
5:30 PM - 5:45 PM	1	11	0	0	0	0	0	0	0	0	0	14	0	0	0	0
5:45 PM - 6:00 PM	1	9	0	0	0	0	0	0	3	0	0	10	0	0	0	0
TOTAL	6	98	0	0	0	0	0	0	11	0	0	111	0	0	0	0

Direction	Northbound Court St				Southbound Court St				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:45 AM - 8:45 AM	3	42	0	0	0	0	0	0	6	0	0	30	0	0	0	0
4:00 PM - 5:00 PM	3	46	0	0	0	0	0	0	5	0	0	61	0	0	0	0

	PHF	Trucks	NB Court St PHF	SB Court St PHF	EB Shannon Pkwy PHF	WB Shannon Pkwy PHF
Morning Rush Hour	0.720	12.5%	0.583	N/A	0.833	N/A
Afternoon Rush Hour	1.342	7.5%	0.767	N/A	0.803	N/A

Direction	NB Court St	SB Court St	EB Shannon Pkwy	WB Shannon Pkwy
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	0	0	0	0

Direction	NB Court St	SB Court St	EB Shannon Pkwy	WB Shannon Pkwy
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0
4:30 PM - 4:45 PM	0	0	1	0
4:45 PM - 5:00 PM	1	0	0	0
5:00 PM - 5:15 PM	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	1	0	0	0
TOTAL	2	0	1	0

	Ped PHF
Morning Rush Hour	N/A
Afternoon Rush Hour	0.500

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Dinuba Blvd

E/W Street Shannon Parkway

Intersection Control Signalized intersection

Date 10/23/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	8	2	55	2	4	2	81	1	0	1	1	4	1	0	1	1
7:15 AM - 7:30 AM	7	8	66	2	5	4	103	1	0	2	2	7	1	2	1	2
7:30 AM - 7:45 AM	3	10	74	1	2	3	138	2	1	2	1	10	1	0	4	7
7:45 AM - 8:00 AM	3	15	66	3	3	8	165	3	0	4	4	16	0	1	2	5
8:00 AM - 8:15 AM	1	4	64	2	3	7	130	4	0	4	8	30	2	2	4	6
8:15 AM - 8:30 AM	2	8	81	1	1	3	92	2	0	2	3	12	1	2	2	5
8:30 AM - 8:45 AM	4	9	70	0	2	5	84	1	0	1	2	3	1	3	2	5
8:45 AM - 9:00 AM	6	4	64	2	5	6	85	0	0	1	1	9	1	1	3	7
TOTAL	34	60	540	13	25	38	878	14	1	17	22	91	8	11	19	38

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	5	10	110	2	4	11	123	2	0	2	2	6	1	5	5	5
4:15 PM - 4:30 PM	6	12	105	2	6	6	128	1	0	2	4	3	1	6	7	11
4:30 PM - 4:45 PM	3	11	131	1	2	5	119	3	0	3	5	2	1	4	3	12
4:45 PM - 5:00 PM	4	19	124	2	2	8	120	3	1	2	3	4	0	4	4	9
5:00 PM - 5:15 PM	3	17	155	4	3	7	135	5	1	2	2	9	2	5	10	11
5:15 PM - 5:30 PM	4	16	144	2	3	6	146	5	0	5	1	6	1	8	6	12
5:30 PM - 5:45 PM	2	15	130	3	0	5	133	2	0	1	4	10	1	10	4	18
5:45 PM - 6:00 PM	3	16	157	2	1	7	134	3	0	4	2	11	1	6	3	18
TOTAL	30	116	1056	18	21	55	1038	24	2	21	23	51	8	48	42	96

Direction	Northbound Dinuba Blvd				Southbound Dinuba Blvd				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	9	37	285	7	9	21	525	11	1	12	16	68	4	5	12	23
5:00 PM - 6:00 PM	12	64	586	11	7	25	548	15	1	12	9	36	5	29	23	59

	PHF	Trucks	NB Dinuba Blvd PHF	SB Dinuba Blvd PHF	EB Shannon Pkwy PHF	WB Shannon Pkwy PHF
Morning Rush Hour	0.875	2.3%	0.914	0.791	0.571	0.833
Afternoon Rush Hour	0.976	1.8%	0.939	0.936	0.838	0.867

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Shannon Pkwy	WB Shannon Pkwy
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	1	0	2	0
7:15 AM - 7:30 AM	0	1	0	1
7:30 AM - 7:45 AM	0	2	0	0
7:45 AM - 8:00 AM	1	0	1	0
8:00 AM - 8:15 AM	1	0	0	1
8:15 AM - 8:30 AM	0	1	0	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	3	4	3	2

Direction	NB Dinuba Blvd	SB Dinuba Blvd	EB Shannon Pkwy	WB Shannon Pkwy
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	1	0	0	1
4:15 PM - 4:30 PM	0	0	0	1
4:30 PM - 4:45 PM	0	2	2	0
4:45 PM - 5:00 PM	2	3	1	0
5:00 PM - 5:15 PM	0	0	0	2
5:15 PM - 5:30 PM	0	1	0	0
5:30 PM - 5:45 PM	0	0	0	1
5:45 PM - 6:00 PM	0	0	1	0
TOTAL	3	6	4	5

	Ped PHF
Morning Rush Hour	0.750
Afternoon Rush Hour	0.542

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

Traffic Count Report

N/S Street Giddings Street

E/W Street Shannon Parkway

Intersection Control Roundabout

Date 10/24/2018

Weather AM: Clear & PM: Sunny

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	0	1	4	0	0	1	1	1	0	1	2	2	0	2	2	1
7:15 AM - 7:30 AM	0	1	13	3	0	3	6	0	0	10	7	4	0	1	1	2
7:30 AM - 7:45 AM	0	0	30	3	1	7	20	10	1	15	6	1	0	1	2	5
7:45 AM - 8:00 AM	1	3	47	4	2	23	23	19	1	32	16	1	0	3	14	16
8:00 AM - 8:15 AM	1	2	49	3	2	25	38	23	0	36	8	10	0	2	10	12
8:15 AM - 8:30 AM	1	2	18	0	0	10	24	15	0	5	2	3	0	1	4	4
8:30 AM - 8:45 AM	0	2	6	2	0	9	6	6	0	1	4	1	0	0	3	2
8:45 AM - 9:00 AM	0	1	4	2	0	2	1	3	0	0	5	1	0	1	2	1
TOTAL	3	12	171	17	5	80	119	77	2	100	50	23	0	11	38	43

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	0	0	8	1	0	1	6	1	0	6	7	2	0	2	8	2
4:15 PM - 4:30 PM	0	0	13	2	0	2	6	4	0	10	8	1	0	2	9	4
4:30 PM - 4:45 PM	0	1	10	2	0	2	4	3	0	15	4	1	1	2	10	3
4:45 PM - 5:00 PM	0	2	23	1	0	1	3	2	0	12	4	2	0	6	12	5
5:00 PM - 5:15 PM	0	1	28	10	0	8	11	12	0	19	6	0	0	4	14	7
5:15 PM - 5:30 PM	0	0	25	4	0	2	7	6	0	9	15	0	0	3	11	6
5:30 PM - 5:45 PM	0	0	20	4	0	1	6	4	0	5	13	1	0	4	10	2
5:45 PM - 6:00 PM	0	0	18	14	0	3	5	2	0	8	18	2	0	2	6	4
TOTAL	0	4	145	38	0	20	48	34	0	84	75	9	1	25	80	33

Direction	Northbound Giddings Street				Southbound Giddings Street				Eastbound Shannon Parkway				Westbound Shannon Parkway			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	3	7	144	10	5	65	105	67	2	88	32	15	0	7	30	37
5:00 PM - 6:00 PM	0	1	91	32	0	14	29	24	0	41	52	3	0	13	41	19

	PHF	Trucks	NB Giddings St PHF	SB Giddings St PHF	EB Shannon Pkwy PHF	WB Shannon Pkwy PHF
Morning Rush Hour	0.696	1.6%	0.745	0.689	0.625	0.561
Afternoon Rush Hour	0.750	0.0%	0.795	0.540	0.857	0.730

Direction	NB Giddings St	SB Giddings St	EB Shannon Pkwy	WB Shannon Pkwy
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	4	0	0	0
8:00 AM - 8:15 AM	0	0	0	0
8:15 AM - 8:30 AM	0	2	0	0
8:30 AM - 8:45 AM	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	4	2	0	0

Direction	NB Giddings St	SB Giddings St	EB Shannon Pkwy	WB Shannon Pkwy
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	0	0	0
4:15 PM - 4:30 PM	0	1	0	0
4:30 PM - 4:45 PM	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0
TOTAL	0	1	0	0

	Ped PHF
Morning Rush Hour	0.375
Afternoon Rush Hour	0.250

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
Phone: 559.429.4747

A & M CONSULTING ENGINEERS

Traffic Count Report

N/S Street Burke Street

E/W Street St John's Parkway

Intersection Control Four-way Stop

Date 11/28/2018

Weather AM: Rain & PM: Rain

Direction	Northbound Burke Street				Southbound Burke Street				Eastbound St John's Parkway				Westbound St John's Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:00 AM - 7:15 AM	0	3	3	3	1	2	5	2	3	2	42	7	3	10	32	1
7:15 AM - 7:30 AM	3	11	1	4	0	5	7	4	2	1	56	7	3	6	39	1
7:30 AM - 7:45 AM	0	14	3	17	0	5	6	6	1	2	76	23	2	19	70	1
7:45 AM - 8:00 AM	1	20	1	30	0	2	5	4	0	5	116	25	7	17	85	1
8:00 AM - 8:15 AM	0	11	5	25	0	0	7	2	6	2	97	22	7	34	85	1
8:15 AM - 8:30 AM	0	13	11	15	0	2	7	0	0	2	84	17	6	11	70	4
8:30 AM - 8:45 AM	0	8	1	4	0	1	1	4	2	3	58	8	5	9	37	2
8:45 AM - 9:00 AM	1	7	0	2	0	3	2	4	4	3	49	5	0	3	36	2
TOTAL	5	87	25	100	1	20	40	26	18	20	578	114	33	109	454	13

Direction	Northbound Burke Street				Southbound Burke Street				Eastbound St John's Parkway				Westbound St John's Parkway			
Time Period	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
4:00 PM - 4:15 PM	0	14	1	11	0	3	2	3	1	4	78	20	3	6	59	6
4:15 PM - 4:30 PM	1	13	6	6	0	3	1	2	1	9	68	16	2	10	57	2
4:30 PM - 4:45 PM	0	13	2	7	0	2	0	0	1	0	76	7	2	6	72	4
4:45 PM - 5:00 PM	0	23	4	6	0	4	1	2	1	5	68	18	2	7	58	3
5:00 PM - 5:15 PM	0	18	5	10	0	3	1	0	2	9	84	9	1	7	85	4
5:15 PM - 5:30 PM	0	24	8	10	0	0	3	1	0	0	80	10	0	6	70	1
5:30 PM - 5:45 PM	1	10	5	4	1	1	2	3	0	6	66	11	2	8	74	5
5:45 PM - 6:00 PM	1	13	5	10	0	1	0	2	1	1	75	18	1	10	49	3
TOTAL	3	128	36	64	1	17	10	13	7	34	595	109	13	60	524	28

Direction	Northbound Burke Street				Southbound Burke Street				Eastbound St John's Parkway				Westbound St John's Parkway			
Peak Hour	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right	Trucks	Left	Through	Right
7:30 AM - 8:30 AM	1	58	20	87	0	9	25	12	7	11	373	87	22	81	310	7
4:45 PM - 5:45 PM	1	75	22	30	1	8	7	6	3	20	298	48	5	28	287	13

	PHF	Trucks	NB Burke St PHF	SB Burke St PHF	EB St John's Pkwy PHF	WB St John's Pkwy PHF
Morning Rush Hour	0.868	2.8%	0.809	0.676	0.807	0.829
Afternoon Rush Hour	0.883	1.2%	0.756	0.750	0.897	0.854

Direction	NB Burke St	SB Burke St	EB St John's Pkwy	WB St John's Pkwy
Time Period	Peds	Peds	Peds	Peds
7:00 AM - 7:15 AM	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	2
8:00 AM - 8:15 AM	0	0	0	0
8:15 AM - 8:30 AM	0	1	0	0
8:30 AM - 8:45 AM	1	0	1	0
8:45 AM - 9:00 AM	0	0	0	0
TOTAL	1	1	1	2

Direction	NB Burke St	SB Burke St	EB St John's Pkwy	WB St John's Pkwy
Time Period	Peds	Peds	Peds	Peds
4:00 PM - 4:15 PM	0	2	1	0
4:15 PM - 4:30 PM	0	2	0	1
4:30 PM - 4:45 PM	0	0	0	2
4:45 PM - 5:00 PM	0	2	1	0
5:00 PM - 5:15 PM	0	2	0	0
5:15 PM - 5:30 PM	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	2
5:45 PM - 6:00 PM	0	0	0	2
TOTAL	0	8	2	7

	Ped PHF
Morning Rush Hour	0.625
Afternoon Rush Hour	0.917

204 E Oak Avenue (Suite 5A) Visalia, CA 93291
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Appendix B

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	4	16	51	6	26	11	250	42	40	456	1
Future Vol, veh/h	3	4	16	51	6	26	11	250	42	40	456	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	4	17	55	7	28	12	272	46	43	496	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	920	925	497	912	902	295	497	0	0	318	0	0
Stage 1	583	583	-	319	319	-	-	-	-	-	-	-
Stage 2	337	342	-	593	583	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	251	269	573	255	277	744	1067	-	-	1242	-	-
Stage 1	498	499	-	693	653	-	-	-	-	-	-	-
Stage 2	677	638	-	492	499	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	229	257	573	236	264	744	1067	-	-	1242	-	-
Mov Cap-2 Maneuver	229	257	-	236	264	-	-	-	-	-	-	-
Stage 1	493	482	-	685	646	-	-	-	-	-	-	-
Stage 2	637	631	-	456	482	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.4	21.8	0.3	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1067	-	-	406	303	1242	-	-
HCM Lane V/C Ratio	0.011	-	-	0.062	0.298	0.035	-	-
HCM Control Delay (s)	8.4	-	-	14.4	21.8	8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.2	0.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	60	27	48	19	17
Future Vol, veh/h	71	60	27	48	19	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	65	29	52	21	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	142	0	220	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	110	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1441	-	768	943
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1441	-	752	943
Mov Cap-2 Maneuver	-	-	-	-	752	-
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	896	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	832	-	-	1441	-
HCM Lane V/C Ratio	0.047	-	-	0.02	-
HCM Control Delay (s)	9.5	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	39	13	298	507	55
Future Vol, veh/h	44	39	13	298	507	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	42	14	324	551	60

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	903	551	551	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	308	534	1019	-	-	0
Stage 1	577	-	-	-	-	0
Stage 2	712	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	303	534	1019	-	-	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1019	-	572	-
HCM Lane V/C Ratio	0.014	-	0.158	-
HCM Control Delay (s)	8.6	0	12.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.6	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	11	14	317	539	3
Future Vol, veh/h	2	11	14	317	539	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	12	15	345	586	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	961	293	589	0	-	0
Stage 1	586	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	269	704	984	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	265	704	984	-	-	-
Mov Cap-2 Maneuver	265	-	-	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	694	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	984	-	265	704	-	-
HCM Lane V/C Ratio	0.015	-	0.008	0.017	-	-
HCM Control Delay (s)	8.7	-	18.7	10.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	147	81	176	258
Demand Flow Rate, veh/h	150	83	179	262
Vehicles Circulating, veh/h	196	266	206	50
Vehicles Exiting, veh/h	116	119	140	299
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.5	5.2	5.9	5.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	150	83	179	262
Cap Entry Lane, veh/h	929	866	920	1075
Entry HV Adj Factor	0.982	0.980	0.982	0.984
Flow Entry, veh/h	147	81	176	258
Cap Entry, veh/h	912	849	903	1057
V/C Ratio	0.161	0.096	0.195	0.244
Control Delay, s/veh	5.5	5.2	5.9	5.7
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

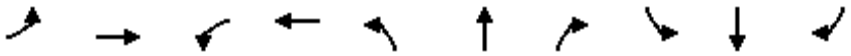
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	16	68	5	12	23	37	285	7	21	525	11
Future Volume (veh/h)	12	16	68	5	12	23	37	285	7	21	525	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	13	17	74	5	13	25	40	310	8	23	571	12
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	253	226	14	232	208	174	1222	547	58	1158	518
Arrive On Green	0.02	0.14	0.14	0.01	0.13	0.13	0.05	0.35	0.35	0.03	0.33	0.33
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	13	17	74	5	13	25	40	310	8	23	571	12
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.4	2.2	0.1	0.3	0.7	0.6	3.3	0.2	0.7	6.8	0.3
Cycle Q Clear(g_c), s	0.4	0.4	2.2	0.1	0.3	0.7	0.6	3.3	0.2	0.7	6.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	253	226	14	232	208	174	1222	547	58	1158	518
V/C Ratio(X)	0.37	0.07	0.33	0.35	0.06	0.12	0.23	0.25	0.01	0.40	0.49	0.02
Avail Cap(c_a), veh/h	849	1423	1274	849	1288	1152	1648	2372	1061	849	2372	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	19.4	20.1	25.8	19.8	20.0	23.8	12.3	11.2	24.8	14.1	11.9
Incr Delay (d2), s/veh	2.4	0.3	2.4	5.4	0.3	0.7	0.2	0.4	0.0	1.6	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	1.1	0.1	0.2	0.4	0.3	1.7	0.1	0.4	3.4	0.1
LnGrp Delay(d),s/veh	27.7	19.7	22.5	31.1	20.1	20.8	24.1	12.7	11.3	26.4	15.3	12.0
LnGrp LOS	C	B	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		104			43			358			606	
Approach Delay, s/veh		22.7			21.8			13.9			15.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	24.8	6.1	13.9	8.3	23.9	6.7	13.3
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.7	5.3	2.1	4.2	2.6	8.8	2.4	2.7
Green Ext Time (p_c), s	0.0	4.4	0.0	0.7	0.0	8.3	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	91	5	38	40	310	8	23	571	12
v/c Ratio	0.05	0.12	0.02	0.05	0.08	0.16	0.01	0.08	0.32	0.01
Control Delay	27.5	10.3	27.6	14.7	26.4	10.7	0.0	27.4	12.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	10.3	27.6	14.7	26.4	10.7	0.0	27.4	12.7	0.0
Queue Length 50th (ft)	4	2	1	1	5	19	0	6	68	0
Queue Length 95th (ft)	22	23	12	15	23	80	0	31	145	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	1035	2573	1035	2633	2009	2615	1198	1035	2615	1198
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.00	0.01	0.02	0.12	0.01	0.02	0.22	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	30	0	0	42	0
Future Vol, veh/h	0	30	0	0	42	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	0	0	46	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.045	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.1	-

Intersection	
Int Delay, s/veh	10.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	529	38	27	375	56	14	56	40	4	72	41
Future Vol, veh/h	65	529	38	27	375	56	14	56	40	4	72	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	575	41	29	408	61	15	61	43	4	78	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	469	0	0	616	0	0	1296	1265	596	1287	1255	439
Stage 1	-	-	-	-	-	-	738	738	-	497	497	-
Stage 2	-	-	-	-	-	-	558	527	-	790	758	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1093	-	-	964	-	-	139	169	504	141	172	618
Stage 1	-	-	-	-	-	-	410	424	-	555	545	-
Stage 2	-	-	-	-	-	-	514	528	-	383	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1093	-	-	964	-	-	73	153	504	83	156	618
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	153	-	83	156	-
Stage 1	-	-	-	-	-	-	383	396	-	519	529	-
Stage 2	-	-	-	-	-	-	394	512	-	277	388	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	62.6	48.5
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	173	1093	-	-	964	-	-	203
HCM Lane V/C Ratio	0.691	0.065	-	-	0.03	-	-	0.626
HCM Control Delay (s)	62.6	8.5	-	-	8.9	-	-	48.5
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	4.1	0.2	-	-	0.1	-	-	3.6

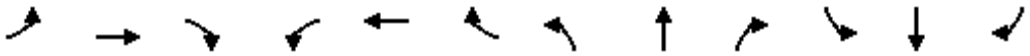
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	309	163	105	257	34	99	267	32	74	361	87
Future Volume (veh/h)	142	309	163	105	257	34	99	267	32	74	361	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	154	336	177	114	279	37	108	290	35	80	392	95
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	803	359	147	708	317	267	836	374	239	806	361
Arrive On Green	0.11	0.23	0.23	0.08	0.20	0.20	0.08	0.24	0.24	0.07	0.23	0.23
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	154	336	177	114	279	37	108	290	35	80	392	95
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	5.7	5.4	6.5	4.2	4.6	1.3	2.0	4.6	1.2	1.5	6.4	3.3
Cycle Q Clear(g_c), s	5.7	5.4	6.5	4.2	4.6	1.3	2.0	4.6	1.2	1.5	6.4	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	803	359	147	708	317	267	836	374	239	806	361
V/C Ratio(X)	0.79	0.42	0.49	0.77	0.39	0.12	0.40	0.35	0.09	0.33	0.49	0.26
Avail Cap(c_a), veh/h	398	2225	996	398	2066	924	773	1907	853	773	1960	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	22.1	22.5	30.0	23.2	21.9	29.3	21.2	19.9	29.6	22.4	21.2
Incr Delay (d2), s/veh	2.7	1.0	3.0	3.3	1.0	0.5	0.4	0.9	0.4	0.3	1.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.8	3.1	2.2	2.3	0.6	1.0	2.3	0.5	0.7	3.3	1.6
LnGrp Delay(d),s/veh	31.7	23.1	25.5	33.3	24.2	22.4	29.7	22.1	20.3	29.9	24.0	22.6
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		667			430			433			567	
Approach Delay, s/veh		25.7			26.5			23.9			24.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	23.3	11.2	21.9	10.9	22.7	13.0	20.2
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	3.5	6.6	6.2	8.5	4.0	8.4	7.7	6.6
Green Ext Time (p_c), s	0.1	4.5	0.1	6.6	0.1	6.8	0.1	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	154	336	177	114	279	37	108	290	35	80	392	95
v/c Ratio	0.57	0.44	0.37	0.51	0.41	0.09	0.33	0.31	0.07	0.27	0.49	0.21
Control Delay	41.1	29.4	7.3	41.9	30.7	0.4	38.6	26.1	0.2	38.7	29.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	29.4	7.3	41.9	30.7	0.4	38.6	26.1	0.2	38.7	29.5	4.3
Queue Length 50th (ft)	68	72	0	51	62	0	25	61	0	18	86	0
Queue Length 95th (ft)	149	133	52	115	112	0	57	110	0	45	150	24
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	347	1946	950	347	1946	928	674	1714	830	674	1714	830
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.17	0.19	0.33	0.14	0.04	0.16	0.17	0.04	0.12	0.23	0.11

Intersection Summary

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	310	29	26	301	13	36	11	19	19	13	2
Future Vol, veh/h	23	310	29	26	301	13	36	11	19	19	13	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	337	32	28	327	14	39	12	21	21	14	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	341	0	0	369	0	0	630	800	185	615	809	171
Stage 1	-	-	-	-	-	-	403	403	-	390	390	-
Stage 2	-	-	-	-	-	-	227	397	-	225	419	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1215	-	-	1186	-	-	366	317	826	375	313	843
Stage 1	-	-	-	-	-	-	595	598	-	606	606	-
Stage 2	-	-	-	-	-	-	755	602	-	757	588	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1215	-	-	1186	-	-	340	303	826	343	299	843
Mov Cap-2 Maneuver	-	-	-	-	-	-	340	303	-	343	299	-
Stage 1	-	-	-	-	-	-	583	585	-	593	591	-
Stage 2	-	-	-	-	-	-	718	588	-	708	576	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	15	16.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	340	506	1215	-	-	1186	-	-	343	327
HCM Lane V/C Ratio	0.115	0.064	0.021	-	-	0.024	-	-	0.06	0.05
HCM Control Delay (s)	17	12.6	8	-	-	8.1	-	-	16.2	16.6
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.4	0.2	0.1	-	-	0.1	-	-	0.2	0.2

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	181	46	34	225	61	31	165	36	66	170	59
Future Vol, veh/h	54	181	46	34	225	61	31	165	36	66	170	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	197	50	37	245	66	34	179	39	72	185	64
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	16.1	19.8	18.8	17.1
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	13%	100%	0%	100%	0%	28%	0%
Vol Thru, %	71%	0%	80%	0%	79%	72%	0%
Vol Right, %	16%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	232	54	227	34	286	236	59
LT Vol	31	54	0	34	0	66	0
Through Vol	165	0	181	0	225	170	0
RT Vol	36	0	46	0	61	0	59
Lane Flow Rate	252	59	247	37	311	257	64
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.527	0.129	0.497	0.08	0.617	0.537	0.119
Departure Headway (Hd)	7.519	7.918	7.258	7.808	7.14	7.534	6.673
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	451	493	458	504	477	535
Service Time	5.599	5.695	5.034	5.579	4.911	5.307	4.446
HCM Lane V/C Ratio	0.528	0.131	0.501	0.081	0.617	0.539	0.12
HCM Control Delay	18.8	11.9	17.1	11.3	20.8	18.8	10.4
HCM Lane LOS	C	B	C	B	C	C	B
HCM 95th-tile Q	3	0.4	2.7	0.3	4.1	3.1	0.4

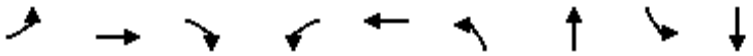
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	79	273	54	50	38	58	393	25	20	740	43
Future Volume (veh/h)	89	79	273	54	50	38	58	393	25	20	740	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	97	86	297	59	54	41	63	427	27	22	804	47
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	433	368	99	214	162	102	1206	76	52	1138	67
Arrive On Green	0.07	0.23	0.23	0.06	0.22	0.22	0.06	0.36	0.36	0.03	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	984	747	1774	3382	213	1774	3399	199
Grp Volume(v), veh/h	97	86	297	59	0	95	63	223	231	22	419	432
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1731	1774	1770	1825	1774	1770	1828
Q Serve(g_s), s	4.2	2.9	13.8	2.5	0.0	3.5	2.7	7.2	7.2	0.9	16.0	16.0
Cycle Q Clear(g_c), s	4.2	2.9	13.8	2.5	0.0	3.5	2.7	7.2	7.2	0.9	16.0	16.0
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.12	1.00		0.11
Lane Grp Cap(c), veh/h	125	433	368	99	0	376	102	631	651	52	593	612
V/C Ratio(X)	0.77	0.20	0.81	0.60	0.00	0.25	0.62	0.35	0.36	0.42	0.71	0.71
Avail Cap(c_a), veh/h	544	674	573	544	0	669	555	746	769	544	730	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	24.0	28.1	35.8	0.0	25.1	35.7	18.4	18.4	37.0	22.5	22.5
Incr Delay (d2), s/veh	3.8	0.5	8.6	2.1	0.0	0.7	2.3	1.0	1.0	2.0	5.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.5	6.9	1.3	0.0	1.8	1.4	3.7	3.8	0.5	8.6	8.9
LnGrp Delay(d),s/veh	39.2	24.4	36.7	37.9	0.0	25.9	38.0	19.4	19.4	39.1	27.5	27.4
LnGrp LOS	D	C	D	D		C	D	B	B	D	C	C
Approach Vol, veh/h		480			154			517			873	
Approach Delay, s/veh		35.0			30.5			21.7			27.7	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	35.2	10.0	24.4	9.7	33.5	11.2	23.3
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	2.9	9.2	4.5	15.8	4.7	18.0	6.2	5.5
Green Ext Time (p_c), s	0.0	5.6	0.0	2.3	0.1	8.0	0.1	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	97	86	297	59	95	63	454	22	851
v/c Ratio	0.48	0.30	0.60	0.35	0.37	0.36	0.26	0.15	0.58
Control Delay	44.9	35.8	9.9	43.9	31.2	43.9	15.3	42.1	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	35.8	9.9	43.9	31.2	43.9	15.3	42.1	23.5
Queue Length 50th (ft)	49	41	0	30	34	32	61	11	188
Queue Length 95th (ft)	104	89	70	72	84	76	142	37	307
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	544	722	795	544	692	556	1730	544	1455
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	0.18	0.12	0.37	0.11	0.14	0.11	0.26	0.04	0.58

Intersection Summary

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	56	54	64	65	56	40	62	41	48	89	34
Future Vol, veh/h	20	56	54	64	65	56	40	62	41	48	89	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	61	59	70	71	61	43	67	45	52	97	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.7	9.3	9.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	15%	35%	28%
Vol Thru, %	43%	43%	35%	52%
Vol Right, %	29%	42%	30%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	130	185	171
LT Vol	40	20	64	48
Through Vol	62	56	65	89
RT Vol	41	54	56	34
Lane Flow Rate	155	141	201	186
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.188	0.27	0.252
Departure Headway (Hd)	4.877	4.802	4.826	4.888
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	729	740	738	729
Service Time	2.952	2.877	2.896	2.961
HCM Lane V/C Ratio	0.213	0.191	0.272	0.255
HCM Control Delay	9.3	9	9.7	9.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.7	1.1	1

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	373	87	81	310	7	58	20	87	9	25	12
Future Vol, veh/h	11	373	87	81	310	7	58	20	87	9	25	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	405	95	88	337	8	63	22	95	10	27	13
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	12.5	11.4	12.6	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	35%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	12%	0%	100%	59%	0%	100%	94%	54%
Vol Right, %	53%	0%	0%	41%	0%	0%	6%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	11	249	211	81	207	110	46
LT Vol	58	11	0	0	81	0	0	9
Through Vol	20	0	249	124	0	207	103	25
RT Vol	87	0	0	87	0	0	7	12
Lane Flow Rate	179	12	270	230	88	225	120	50
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.33	0.021	0.446	0.36	0.159	0.375	0.199	0.098
Departure Headway (Hd)	6.624	6.442	5.934	5.642	6.52	6.013	5.968	7.058
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	542	555	605	636	549	598	601	506
Service Time	4.378	4.186	3.678	3.386	4.267	3.759	3.714	4.825
HCM Lane V/C Ratio	0.33	0.022	0.446	0.362	0.16	0.376	0.2	0.099
HCM Control Delay	12.6	9.3	13.4	11.5	10.5	12.3	10.2	10.6
HCM Lane LOS	B	A	B	B	B	B	B	B
HCM 95th-tile Q	1.4	0.1	2.3	1.6	0.6	1.7	0.7	0.3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	10	23	4	26	23	504	42	14	469	5
Future Vol, veh/h	1	1	10	23	4	26	23	504	42	14	469	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	11	25	4	28	25	548	46	15	510	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1180	1187	513	1170	1166	571	515	0	0	594	0	0
Stage 1	543	543	-	621	621	-	-	-	-	-	-	-
Stage 2	637	644	-	549	545	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	167	188	561	170	194	520	1051	-	-	982	-	-
Stage 1	524	520	-	475	479	-	-	-	-	-	-	-
Stage 2	465	468	-	520	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	150	181	561	161	186	520	1051	-	-	982	-	-
Mov Cap-2 Maneuver	150	181	-	161	186	-	-	-	-	-	-	-
Stage 1	511	512	-	464	468	-	-	-	-	-	-	-
Stage 2	425	457	-	501	511	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	24	0.3	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1051	-	-	400	247	982	-	-
HCM Lane V/C Ratio	0.024	-	-	0.033	0.233	0.015	-	-
HCM Control Delay (s)	8.5	-	-	14.3	24	8.7	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.9	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	59	32	29	51	17	22
Future Vol, veh/h	59	32	29	51	17	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	35	32	55	18	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	99	0	201	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	119	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1494	-	788	978
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	906	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	771	978
Mov Cap-2 Maneuver	-	-	-	-	771	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	876	-	-	1494	-
HCM Lane V/C Ratio	0.048	-	-	0.021	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	27	25	556	541	43
Future Vol, veh/h	37	27	25	556	541	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	29	27	604	588	47

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1246	588	588	0	-	0
Stage 1	588	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	192	509	987	-	-	0
Stage 1	555	-	-	-	-	0
Stage 2	515	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	184	509	987	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	515	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.5	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	987	-	318	-
HCM Lane V/C Ratio	0.028	-	0.219	-
HCM Control Delay (s)	8.8	0	19.5	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	45	78	566	547	12
Future Vol, veh/h	3	45	78	566	547	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	49	85	615	595	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1380	298	608	0	-	0
Stage 1	595	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	147	699	968	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	134	699	968	-	-	-
Mov Cap-2 Maneuver	134	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	968	-	134	699	-	-
HCM Lane V/C Ratio	0.088	-	0.024	0.07	-	-
HCM Control Delay (s)	9.1	-	32.5	10.5	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.2	-	-

Intersection	
Intersection Delay, s/veh	4.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	105	80	135	73
Demand Flow Rate, veh/h	107	81	138	75
Vehicles Circulating, veh/h	62	148	119	61
Vehicles Exiting, veh/h	74	109	50	168
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.5	4.9	4.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	107	81	138	75
Cap Entry Lane, veh/h	1062	974	1003	1063
Entry HV Adj Factor	0.980	0.989	0.978	0.978
Flow Entry, veh/h	105	80	135	73
Cap Entry, veh/h	1041	964	982	1040
V/C Ratio	0.101	0.083	0.138	0.071
Control Delay, s/veh	4.3	4.5	4.9	4.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	9	36	29	23	59	64	586	11	25	548	15
Future Volume (veh/h)	12	9	36	29	23	59	64	586	11	25	548	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	13	10	39	32	25	64	70	637	12	27	596	16
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	227	203	74	267	239	244	1266	566	65	1145	512
Arrive On Green	0.02	0.13	0.13	0.04	0.15	0.15	0.07	0.36	0.36	0.04	0.32	0.32
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	13	10	39	32	25	64	70	637	12	27	596	16
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.3	1.2	1.0	0.7	2.0	1.1	8.0	0.3	0.8	7.7	0.4
Cycle Q Clear(g_c), s	0.4	0.3	1.2	1.0	0.7	2.0	1.1	8.0	0.3	0.8	7.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	227	203	74	267	239	244	1266	566	65	1145	512
V/C Ratio(X)	0.37	0.04	0.19	0.43	0.09	0.27	0.29	0.50	0.02	0.41	0.52	0.03
Avail Cap(c_a), veh/h	785	1315	1177	785	1190	1065	1523	2192	981	785	2192	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	21.6	22.0	26.4	20.7	21.2	24.9	14.2	11.7	26.6	15.5	13.1
Incr Delay (d2), s/veh	2.5	0.2	1.3	1.5	0.4	1.7	0.2	1.1	0.1	1.6	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.6	0.5	0.4	1.0	0.5	4.1	0.1	0.4	3.9	0.2
LnGrp Delay(d),s/veh	29.8	21.8	23.3	27.9	21.1	23.0	25.1	15.3	11.8	28.2	16.9	13.1
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		62			121			719			639	
Approach Delay, s/veh		24.4			23.9			16.2			17.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	27.0	8.1	13.7	9.7	25.1	6.8	14.9
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.8	10.0	3.0	3.2	3.1	9.7	2.4	4.0
Green Ext Time (p_c), s	0.0	9.2	0.0	0.3	0.1	8.5	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	49	32	89	70	637	12	27	596	16
v/c Ratio	0.05	0.08	0.13	0.12	0.15	0.31	0.01	0.11	0.34	0.02
Control Delay	32.2	14.0	31.6	11.7	30.2	12.3	0.0	31.8	15.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	14.0	31.6	11.7	30.2	12.3	0.0	31.8	15.1	0.1
Queue Length 50th (ft)	4	1	10	3	10	44	0	8	72	0
Queue Length 95th (ft)	23	17	42	26	36	168	0	37	157	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	924	2320	924	2356	1792	2303	1067	924	2303	1067
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.02	0.03	0.04	0.04	0.28	0.01	0.03	0.26	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	61	0	0	46	0
Future Vol, veh/h	0	61	0	0	46	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	66	0	0	50	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.049	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

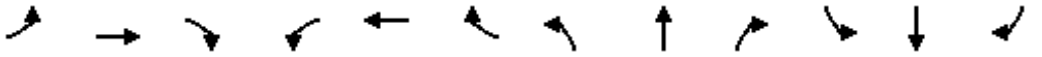
Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	452	20	67	565	14	16	41	51	3	29	34
Future Vol, veh/h	73	452	20	67	565	14	16	41	51	3	29	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	491	22	73	614	15	17	45	55	3	32	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	629	0	0	513	0	0	1462	1435	502	1478	1439	622
Stage 1	-	-	-	-	-	-	660	660	-	768	768	-
Stage 2	-	-	-	-	-	-	802	775	-	710	671	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	953	-	-	1052	-	-	107	134	569	104	133	487
Stage 1	-	-	-	-	-	-	452	460	-	394	411	-
Stage 2	-	-	-	-	-	-	378	408	-	424	455	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	953	-	-	1052	-	-	69	114	569	58	114	487
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	114	-	58	114	-
Stage 1	-	-	-	-	-	-	414	422	-	361	383	-
Stage 2	-	-	-	-	-	-	298	380	-	314	417	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.9	73.6	38.9
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	159	953	-	-	1052	-	-	176
HCM Lane V/C Ratio	0.738	0.083	-	-	0.069	-	-	0.408
HCM Control Delay (s)	73.6	9.1	-	-	8.7	-	-	38.9
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	4.5	0.3	-	-	0.2	-	-	1.8



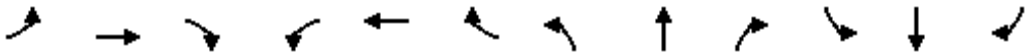
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	240	71	147	314	53	146	636	43	87	345	105
Future Volume (veh/h)	181	240	71	147	314	53	146	636	43	87	345	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	197	261	77	160	341	58	159	691	47	95	375	114
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	703	314	197	626	280	247	1092	489	224	1069	478
Arrive On Green	0.13	0.20	0.20	0.11	0.18	0.18	0.07	0.31	0.31	0.07	0.30	0.30
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	197	261	77	160	341	58	159	691	47	95	375	114
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	8.8	5.2	3.3	7.2	7.1	2.5	3.7	13.6	1.7	2.2	6.7	4.4
Cycle Q Clear(g_c), s	8.8	5.2	3.3	7.2	7.1	2.5	3.7	13.6	1.7	2.2	6.7	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	703	314	197	626	280	247	1092	489	224	1069	478
V/C Ratio(X)	0.84	0.37	0.24	0.81	0.54	0.21	0.64	0.63	0.10	0.42	0.35	0.24
Avail Cap(c_a), veh/h	328	1830	819	328	1699	760	636	1569	702	636	1612	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	28.2	27.4	35.3	30.5	28.6	36.7	24.1	20.0	36.5	22.1	21.3
Incr Delay (d2), s/veh	9.2	0.9	1.2	3.1	2.1	1.1	1.0	2.2	0.3	0.5	0.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	2.6	1.6	3.7	3.6	1.2	1.8	7.0	0.8	1.0	3.4	2.0
LnGrp Delay(d),s/veh	43.6	29.1	28.6	38.3	32.6	29.6	37.7	26.3	20.3	37.0	22.8	22.2
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		535			559			897			584	
Approach Delay, s/veh		34.4			33.9			28.0			25.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	32.6	14.7	22.9	11.5	32.0	16.5	21.2
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.2	15.6	9.2	7.2	5.7	8.7	10.8	9.1
Green Ext Time (p_c), s	0.1	9.4	0.1	4.4	0.1	6.7	0.1	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	261	77	160	341	58	159	691	47	95	375	114
v/c Ratio	0.67	0.35	0.18	0.63	0.52	0.14	0.47	0.63	0.08	0.34	0.41	0.23
Control Delay	51.0	34.4	2.1	51.2	37.6	0.8	45.8	30.8	0.3	46.2	29.3	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	34.4	2.1	51.2	37.6	0.8	45.8	30.8	0.3	46.2	29.3	5.6
Queue Length 50th (ft)	108	69	0	87	94	0	45	185	0	27	93	0
Queue Length 95th (ft)	#251	122	8	#181	156	0	87	266	0	58	146	35
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	295	1656	809	295	1656	809	573	1458	724	573	1458	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.16	0.10	0.54	0.21	0.07	0.28	0.47	0.06	0.17	0.26	0.16

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	306	55	36	358	44	43	29	48	49	21	12
Future Vol, veh/h	52	306	55	36	358	44	43	29	48	49	21	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	333	60	39	389	48	47	32	52	53	23	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	437	0	0	393	0	0	761	992	197	788	998	219
Stage 1	-	-	-	-	-	-	477	477	-	491	491	-
Stage 2	-	-	-	-	-	-	284	515	-	297	507	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1119	-	-	1162	-	-	295	244	811	282	242	785
Stage 1	-	-	-	-	-	-	538	554	-	528	546	-
Stage 2	-	-	-	-	-	-	699	533	-	687	538	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1119	-	-	1162	-	-	251	224	811	221	222	785
Mov Cap-2 Maneuver	-	-	-	-	-	-	251	224	-	221	222	-
Stage 1	-	-	-	-	-	-	511	526	-	501	527	-
Stage 2	-	-	-	-	-	-	636	515	-	574	511	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.7	18.4	23.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	251	408	1119	-	-	1162	-	-	221	300
HCM Lane V/C Ratio	0.186	0.205	0.051	-	-	0.034	-	-	0.241	0.12
HCM Control Delay (s)	22.6	16.1	8.4	-	-	8.2	-	-	26.4	18.6
HCM Lane LOS	C	C	A	-	-	A	-	-	D	C
HCM 95th %tile Q(veh)	0.7	0.8	0.2	-	-	0.1	-	-	0.9	0.4

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	182	33	37	314	55	42	97	42	38	101	52
Future Vol, veh/h	48	182	33	37	314	55	42	97	42	38	101	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	198	36	40	341	60	46	105	46	41	110	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	13.8	22.7	14.9	12.6
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	23%	100%	0%	100%	0%	27%	0%
Vol Thru, %	54%	0%	85%	0%	85%	73%	0%
Vol Right, %	23%	0%	15%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	181	48	215	37	369	139	52
LT Vol	42	48	0	37	0	38	0
Through Vol	97	0	182	0	314	101	0
RT Vol	42	0	33	0	55	0	52
Lane Flow Rate	197	52	234	40	401	151	57
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.394	0.106	0.434	0.079	0.719	0.311	0.103
Departure Headway (Hd)	7.204	7.305	6.684	7.029	6.45	7.403	6.547
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	500	490	537	510	566	485	546
Service Time	5.26	5.054	4.432	4.766	4.15	5.159	4.303
HCM Lane V/C Ratio	0.394	0.106	0.436	0.078	0.708	0.311	0.104
HCM Control Delay	14.9	10.9	14.5	10.4	23.9	13.5	10.1
HCM Lane LOS	B	B	B	B	C	B	B
HCM 95th-tile Q	1.9	0.4	2.2	0.3	5.9	1.3	0.3

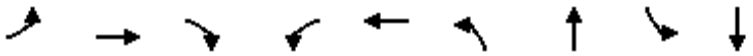
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	101	150	42	79	18	148	741	21	30	564	79
Future Volume (veh/h)	110	101	150	42	79	18	148	741	21	30	564	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	120	110	163	46	86	20	161	805	23	33	613	86
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	290	246	91	175	41	203	1339	38	73	981	137
Arrive On Green	0.09	0.16	0.16	0.05	0.12	0.12	0.11	0.38	0.38	0.04	0.31	0.31
Sat Flow, veh/h	1774	1863	1583	1774	1463	340	1774	3514	100	1774	3119	437
Grp Volume(v), veh/h	120	110	163	46	0	106	161	405	423	33	347	352
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1803	1774	1770	1845	1774	1770	1786
Q Serve(g_s), s	4.5	3.6	6.6	1.7	0.0	3.7	6.0	12.5	12.5	1.2	11.4	11.4
Cycle Q Clear(g_c), s	4.5	3.6	6.6	1.7	0.0	3.7	6.0	12.5	12.5	1.2	11.4	11.4
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.24
Lane Grp Cap(c), veh/h	155	290	246	91	0	215	203	674	703	73	557	562
V/C Ratio(X)	0.78	0.38	0.66	0.51	0.00	0.49	0.79	0.60	0.60	0.45	0.62	0.63
Avail Cap(c_a), veh/h	620	768	653	620	0	794	633	850	886	620	831	839
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	25.8	27.1	31.5	0.0	28.1	29.4	16.9	16.9	31.9	19.9	19.9
Incr Delay (d2), s/veh	3.1	1.7	6.1	1.6	0.0	3.5	2.6	2.6	2.5	1.6	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.0	3.3	0.9	0.0	2.1	3.1	6.6	6.8	0.6	6.0	6.1
LnGrp Delay(d),s/veh	33.6	27.5	33.1	33.1	0.0	31.6	32.0	19.6	19.5	33.6	23.4	23.4
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	C
Approach Vol, veh/h		393			152			989			732	
Approach Delay, s/veh		31.7			32.0			21.6			23.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	33.4	9.2	17.0	13.0	28.9	11.6	14.5
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.2	14.5	3.7	8.6	8.0	13.4	6.5	5.7
Green Ext Time (p_c), s	0.0	9.3	0.0	2.0	0.2	8.0	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	110	163	46	106	161	828	33	699
v/c Ratio	0.56	0.24	0.32	0.31	0.41	0.63	0.53	0.24	0.65
Control Delay	50.3	34.3	7.7	49.4	40.7	49.7	21.8	48.9	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	34.3	7.7	49.4	40.7	49.7	21.8	48.9	30.9
Queue Length 50th (ft)	66	56	0	26	52	88	190	18	173
Queue Length 95th (ft)	139	117	55	69	117	174	309	54	296
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	482	640	650	482	627	492	1563	482	1281
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	0.25	0.17	0.25	0.10	0.17	0.33	0.53	0.07	0.55

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	38	54	12	28	9	47	103	15	11	81	30
Future Vol, veh/h	26	38	54	12	28	9	47	103	15	11	81	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	41	59	13	30	10	51	112	16	12	88	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	8.1	8.8	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	22%	24%	9%
Vol Thru, %	62%	32%	57%	66%
Vol Right, %	9%	46%	18%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	118	49	122
LT Vol	47	26	12	11
Through Vol	103	38	28	81
RT Vol	15	54	9	30
Lane Flow Rate	179	128	53	133
Geometry Grp	1	1	1	1
Degree of Util (X)	0.224	0.16	0.07	0.163
Departure Headway (Hd)	4.506	4.481	4.738	4.43
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	796	800	755	809
Service Time	2.533	2.508	2.772	2.458
HCM Lane V/C Ratio	0.225	0.16	0.07	0.164
HCM Control Delay	8.8	8.4	8.1	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.6	0.2	0.6

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	298	48	28	287	13	75	22	30	8	7	6
Future Vol, veh/h	20	298	48	28	287	13	75	22	30	8	7	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	324	52	30	312	14	82	24	33	9	8	7
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	10.3	10.2	11.2	9.5
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	59%	100%	0%	0%	100%	0%	0%	38%
Vol Thru, %	17%	0%	100%	67%	0%	100%	88%	33%
Vol Right, %	24%	0%	0%	33%	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	20	199	147	28	191	109	21
LT Vol	75	20	0	0	28	0	0	8
Through Vol	22	0	199	99	0	191	96	7
RT Vol	30	0	0	48	0	0	13	6
Lane Flow Rate	138	22	216	160	30	208	118	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.246	0.036	0.325	0.231	0.051	0.321	0.179	0.041
Departure Headway (Hd)	6.425	6.023	5.518	5.287	6.055	5.55	5.465	6.541
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	562	598	656	684	595	651	660	549
Service Time	4.138	3.723	3.218	2.987	3.755	3.25	3.165	4.26
HCM Lane V/C Ratio	0.246	0.037	0.329	0.234	0.05	0.32	0.179	0.042
HCM Control Delay	11.2	8.9	10.9	9.6	9.1	10.9	9.4	9.5
HCM Lane LOS	B	A	B	A	A	B	A	A
HCM 95th-tile Q	1	0.1	1.4	0.9	0.2	1.4	0.6	0.1

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	17	54	7	28	12	260	44	42	475	2
Future Vol, veh/h	4	5	17	54	7	28	12	260	44	42	475	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	5	18	59	8	30	13	283	48	46	516	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	961	966	517	954	943	307	518	0	0	331	0	0
Stage 1	609	609	-	333	333	-	-	-	-	-	-	-
Stage 2	352	357	-	621	610	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	236	255	558	238	263	733	1048	-	-	1228	-	-
Stage 1	482	485	-	681	644	-	-	-	-	-	-	-
Stage 2	665	628	-	475	485	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	213	243	558	218	250	733	1048	-	-	1228	-	-
Mov Cap-2 Maneuver	213	243	-	218	250	-	-	-	-	-	-	-
Stage 1	476	467	-	673	636	-	-	-	-	-	-	-
Stage 2	622	620	-	437	467	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.5	24.1	0.3	0.7
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1048	-	-	372	284	1228	-	-
HCM Lane V/C Ratio	0.012	-	-	0.076	0.341	0.037	-	-
HCM Control Delay (s)	8.5	-	-	15.5	24.1	8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.5	0.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	74	63	29	50	20	18
Future Vol, veh/h	74	63	29	50	20	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	68	32	54	22	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	148	0	232	114
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	118	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1434	-	756	939
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	907	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1434	-	739	939
Mov Cap-2 Maneuver	-	-	-	-	739	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	822	-	-	1434	-
HCM Lane V/C Ratio	0.05	-	-	0.022	-
HCM Control Delay (s)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	41	14	310	528	58
Future Vol, veh/h	46	41	14	310	528	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	45	15	337	574	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	941	574	574	0	-	0
Stage 1	574	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	292	518	999	-	-	0
Stage 1	563	-	-	-	-	0
Stage 2	701	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	287	518	999	-	-	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	999	-	543	-
HCM Lane V/C Ratio	0.015	-	0.174	-
HCM Control Delay (s)	8.7	0	13	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.6	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	12	15	330	561	4
Future Vol, veh/h	3	12	15	330	561	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	16	359	610	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1001	305	614	0	-	0
Stage 1	610	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	254	692	963	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	250	692	963	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	683	-	-	-	-	-

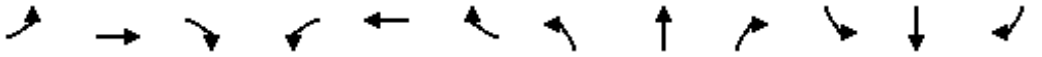
Approach	EB	NB	SB
HCM Control Delay, s	12.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	963	-	250	692	-	-
HCM Lane V/C Ratio	0.017	-	0.013	0.019	-	-
HCM Control Delay (s)	8.8	-	19.6	10.3	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	5.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	154	86	184	270
Demand Flow Rate, veh/h	157	88	187	275
Vehicles Circulating, veh/h	206	277	215	54
Vehicles Exiting, veh/h	123	125	148	311
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.7	5.3	6.1	5.9
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	157	88	187	275
Cap Entry Lane, veh/h	920	857	911	1071
Entry HV Adj Factor	0.983	0.981	0.983	0.980
Flow Entry, veh/h	154	86	184	270
Cap Entry, veh/h	904	840	895	1050
V/C Ratio	0.171	0.103	0.205	0.257
Control Delay, s/veh	5.7	5.3	6.1	5.9
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	17	71	6	13	24	39	297	8	22	546	12
Future Volume (veh/h)	13	17	71	6	13	24	39	297	8	22	546	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	18	77	7	14	26	42	323	9	24	593	13
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	251	224	20	233	209	179	1245	557	60	1180	528
Arrive On Green	0.02	0.14	0.14	0.01	0.13	0.13	0.05	0.35	0.35	0.03	0.33	0.33
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	18	77	7	14	26	42	323	9	24	593	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.5	2.3	0.2	0.4	0.8	0.6	3.5	0.2	0.7	7.2	0.3
Cycle Q Clear(g_c), s	0.4	0.5	2.3	0.2	0.4	0.8	0.6	3.5	0.2	0.7	7.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	251	224	20	233	209	179	1245	557	60	1180	528
V/C Ratio(X)	0.37	0.07	0.34	0.36	0.06	0.12	0.23	0.26	0.02	0.40	0.50	0.02
Avail Cap(c_a), veh/h	832	1395	1248	832	1262	1129	1614	2324	1040	832	2324	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	19.8	20.6	26.2	20.2	20.4	24.2	12.3	11.3	25.2	14.2	11.9
Incr Delay (d2), s/veh	2.3	0.3	2.6	4.0	0.3	0.8	0.2	0.4	0.0	1.6	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	1.2	0.1	0.2	0.4	0.3	1.7	0.1	0.4	3.7	0.1
LnGrp Delay(d),s/veh	28.0	20.2	23.2	30.2	20.6	21.2	24.5	12.7	11.3	26.8	15.4	12.0
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		109			47			374			630	
Approach Delay, s/veh		23.4			22.3			14.0			15.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	25.6	6.3	14.0	8.5	24.6	6.8	13.4
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.7	5.5	2.2	4.3	2.6	9.2	2.4	2.8
Green Ext Time (p_c), s	0.0	4.6	0.0	0.8	0.0	8.6	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	95	7	40	42	323	9	24	593	13
v/c Ratio	0.05	0.13	0.03	0.06	0.08	0.16	0.01	0.09	0.32	0.01
Control Delay	28.1	10.4	28.2	14.9	26.8	10.6	0.0	28.0	12.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	10.4	28.2	14.9	26.8	10.6	0.0	28.0	12.6	0.0
Queue Length 50th (ft)	4	2	2	2	6	20	0	7	71	0
Queue Length 95th (ft)	23	24	15	16	24	83	0	33	151	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	1028	2558	1028	2619	1994	2595	1189	1028	2595	1189
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.01	0.02	0.02	0.12	0.01	0.02	0.23	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	32	0	0	44	0
Future Vol, veh/h	0	32	0	0	44	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	0	0	48	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.047	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.1	-

Intersection	
Int Delay, s/veh	13.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	551	40	29	390	59	15	59	42	5	75	43
Future Vol, veh/h	68	551	40	29	390	59	15	59	42	5	75	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	599	43	32	424	64	16	64	46	5	82	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	488	0	0	642	0	0	1354	1321	621	1344	1310	456
Stage 1	-	-	-	-	-	-	769	769	-	520	520	-
Stage 2	-	-	-	-	-	-	585	552	-	824	790	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1075	-	-	943	-	-	127	157	487	129	159	604
Stage 1	-	-	-	-	-	-	394	411	-	539	532	-
Stage 2	-	-	-	-	-	-	497	515	-	367	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1075	-	-	943	-	-	60	141	487	70	143	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	60	141	-	70	143	-
Stage 1	-	-	-	-	-	-	367	383	-	502	514	-
Stage 2	-	-	-	-	-	-	373	497	-	258	374	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	89	64
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	154	1075	-	-	943	-	-	184
HCM Lane V/C Ratio	0.819	0.069	-	-	0.033	-	-	0.727
HCM Control Delay (s)	89	8.6	-	-	8.9	-	-	64
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	5.3	0.2	-	-	0.1	-	-	4.6

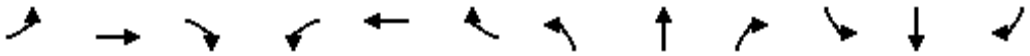
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	322	170	110	268	36	103	278	34	77	376	91
Future Volume (veh/h)	148	322	170	110	268	36	103	278	34	77	376	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	161	350	185	120	291	39	112	302	37	84	409	99
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	819	366	154	724	324	264	847	379	240	821	367
Arrive On Green	0.11	0.23	0.23	0.09	0.20	0.20	0.08	0.24	0.24	0.07	0.23	0.23
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	161	350	185	120	291	39	112	302	37	84	409	99
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.1	5.8	7.0	4.6	4.9	1.4	2.1	4.9	1.3	1.6	6.9	3.5
Cycle Q Clear(g_c), s	6.1	5.8	7.0	4.6	4.9	1.4	2.1	4.9	1.3	1.6	6.9	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	819	366	154	724	324	264	847	379	240	821	367
V/C Ratio(X)	0.80	0.43	0.50	0.78	0.40	0.12	0.42	0.36	0.10	0.35	0.50	0.27
Avail Cap(c_a), veh/h	386	2156	965	386	2002	896	749	1848	827	749	1900	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	22.6	23.1	30.8	23.8	22.4	30.4	21.8	20.4	30.6	23.0	21.7
Incr Delay (d2), s/veh	2.7	1.0	3.1	3.2	1.0	0.5	0.4	0.9	0.4	0.3	1.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.9	3.3	2.4	2.5	0.6	1.0	2.5	0.6	0.8	3.5	1.7
LnGrp Delay(d),s/veh	32.5	23.6	26.2	34.0	24.8	22.8	30.8	22.7	20.8	30.9	24.7	23.1
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		696			450			451			592	
Approach Delay, s/veh		26.4			27.1			24.6			25.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	24.0	11.7	22.8	11.0	23.5	13.6	20.9
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	3.6	6.9	6.6	9.0	4.1	8.9	8.1	6.9
Green Ext Time (p_c), s	0.1	4.7	0.1	6.9	0.1	7.1	0.1	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	161	350	185	120	291	39	112	302	37	84	409	99
v/c Ratio	0.58	0.45	0.37	0.53	0.43	0.10	0.35	0.32	0.07	0.28	0.51	0.22
Control Delay	41.9	29.9	7.2	43.1	31.3	0.5	39.4	26.5	0.3	39.6	30.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	29.9	7.2	43.1	31.3	0.5	39.4	26.5	0.3	39.6	30.1	4.8
Queue Length 50th (ft)	72	77	0	56	66	0	26	65	0	20	92	0
Queue Length 95th (ft)	158	140	53	122	117	0	59	116	0	47	157	27
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	340	1906	937	340	1906	912	660	1679	816	660	1679	816
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.18	0.20	0.35	0.15	0.04	0.17	0.18	0.05	0.13	0.24	0.12

Intersection Summary

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	323	31	28	314	14	38	12	20	20	14	3
Future Vol, veh/h	24	323	31	28	314	14	38	12	20	20	14	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	351	34	30	341	15	41	13	22	22	15	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	356	0	0	385	0	0	658	836	193	643	846	178
Stage 1	-	-	-	-	-	-	420	420	-	409	409	-
Stage 2	-	-	-	-	-	-	238	416	-	234	437	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1199	-	-	1170	-	-	350	302	816	358	298	834
Stage 1	-	-	-	-	-	-	581	588	-	590	594	-
Stage 2	-	-	-	-	-	-	744	590	-	748	578	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1170	-	-	322	288	816	324	284	834
Mov Cap-2 Maneuver	-	-	-	-	-	-	322	288	-	324	284	-
Stage 1	-	-	-	-	-	-	568	575	-	577	579	-
Stage 2	-	-	-	-	-	-	703	575	-	696	565	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	15.6	16.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	322	484	1199	-	-	1170	-	-	324	321
HCM Lane V/C Ratio	0.128	0.072	0.022	-	-	0.026	-	-	0.067	0.058
HCM Control Delay (s)	17.8	13	8.1	-	-	8.2	-	-	16.9	16.9
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.4	0.2	0.1	-	-	0.1	-	-	0.2	0.2

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	189	48	36	234	64	33	172	38	69	177	62
Future Vol, veh/h	57	189	48	36	234	64	33	172	38	69	177	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	205	52	39	254	70	36	187	41	75	192	67
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.4	22.2	20.7	18.6
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	14%	100%	0%	100%	0%	28%	0%
Vol Thru, %	71%	0%	80%	0%	79%	72%	0%
Vol Right, %	16%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	57	237	36	298	246	62
LT Vol	33	57	0	36	0	69	0
Through Vol	172	0	189	0	234	177	0
RT Vol	38	0	48	0	64	0	62
Lane Flow Rate	264	62	258	39	324	267	67
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.568	0.14	0.535	0.087	0.661	0.575	0.129
Departure Headway (Hd)	7.745	8.137	7.475	8.014	7.344	7.746	6.883
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	439	479	445	489	463	518
Service Time	5.842	5.93	5.267	5.801	5.131	5.536	4.672
HCM Lane V/C Ratio	0.571	0.141	0.539	0.088	0.663	0.577	0.129
HCM Control Delay	20.7	12.3	18.6	11.6	23.5	20.6	10.7
HCM Lane LOS	C	B	C	B	C	C	B
HCM 95th-tile Q	3.5	0.5	3.1	0.3	4.8	3.5	0.4

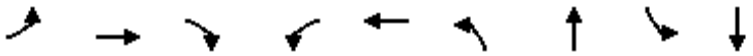
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	83	284	57	52	40	61	409	26	21	770	45
Future Volume (veh/h)	93	83	284	57	52	40	61	409	26	21	770	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	101	90	309	62	57	43	66	445	28	23	837	49
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	444	377	100	218	164	102	1215	76	53	1148	67
Arrive On Green	0.07	0.24	0.24	0.06	0.22	0.22	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	987	744	1774	3383	212	1774	3398	199
Grp Volume(v), veh/h	101	90	309	62	0	100	66	232	241	23	436	450
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1731	1774	1770	1825	1774	1770	1828
Q Serve(g_s), s	4.5	3.1	14.8	2.7	0.0	3.8	2.9	7.7	7.8	1.0	17.3	17.3
Cycle Q Clear(g_c), s	4.5	3.1	14.8	2.7	0.0	3.8	2.9	7.7	7.8	1.0	17.3	17.3
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.12	1.00		0.11
Lane Grp Cap(c), veh/h	130	444	377	100	0	382	102	636	656	53	598	617
V/C Ratio(X)	0.78	0.20	0.82	0.62	0.00	0.26	0.64	0.37	0.37	0.43	0.73	0.73
Avail Cap(c_a), veh/h	528	655	556	528	0	650	539	724	746	528	708	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	24.4	28.8	36.9	0.0	25.8	36.9	18.9	18.9	38.1	23.3	23.3
Incr Delay (d2), s/veh	3.7	0.5	9.7	2.4	0.0	0.7	2.5	1.1	1.1	2.0	5.7	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.7	7.4	1.4	0.0	1.9	1.5	3.9	4.1	0.5	9.3	9.6
LnGrp Delay(d),s/veh	40.1	24.8	38.5	39.3	0.0	26.5	39.4	20.0	20.0	40.2	29.0	28.8
LnGrp LOS	D	C	D	D		C	D	B	B	D	C	C
Approach Vol, veh/h		500			162			539			909	
Approach Delay, s/veh		36.4			31.4			22.3			29.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	36.2	10.2	25.4	9.8	34.5	11.6	24.1
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.0	9.8	4.7	16.8	4.9	19.3	6.5	5.8
Green Ext Time (p_c), s	0.0	5.8	0.1	2.3	0.1	7.7	0.1	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	101	90	309	62	100	66	473	23	886
v/c Ratio	0.49	0.31	0.61	0.36	0.38	0.38	0.27	0.16	0.61
Control Delay	45.5	36.1	9.9	44.4	32.0	44.5	15.7	42.7	24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	36.1	9.9	44.4	32.0	44.5	15.7	42.7	24.4
Queue Length 50th (ft)	52	43	0	32	36	34	65	12	201
Queue Length 95th (ft)	109	93	72	76	89	79	151	38	328
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	541	718	800	541	687	552	1723	541	1445
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	0.19	0.13	0.39	0.11	0.15	0.12	0.27	0.04	0.61

Intersection Summary

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	59	57	67	68	59	42	65	43	50	93	36
Future Vol, veh/h	21	59	57	67	68	59	42	65	43	50	93	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	64	62	73	74	64	46	71	47	54	101	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	9.9	9.5	9.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	15%	35%	28%
Vol Thru, %	43%	43%	35%	52%
Vol Right, %	29%	42%	30%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	137	194	179
LT Vol	42	21	67	50
Through Vol	65	59	68	93
RT Vol	43	57	59	36
Lane Flow Rate	163	149	211	195
Geometry Grp	1	1	1	1
Degree of Util (X)	0.224	0.201	0.286	0.267
Departure Headway (Hd)	4.94	4.864	4.883	4.947
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	719	730	727	718
Service Time	3.026	2.95	2.963	3.03
HCM Lane V/C Ratio	0.227	0.204	0.29	0.272
HCM Control Delay	9.5	9.2	9.9	9.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.7	1.2	1.1

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	388	91	85	323	8	61	21	91	10	26	13
Future Vol, veh/h	12	388	91	85	323	8	61	21	91	10	26	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	422	99	92	351	9	66	23	99	11	28	14
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	13	11.8	13.1	10.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	35%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	12%	0%	100%	59%	0%	100%	93%	53%
Vol Right, %	53%	0%	0%	41%	0%	0%	7%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	12	259	220	85	215	116	49
LT Vol	61	12	0	0	85	0	0	10
Through Vol	21	0	259	129	0	215	108	26
RT Vol	91	0	0	91	0	0	8	13
Lane Flow Rate	188	13	281	239	92	234	126	53
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.352	0.024	0.471	0.382	0.17	0.398	0.212	0.106
Departure Headway (Hd)	6.735	6.54	6.032	5.738	6.622	6.114	6.064	7.194
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	532	546	596	625	540	587	590	496
Service Time	4.496	4.293	3.784	3.49	4.377	3.869	3.82	4.973
HCM Lane V/C Ratio	0.353	0.024	0.471	0.382	0.17	0.399	0.214	0.107
HCM Control Delay	13.1	9.5	14.1	12	10.7	12.9	10.5	10.8
HCM Lane LOS	B	A	B	B	B	B	B	B
HCM 95th-tile Q	1.6	0.1	2.5	1.8	0.6	1.9	0.8	0.4

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	11	24	5	28	24	525	44	15	488	6
Future Vol, veh/h	2	2	11	24	5	28	24	525	44	15	488	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	12	26	5	30	26	571	48	16	530	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1231	1237	534	1220	1216	595	537	0	0	619	0	0
Stage 1	566	566	-	647	647	-	-	-	-	-	-	-
Stage 2	665	671	-	573	569	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	154	176	546	157	181	504	1031	-	-	961	-	-
Stage 1	509	507	-	460	467	-	-	-	-	-	-	-
Stage 2	449	455	-	505	506	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	137	169	546	147	173	504	1031	-	-	961	-	-
Mov Cap-2 Maneuver	137	169	-	147	173	-	-	-	-	-	-	-
Stage 1	496	498	-	449	455	-	-	-	-	-	-	-
Stage 2	406	444	-	484	497	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.8	26.3	0.3	0.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1031	-	-	322	230	961	-	-
HCM Lane V/C Ratio	0.025	-	-	0.051	0.269	0.017	-	-
HCM Control Delay (s)	8.6	-	-	16.8	26.3	8.8	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.1	0.1	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	34	31	54	18	23
Future Vol, veh/h	62	34	31	54	18	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	37	34	59	20	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	104	0	213	86
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	127	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1488	-	775	973
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	899	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1488	-	756	973
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	864	-	-	1488	-
HCM Lane V/C Ratio	0.052	-	-	0.023	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	29	26	579	563	45
Future Vol, veh/h	39	29	26	579	563	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	32	28	629	612	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1297	612	612	0	-	0
Stage 1	612	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	179	493	967	-	-	0
Stage 1	541	-	-	-	-	0
Stage 2	500	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	171	493	967	-	-	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	967	-	298	-
HCM Lane V/C Ratio	0.029	-	0.248	-
HCM Control Delay (s)	8.8	0	21	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	47	82	589	569	13
Future Vol, veh/h	4	47	82	589	569	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	51	89	640	618	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1436	309	632	0	-	0
Stage 1	618	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	135	688	949	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	433	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	122	688	949	-	-	-
Mov Cap-2 Maneuver	122	-	-	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	433	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	949	-	122	688	-	-
HCM Lane V/C Ratio	0.094	-	0.036	0.074	-	-
HCM Control Delay (s)	9.2	-	35.6	10.7	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.2	-	-

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	111	84	142	77
Demand Flow Rate, veh/h	113	85	145	79
Vehicles Circulating, veh/h	66	155	125	65
Vehicles Exiting, veh/h	78	115	54	175
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.4	4.6	5.0	4.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	113	85	145	79
Cap Entry Lane, veh/h	1058	968	997	1059
Entry HV Adj Factor	0.981	0.989	0.979	0.979
Flow Entry, veh/h	111	84	142	77
Cap Entry, veh/h	1037	957	976	1036
V/C Ratio	0.107	0.088	0.145	0.075
Control Delay, s/veh	4.4	4.6	5.0	4.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	38	31	24	62	67	610	12	26	570	16
Future Volume (veh/h)	13	10	38	31	24	62	67	610	12	26	570	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	11	41	34	26	67	73	663	13	28	620	17
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	226	202	78	267	238	247	1290	577	67	1169	523
Arrive On Green	0.02	0.13	0.13	0.04	0.15	0.15	0.07	0.36	0.36	0.04	0.33	0.33
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	11	41	34	26	67	73	663	13	28	620	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.3	1.3	1.1	0.7	2.2	1.2	8.5	0.3	0.9	8.2	0.4
Cycle Q Clear(g_c), s	0.4	0.3	1.3	1.1	0.7	2.2	1.2	8.5	0.3	0.9	8.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	226	202	78	267	238	247	1290	577	67	1169	523
V/C Ratio(X)	0.38	0.05	0.20	0.44	0.10	0.28	0.30	0.51	0.02	0.42	0.53	0.03
Avail Cap(c_a), veh/h	769	1289	1153	769	1166	1043	1492	2148	961	769	2148	961
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	22.1	22.5	26.9	21.1	21.7	25.4	14.3	11.7	27.1	15.7	13.1
Incr Delay (d2), s/veh	2.3	0.3	1.4	1.4	0.5	1.8	0.2	1.2	0.1	1.6	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.7	0.6	0.4	1.1	0.6	4.3	0.1	0.5	4.2	0.2
LnGrp Delay(d),s/veh	30.2	22.3	23.9	28.3	21.6	23.6	25.6	15.5	11.8	28.7	17.0	13.2
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		66			127			749			665	
Approach Delay, s/veh		25.0			24.4			16.4			17.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	27.8	8.2	13.8	9.8	25.8	6.9	15.1
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.9	10.5	3.1	3.3	3.2	10.2	2.4	4.2
Green Ext Time (p_c), s	0.0	9.5	0.0	0.4	0.1	8.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	52	34	93	73	663	13	28	620	17
v/c Ratio	0.06	0.09	0.15	0.11	0.16	0.33	0.01	0.12	0.36	0.02
Control Delay	33.8	14.4	33.5	11.5	32.0	13.3	0.0	33.5	16.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	14.4	33.5	11.5	32.0	13.3	0.0	33.5	16.3	0.1
Queue Length 50th (ft)	6	2	14	4	14	81	0	11	106	0
Queue Length 95th (ft)	25	18	44	27	38	177	0	38	165	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	885	2212	885	2244	1718	2196	1022	885	2196	1022
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.04	0.04	0.04	0.30	0.01	0.03	0.28	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	64	0	0	48	0
Future Vol, veh/h	0	64	0	0	48	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	70	0	0	52	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.051	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	471	21	70	588	15	17	43	54	4	31	36
Future Vol, veh/h	76	471	21	70	588	15	17	43	54	4	31	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	512	23	76	639	16	18	47	59	4	34	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	655	0	0	535	0	0	1526	1497	524	1542	1500	647
Stage 1	-	-	-	-	-	-	690	690	-	799	799	-
Stage 2	-	-	-	-	-	-	836	807	-	743	701	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	932	-	-	1033	-	-	96	123	553	94	122	471
Stage 1	-	-	-	-	-	-	435	446	-	379	398	-
Stage 2	-	-	-	-	-	-	362	394	-	407	441	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	932	-	-	1033	-	-	58	104	553	49	103	471
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	104	-	49	103	-
Stage 1	-	-	-	-	-	-	396	406	-	345	369	-
Stage 2	-	-	-	-	-	-	279	365	-	293	402	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.9	105.5	49.3
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	142	932	-	-	1033	-	-	155
HCM Lane V/C Ratio	0.873	0.089	-	-	0.074	-	-	0.498
HCM Control Delay (s)	105.5	9.2	-	-	8.8	-	-	49.3
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	5.8	0.3	-	-	0.2	-	-	2.4

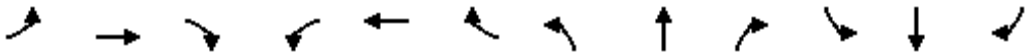
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	250	74	153	327	56	152	662	45	91	359	110
Future Volume (veh/h)	189	250	74	153	327	56	152	662	45	91	359	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	205	272	80	166	355	61	165	720	49	99	390	120
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	718	321	203	638	285	244	1106	495	222	1083	485
Arrive On Green	0.14	0.20	0.20	0.11	0.18	0.18	0.07	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	205	272	80	166	355	61	165	720	49	99	390	120
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	9.5	5.6	3.6	7.7	7.7	2.8	3.9	14.7	1.8	2.3	7.2	4.8
Cycle Q Clear(g_c), s	9.5	5.6	3.6	7.7	7.7	2.8	3.9	14.7	1.8	2.3	7.2	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	718	321	203	638	285	244	1106	495	222	1083	485
V/C Ratio(X)	0.84	0.38	0.25	0.82	0.56	0.21	0.68	0.65	0.10	0.45	0.36	0.25
Avail Cap(c_a), veh/h	317	1771	792	317	1644	736	615	1518	679	615	1560	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	28.9	28.1	36.3	31.4	29.3	38.1	24.9	20.5	37.8	22.7	21.9
Incr Delay (d2), s/veh	12.1	1.0	1.2	4.7	2.2	1.1	1.2	2.3	0.3	0.5	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	2.8	1.7	4.0	3.9	1.3	1.9	7.6	0.8	1.1	3.6	2.2
LnGrp Delay(d),s/veh	47.4	29.9	29.3	41.1	33.6	30.4	39.3	27.3	20.8	38.4	23.4	22.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		557			582			934			609	
Approach Delay, s/veh		36.2			35.4			29.0			25.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	33.7	15.3	23.8	11.6	33.2	17.2	21.9
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.3	16.7	9.7	7.6	5.9	9.2	11.5	9.7
Green Ext Time (p_c), s	0.1	9.5	0.1	4.6	0.2	7.0	0.1	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	205	272	80	166	355	61	165	720	49	99	390	120
v/c Ratio	0.72	0.37	0.19	0.65	0.54	0.15	0.49	0.69	0.09	0.36	0.40	0.23
Control Delay	55.2	35.4	2.5	52.9	38.6	0.8	46.9	33.3	0.3	47.1	29.2	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	35.4	2.5	52.9	38.6	0.8	46.9	33.3	0.3	47.1	29.2	6.0
Queue Length 50th (ft)	116	74	0	92	100	0	48	197	0	29	98	0
Queue Length 95th (ft)	#268	126	11	#198	163	0	90	283	0	60	153	40
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	286	1601	787	286	1601	787	555	1411	705	555	1411	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.17	0.10	0.58	0.22	0.08	0.30	0.51	0.07	0.18	0.28	0.17

Intersection Summary

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

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	319	58	38	373	46	45	31	50	51	22	13
Future Vol, veh/h	55	319	58	38	373	46	45	31	50	51	22	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	347	63	41	405	50	49	34	54	55	24	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	455	0	0	410	0	0	796	1036	205	823	1042	228
Stage 1	-	-	-	-	-	-	499	499	-	512	512	-
Stage 2	-	-	-	-	-	-	297	537	-	311	530	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1102	-	-	1145	-	-	278	230	802	266	228	775
Stage 1	-	-	-	-	-	-	522	542	-	513	535	-
Stage 2	-	-	-	-	-	-	687	521	-	674	525	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1102	-	-	1145	-	-	232	210	802	203	208	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	232	210	-	203	208	-
Stage 1	-	-	-	-	-	-	494	513	-	485	516	-
Stage 2	-	-	-	-	-	-	620	502	-	555	497	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.7	19.8	25.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	232	386	1102	-	-	1145	-	-	203	286
HCM Lane V/C Ratio	0.211	0.228	0.054	-	-	0.036	-	-	0.273	0.133
HCM Control Delay (s)	24.6	17.1	8.5	-	-	8.3	-	-	29.3	19.5
HCM Lane LOS	C	C	A	-	-	A	-	-	D	C
HCM 95th %tile Q(veh)	0.8	0.9	0.2	-	-	0.1	-	-	1.1	0.5

Intersection	
Intersection Delay, s/veh	19
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	190	35	39	327	58	44	101	44	40	106	55
Future Vol, veh/h	50	190	35	39	327	58	44	101	44	40	106	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	207	38	42	355	63	48	110	48	43	115	60
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	14.7	25.9	15.8	13.1
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	23%	100%	0%	100%	0%	27%	0%
Vol Thru, %	53%	0%	84%	0%	85%	73%	0%
Vol Right, %	23%	0%	16%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	50	225	39	385	146	55
LT Vol	44	50	0	39	0	40	0
Through Vol	101	0	190	0	327	106	0
RT Vol	44	0	35	0	58	0	55
Lane Flow Rate	205	54	245	42	418	159	60
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.422	0.113	0.466	0.085	0.763	0.335	0.112
Departure Headway (Hd)	7.395	7.481	6.856	7.179	6.561	7.59	6.732
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	487	479	523	499	552	473	531
Service Time	5.454	5.235	4.611	4.925	4.307	5.346	4.488
HCM Lane V/C Ratio	0.421	0.113	0.468	0.084	0.757	0.336	0.113
HCM Control Delay	15.8	11.2	15.5	10.6	27.5	14.1	10.3
HCM Lane LOS	C	B	C	B	D	B	B
HCM 95th-tile Q	2.1	0.4	2.4	0.3	6.8	1.5	0.4

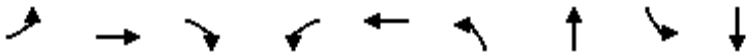
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	106	156	44	83	19	154	771	22	32	587	83
Future Volume (veh/h)	115	106	156	44	83	19	154	771	22	32	587	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	125	115	170	48	90	21	167	838	24	35	638	90
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	296	252	92	176	41	209	1361	39	75	993	140
Arrive On Green	0.09	0.16	0.16	0.05	0.12	0.12	0.12	0.39	0.39	0.04	0.32	0.32
Sat Flow, veh/h	1774	1863	1583	1774	1462	341	1774	3514	101	1774	3116	439
Grp Volume(v), veh/h	125	115	170	48	0	111	167	422	440	35	362	366
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1803	1774	1770	1845	1774	1770	1785
Q Serve(g_s), s	4.9	3.9	7.1	1.9	0.0	4.1	6.5	13.5	13.5	1.4	12.3	12.4
Cycle Q Clear(g_c), s	4.9	3.9	7.1	1.9	0.0	4.1	6.5	13.5	13.5	1.4	12.3	12.4
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.25
Lane Grp Cap(c), veh/h	161	296	252	92	0	217	209	685	715	75	564	569
V/C Ratio(X)	0.78	0.39	0.67	0.52	0.00	0.51	0.80	0.62	0.62	0.47	0.64	0.64
Avail Cap(c_a), veh/h	600	744	632	600	0	768	612	822	857	600	805	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	26.5	27.9	32.5	0.0	29.0	30.2	17.3	17.3	32.9	20.5	20.5
Incr Delay (d2), s/veh	3.1	1.7	6.3	1.7	0.0	3.8	2.7	2.8	2.7	1.7	3.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.2	3.5	1.0	0.0	2.3	3.3	7.1	7.4	0.7	6.6	6.7
LnGrp Delay(d),s/veh	34.4	28.2	34.2	34.2	0.0	32.8	32.9	20.1	20.0	34.6	24.2	24.3
LnGrp LOS	C	C	C	C		C	C	C	C	C	C	C
Approach Vol, veh/h		410			159			1029			763	
Approach Delay, s/veh		32.6			33.2			22.2			24.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	34.8	9.4	17.6	13.5	29.9	12.1	14.9
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.4	15.5	3.9	9.1	8.5	14.4	6.9	6.1
Green Ext Time (p_c), s	0.0	9.3	0.0	2.1	0.2	8.1	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	125	115	170	48	111	167	862	35	728
v/c Ratio	0.58	0.29	0.36	0.33	0.43	0.64	0.55	0.26	0.66
Control Delay	51.8	36.6	8.0	50.9	41.9	51.2	22.4	50.2	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	36.6	8.0	50.9	41.9	51.2	22.4	50.2	31.8
Queue Length 50th (ft)	72	61	0	28	57	96	203	20	185
Queue Length 95th (ft)	145	123	56	72	123	181	332	57	318
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	469	623	642	469	611	479	1581	469	1245
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	0.27	0.18	0.26	0.10	0.18	0.35	0.55	0.07	0.58

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	40	57	13	30	10	49	108	16	12	85	32
Future Vol, veh/h	28	40	57	13	30	10	49	108	16	12	85	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	43	62	14	33	11	53	117	17	13	92	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	8.2	9	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	22%	25%	9%
Vol Thru, %	62%	32%	57%	66%
Vol Right, %	9%	46%	19%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	125	53	129
LT Vol	49	28	13	12
Through Vol	108	40	30	85
RT Vol	16	57	10	32
Lane Flow Rate	188	136	58	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.238	0.171	0.077	0.174
Departure Headway (Hd)	4.548	4.53	4.789	4.474
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	790	791	747	801
Service Time	2.578	2.564	2.828	2.507
HCM Lane V/C Ratio	0.238	0.172	0.078	0.175
HCM Control Delay	9	8.5	8.2	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.6	0.2	0.6

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	310	50	30	299	14	78	23	32	9	8	7
Future Vol, veh/h	21	310	50	30	299	14	78	23	32	9	8	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	337	54	33	325	15	85	25	35	10	9	8
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	10.6	10.5	11.5	9.7
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	59%	100%	0%	0%	100%	0%	0%	38%
Vol Thru, %	17%	0%	100%	67%	0%	100%	88%	33%
Vol Right, %	24%	0%	0%	33%	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	21	207	153	30	199	114	24
LT Vol	78	21	0	0	30	0	0	9
Through Vol	23	0	207	103	0	199	100	8
RT Vol	32	0	0	50	0	0	14	7
Lane Flow Rate	145	23	225	167	33	217	124	26
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.261	0.039	0.349	0.248	0.055	0.338	0.19	0.048
Departure Headway (Hd)	6.502	6.098	5.592	5.361	6.115	5.609	5.522	6.633
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	554	591	647	673	587	641	651	540
Service Time	4.236	3.798	3.292	3.061	3.84	3.334	3.247	4.374
HCM Lane V/C Ratio	0.262	0.039	0.348	0.248	0.056	0.339	0.19	0.048
HCM Control Delay	11.5	9	11.3	9.8	9.2	11.2	9.5	9.7
HCM Lane LOS	B	A	B	A	A	B	A	A
HCM 95th-tile Q	1	0.1	1.6	1	0.2	1.5	0.7	0.2

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	17	64	7	28	12	279	54	42	494	2
Future Vol, veh/h	4	5	17	64	7	28	12	279	54	42	494	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	5	18	70	8	30	13	303	59	46	537	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1008	1018	538	1001	990	333	539	0	0	362	0	0
Stage 1	630	630	-	359	359	-	-	-	-	-	-	-
Stage 2	378	388	-	642	631	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	219	237	543	222	246	709	1029	-	-	1197	-	-
Stage 1	470	475	-	659	627	-	-	-	-	-	-	-
Stage 2	644	609	-	463	474	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	196	225	543	202	233	709	1029	-	-	1197	-	-
Mov Cap-2 Maneuver	196	225	-	202	233	-	-	-	-	-	-	-
Stage 1	464	457	-	650	619	-	-	-	-	-	-	-
Stage 2	601	601	-	425	456	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	28.9	0.3	0.6
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1029	-	-	352	256	1197	-	-
HCM Lane V/C Ratio	0.013	-	-	0.08	0.42	0.038	-	-
HCM Control Delay (s)	8.5	-	-	16.1	28.9	8.1	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	2	0.1	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	74	73	29	50	30	18
Future Vol, veh/h	74	73	29	50	30	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	79	32	54	33	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	159	0	238	120
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	118	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1420	-	750	931
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	907	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1420	-	733	931
Mov Cap-2 Maneuver	-	-	-	-	733	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	797	-	-	1420	-
HCM Lane V/C Ratio	0.065	-	-	0.022	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	41	14	339	557	58
Future Vol, veh/h	46	41	14	339	557	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	45	15	368	605	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1003	605	605	0	-	0
Stage 1	605	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	268	498	973	-	-	0
Stage 1	545	-	-	-	-	0
Stage 2	678	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	263	498	973	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	678	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	973	-	497	-
HCM Lane V/C Ratio	0.016	-	0.19	-
HCM Control Delay (s)	8.8	0	13.9	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.7	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	12	15	359	590	4
Future Vol, veh/h	3	12	15	359	590	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	16	390	641	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1063	321	645	0	-	0
Stage 1	641	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	232	675	938	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	228	675	938	-	-	-
Mov Cap-2 Maneuver	228	-	-	-	-	-
Stage 1	480	-	-	-	-	-
Stage 2	661	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	938	-	228	675	-	-
HCM Lane V/C Ratio	0.017	-	0.014	0.019	-	-
HCM Control Delay (s)	8.9	-	21	10.4	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	165	170	246	281
Demand Flow Rate, veh/h	168	173	250	287
Vehicles Circulating, veh/h	281	277	238	128
Vehicles Exiting, veh/h	134	211	211	322
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.3	6.4	7.1	6.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	168	173	250	287
Cap Entry Lane, veh/h	853	857	891	994
Entry HV Adj Factor	0.982	0.983	0.983	0.978
Flow Entry, veh/h	165	170	246	281
Cap Entry, veh/h	838	842	875	972
V/C Ratio	0.197	0.202	0.281	0.289
Control Delay, s/veh	6.3	6.4	7.1	6.6
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	1

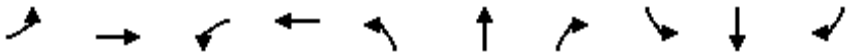
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	93	71	53	89	53	39	297	55	51	546	12
Future Volume (veh/h)	13	93	71	53	89	53	39	297	55	51	546	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	101	77	58	97	58	42	323	60	55	593	13
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	276	194	112	396	221	176	1096	490	108	1131	506
Arrive On Green	0.02	0.14	0.14	0.06	0.18	0.18	0.05	0.31	0.31	0.06	0.32	0.32
Sat Flow, veh/h	1774	1989	1397	1774	2192	1224	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	89	89	58	77	78	42	323	60	55	593	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1616	1774	1770	1647	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	2.6	2.9	1.8	2.1	2.3	0.7	4.0	1.6	1.7	7.9	0.3
Cycle Q Clear(g_c), s	0.4	2.6	2.9	1.8	2.1	2.3	0.7	4.0	1.6	1.7	7.9	0.3
Prop In Lane	1.00		0.86	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	245	224	112	320	298	176	1096	490	108	1131	506
V/C Ratio(X)	0.38	0.36	0.40	0.52	0.24	0.26	0.24	0.29	0.12	0.51	0.52	0.03
Avail Cap(c_a), veh/h	771	1292	1180	771	1169	1088	1496	2154	964	771	2154	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	22.5	22.6	26.1	20.2	20.3	26.2	15.1	14.2	26.2	16.0	13.4
Incr Delay (d2), s/veh	2.3	2.6	3.3	1.4	1.1	1.3	0.3	0.5	0.4	1.4	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	0.9	1.1	1.2	0.3	2.0	0.7	0.9	4.0	0.2
LnGrp Delay(d),s/veh	30.1	25.1	25.9	27.5	21.3	21.6	26.5	15.6	14.6	27.5	17.4	13.5
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		192			213			425			661	
Approach Delay, s/veh		25.8			23.1			16.6			18.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	24.6	9.3	14.4	8.6	25.2	6.9	16.8
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	3.7	6.0	3.8	4.9	2.7	9.9	2.4	4.3
Green Ext Time (p_c), s	0.0	4.0	0.1	1.5	0.0	8.5	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	178	58	155	42	323	60	55	593	13
v/c Ratio	0.08	0.28	0.27	0.15	0.12	0.30	0.11	0.26	0.46	0.02
Control Delay	35.4	18.9	35.3	14.9	34.2	20.2	1.5	35.3	19.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	18.9	35.3	14.9	34.2	20.2	1.5	35.3	19.2	0.1
Queue Length 50th (ft)	6	20	24	15	8	56	0	23	110	0
Queue Length 95th (ft)	25	54	65	48	26	99	8	63	172	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	753	2245	753	2260	1460	2096	981	753	2096	981
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.08	0.08	0.07	0.03	0.15	0.06	0.07	0.28	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	70	0	0	82	0
Future Vol, veh/h	0	70	0	0	82	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	76	0	0	89	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.087	-
HCM Control Delay (s)	8.9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.3	-

Intersection	
Int Delay, s/veh	62.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	97	551	40	29	390	59	15	88	42	5	104	72
Future Vol, veh/h	97	551	40	29	390	59	15	88	42	5	104	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	599	43	32	424	64	16	96	46	5	113	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	488	0	0	642	0	0	1447	1383	621	1422	1372	456
Stage 1	-	-	-	-	-	-	831	831	-	520	520	-
Stage 2	-	-	-	-	-	-	616	552	-	902	852	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1075	-	-	943	-	-	109	144	487	114	146	604
Stage 1	-	-	-	-	-	-	364	384	-	539	532	-
Stage 2	-	-	-	-	-	-	478	515	-	332	376	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1075	-	-	943	-	-	21	125	487	35	127	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	125	-	35	127	-
Stage 1	-	-	-	-	-	-	328	346	-	486	514	-
Stage 2	-	-	-	-	-	-	314	497	-	196	339	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.5	$ 407.2	180.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	96	1075	-	-	943	-	-	167
HCM Lane V/C Ratio	1.642	0.098	-	-	0.033	-	-	1.178
HCM Control Delay (s)	$ 407.2	8.7	-	-	8.9	-	-	180.8
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	12.4	0.3	-	-	0.1	-	-	10.6

Notes

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

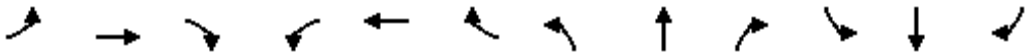
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	322	170	110	268	36	103	325	34	77	423	91
Future Volume (veh/h)	148	322	170	110	268	36	103	325	34	77	423	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	161	350	185	120	291	39	112	353	37	84	460	99
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	805	360	154	711	318	258	908	406	235	884	395
Arrive On Green	0.11	0.23	0.23	0.09	0.20	0.20	0.08	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	161	350	185	120	291	39	112	353	37	84	460	99
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.3	6.0	7.3	4.7	5.1	1.4	2.2	5.9	1.3	1.7	8.0	3.6
Cycle Q Clear(g_c), s	6.3	6.0	7.3	4.7	5.1	1.4	2.2	5.9	1.3	1.7	8.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	805	360	154	711	318	258	908	406	235	884	395
V/C Ratio(X)	0.80	0.43	0.51	0.78	0.41	0.12	0.43	0.39	0.09	0.36	0.52	0.25
Avail Cap(c_a), veh/h	374	2088	934	374	1939	867	725	1789	801	725	1839	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	23.6	24.1	31.8	24.8	23.3	31.5	21.9	20.2	31.7	23.0	21.4
Incr Delay (d2), s/veh	2.8	1.1	3.3	3.2	1.1	0.5	0.4	1.0	0.3	0.3	1.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.1	3.5	2.4	2.6	0.7	1.1	3.0	0.6	0.8	4.1	1.7
LnGrp Delay(d),s/veh	33.6	24.7	27.3	35.1	25.9	23.8	31.9	22.9	20.5	32.0	24.8	22.6
LnGrp LOS	C	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		696			450			502			643	
Approach Delay, s/veh		27.4			28.1			24.7			25.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	25.8	11.9	23.0	11.0	25.3	13.8	21.1
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	3.7	7.9	6.7	9.3	4.2	10.0	8.3	7.1
Green Ext Time (p_c), s	0.1	5.5	0.1	6.9	0.1	7.8	0.1	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	161	350	185	120	291	39	112	353	37	84	460	99
v/c Ratio	0.59	0.45	0.38	0.54	0.43	0.10	0.35	0.36	0.07	0.29	0.55	0.21
Control Delay	43.2	30.7	7.4	44.4	32.1	0.5	40.3	26.6	0.3	40.6	30.5	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	30.7	7.4	44.4	32.1	0.5	40.3	26.6	0.3	40.6	30.5	4.6
Queue Length 50th (ft)	74	79	0	57	68	0	27	77	0	20	106	0
Queue Length 95th (ft)	162	143	54	125	120	0	60	135	0	49	178	26
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	333	1868	922	333	1868	896	647	1646	802	647	1646	802
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.19	0.20	0.36	0.16	0.04	0.17	0.21	0.05	0.13	0.28	0.12

Intersection Summary

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	323	31	28	314	43	38	22	20	49	24	3
Future Vol, veh/h	24	323	31	28	314	43	38	22	20	49	24	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	351	34	30	341	47	41	24	22	53	26	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	385	0	0	664	868	193	665	862	194
Stage 1	-	-	-	-	-	-	420	420	-	425	425	-
Stage 2	-	-	-	-	-	-	244	448	-	240	437	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1167	-	-	1170	-	-	346	289	816	345	291	815
Stage 1	-	-	-	-	-	-	581	588	-	578	585	-
Stage 2	-	-	-	-	-	-	738	571	-	742	578	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1167	-	-	1170	-	-	308	275	816	302	277	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	308	275	-	302	277	-
Stage 1	-	-	-	-	-	-	568	575	-	565	570	-
Stage 2	-	-	-	-	-	-	683	556	-	677	565	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	16.7	19.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	308	402	1167	-	-	1170	-	-	302	299
HCM Lane V/C Ratio	0.134	0.114	0.022	-	-	0.026	-	-	0.176	0.098
HCM Control Delay (s)	18.5	15.1	8.2	-	-	8.2	-	-	19.5	18.3
HCM Lane LOS	C	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.5	0.4	0.1	-	-	0.1	-	-	0.6	0.3

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	189	48	36	234	64	33	191	38	69	196	72
Future Vol, veh/h	67	189	48	36	234	64	33	191	38	69	196	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	205	52	39	254	70	36	208	41	75	213	78
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	18.7	24.8	24.4	21.4
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	13%	100%	0%	100%	0%	26%	0%
Vol Thru, %	73%	0%	80%	0%	79%	74%	0%
Vol Right, %	15%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	262	67	237	36	298	265	72
LT Vol	33	67	0	36	0	69	0
Through Vol	191	0	189	0	234	196	0
RT Vol	38	0	48	0	64	0	72
Lane Flow Rate	285	73	258	39	324	288	78
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.639	0.173	0.563	0.091	0.696	0.643	0.156
Departure Headway (Hd)	8.083	8.534	7.869	8.409	7.736	8.039	7.184
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	420	459	426	466	449	499
Service Time	6.136	6.285	5.619	6.158	5.485	5.788	4.932
HCM Lane V/C Ratio	0.638	0.174	0.562	0.092	0.695	0.641	0.156
HCM Control Delay	24.4	13.1	20.3	12	26.4	24.2	11.3
HCM Lane LOS	C	B	C	B	D	C	B
HCM 95th-tile Q	4.4	0.6	3.4	0.3	5.3	4.4	0.5

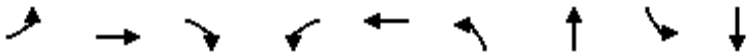
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	83	284	57	52	40	61	447	26	21	808	55
Future Volume (veh/h)	103	83	284	57	52	40	61	447	26	21	808	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	112	90	309	62	57	43	66	486	28	23	878	60
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	442	375	99	209	158	101	1248	72	53	1162	79
Arrive On Green	0.08	0.24	0.24	0.06	0.21	0.21	0.06	0.37	0.37	0.03	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	1774	987	744	1774	3402	196	1774	3362	230
Grp Volume(v), veh/h	112	90	309	62	0	100	66	252	262	23	462	476
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1731	1774	1770	1828	1774	1770	1822
Q Serve(g_s), s	5.0	3.2	15.1	2.8	0.0	3.9	3.0	8.6	8.6	1.0	18.8	18.8
Cycle Q Clear(g_c), s	5.0	3.2	15.1	2.8	0.0	3.9	3.0	8.6	8.6	1.0	18.8	18.8
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	143	442	375	99	0	367	101	649	670	53	612	630
V/C Ratio(X)	0.78	0.20	0.82	0.63	0.00	0.27	0.65	0.39	0.39	0.43	0.76	0.76
Avail Cap(c_a), veh/h	519	643	546	519	0	638	529	711	734	519	695	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	24.9	29.4	37.6	0.0	26.8	37.6	19.0	19.1	38.8	23.6	23.6
Incr Delay (d2), s/veh	3.5	0.5	10.2	2.4	0.0	0.8	2.6	1.2	1.1	2.1	6.7	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.7	7.6	1.4	0.0	2.0	1.5	4.4	4.6	0.5	10.2	10.5
LnGrp Delay(d),s/veh	40.2	25.4	39.6	40.1	0.0	27.7	40.2	20.2	20.2	40.9	30.2	30.1
LnGrp LOS	D	C	D	D		C	D	C	C	D	C	C
Approach Vol, veh/h		511			162			580			961	
Approach Delay, s/veh		37.2			32.4			22.5			30.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	37.4	10.2	25.7	9.9	35.6	12.3	23.6
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.0	10.6	4.8	17.1	5.0	20.8	7.0	5.9
Green Ext Time (p_c), s	0.0	6.2	0.1	2.2	0.1	7.3	0.1	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	112	90	309	62	100	66	514	23	938
v/c Ratio	0.48	0.30	0.60	0.36	0.38	0.38	0.30	0.16	0.65
Control Delay	44.3	35.7	9.6	44.9	32.3	44.9	16.2	43.1	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	35.7	9.6	44.9	32.3	44.9	16.2	43.1	25.7
Queue Length 50th (ft)	58	43	0	32	37	34	73	12	220
Queue Length 95th (ft)	118	93	71	77	90	80	167	39	358
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	538	714	797	538	683	549	1716	538	1435
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	0.21	0.13	0.39	0.12	0.15	0.12	0.30	0.04	0.65

Intersection Summary

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	59	57	67	68	59	42	75	43	50	103	36
Future Vol, veh/h	21	59	57	67	68	59	42	75	43	50	103	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	64	62	73	74	64	46	82	47	54	112	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	10.1	9.7	10.1
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	15%	35%	26%
Vol Thru, %	47%	43%	35%	54%
Vol Right, %	27%	42%	30%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	137	194	189
LT Vol	42	21	67	50
Through Vol	75	59	68	103
RT Vol	43	57	59	36
Lane Flow Rate	174	149	211	205
Geometry Grp	1	1	1	1
Degree of Util (X)	0.24	0.204	0.289	0.284
Departure Headway (Hd)	4.971	4.923	4.941	4.974
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	719	719	715
Service Time	3.064	3.018	3.03	3.063
HCM Lane V/C Ratio	0.244	0.207	0.293	0.287
HCM Control Delay	9.7	9.3	10.1	10.1
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.9	0.8	1.2	1.2

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	398	110	85	333	8	80	21	91	10	26	13
Future Vol, veh/h	12	398	110	85	333	8	80	21	91	10	26	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	433	120	92	362	9	87	23	99	11	28	14
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	13.9	12.3	14.3	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	42%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	11%	0%	100%	55%	0%	100%	93%	53%
Vol Right, %	47%	0%	0%	45%	0%	0%	7%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	192	12	265	243	85	222	119	49
LT Vol	80	12	0	0	85	0	0	10
Through Vol	21	0	265	133	0	222	111	26
RT Vol	91	0	0	110	0	0	8	13
Lane Flow Rate	209	13	288	264	92	241	129	53
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.401	0.024	0.494	0.428	0.174	0.421	0.224	0.109
Departure Headway (Hd)	6.913	6.68	6.171	5.848	6.787	6.278	6.23	7.379
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	518	534	583	612	527	572	573	483
Service Time	4.684	4.445	3.936	3.612	4.556	4.046	3.998	5.172
HCM Lane V/C Ratio	0.403	0.024	0.494	0.431	0.175	0.421	0.225	0.11
HCM Control Delay	14.3	9.6	14.9	13	11	13.6	10.8	11.1
HCM Lane LOS	B	A	B	B	B	B	B	B
HCM 95th-tile Q	1.9	0.1	2.7	2.1	0.6	2.1	0.9	0.4

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	11	34	5	28	24	545	54	15	508	6
Future Vol, veh/h	2	2	11	34	5	28	24	545	54	15	508	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	12	37	5	30	26	592	59	16	552	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1279	1291	556	1269	1265	622	559	0	0	651	0	0
Stage 1	588	588	-	674	674	-	-	-	-	-	-	-
Stage 2	691	703	-	595	591	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	143	163	531	145	169	487	1012	-	-	935	-	-
Stage 1	495	496	-	444	454	-	-	-	-	-	-	-
Stage 2	435	440	-	491	494	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	126	156	531	136	162	487	1012	-	-	935	-	-
Mov Cap-2 Maneuver	126	156	-	136	162	-	-	-	-	-	-	-
Stage 1	482	488	-	432	442	-	-	-	-	-	-	-
Stage 2	392	429	-	470	486	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.5	33.4	0.3	0.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1012	-	-	304	198	935	-	-
HCM Lane V/C Ratio	0.026	-	-	0.054	0.368	0.017	-	-
HCM Control Delay (s)	8.7	-	-	17.5	33.4	8.9	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.6	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	44	31	54	28	23
Future Vol, veh/h	62	44	31	54	28	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	48	34	59	30	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	115	0	218	91
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	127	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1474	-	770	967
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	899	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1474	-	752	967
Mov Cap-2 Maneuver	-	-	-	-	752	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	836	-	-	1474	-
HCM Lane V/C Ratio	0.066	-	-	0.023	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	29	26	609	593	45
Future Vol, veh/h	39	29	26	609	593	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	32	28	662	645	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1363	645	645	0	-	0
Stage 1	645	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	163	472	940	-	-	0
Stage 1	522	-	-	-	-	0
Stage 2	483	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	155	472	940	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	483	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.3	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	940	-	270	-
HCM Lane V/C Ratio	0.03	-	0.274	-
HCM Control Delay (s)	8.9	0	23.3	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	47	82	619	599	13
Future Vol, veh/h	4	47	82	619	599	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	51	89	673	651	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1502	326	665	0	-	0
Stage 1	651	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	123	670	922	-	-	-
Stage 1	482	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	111	670	922	-	-	-
Mov Cap-2 Maneuver	111	-	-	-	-	-
Stage 1	435	-	-	-	-	-
Stage 2	417	-	-	-	-	-

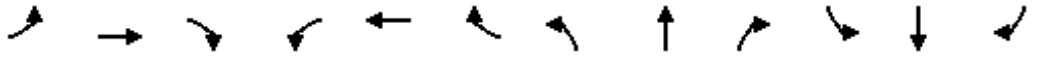
Approach	EB	NB	SB
HCM Control Delay, s	13	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	922	-	111	670	-	-
HCM Lane V/C Ratio	0.097	-	0.039	0.076	-	-
HCM Control Delay (s)	9.3	-	38.8	10.8	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.2	-	-

Intersection	
Intersection Delay, s/veh	5.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	122	171	207	88
Demand Flow Rate, veh/h	124	175	211	91
Vehicles Circulating, veh/h	145	155	148	143
Vehicles Exiting, veh/h	89	204	121	187
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.9	5.6	5.9	4.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	124	175	211	91
Cap Entry Lane, veh/h	977	968	974	979
Entry HV Adj Factor	0.981	0.976	0.981	0.970
Flow Entry, veh/h	122	171	207	88
Cap Entry, veh/h	958	945	956	950
V/C Ratio	0.127	0.181	0.217	0.093
Control Delay, s/veh	4.9	5.6	5.9	4.6
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	90	38	81	104	92	67	610	62	56	570	16
Future Volume (veh/h)	13	90	38	81	104	92	67	610	62	56	570	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	98	41	88	113	100	73	663	67	61	620	17
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	321	128	135	344	279	239	1172	524	112	1149	514
Arrive On Green	0.02	0.13	0.13	0.08	0.18	0.18	0.07	0.33	0.33	0.06	0.32	0.32
Sat Flow, veh/h	1774	2474	984	1774	1858	1508	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	69	70	88	107	106	73	663	67	61	620	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	1770	1597	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	2.2	2.3	3.0	3.2	3.6	1.2	9.5	1.8	2.1	8.8	0.5
Cycle Q Clear(g_c), s	0.5	2.2	2.3	3.0	3.2	3.6	1.2	9.5	1.8	2.1	8.8	0.5
Prop In Lane	1.00		0.58	1.00		0.94	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	230	219	135	327	295	239	1172	524	112	1149	514
V/C Ratio(X)	0.38	0.30	0.32	0.65	0.33	0.36	0.31	0.57	0.13	0.54	0.54	0.03
Avail Cap(c_a), veh/h	721	1209	1154	721	1094	987	1399	2015	901	721	2015	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	24.2	24.3	27.6	21.7	21.9	27.2	16.9	14.4	27.9	17.0	14.2
Incr Delay (d2), s/veh	2.4	2.1	2.4	2.0	1.7	2.1	0.3	1.6	0.4	1.5	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	1.2	1.5	1.7	1.7	0.6	4.9	0.8	1.0	4.5	0.2
LnGrp Delay(d),s/veh	32.1	26.3	26.7	29.6	23.4	24.0	27.5	18.5	14.8	29.5	18.4	14.3
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		153			301			803			698	
Approach Delay, s/veh		27.0			25.4			19.0			19.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	27.2	10.4	14.4	10.0	26.8	7.0	17.8
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	4.1	11.5	5.0	4.3	3.2	10.8	2.5	5.6
Green Ext Time (p_c), s	0.1	8.9	0.1	1.1	0.1	8.7	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	139	88	213	73	663	67	61	620	17
v/c Ratio	0.09	0.26	0.40	0.22	0.22	0.51	0.10	0.31	0.46	0.03
Control Delay	40.7	26.4	41.4	14.7	39.1	22.0	1.7	41.1	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	26.4	41.4	14.7	39.1	22.0	1.7	41.1	20.3	0.1
Queue Length 50th (ft)	7	22	41	20	17	135	0	29	121	0
Queue Length 95th (ft)	28	56	98	62	43	217	11	75	192	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	655	2077	655	2044	1271	1834	872	655	1853	879
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.07	0.13	0.10	0.06	0.36	0.08	0.09	0.33	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	104	0	0	88	0
Future Vol, veh/h	0	104	0	0	88	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	113	0	0	96	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.094	-
HCM Control Delay (s)	8.9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.3	-

Intersection	
Int Delay, s/veh	58.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	471	21	70	588	15	17	73	54	4	61	66
Future Vol, veh/h	106	471	21	70	588	15	17	73	54	4	61	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	512	23	76	639	16	18	79	59	4	66	72

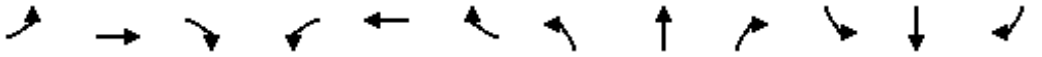
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	655	0	0	535	0	0	1622	1561	524	1622	1564	647
Stage 1	-	-	-	-	-	-	754	754	-	799	799	-
Stage 2	-	-	-	-	-	-	868	807	-	823	765	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	932	-	-	1033	-	-	82	112	553	82	112	471
Stage 1	-	-	-	-	-	-	401	417	-	379	398	-
Stage 2	-	-	-	-	-	-	347	394	-	368	412	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	932	-	-	1033	-	-	25	91	553	17	91	471
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	91	-	17	91	-
Stage 1	-	-	-	-	-	-	352	366	-	332	369	-
Stage 2	-	-	-	-	-	-	224	365	-	226	361	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.9	$ 445	190.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	91	932	-	-	1033	-	-	125
HCM Lane V/C Ratio	1.72	0.124	-	-	0.074	-	-	1.139
HCM Control Delay (s)	$ 445	9.4	-	-	8.8	-	-	190.6
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	12.8	0.4	-	-	0.2	-	-	8.5

Notes

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



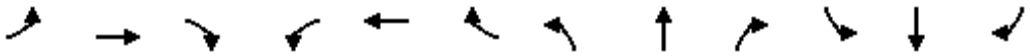
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	250	74	153	327	56	152	712	45	91	409	110
Future Volume (veh/h)	189	250	74	153	327	56	152	712	45	91	409	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	205	272	80	166	355	61	165	774	49	99	445	120
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	710	317	202	630	282	242	1147	513	217	1121	502
Arrive On Green	0.14	0.20	0.20	0.11	0.18	0.18	0.07	0.32	0.32	0.06	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	205	272	80	166	355	61	165	774	49	99	445	120
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	9.7	5.7	3.7	7.9	7.9	2.8	4.0	16.3	1.9	2.4	8.5	4.8
Cycle Q Clear(g_c), s	9.7	5.7	3.7	7.9	7.9	2.8	4.0	16.3	1.9	2.4	8.5	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	710	317	202	630	282	242	1147	513	217	1121	502
V/C Ratio(X)	0.85	0.38	0.25	0.82	0.56	0.22	0.68	0.67	0.10	0.46	0.40	0.24
Avail Cap(c_a), veh/h	309	1727	772	309	1603	717	600	1480	662	600	1521	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	29.8	29.0	37.3	32.3	30.2	39.1	25.2	20.3	38.9	23.0	21.7
Incr Delay (d2), s/veh	13.2	1.0	1.2	5.7	2.3	1.1	1.3	2.6	0.3	0.6	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	2.9	1.7	4.2	4.0	1.3	2.0	8.4	0.8	1.2	4.3	2.2
LnGrp Delay(d),s/veh	49.5	30.8	30.2	43.0	34.6	31.4	40.3	27.7	20.6	39.5	23.8	22.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		557			582			988			664	
Approach Delay, s/veh		37.6			36.7			29.5			25.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	35.4	15.5	24.1	11.8	34.8	17.4	22.1
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.4	18.3	9.9	7.7	6.0	10.5	11.7	9.9
Green Ext Time (p_c), s	0.1	9.6	0.1	4.6	0.1	7.7	0.1	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	205	272	80	166	355	61	165	774	49	99	445	120
v/c Ratio	0.73	0.38	0.19	0.66	0.54	0.15	0.50	0.71	0.09	0.37	0.43	0.22
Control Delay	57.3	36.3	2.5	54.3	39.5	0.8	47.9	33.7	0.3	47.9	29.5	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	36.3	2.5	54.3	39.5	0.8	47.9	33.7	0.3	47.9	29.5	5.9
Queue Length 50th (ft)	121	77	0	95	104	0	50	217	0	30	115	0
Queue Length 95th (ft)	#268	126	11	#198	163	0	90	307	0	60	175	40
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	280	1568	773	280	1568	773	543	1381	692	543	1381	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.17	0.10	0.59	0.23	0.08	0.30	0.56	0.07	0.18	0.32	0.17

Intersection Summary

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

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	319	58	38	373	76	45	41	50	81	32	13
Future Vol, veh/h	55	319	58	38	373	76	45	41	50	81	32	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	347	63	41	405	83	49	45	54	88	35	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	488	0	0	410	0	0	801	1069	205	845	1059	244
Stage 1	-	-	-	-	-	-	499	499	-	529	529	-
Stage 2	-	-	-	-	-	-	302	570	-	316	530	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1071	-	-	1145	-	-	276	220	802	256	223	757
Stage 1	-	-	-	-	-	-	522	542	-	501	525	-
Stage 2	-	-	-	-	-	-	682	504	-	670	525	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1145	-	-	219	200	802	185	203	757
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	200	-	185	203	-
Stage 1	-	-	-	-	-	-	493	512	-	473	506	-
Stage 2	-	-	-	-	-	-	601	486	-	538	496	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.6	22	34.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	219	340	1071	-	-	1145	-	-	185	257
HCM Lane V/C Ratio	0.223	0.291	0.056	-	-	0.036	-	-	0.476	0.19
HCM Control Delay (s)	26.1	19.9	8.6	-	-	8.3	-	-	41	22.3
HCM Lane LOS	D	C	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.8	1.2	0.2	-	-	0.1	-	-	2.3	0.7

Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	190	35	39	327	58	44	121	44	40	126	65
Future Vol, veh/h	60	190	35	39	327	58	44	121	44	40	126	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	207	38	42	355	63	48	132	48	43	137	71
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	15.6	29.6	17.7	14.2
HCM LOS	C	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	100%	0%	24%	0%
Vol Thru, %	58%	0%	84%	0%	85%	76%	0%
Vol Right, %	21%	0%	16%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	60	225	39	385	166	65
LT Vol	44	60	0	39	0	40	0
Through Vol	121	0	190	0	327	126	0
RT Vol	44	0	35	0	58	0	65
Lane Flow Rate	227	65	245	42	418	180	71
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.482	0.141	0.487	0.088	0.797	0.39	0.136
Departure Headway (Hd)	7.634	7.791	7.165	7.474	6.854	7.776	6.933
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	458	501	478	527	462	515
Service Time	5.71	5.564	4.938	5.236	4.615	5.552	4.708
HCM Lane V/C Ratio	0.483	0.142	0.489	0.088	0.793	0.39	0.138
HCM Control Delay	17.7	11.9	16.6	11	31.5	15.5	10.8
HCM Lane LOS	C	B	C	B	D	C	B
HCM 95th-tile Q	2.6	0.5	2.6	0.3	7.5	1.8	0.5

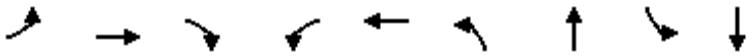
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	106	156	44	83	19	154	811	22	32	627	93
Future Volume (veh/h)	125	106	156	44	83	19	154	811	22	32	627	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	136	115	170	48	90	21	167	882	24	35	682	101
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	293	249	91	163	38	208	1407	38	74	1024	152
Arrive On Green	0.10	0.16	0.16	0.05	0.11	0.11	0.12	0.40	0.40	0.04	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	1462	341	1774	3520	96	1774	3094	458
Grp Volume(v), veh/h	136	115	170	48	0	111	167	443	463	35	390	393
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1803	1774	1770	1846	1774	1770	1782
Q Serve(g_s), s	5.4	4.0	7.3	1.9	0.0	4.2	6.6	14.5	14.5	1.4	13.7	13.7
Cycle Q Clear(g_c), s	5.4	4.0	7.3	1.9	0.0	4.2	6.6	14.5	14.5	1.4	13.7	13.7
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	173	293	249	91	0	200	208	707	738	74	586	590
V/C Ratio(X)	0.79	0.39	0.68	0.53	0.00	0.55	0.80	0.63	0.63	0.47	0.67	0.67
Avail Cap(c_a), veh/h	583	723	615	583	0	747	596	799	834	583	782	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	27.4	28.8	33.5	0.0	30.5	31.1	17.4	17.4	33.9	20.8	20.8
Incr Delay (d2), s/veh	3.0	1.7	6.5	1.8	0.0	4.8	2.7	2.9	2.8	1.7	4.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.2	3.7	1.0	0.0	2.4	3.4	7.6	7.9	0.7	7.2	7.3
LnGrp Delay(d),s/veh	34.9	29.1	35.3	35.2	0.0	35.3	33.8	20.3	20.2	35.6	24.7	24.7
LnGrp LOS	C	C	D	D		D	C	C	C	D	C	C
Approach Vol, veh/h		421			159			1073			818	
Approach Delay, s/veh		33.5			35.3			22.4			25.2	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	36.4	9.4	17.8	13.7	31.5	12.8	14.4
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.4	16.5	3.9	9.3	8.6	15.7	7.4	6.2
Green Ext Time (p_c), s	0.0	9.4	0.0	2.1	0.2	8.3	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	115	170	48	111	167	906	35	783
v/c Ratio	0.61	0.29	0.36	0.34	0.44	0.66	0.56	0.27	0.69
Control Delay	53.1	36.6	7.9	52.0	42.8	52.8	23.1	51.2	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	36.6	7.9	52.0	42.8	52.8	23.1	51.2	32.9
Queue Length 50th (ft)	79	61	0	28	58	97	221	20	207
Queue Length 95th (ft)	157	123	55	72	124	182	358	58	353
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	454	603	627	454	592	464	1604	454	1206
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	0.30	0.19	0.27	0.11	0.19	0.36	0.56	0.08	0.65

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	40	57	13	30	10	49	118	16	12	95	32
Future Vol, veh/h	28	40	57	13	30	10	49	118	16	12	95	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	43	62	14	33	11	53	128	17	13	103	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.3	9.1	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	22%	25%	9%
Vol Thru, %	64%	32%	57%	68%
Vol Right, %	9%	46%	19%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	125	53	139
LT Vol	49	28	13	12
Through Vol	118	40	30	95
RT Vol	16	57	10	32
Lane Flow Rate	199	136	58	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.252	0.173	0.078	0.189
Departure Headway (Hd)	4.563	4.582	4.844	4.499
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	781	737	796
Service Time	2.598	2.619	2.886	2.536
HCM Lane V/C Ratio	0.253	0.174	0.079	0.19
HCM Control Delay	9.1	8.6	8.3	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.6	0.3	0.7

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	320	70	30	309	14	98	23	32	9	8	7
Future Vol, veh/h	21	320	70	30	309	14	98	23	32	9	8	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	348	76	33	336	15	107	25	35	10	9	8
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	11	10.9	12.3	9.9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	64%	100%	0%	0%	100%	0%	0%	38%
Vol Thru, %	15%	0%	100%	60%	0%	100%	88%	33%
Vol Right, %	21%	0%	0%	40%	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	21	213	177	30	206	117	24
LT Vol	98	21	0	0	30	0	0	9
Through Vol	23	0	213	107	0	206	103	8
RT Vol	32	0	0	70	0	0	14	7
Lane Flow Rate	166	23	232	192	33	224	127	26
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.308	0.039	0.367	0.289	0.057	0.358	0.201	0.049
Departure Headway (Hd)	6.664	6.206	5.7	5.419	6.269	5.763	5.678	6.813
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	578	631	664	572	625	632	525
Service Time	4.397	3.935	3.429	3.148	3.999	3.492	3.408	4.558
HCM Lane V/C Ratio	0.307	0.04	0.368	0.289	0.058	0.358	0.201	0.05
HCM Control Delay	12.3	9.2	11.7	10.3	9.4	11.7	9.8	9.9
HCM Lane LOS	B	A	B	B	A	B	A	A
HCM 95th-tile Q	1.3	0.1	1.7	1.2	0.2	1.6	0.7	0.2

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	18	56	7	29	12	270	46	44	493	2
Future Vol, veh/h	4	5	18	56	7	29	12	270	46	44	493	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	5	20	61	8	32	13	293	50	48	536	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	997	1002	537	990	978	318	538	0	0	343	0	0
Stage 1	633	633	-	344	344	-	-	-	-	-	-	-
Stage 2	364	369	-	646	634	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	223	242	544	225	250	723	1030	-	-	1216	-	-
Stage 1	468	473	-	671	637	-	-	-	-	-	-	-
Stage 2	655	621	-	460	473	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	200	230	544	205	237	723	1030	-	-	1216	-	-
Mov Cap-2 Maneuver	200	230	-	205	237	-	-	-	-	-	-	-
Stage 1	462	455	-	662	629	-	-	-	-	-	-	-
Stage 2	611	613	-	421	455	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.9	26.2	0.3	0.7
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1030	-	-	361	268	1216	-	-
HCM Lane V/C Ratio	0.013	-	-	0.081	0.373	0.039	-	-
HCM Control Delay (s)	8.5	-	-	15.9	26.2	8.1	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1.7	0.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	65	30	52	21	19
Future Vol, veh/h	77	65	30	52	21	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	71	33	57	23	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	243	120
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	123	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1425	-	745	931
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1425	-	727	931
Mov Cap-2 Maneuver	-	-	-	-	727	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	811	-	-	1425	-
HCM Lane V/C Ratio	0.054	-	-	0.023	-
HCM Control Delay (s)	9.7	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	43	15	322	548	60
Future Vol, veh/h	48	43	15	322	548	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	47	16	350	596	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	978	596	596	0	-	0
Stage 1	596	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	278	504	980	-	-	0
Stage 1	550	-	-	-	-	0
Stage 2	690	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	272	504	980	-	-	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	980	-	516	-
HCM Lane V/C Ratio	0.017	-	0.192	-
HCM Control Delay (s)	8.7	0	13.6	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	12	16	343	583	4
Future Vol, veh/h	3	12	16	343	583	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	17	373	634	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1041	317	638	0	-	0
Stage 1	634	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	240	680	944	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	680	944	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	671	-	-	-	-	-

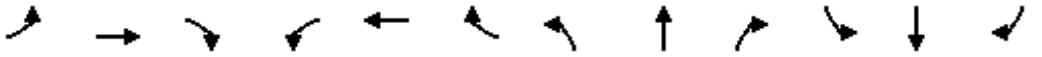
Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	944	-	236	680	-	-
HCM Lane V/C Ratio	0.018	-	0.014	0.019	-	-
HCM Control Delay (s)	8.9	-	20.5	10.4	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	6.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	160	88	191	280
Demand Flow Rate, veh/h	163	90	194	286
Vehicles Circulating, veh/h	214	288	224	55
Vehicles Exiting, veh/h	127	130	153	323
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.8	5.4	6.2	6.0
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	163	90	194	286
Cap Entry Lane, veh/h	912	847	903	1069
Entry HV Adj Factor	0.983	0.981	0.983	0.977
Flow Entry, veh/h	160	88	191	280
Cap Entry, veh/h	897	831	887	1045
V/C Ratio	0.179	0.106	0.215	0.267
Control Delay, s/veh	5.8	5.4	6.2	6.0
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	18	74	6	13	25	40	308	9	23	567	12
Future Volume (veh/h)	13	18	74	6	13	25	40	308	9	23	567	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	20	80	7	14	27	43	335	10	25	616	13
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	251	224	20	233	209	182	1269	568	62	1206	539
Arrive On Green	0.02	0.14	0.14	0.01	0.13	0.13	0.05	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	20	80	7	14	27	43	335	10	25	616	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.5	2.5	0.2	0.4	0.8	0.6	3.6	0.2	0.7	7.5	0.3
Cycle Q Clear(g_c), s	0.4	0.5	2.5	0.2	0.4	0.8	0.6	3.6	0.2	0.7	7.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	251	224	20	233	209	182	1269	568	62	1206	539
V/C Ratio(X)	0.38	0.08	0.36	0.36	0.06	0.13	0.24	0.26	0.02	0.41	0.51	0.02
Avail Cap(c_a), veh/h	818	1371	1227	818	1241	1110	1587	2285	1022	818	2285	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	20.2	21.0	26.6	20.6	20.8	24.6	12.3	11.2	25.6	14.3	11.9
Incr Delay (d2), s/veh	2.3	0.4	2.8	4.0	0.3	0.8	0.2	0.4	0.0	1.6	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	1.3	0.1	0.2	0.4	0.3	1.8	0.1	0.4	3.9	0.1
LnGrp Delay(d),s/veh	28.5	20.6	23.8	30.6	20.9	21.6	24.9	12.7	11.3	27.2	15.5	11.9
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		114			48			388			654	
Approach Delay, s/veh		23.8			22.7			14.0			15.9	
Approach LOS		C			C			B			B	

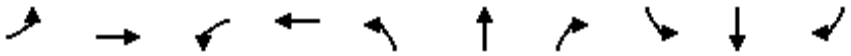
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	26.2	6.3	14.1	8.6	25.3	6.8	13.5
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.7	5.6	2.2	4.5	2.6	9.5	2.4	2.8
Green Ext Time (p_c), s	0.0	4.8	0.0	0.8	0.0	8.9	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	100	7	41	43	335	10	25	616	13
v/c Ratio	0.05	0.14	0.03	0.06	0.08	0.17	0.01	0.09	0.33	0.01
Control Delay	28.7	10.6	28.7	15.0	27.5	10.4	0.0	28.7	12.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	10.6	28.7	15.0	27.5	10.4	0.0	28.7	12.5	0.0
Queue Length 50th (ft)	4	2	2	2	6	21	0	7	74	0
Queue Length 95th (ft)	23	25	15	16	24	86	0	34	157	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	1010	2537	1010	2587	1960	2546	1168	1010	2546	1168
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.01	0.02	0.02	0.13	0.01	0.02	0.24	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	0	46	0
Future Vol, veh/h	0	33	0	0	46	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	0	0	50	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.049	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

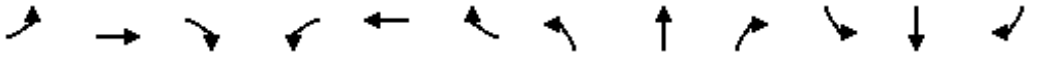
Intersection	
Int Delay, s/veh	19

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	572	42	30	405	61	16	61	44	5	78	45
Future Vol, veh/h	71	572	42	30	405	61	16	61	44	5	78	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	622	46	33	440	66	17	66	48	5	85	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	506	0	0	668	0	0	1405	1371	645	1395	1361	473
Stage 1	-	-	-	-	-	-	799	799	-	539	539	-
Stage 2	-	-	-	-	-	-	606	572	-	856	822	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1059	-	-	922	-	-	117	146	472	119	148	591
Stage 1	-	-	-	-	-	-	379	398	-	527	522	-
Stage 2	-	-	-	-	-	-	484	504	-	352	388	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1059	-	-	922	-	-	48	131	472	60	132	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	131	-	60	132	-
Stage 1	-	-	-	-	-	-	351	369	-	489	503	-
Stage 2	-	-	-	-	-	-	356	486	-	241	360	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	131.6	81.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	136	1059	-	-	922	-	-	171
HCM Lane V/C Ratio	0.967	0.073	-	-	0.035	-	-	0.814
HCM Control Delay (s)	131.6	8.7	-	-	9	-	-	81.4
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	6.7	0.2	-	-	0.1	-	-	5.5



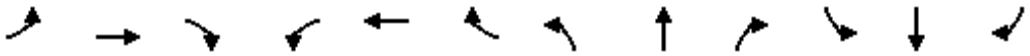
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	334	177	114	278	37	107	289	35	80	390	94
Future Volume (veh/h)	154	334	177	114	278	37	107	289	35	80	390	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	167	363	192	124	302	40	116	314	38	87	424	102
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	834	373	159	736	329	262	857	384	239	834	373
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.08	0.24	0.24	0.07	0.24	0.24
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	167	363	192	124	302	40	116	314	38	87	424	102
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.5	6.2	7.5	4.8	5.2	1.5	2.3	5.2	1.3	1.7	7.4	3.7
Cycle Q Clear(g_c), s	6.5	6.2	7.5	4.8	5.2	1.5	2.3	5.2	1.3	1.7	7.4	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	834	373	159	736	329	262	857	384	239	834	373
V/C Ratio(X)	0.80	0.44	0.51	0.78	0.41	0.12	0.44	0.37	0.10	0.36	0.51	0.27
Avail Cap(c_a), veh/h	376	2100	940	376	1950	873	729	1800	805	729	1850	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	23.0	23.5	31.5	24.3	22.8	31.3	22.3	20.8	31.4	23.5	22.1
Incr Delay (d2), s/veh	2.7	1.0	3.2	3.1	1.1	0.5	0.4	1.0	0.4	0.3	1.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.1	3.6	2.5	2.7	0.7	1.1	2.6	0.6	0.8	3.8	1.8
LnGrp Delay(d),s/veh	33.2	24.1	26.7	34.7	25.3	23.3	31.7	23.2	21.2	31.8	25.2	23.5
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		722			466			468			613	
Approach Delay, s/veh		26.9			27.6			25.2			25.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	24.6	12.0	23.5	11.1	24.2	14.0	21.5
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	3.7	7.2	6.8	9.5	4.3	9.4	8.5	7.2
Green Ext Time (p_c), s	0.1	4.9	0.1	7.2	0.1	7.3	0.1	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	167	363	192	124	302	40	116	314	38	87	424	102
v/c Ratio	0.59	0.45	0.38	0.55	0.44	0.10	0.36	0.33	0.07	0.29	0.53	0.22
Control Delay	42.7	30.3	7.2	44.3	31.9	0.5	40.2	26.9	0.3	40.4	30.7	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	30.3	7.2	44.3	31.9	0.5	40.2	26.9	0.3	40.4	30.7	5.2
Queue Length 50th (ft)	77	81	0	59	71	0	28	70	0	21	98	0
Queue Length 95th (ft)	166	146	54	128	123	0	62	122	0	50	165	29
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	334	1871	927	334	1871	897	647	1648	803	647	1648	803
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.19	0.21	0.37	0.16	0.04	0.18	0.19	0.05	0.13	0.26	0.13

Intersection Summary

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	335	32	29	326	15	39	12	21	21	15	3
Future Vol, veh/h	25	335	32	29	326	15	39	12	21	21	15	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	364	35	32	354	16	42	13	23	23	16	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	370	0	0	399	0	0	685	870	200	669	879	185
Stage 1	-	-	-	-	-	-	436	436	-	426	426	-
Stage 2	-	-	-	-	-	-	249	434	-	243	453	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1185	-	-	1156	-	-	334	288	808	343	285	826
Stage 1	-	-	-	-	-	-	569	578	-	577	584	-
Stage 2	-	-	-	-	-	-	733	579	-	739	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1156	-	-	305	274	808	309	271	826
Mov Cap-2 Maneuver	-	-	-	-	-	-	305	274	-	309	271	-
Stage 1	-	-	-	-	-	-	556	565	-	564	568	-
Stage 2	-	-	-	-	-	-	690	563	-	686	555	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	16.2	17.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	305	473	1185	-	-	1156	-	-	309	305
HCM Lane V/C Ratio	0.139	0.076	0.023	-	-	0.027	-	-	0.074	0.064
HCM Control Delay (s)	18.7	13.2	8.1	-	-	8.2	-	-	17.6	17.6
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.5	0.2	0.1	-	-	0.1	-	-	0.2	0.2

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	196	50	37	243	66	34	179	39	72	184	64
Future Vol, veh/h	59	196	50	37	243	66	34	179	39	72	184	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	213	54	40	264	72	37	195	42	78	200	70
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	19.2	25.7	23.2	20.8
HCM LOS	C	D	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	13%	100%	0%	100%	0%	28%	0%
Vol Thru, %	71%	0%	80%	0%	79%	72%	0%
Vol Right, %	15%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	252	59	246	37	309	256	64
LT Vol	34	59	0	37	0	72	0
Through Vol	179	0	196	0	243	184	0
RT Vol	39	0	50	0	66	0	64
Lane Flow Rate	274	64	267	40	336	278	70
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.614	0.151	0.578	0.093	0.713	0.622	0.139
Departure Headway (Hd)	8.076	8.452	7.788	8.31	7.638	8.046	7.18
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	446	425	463	432	474	448	499
Service Time	6.129	6.203	5.538	6.057	5.385	5.796	4.929
HCM Lane V/C Ratio	0.614	0.151	0.577	0.093	0.709	0.621	0.14
HCM Control Delay	23.2	12.7	20.7	11.9	27.3	23.2	11.1
HCM Lane LOS	C	B	C	B	D	C	B
HCM 95th-tile Q	4	0.5	3.6	0.3	5.6	4.1	0.5

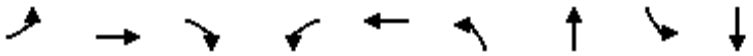
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	86	295	59	54	42	63	425	27	22	800	47
Future Volume (veh/h)	97	86	295	59	54	42	63	425	27	22	800	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	105	93	321	64	59	46	68	462	29	24	870	51
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	454	386	100	218	170	102	1221	76	55	1156	68
Arrive On Green	0.08	0.24	0.24	0.06	0.22	0.22	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	972	757	1774	3383	212	1774	3398	199
Grp Volume(v), veh/h	105	93	321	64	0	105	68	241	250	24	453	468
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1729	1774	1770	1825	1774	1770	1828
Q Serve(g_s), s	4.8	3.3	15.8	2.9	0.0	4.1	3.1	8.3	8.3	1.1	18.6	18.6
Cycle Q Clear(g_c), s	4.8	3.3	15.8	2.9	0.0	4.1	3.1	8.3	8.3	1.1	18.6	18.6
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.12	1.00		0.11
Lane Grp Cap(c), veh/h	135	454	386	100	0	387	102	639	659	55	602	622
V/C Ratio(X)	0.78	0.20	0.83	0.64	0.00	0.27	0.67	0.38	0.38	0.44	0.75	0.75
Avail Cap(c_a), veh/h	514	638	542	514	0	632	525	705	727	514	690	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	24.7	29.4	37.9	0.0	26.3	37.9	19.4	19.4	39.1	24.0	24.0
Incr Delay (d2), s/veh	3.6	0.4	10.9	2.6	0.0	0.8	2.8	1.1	1.1	2.1	6.6	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.7	8.0	1.5	0.0	2.0	1.6	4.2	4.4	0.6	10.2	10.5
LnGrp Delay(d),s/veh	40.9	25.1	40.3	40.5	0.0	27.1	40.7	20.5	20.5	41.1	30.6	30.4
LnGrp LOS	D	C	D	D		C	D	C	C	D	C	C
Approach Vol, veh/h		519			169			559			945	
Approach Delay, s/veh		37.7			32.2			23.0			30.8	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	37.1	10.3	26.4	9.9	35.4	11.9	24.8
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.1	10.3	4.9	17.8	5.1	20.6	6.8	6.1
Green Ext Time (p_c), s	0.0	6.0	0.1	2.2	0.1	7.3	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	105	93	321	64	105	68	491	24	921
v/c Ratio	0.50	0.31	0.61	0.37	0.39	0.38	0.29	0.17	0.64
Control Delay	46.0	36.2	9.8	44.9	32.4	45.0	16.1	43.1	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	36.2	9.8	44.9	32.4	45.0	16.1	43.1	25.4
Queue Length 50th (ft)	54	45	0	33	39	35	69	12	214
Queue Length 95th (ft)	112	95	73	79	93	82	160	40	351
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	538	714	804	538	683	549	1716	538	1438
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	0.20	0.13	0.40	0.12	0.15	0.12	0.29	0.04	0.64

Intersection Summary

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	61	59	70	71	61	44	67	45	52	97	37
Future Vol, veh/h	22	61	59	70	71	61	44	67	45	52	97	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	66	64	76	77	66	48	73	49	57	105	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	10.2	9.6	10.1
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	15%	35%	28%
Vol Thru, %	43%	43%	35%	52%
Vol Right, %	29%	42%	30%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	156	142	202	186
LT Vol	44	22	70	52
Through Vol	67	61	71	97
RT Vol	45	59	61	37
Lane Flow Rate	170	154	220	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.235	0.211	0.301	0.281
Departure Headway (Hd)	4.995	4.92	4.935	5.002
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	710	719	720	710
Service Time	3.09	3.017	3.024	3.092
HCM Lane V/C Ratio	0.239	0.214	0.306	0.285
HCM Control Delay	9.6	9.4	10.2	10.1
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.9	0.8	1.3	1.2

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	403	94	88	335	8	63	22	94	10	27	13
Future Vol, veh/h	12	403	94	88	335	8	63	22	94	10	27	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	438	102	96	364	9	68	24	102	11	29	14
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	13.5	12.1	13.6	11
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	35%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	12%	0%	100%	59%	0%	100%	93%	54%
Vol Right, %	53%	0%	0%	41%	0%	0%	7%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	179	12	269	228	88	223	120	50
LT Vol	63	12	0	0	88	0	0	10
Through Vol	22	0	269	134	0	223	112	27
RT Vol	94	0	0	94	0	0	8	13
Lane Flow Rate	195	13	292	248	96	243	130	54
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.369	0.024	0.495	0.401	0.178	0.417	0.222	0.11
Departure Headway (Hd)	6.82	6.611	6.103	5.81	6.699	6.19	6.143	7.307
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	540	590	618	534	580	583	487
Service Time	4.588	4.371	3.862	3.569	4.462	3.952	3.905	5.093
HCM Lane V/C Ratio	0.371	0.024	0.495	0.401	0.18	0.419	0.223	0.111
HCM Control Delay	13.6	9.5	14.7	12.4	10.9	13.4	10.7	11
HCM Lane LOS	B	A	B	B	B	B	B	B
HCM 95th-tile Q	1.7	0.1	2.7	1.9	0.6	2	0.8	0.4

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	11	25	5	29	25	545	46	16	507	6
Future Vol, veh/h	2	2	11	25	5	29	25	545	46	16	507	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	12	27	5	32	27	592	50	17	551	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1279	1285	555	1267	1263	617	558	0	0	642	0	0
Stage 1	589	589	-	671	671	-	-	-	-	-	-	-
Stage 2	690	696	-	596	592	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	143	165	531	146	170	490	1013	-	-	943	-	-
Stage 1	494	495	-	446	455	-	-	-	-	-	-	-
Stage 2	435	443	-	490	494	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	126	158	531	137	162	490	1013	-	-	943	-	-
Mov Cap-2 Maneuver	126	158	-	137	162	-	-	-	-	-	-	-
Stage 1	481	486	-	434	443	-	-	-	-	-	-	-
Stage 2	391	431	-	468	485	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.5	28.6	0.4	0.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1013	-	-	305	216	943	-	-
HCM Lane V/C Ratio	0.027	-	-	0.053	0.297	0.018	-	-
HCM Control Delay (s)	8.7	-	-	17.5	28.6	8.9	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.2	0.1	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	35	32	56	19	24
Future Vol, veh/h	64	35	32	56	19	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	38	35	61	21	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	220	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	131	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1483	-	768	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	750	969
Mov Cap-2 Maneuver	-	-	-	-	750	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	874	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	858	-	-	1483	-
HCM Lane V/C Ratio	0.054	-	-	0.023	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	30	27	601	585	47
Future Vol, veh/h	40	30	27	601	585	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	33	29	653	636	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1347	636	636	0	-	0
Stage 1	636	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	167	478	947	-	-	0
Stage 1	527	-	-	-	-	0
Stage 2	487	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	159	478	947	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	487	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.8	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	947	-	278	-
HCM Lane V/C Ratio	0.031	-	0.274	-
HCM Control Delay (s)	8.9	0	22.8	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	49	85	612	591	13
Future Vol, veh/h	4	49	85	612	591	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	53	92	665	642	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1491	321	656	0	-	0
Stage 1	642	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	125	675	929	-	-	-
Stage 1	487	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	113	675	929	-	-	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	439	-	-	-	-	-
Stage 2	418	-	-	-	-	-

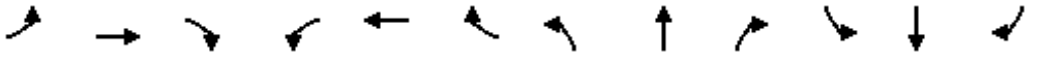
Approach	EB	NB	SB
HCM Control Delay, s	12.9	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	929	-	113	675	-	-
HCM Lane V/C Ratio	0.099	-	0.038	0.079	-	-
HCM Control Delay (s)	9.3	-	38.1	10.8	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.3	-	-

Intersection	
Intersection Delay, s/veh	4.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	115	88	148	80
Demand Flow Rate, veh/h	117	89	151	82
Vehicles Circulating, veh/h	69	162	130	68
Vehicles Exiting, veh/h	81	119	56	183
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	4.6	5.1	4.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	117	89	151	82
Cap Entry Lane, veh/h	1055	961	992	1056
Entry HV Adj Factor	0.981	0.989	0.979	0.979
Flow Entry, veh/h	115	88	148	80
Cap Entry, veh/h	1034	950	971	1034
V/C Ratio	0.111	0.093	0.152	0.078
Control Delay, s/veh	4.5	4.6	5.1	4.2
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	39	32	25	64	70	633	12	27	592	17
Future Volume (veh/h)	13	10	39	32	25	64	70	633	12	27	592	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	11	42	35	27	70	76	688	13	29	643	18
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	225	201	79	266	238	250	1313	587	68	1192	533
Arrive On Green	0.02	0.13	0.13	0.04	0.15	0.15	0.07	0.37	0.37	0.04	0.34	0.34
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	11	42	35	27	70	76	688	13	29	643	18
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.3	1.4	1.1	0.8	2.3	1.2	8.9	0.3	0.9	8.6	0.4
Cycle Q Clear(g_c), s	0.5	0.3	1.4	1.1	0.8	2.3	1.2	8.9	0.3	0.9	8.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	225	201	79	266	238	250	1313	587	68	1192	533
V/C Ratio(X)	0.38	0.05	0.21	0.44	0.10	0.29	0.30	0.52	0.02	0.42	0.54	0.03
Avail Cap(c_a), veh/h	756	1267	1133	756	1146	1025	1466	2111	944	756	2111	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	22.5	23.0	27.3	21.5	22.1	25.8	14.4	11.7	27.6	15.8	13.1
Incr Delay (d2), s/veh	2.4	0.3	1.5	1.5	0.5	2.0	0.3	1.2	0.1	1.5	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.7	0.6	0.4	1.1	0.6	4.5	0.1	0.5	4.4	0.2
LnGrp Delay(d),s/veh	30.7	22.8	24.5	28.8	22.0	24.1	26.1	15.6	11.8	29.1	17.2	13.1
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		67			132			777			690	
Approach Delay, s/veh		25.5			24.9			16.6			17.6	
Approach LOS		C			C			B			B	

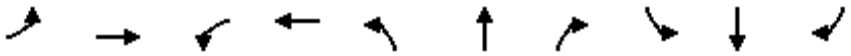
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	28.6	8.3	13.8	10.0	26.6	6.9	15.2
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.9	10.9	3.1	3.4	3.2	10.6	2.5	4.3
Green Ext Time (p_c), s	0.0	9.8	0.0	0.4	0.1	9.1	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	53	35	97	76	688	13	29	643	18
v/c Ratio	0.06	0.09	0.15	0.12	0.17	0.33	0.01	0.13	0.36	0.02
Control Delay	34.8	14.6	34.3	11.7	32.9	13.1	0.0	34.4	16.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	14.6	34.3	11.7	32.9	13.1	0.0	34.4	16.1	0.1
Queue Length 50th (ft)	6	2	14	4	15	85	0	12	112	0
Queue Length 95th (ft)	25	19	46	28	40	185	0	40	172	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	869	2162	869	2198	1686	2156	1006	869	2151	1004
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.04	0.04	0.05	0.32	0.01	0.03	0.30	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	66	0	0	50	0
Future Vol, veh/h	0	66	0	0	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	72	0	0	54	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.053	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	16.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	489	22	73	611	16	18	45	56	4	32	37
Future Vol, veh/h	79	489	22	73	611	16	18	45	56	4	32	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	532	24	79	664	17	20	49	61	4	35	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	681	0	0	556	0	0	1584	1555	544	1602	1559	673
Stage 1	-	-	-	-	-	-	716	716	-	831	831	-
Stage 2	-	-	-	-	-	-	868	839	-	771	728	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	912	-	-	1015	-	-	88	113	539	85	112	455
Stage 1	-	-	-	-	-	-	421	434	-	364	384	-
Stage 2	-	-	-	-	-	-	347	381	-	393	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	1015	-	-	50	94	539	39	94	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	94	-	39	94	-
Stage 1	-	-	-	-	-	-	381	393	-	330	354	-
Stage 2	-	-	-	-	-	-	263	351	-	276	389	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.9	154.6	60.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	126	912	-	-	1015	-	-	139
HCM Lane V/C Ratio	1.027	0.094	-	-	0.078	-	-	0.571
HCM Control Delay (s)	154.6	9.4	-	-	8.8	-	-	60.7
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	7.2	0.3	-	-	0.3	-	-	2.9

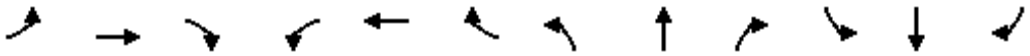
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	260	77	159	340	58	158	687	47	94	373	114
Future Volume (veh/h)	196	260	77	159	340	58	158	687	47	94	373	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	213	283	84	173	370	63	172	747	51	102	405	124
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	731	327	209	650	291	250	1117	500	218	1084	485
Arrive On Green	0.14	0.21	0.21	0.12	0.18	0.18	0.07	0.32	0.32	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	213	283	84	173	370	63	172	747	51	102	405	124
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	10.2	6.0	3.8	8.3	8.3	2.9	4.2	15.9	2.0	2.5	7.8	5.1
Cycle Q Clear(g_c), s	10.2	6.0	3.8	8.3	8.3	2.9	4.2	15.9	2.0	2.5	7.8	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	731	327	209	650	291	250	1117	500	218	1084	485
V/C Ratio(X)	0.85	0.39	0.26	0.83	0.57	0.22	0.69	0.67	0.10	0.47	0.37	0.26
Avail Cap(c_a), veh/h	307	1716	768	307	1594	713	596	1471	658	596	1512	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	29.6	28.8	37.3	32.2	30.0	39.2	25.7	21.0	39.2	23.5	22.6
Incr Delay (d2), s/veh	14.9	1.0	1.2	7.4	2.3	1.1	1.3	2.5	0.3	0.6	0.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	3.0	1.8	4.5	4.2	1.4	2.1	8.1	0.9	1.2	3.9	2.4
LnGrp Delay(d),s/veh	51.3	30.6	30.0	44.8	34.5	31.1	40.5	28.2	21.3	39.7	24.3	23.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		580			606			970			631	
Approach Delay, s/veh		38.1			37.1			30.0			26.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	34.8	15.9	24.7	12.0	34.0	17.9	22.7
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.5	17.9	10.3	8.0	6.2	9.8	12.2	10.3
Green Ext Time (p_c), s	0.1	9.5	0.1	4.8	0.2	7.2	0.1	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	283	84	173	370	63	172	747	51	102	405	124
v/c Ratio	0.76	0.39	0.20	0.68	0.55	0.16	0.51	0.70	0.09	0.38	0.41	0.23
Control Delay	59.5	36.2	2.9	54.8	39.3	0.8	47.9	33.8	0.3	48.0	29.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	36.2	2.9	54.8	39.3	0.8	47.9	33.8	0.3	48.0	29.6	6.3
Queue Length 50th (ft)	126	80	0	100	107	0	52	209	0	30	104	0
Queue Length 95th (ft)	#285	132	14	#213	170	0	93	298	0	62	161	42
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	280	1569	773	280	1569	773	543	1382	693	543	1382	693
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.18	0.11	0.62	0.24	0.08	0.32	0.54	0.07	0.19	0.29	0.18

Intersection Summary

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

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	331	60	39	387	48	47	32	52	53	23	13
Future Vol, veh/h	57	331	60	39	387	48	47	32	52	53	23	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	360	65	42	421	52	51	35	57	58	25	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	473	0	0	425	0	0	824	1074	213	853	1080	237
Stage 1	-	-	-	-	-	-	517	517	-	531	531	-
Stage 2	-	-	-	-	-	-	307	557	-	322	549	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1085	-	-	1131	-	-	265	218	792	253	217	764
Stage 1	-	-	-	-	-	-	509	532	-	500	524	-
Stage 2	-	-	-	-	-	-	678	510	-	664	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1085	-	-	1131	-	-	219	198	792	189	197	764
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	198	-	189	197	-
Stage 1	-	-	-	-	-	-	480	502	-	472	505	-
Stage 2	-	-	-	-	-	-	609	491	-	541	486	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.7	20.9	27.5
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	219	370	1085	-	-	1131	-	-	189	269
HCM Lane V/C Ratio	0.233	0.247	0.057	-	-	0.037	-	-	0.305	0.145
HCM Control Delay (s)	26.4	17.9	8.5	-	-	8.3	-	-	32.2	20.6
HCM Lane LOS	D	C	A	-	-	A	-	-	D	C
HCM 95th %tile Q(veh)	0.9	1	0.2	-	-	0.1	-	-	1.2	0.5

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	197	36	40	340	60	46	105	46	42	110	57
Future Vol, veh/h	52	197	36	40	340	60	46	105	46	42	110	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	214	39	43	370	65	50	114	50	46	120	62
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	15.6	30.2	16.7	13.7
HCM LOS	C	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	23%	100%	0%	100%	0%	28%	0%
Vol Thru, %	53%	0%	85%	0%	85%	72%	0%
Vol Right, %	23%	0%	15%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	52	233	40	400	152	57
LT Vol	46	52	0	40	0	42	0
Through Vol	105	0	197	0	340	110	0
RT Vol	46	0	36	0	60	0	57
Lane Flow Rate	214	57	253	43	435	165	62
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.45	0.12	0.494	0.088	0.809	0.356	0.119
Departure Headway (Hd)	7.571	7.648	7.023	7.319	6.7	7.764	6.903
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	468	512	489	539	463	517
Service Time	5.637	5.409	4.784	5.072	4.452	5.529	4.668
HCM Lane V/C Ratio	0.451	0.122	0.494	0.088	0.807	0.356	0.12
HCM Control Delay	16.7	11.5	16.5	10.8	32.1	14.8	10.6
HCM Lane LOS	C	B	C	B	D	B	B
HCM 95th-tile Q	2.3	0.4	2.7	0.3	7.9	1.6	0.4

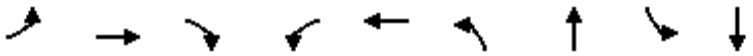
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	110	162	46	86	20	160	801	23	33	610	86
Future Volume (veh/h)	119	110	162	46	86	20	160	801	23	33	610	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	129	120	176	50	93	22	174	871	25	36	663	93
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	302	256	93	177	42	216	1386	40	76	1005	141
Arrive On Green	0.09	0.16	0.16	0.05	0.12	0.12	0.12	0.39	0.39	0.04	0.32	0.32
Sat Flow, veh/h	1774	1863	1583	1774	1457	345	1774	3514	101	1774	3118	437
Grp Volume(v), veh/h	129	120	176	50	0	115	174	439	457	36	376	380
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1802	1774	1770	1845	1774	1770	1786
Q Serve(g_s), s	5.2	4.2	7.6	2.0	0.0	4.3	6.9	14.5	14.5	1.4	13.3	13.3
Cycle Q Clear(g_c), s	5.2	4.2	7.6	2.0	0.0	4.3	6.9	14.5	14.5	1.4	13.3	13.3
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.24
Lane Grp Cap(c), veh/h	165	302	256	93	0	219	216	698	728	76	570	575
V/C Ratio(X)	0.78	0.40	0.69	0.54	0.00	0.53	0.81	0.63	0.63	0.48	0.66	0.66
Avail Cap(c_a), veh/h	581	721	613	581	0	744	594	797	831	581	780	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	27.3	28.7	33.5	0.0	29.9	31.0	17.7	17.7	34.0	21.2	21.2
Incr Delay (d2), s/veh	3.0	1.7	6.5	1.8	0.0	3.9	2.7	3.0	2.9	1.7	4.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	2.3	3.8	1.0	0.0	2.4	3.5	7.6	7.9	0.7	7.1	7.2
LnGrp Delay(d),s/veh	35.3	29.0	35.2	35.3	0.0	33.9	33.7	20.7	20.6	35.7	25.1	25.1
LnGrp LOS	D	C	D	D		C	C	C	C	D	C	C
Approach Vol, veh/h		425			165			1070			792	
Approach Delay, s/veh		33.5			34.3			22.8			25.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	36.2	9.5	18.2	14.0	30.9	12.5	15.2
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.4	16.5	4.0	9.6	8.9	15.3	7.2	6.3
Green Ext Time (p_c), s	0.0	9.3	0.0	2.1	0.2	8.1	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	129	120	176	50	115	174	896	36	756
v/c Ratio	0.59	0.30	0.37	0.35	0.44	0.66	0.56	0.27	0.68
Control Delay	52.9	37.1	8.0	51.9	42.7	52.3	23.0	51.1	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	37.1	8.0	51.9	42.7	52.3	23.0	51.1	32.8
Queue Length 50th (ft)	75	64	0	29	60	101	217	21	198
Queue Length 95th (ft)	151	128	56	75	129	190	354	59	340
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	458	608	635	458	595	467	1597	458	1217
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	0.28	0.20	0.28	0.11	0.19	0.37	0.56	0.08	0.62

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	42	59	13	31	10	51	112	17	12	88	33
Future Vol, veh/h	29	42	59	13	31	10	51	112	17	12	88	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	46	64	14	34	11	55	122	18	13	96	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.3	9.1	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	22%	24%	9%
Vol Thru, %	62%	32%	57%	66%
Vol Right, %	9%	45%	19%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	130	54	133
LT Vol	51	29	13	12
Through Vol	112	42	31	88
RT Vol	17	59	10	33
Lane Flow Rate	196	141	59	145
Geometry Grp	1	1	1	1
Degree of Util (X)	0.248	0.179	0.079	0.181
Departure Headway (Hd)	4.57	4.563	4.829	4.501
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	784	740	795
Service Time	2.604	2.599	2.871	2.536
HCM Lane V/C Ratio	0.25	0.18	0.08	0.182
HCM Control Delay	9.1	8.6	8.3	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.6	0.3	0.7

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	322	52	31	310	15	81	24	33	9	8	7
Future Vol, veh/h	22	322	52	31	310	15	81	24	33	9	8	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	350	57	34	337	16	88	26	36	10	9	8
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	10.8	10.7	11.8	9.8
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	59%	100%	0%	0%	100%	0%	0%	38%
Vol Thru, %	17%	0%	100%	67%	0%	100%	87%	33%
Vol Right, %	24%	0%	0%	33%	0%	0%	13%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	22	215	159	31	207	118	24
LT Vol	81	22	0	0	31	0	0	9
Through Vol	24	0	215	107	0	207	103	8
RT Vol	33	0	0	52	0	0	15	7
Lane Flow Rate	150	24	233	173	34	225	129	26
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.274	0.041	0.364	0.259	0.058	0.353	0.199	0.049
Departure Headway (Hd)	6.575	6.126	5.621	5.39	6.168	5.662	5.572	6.725
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	586	642	667	582	636	644	533
Service Time	4.305	3.851	3.345	3.114	3.894	3.388	3.299	4.464
HCM Lane V/C Ratio	0.274	0.041	0.363	0.259	0.058	0.354	0.2	0.049
HCM Control Delay	11.8	9.1	11.5	10	9.3	11.5	9.7	9.8
HCM Lane LOS	B	A	B	A	A	B	A	A
HCM 95th-tile Q	1.1	0.1	1.7	1	0.2	1.6	0.7	0.2

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	18	71	7	29	12	300	61	44	523	2
Future Vol, veh/h	4	5	18	71	7	29	12	300	61	44	523	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	5	20	77	8	32	13	326	66	48	568	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1070	1083	569	1063	1051	359	570	0	0	392	0	0
Stage 1	665	665	-	385	385	-	-	-	-	-	-	-
Stage 2	405	418	-	678	666	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	199	217	522	201	227	685	1002	-	-	1167	-	-
Stage 1	449	458	-	638	611	-	-	-	-	-	-	-
Stage 2	622	591	-	442	457	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	177	205	522	182	215	685	1002	-	-	1167	-	-
Mov Cap-2 Maneuver	177	205	-	182	215	-	-	-	-	-	-	-
Stage 1	443	439	-	630	603	-	-	-	-	-	-	-
Stage 2	578	583	-	403	438	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	35.7	0.3	0.6
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1002	-	-	331	230	1167	-	-
HCM Lane V/C Ratio	0.013	-	-	0.089	0.506	0.041	-	-
HCM Control Delay (s)	8.6	-	-	16.9	35.7	8.2	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	2.6	0.1	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	75	30	52	36	19
Future Vol, veh/h	77	75	30	52	36	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	82	33	57	39	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	166	0	248	125
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	123	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1412	-	740	926
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1412	-	722	926
Mov Cap-2 Maneuver	-	-	-	-	722	-
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	781	-	-	1412	-
HCM Lane V/C Ratio	0.077	-	-	0.023	-
HCM Control Delay (s)	10	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	43	15	367	593	60
Future Vol, veh/h	48	43	15	367	593	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	47	16	399	645	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1076	645	645	0	-	0
Stage 1	645	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	243	472	940	-	-	0
Stage 1	522	-	-	-	-	0
Stage 2	655	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	238	472	940	-	-	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	940	-	451	-
HCM Lane V/C Ratio	0.017	-	0.219	-
HCM Control Delay (s)	8.9	0	15.2	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	12	16	388	628	4
Future Vol, veh/h	3	12	16	388	628	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	17	422	683	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1139	342	687	0	-	0
Stage 1	683	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	208	655	905	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	204	655	905	-	-	-
Mov Cap-2 Maneuver	204	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	637	-	-	-	-	-

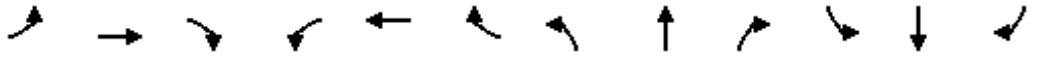
Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	905	-	204	655	-	-
HCM Lane V/C Ratio	0.019	-	0.016	0.02	-	-
HCM Control Delay (s)	9.1	-	22.9	10.6	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	176	217	288	296
Demand Flow Rate, veh/h	179	221	293	302
Vehicles Circulating, veh/h	328	288	256	169
Vehicles Exiting, veh/h	143	261	251	340
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.9	7.2	8.0	7.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	179	221	293	302
Cap Entry Lane, veh/h	814	847	875	954
Entry HV Adj Factor	0.983	0.982	0.982	0.979
Flow Entry, veh/h	176	217	288	296
Cap Entry, veh/h	800	832	859	934
V/C Ratio	0.220	0.261	0.335	0.316
Control Delay, s/veh	6.9	7.2	8.0	7.2
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	136	74	80	131	70	40	308	82	68	567	12
Future Volume (veh/h)	13	136	74	80	131	70	40	308	82	68	567	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	148	80	87	142	76	43	335	89	74	616	13
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	305	156	136	433	220	177	1075	481	126	1145	512
Arrive On Green	0.02	0.13	0.13	0.08	0.19	0.19	0.05	0.30	0.30	0.07	0.32	0.32
Sat Flow, veh/h	1774	2265	1162	1774	2274	1155	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	114	114	87	109	109	43	335	89	74	616	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1658	1774	1770	1659	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	3.5	3.8	2.8	3.2	3.4	0.7	4.3	2.5	2.4	8.5	0.3
Cycle Q Clear(g_c), s	0.5	3.5	3.8	2.8	3.2	3.4	0.7	4.3	2.5	2.4	8.5	0.3
Prop In Lane	1.00		0.70	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	238	223	136	337	316	177	1075	481	126	1145	512
V/C Ratio(X)	0.38	0.48	0.51	0.64	0.32	0.35	0.24	0.31	0.19	0.59	0.54	0.03
Avail Cap(c_a), veh/h	746	1250	1171	746	1131	1060	1447	2083	932	746	2083	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	23.8	23.9	26.6	20.8	20.9	27.1	15.9	15.3	26.8	16.5	13.7
Incr Delay (d2), s/veh	2.4	4.3	5.2	1.8	1.6	1.9	0.3	0.6	0.7	1.6	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	2.1	1.4	1.7	1.7	0.3	2.2	1.2	1.2	4.3	0.2
LnGrp Delay(d),s/veh	31.1	28.1	29.1	28.5	22.4	22.7	27.4	16.5	15.9	28.4	17.9	13.8
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		242			305			467			703	
Approach Delay, s/veh		28.8			24.2			17.4			18.9	
Approach LOS		C			C			B			B	

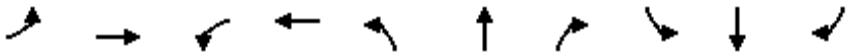
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	24.9	10.3	14.4	8.8	26.0	6.9	17.7
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	4.4	6.3	4.8	5.8	2.7	10.5	2.5	5.4
Green Ext Time (p_c), s	0.1	4.0	0.1	2.0	0.0	8.8	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	228	87	218	43	335	89	74	616	13
v/c Ratio	0.08	0.35	0.38	0.20	0.13	0.30	0.16	0.35	0.47	0.02
Control Delay	39.0	23.4	39.0	15.9	37.5	22.3	4.3	39.1	20.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	23.4	39.0	15.9	37.5	22.3	4.3	39.1	20.5	0.1
Queue Length 50th (ft)	6	36	39	25	9	64	0	33	124	0
Queue Length 95th (ft)	27	79	94	70	28	114	25	83	195	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	685	2147	685	2148	1330	1919	907	685	1919	907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.11	0.13	0.10	0.03	0.17	0.10	0.11	0.32	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	92	0	0	105	0
Future Vol, veh/h	0	92	0	0	105	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	100	0	0	114	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.112	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.4	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	572	42	30	405	61	16	106	44	5	123	90
Future Vol, veh/h	116	572	42	30	405	61	16	106	44	5	123	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	126	622	46	33	440	66	17	115	48	5	134	98

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	506	0	0	668	0	0	1552	1469	645	1518	1459	473
Stage 1	-	-	-	-	-	-	897	897	-	539	539	-
Stage 2	-	-	-	-	-	-	655	572	-	979	920	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1059	-	-	922	-	-	92	127	472	98	~ 129	591
Stage 1	-	-	-	-	-	-	334	358	-	527	522	-
Stage 2	-	-	-	-	-	-	455	504	-	301	350	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1059	-	-	922	-	-	-	~ 108	472	-	~ 110	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 108	-	-	~ 110	-
Stage 1	-	-	-	-	-	-	294	315	-	464	503	-
Stage 2	-	-	-	-	-	-	269	486	-	151	308	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.5		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1059	-	-	922	-	-	-
HCM Lane V/C Ratio	-	0.119	-	-	0.035	-	-	-
HCM Control Delay (s)	-	8.9	-	-	9	-	-	-
HCM Lane LOS	-	A	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-	0.1	-	-	-

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

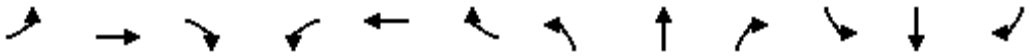
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	334	177	114	278	37	107	363	35	80	464	94
Future Volume (veh/h)	154	334	177	114	278	37	107	363	35	80	464	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	167	363	192	124	302	40	116	395	38	87	504	102
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	813	364	158	716	320	252	949	425	232	928	415
Arrive On Green	0.12	0.23	0.23	0.09	0.20	0.20	0.07	0.27	0.27	0.07	0.26	0.26
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	167	363	192	124	302	40	116	395	38	87	504	102
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	6.8	6.5	7.9	5.1	5.5	1.5	2.4	6.8	1.3	1.8	9.1	3.8
Cycle Q Clear(g_c), s	6.8	6.5	7.9	5.1	5.5	1.5	2.4	6.8	1.3	1.8	9.1	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	813	364	158	716	320	252	949	425	232	928	415
V/C Ratio(X)	0.81	0.45	0.53	0.78	0.42	0.12	0.46	0.42	0.09	0.38	0.54	0.25
Avail Cap(c_a), veh/h	358	1999	894	358	1856	830	694	1713	766	694	1761	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	24.6	25.1	33.2	25.9	24.3	33.0	22.4	20.4	33.2	23.6	21.6
Incr Delay (d2), s/veh	2.8	1.1	3.4	3.2	1.1	0.5	0.5	1.1	0.3	0.4	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	3.3	3.8	2.6	2.8	0.7	1.2	3.5	0.6	0.9	4.6	1.8
LnGrp Delay(d),s/veh	34.9	25.7	28.5	36.4	27.0	24.8	33.5	23.5	20.7	33.6	25.4	22.7
LnGrp LOS	C	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		722			466			549			693	
Approach Delay, s/veh		28.6			29.3			25.4			26.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	27.4	12.3	23.9	11.2	27.0	14.4	21.8
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	3.8	8.8	7.1	9.9	4.4	11.1	8.8	7.5
Green Ext Time (p_c), s	0.1	6.1	0.1	7.2	0.1	8.4	0.1	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	167	363	192	124	302	40	116	395	38	87	504	102
v/c Ratio	0.60	0.46	0.38	0.56	0.45	0.10	0.37	0.38	0.07	0.30	0.57	0.21
Control Delay	45.3	31.9	7.4	46.9	33.5	0.5	42.1	27.0	0.3	42.4	31.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	31.9	7.4	46.9	33.5	0.5	42.1	27.0	0.3	42.4	31.1	4.8
Queue Length 50th (ft)	81	86	0	63	75	0	30	91	0	22	122	0
Queue Length 95th (ft)	#179	153	55	135	129	0	64	152	0	52	198	28
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	322	1804	901	322	1804	870	625	1589	778	625	1589	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.20	0.21	0.39	0.17	0.05	0.19	0.25	0.05	0.14	0.32	0.13

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	335	32	29	326	60	39	27	21	66	30	3
Future Vol, veh/h	25	335	32	29	326	60	39	27	21	66	30	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	364	35	32	354	65	42	29	23	72	33	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	419	0	0	399	0	0	694	919	200	702	904	210
Stage 1	-	-	-	-	-	-	436	436	-	451	451	-
Stage 2	-	-	-	-	-	-	258	483	-	251	453	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1137	-	-	1156	-	-	329	270	808	325	275	796
Stage 1	-	-	-	-	-	-	569	578	-	557	569	-
Stage 2	-	-	-	-	-	-	724	551	-	731	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1137	-	-	1156	-	-	285	256	808	277	261	796
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	256	-	277	261	-
Stage 1	-	-	-	-	-	-	555	564	-	544	553	-
Stage 2	-	-	-	-	-	-	660	536	-	657	554	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	18	21.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	285	365	1137	-	-	1156	-	-	277	278
HCM Lane V/C Ratio	0.149	0.143	0.024	-	-	0.027	-	-	0.259	0.129
HCM Control Delay (s)	19.8	16.5	8.2	-	-	8.2	-	-	22.5	19.9
HCM Lane LOS	C	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.5	0.5	0.1	-	-	0.1	-	-	1	0.4

Intersection	
Intersection Delay, s/veh	27.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	196	50	37	243	66	34	209	39	72	214	79
Future Vol, veh/h	74	196	50	37	243	66	34	209	39	72	214	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	213	54	40	264	72	37	227	42	78	233	86
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	21.3	30.3	30.7	26.4
HCM LOS	C	D	D	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	100%	0%	25%	0%
Vol Thru, %	74%	0%	80%	0%	79%	75%	0%
Vol Right, %	14%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	282	74	246	37	309	286	79
LT Vol	34	74	0	37	0	72	0
Through Vol	209	0	196	0	243	214	0
RT Vol	39	0	50	0	66	0	79
Lane Flow Rate	307	80	267	40	336	311	86
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.721	0.2	0.615	0.098	0.759	0.724	0.18
Departure Headway (Hd)	8.473	8.95	8.281	8.809	8.134	8.387	7.533
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	426	401	436	406	443	429	475
Service Time	6.547	6.722	6.053	6.576	5.901	6.156	5.301
HCM Lane V/C Ratio	0.721	0.2	0.612	0.099	0.758	0.725	0.181
HCM Control Delay	30.7	14	23.5	12.5	32.4	30.4	12
HCM Lane LOS	D	B	C	B	D	D	B
HCM 95th-tile Q	5.6	0.7	4	0.3	6.4	5.7	0.6

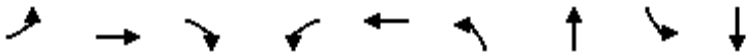
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	86	295	59	54	42	63	484	27	22	859	62
Future Volume (veh/h)	112	86	295	59	54	42	63	484	27	22	859	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	122	93	321	64	59	46	68	526	29	24	934	67
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	452	384	98	205	160	101	1265	70	54	1174	84
Arrive On Green	0.09	0.24	0.24	0.06	0.21	0.21	0.06	0.37	0.37	0.03	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	1774	972	757	1774	3411	188	1774	3350	240
Grp Volume(v), veh/h	122	93	321	64	0	105	68	272	283	24	493	508
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1729	1774	1770	1830	1774	1770	1820
Q Serve(g_s), s	5.7	3.3	16.2	3.0	0.0	4.3	3.2	9.6	9.7	1.1	21.1	21.1
Cycle Q Clear(g_c), s	5.7	3.3	16.2	3.0	0.0	4.3	3.2	9.6	9.7	1.1	21.1	21.1
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	155	452	384	98	0	364	101	656	678	54	620	638
V/C Ratio(X)	0.79	0.21	0.84	0.65	0.00	0.29	0.68	0.42	0.42	0.44	0.80	0.80
Avail Cap(c_a), veh/h	502	623	529	502	0	617	513	688	712	502	674	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	25.4	30.3	38.9	0.0	27.9	38.9	19.7	19.7	40.0	24.6	24.6
Incr Delay (d2), s/veh	3.4	0.5	11.6	2.7	0.0	0.9	2.9	1.3	1.3	2.1	8.5	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.8	8.3	1.5	0.0	2.1	1.6	4.9	5.1	0.6	11.7	12.0
LnGrp Delay(d),s/veh	41.0	25.8	41.9	41.6	0.0	28.8	41.8	21.0	20.9	42.1	33.1	32.9
LnGrp LOS	D	C	D	D		C	D	C	C	D	C	C
Approach Vol, veh/h		536			169			623			1025	
Approach Delay, s/veh		38.9			33.6			23.2			33.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	38.7	10.4	26.8	10.0	37.0	13.0	24.1
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.1	11.7	5.0	18.2	5.2	23.1	7.7	6.3
Green Ext Time (p_c), s	0.0	6.6	0.1	2.2	0.1	6.3	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	93	321	64	105	68	555	24	1001
v/c Ratio	0.51	0.30	0.60	0.37	0.40	0.39	0.33	0.17	0.70
Control Delay	44.9	35.6	9.4	45.6	32.8	45.7	16.9	43.9	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	35.6	9.4	45.6	32.8	45.7	16.9	43.9	27.6
Queue Length 50th (ft)	64	45	0	34	39	36	82	13	245
Queue Length 95th (ft)	128	95	72	80	94	83	185	40	#432
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	533	707	800	533	677	544	1704	533	1422
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	0.23	0.13	0.40	0.12	0.16	0.13	0.33	0.05	0.70

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	61	59	70	71	61	44	82	45	52	112	37
Future Vol, veh/h	22	61	59	70	71	61	44	82	45	52	112	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	66	64	76	77	66	48	89	49	57	122	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	10.5	10	10.5
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	15%	35%	26%
Vol Thru, %	48%	43%	35%	56%
Vol Right, %	26%	42%	30%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	171	142	202	201
LT Vol	44	22	70	52
Through Vol	82	61	71	112
RT Vol	45	59	61	37
Lane Flow Rate	186	154	220	218
Geometry Grp	1	1	1	1
Degree of Util (X)	0.266	0.22	0.313	0.312
Departure Headway (Hd)	5.146	5.121	5.124	5.143
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	701	703	699
Service Time	3.177	3.153	3.153	3.173
HCM Lane V/C Ratio	0.266	0.22	0.313	0.312
HCM Control Delay	10	9.6	10.5	10.5
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	1.1	0.8	1.3	1.3

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	418	124	88	350	8	93	22	94	10	27	13
Future Vol, veh/h	12	418	124	88	350	8	93	22	94	10	27	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	454	135	96	380	9	101	24	102	11	29	14
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	15.1	13	15.6	11.4
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	44%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	11%	0%	100%	53%	0%	100%	94%	54%
Vol Right, %	45%	0%	0%	47%	0%	0%	6%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	12	279	263	88	233	125	50
LT Vol	93	12	0	0	88	0	0	10
Through Vol	22	0	279	139	0	233	117	27
RT Vol	94	0	0	124	0	0	8	13
Lane Flow Rate	227	13	303	286	96	254	136	54
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.448	0.025	0.533	0.476	0.185	0.455	0.241	0.116
Departure Headway (Hd)	7.092	6.839	6.329	5.992	6.967	6.456	6.41	7.715
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	504	520	566	598	512	553	556	467
Service Time	4.879	4.621	4.11	3.774	4.753	4.242	4.196	5.415
HCM Lane V/C Ratio	0.45	0.025	0.535	0.478	0.188	0.459	0.245	0.116
HCM Control Delay	15.6	9.8	16.2	14.2	11.3	14.6	11.2	11.4
HCM Lane LOS	C	A	C	B	B	B	B	B
HCM 95th-tile Q	2.3	0.1	3.1	2.6	0.7	2.4	0.9	0.4

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	11	41	5	29	25	576	62	16	538	6
Future Vol, veh/h	2	2	11	41	5	29	25	576	62	16	538	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	12	45	5	32	27	626	67	17	585	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1355	1370	589	1344	1340	660	592	0	0	693	0	0
Stage 1	623	623	-	714	714	-	-	-	-	-	-	-
Stage 2	732	747	-	630	626	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	127	146	508	129	153	463	984	-	-	902	-	-
Stage 1	474	478	-	422	435	-	-	-	-	-	-	-
Stage 2	413	420	-	470	477	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	111	139	508	120	146	463	984	-	-	902	-	-
Mov Cap-2 Maneuver	111	139	-	120	146	-	-	-	-	-	-	-
Stage 1	461	469	-	411	423	-	-	-	-	-	-	-
Stage 2	370	409	-	448	468	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.8	43.9	0.3	0.3
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	984	-	-	277	171	902	-	-
HCM Lane V/C Ratio	0.028	-	-	0.059	0.477	0.019	-	-
HCM Control Delay (s)	8.8	-	-	18.8	43.9	9.1	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	2.3	0.1	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	45	32	56	35	24
Future Vol, veh/h	64	45	32	56	35	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	49	35	61	38	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	119	0	226	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	131	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1469	-	762	962
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1469	-	743	962
Mov Cap-2 Maneuver	-	-	-	-	743	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	873	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	819	-	-	1469	-
HCM Lane V/C Ratio	0.078	-	-	0.024	-
HCM Control Delay (s)	9.8	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	30	27	647	631	47
Future Vol, veh/h	40	30	27	647	631	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	33	29	703	686	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1447	686	686	0	-	0
Stage 1	686	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	145	447	908	-	-	0
Stage 1	500	-	-	-	-	0
Stage 2	461	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	137	447	908	-	-	-
Mov Cap-2 Maneuver	137	-	-	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.8	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	908	-	240	-
HCM Lane V/C Ratio	0.032	-	0.317	-
HCM Control Delay (s)	9.1	0	26.8	-
HCM Lane LOS	A	A	D	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	49	85	658	637	13
Future Vol, veh/h	4	49	85	658	637	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	53	92	715	692	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1591	346	706	0	-	0
Stage 1	692	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	108	651	890	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	97	651	890	-	-	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	396	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	890	-	97	651	-	-
HCM Lane V/C Ratio	0.104	-	0.045	0.082	-	-
HCM Control Delay (s)	9.5	-	43.8	11	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.3	-	-

Intersection	
Intersection Delay, s/veh	6.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	132	221	247	98
Demand Flow Rate, veh/h	135	225	252	101
Vehicles Circulating, veh/h	189	162	167	186
Vehicles Exiting, veh/h	98	257	157	201
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.3	6.2	6.5	5.0
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	135	225	252	101
Cap Entry Lane, veh/h	935	961	956	938
Entry HV Adj Factor	0.981	0.981	0.980	0.973
Flow Entry, veh/h	132	221	247	98
Cap Entry, veh/h	917	943	937	913
V/C Ratio	0.144	0.234	0.264	0.108
Control Delay, s/veh	5.3	6.2	6.5	5.0
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	131	39	108	146	110	70	633	88	72	592	17
Future Volume (veh/h)	13	131	39	108	146	110	70	633	88	72	592	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	14	142	42	117	159	120	76	688	96	78	643	18
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	341	98	152	378	268	240	1175	526	125	1178	527
Arrive On Green	0.02	0.13	0.13	0.09	0.19	0.19	0.07	0.33	0.33	0.07	0.33	0.33
Sat Flow, veh/h	1774	2717	778	1774	1980	1404	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	14	91	93	117	141	138	76	688	96	78	643	18
Grp Sat Flow(s),veh/h/ln	1774	1770	1725	1774	1770	1615	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	3.0	3.2	4.1	4.5	4.8	1.3	10.3	2.7	2.7	9.4	0.5
Cycle Q Clear(g_c), s	0.5	3.0	3.2	4.1	4.5	4.8	1.3	10.3	2.7	2.7	9.4	0.5
Prop In Lane	1.00		0.45	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	222	217	152	338	308	240	1175	526	125	1178	527
V/C Ratio(X)	0.38	0.41	0.43	0.77	0.42	0.45	0.32	0.59	0.18	0.62	0.55	0.03
Avail Cap(c_a), veh/h	696	1166	1137	696	1055	963	1350	1944	870	696	1944	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	25.7	25.8	28.5	22.7	22.8	28.2	17.6	15.1	28.8	17.3	14.3
Incr Delay (d2), s/veh	2.4	3.5	3.9	3.1	2.4	3.0	0.3	1.7	0.6	1.9	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.7	1.7	2.1	2.4	2.4	0.6	5.2	1.3	1.4	4.8	0.2
LnGrp Delay(d),s/veh	33.2	29.2	29.6	31.6	25.1	25.8	28.5	19.3	15.7	30.7	18.8	14.4
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		198			396			860			739	
Approach Delay, s/veh		29.7			27.2			19.7			19.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	28.0	11.2	14.4	10.1	28.0	7.0	18.6
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	4.7	12.3	6.1	5.2	3.3	11.4	2.5	6.8
Green Ext Time (p_c), s	0.1	8.9	0.1	1.5	0.1	9.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	184	117	279	76	688	96	78	643	18
v/c Ratio	0.10	0.34	0.52	0.24	0.26	0.55	0.15	0.42	0.49	0.03
Control Delay	44.9	32.5	46.8	14.9	43.5	25.2	4.7	46.7	22.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	32.5	46.8	14.9	43.5	25.2	4.7	46.7	22.4	0.1
Queue Length 50th (ft)	7	41	61	31	20	156	0	41	137	0
Queue Length 95th (ft)	29	83	128	81	47	252	29	95	219	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	553	1806	553	1794	1072	1548	752	553	1595	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.10	0.21	0.16	0.07	0.44	0.13	0.14	0.40	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	127	0	0	111	0
Future Vol, veh/h	0	127	0	0	111	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	138	0	0	121	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.118	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.4	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	125	489	22	73	611	16	18	91	56	4	78	83
Future Vol, veh/h	125	489	22	73	611	16	18	91	56	4	78	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	136	532	24	79	664	17	20	99	61	4	85	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	681	0	0	556	0	0	1734	1655	544	1727	1659	673
Stage 1	-	-	-	-	-	-	816	816	-	831	831	-
Stage 2	-	-	-	-	-	-	918	839	-	896	828	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	912	-	-	1015	-	-	69	~ 98	539	70	98	455
Stage 1	-	-	-	-	-	-	371	391	-	364	384	-
Stage 2	-	-	-	-	-	-	326	381	-	335	386	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	1015	-	-	-	~ 77	539	-	~ 77	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 77	-	-	~ 77	-
Stage 1	-	-	-	-	-	-	316	333	-	310	354	-
Stage 2	-	-	-	-	-	-	183	351	-	178	328	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.9		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	912	-	-	1015	-	-	-
HCM Lane V/C Ratio	-	0.149	-	-	0.078	-	-	-
HCM Control Delay (s)	-	9.6	-	-	8.8	-	-	-
HCM Lane LOS	-	A	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-	0.3	-	-	-

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

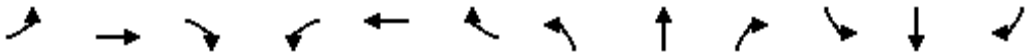
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	260	77	159	340	58	158	763	47	94	449	114
Future Volume (veh/h)	196	260	77	159	340	58	158	763	47	94	449	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	213	283	84	173	370	63	172	829	51	102	488	124
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	720	322	208	640	286	247	1172	524	212	1136	508
Arrive On Green	0.14	0.20	0.20	0.12	0.18	0.18	0.07	0.33	0.33	0.06	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	213	283	84	173	370	63	172	829	51	102	488	124
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	10.5	6.2	4.0	8.6	8.6	3.0	4.4	18.4	2.0	2.6	9.7	5.2
Cycle Q Clear(g_c), s	10.5	6.2	4.0	8.6	8.6	3.0	4.4	18.4	2.0	2.6	9.7	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	720	322	208	640	286	247	1172	524	212	1136	508
V/C Ratio(X)	0.86	0.39	0.26	0.83	0.58	0.22	0.70	0.71	0.10	0.48	0.43	0.24
Avail Cap(c_a), veh/h	297	1657	741	297	1539	688	576	1420	635	576	1460	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	30.9	30.0	38.7	33.6	31.3	40.7	26.2	20.7	40.7	24.0	22.4
Incr Delay (d2), s/veh	16.7	1.0	1.2	8.9	2.4	1.1	1.3	3.0	0.3	0.6	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	3.1	1.8	4.7	4.4	1.4	2.1	9.5	0.9	1.2	4.9	2.4
LnGrp Delay(d),s/veh	54.4	31.9	31.3	47.6	36.0	32.5	42.0	29.2	21.0	41.3	24.9	23.3
LnGrp LOS	D	C	C	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		580			606			1052			714	
Approach Delay, s/veh		40.1			39.0			30.9			27.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	37.2	16.2	25.1	12.1	36.3	18.3	23.0
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.6	20.4	10.6	8.2	6.4	11.7	12.5	10.6
Green Ext Time (p_c), s	0.1	9.3	0.1	4.8	0.2	8.3	0.1	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	283	84	173	370	63	172	829	51	102	488	124
v/c Ratio	0.79	0.41	0.20	0.69	0.56	0.16	0.52	0.73	0.09	0.38	0.46	0.22
Control Delay	63.2	37.6	3.0	57.2	40.7	0.8	49.4	34.4	0.3	49.4	29.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	37.6	3.0	57.2	40.7	0.8	49.4	34.4	0.3	49.4	29.9	6.1
Queue Length 50th (ft)	132	84	0	104	113	0	54	239	0	32	129	0
Queue Length 95th (ft)	#285	132	14	#213	170	0	93	338	0	62	195	42
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	271	1522	754	271	1522	754	527	1341	676	527	1341	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.19	0.11	0.64	0.24	0.08	0.33	0.62	0.08	0.19	0.36	0.18

Intersection Summary

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

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	331	60	39	387	94	47	48	52	99	39	13
Future Vol, veh/h	57	331	60	39	387	94	47	48	52	99	39	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	360	65	42	421	102	51	52	57	108	42	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	523	0	0	425	0	0	833	1124	213	886	1105	262
Stage 1	-	-	-	-	-	-	517	517	-	556	556	-
Stage 2	-	-	-	-	-	-	316	607	-	330	549	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1040	-	-	1131	-	-	261	204	792	239	209	737
Stage 1	-	-	-	-	-	-	509	532	-	483	511	-
Stage 2	-	-	-	-	-	-	670	485	-	657	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1040	-	-	1131	-	-	197	185	792	162	189	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	197	185	-	162	189	-
Stage 1	-	-	-	-	-	-	478	500	-	454	492	-
Stage 2	-	-	-	-	-	-	578	467	-	514	484	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.6	25	49.9
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	197	308	1040	-	-	1131	-	-	162	232
HCM Lane V/C Ratio	0.259	0.353	0.06	-	-	0.037	-	-	0.664	0.244
HCM Control Delay (s)	29.6	22.9	8.7	-	-	8.3	-	-	62.8	25.4
HCM Lane LOS	D	C	A	-	-	A	-	-	F	D
HCM 95th %tile Q(veh)	1	1.5	0.2	-	-	0.1	-	-	3.8	0.9

Intersection	
Intersection Delay, s/veh	25.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	197	36	40	340	60	46	136	46	42	141	73
Future Vol, veh/h	68	197	36	40	340	60	46	136	46	42	141	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	214	39	43	370	65	50	148	50	46	153	79
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.5	38.4	20.7	15.8
HCM LOS	C	E	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	100%	0%	100%	0%	23%	0%
Vol Thru, %	60%	0%	85%	0%	85%	77%	0%
Vol Right, %	20%	0%	15%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	228	68	233	40	400	183	73
LT Vol	46	68	0	40	0	42	0
Through Vol	136	0	197	0	340	141	0
RT Vol	46	0	36	0	60	0	73
Lane Flow Rate	248	74	253	43	435	199	79
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.555	0.17	0.537	0.094	0.866	0.452	0.162
Departure Headway (Hd)	8.066	8.267	7.639	7.919	7.296	8.189	7.349
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	449	436	474	455	500	442	490
Service Time	6.095	5.982	5.353	5.619	4.996	5.905	5.064
HCM Lane V/C Ratio	0.552	0.17	0.534	0.095	0.87	0.45	0.161
HCM Control Delay	20.7	12.7	18.9	11.4	41.1	17.5	11.5
HCM Lane LOS	C	B	C	B	E	C	B
HCM 95th-tile Q	3.3	0.6	3.1	0.3	9.2	2.3	0.6

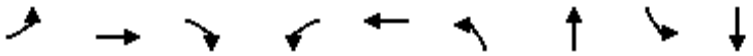
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	110	162	46	86	20	160	862	23	33	671	102
Future Volume (veh/h)	135	110	162	46	86	20	160	862	23	33	671	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	120	176	50	93	22	174	937	25	36	729	111
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	298	253	92	156	37	215	1450	39	75	1045	159
Arrive On Green	0.10	0.16	0.16	0.05	0.11	0.11	0.12	0.41	0.41	0.04	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	1457	345	1774	3522	94	1774	3081	469
Grp Volume(v), veh/h	147	120	176	50	0	115	174	471	491	36	419	421
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1802	1774	1770	1846	1774	1770	1780
Q Serve(g_s), s	6.1	4.4	7.9	2.1	0.0	4.6	7.2	16.1	16.1	1.5	15.5	15.5
Cycle Q Clear(g_c), s	6.1	4.4	7.9	2.1	0.0	4.6	7.2	16.1	16.1	1.5	15.5	15.5
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	185	298	253	92	0	193	215	729	760	75	600	604
V/C Ratio(X)	0.79	0.40	0.70	0.55	0.00	0.60	0.81	0.65	0.65	0.48	0.70	0.70
Avail Cap(c_a), veh/h	559	693	589	559	0	715	571	766	799	559	749	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	28.5	30.0	35.0	0.0	32.2	32.3	17.8	17.8	35.4	21.6	21.6
Incr Delay (d2), s/veh	2.9	1.8	6.8	1.9	0.0	5.9	2.8	3.3	3.1	1.8	4.7	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	3.1	2.4	3.9	1.1	0.0	2.6	3.7	8.5	8.9	0.8	8.3	8.4
LnGrp Delay(d),s/veh	36.0	30.3	36.8	36.8	0.0	38.1	35.1	21.1	21.0	37.2	26.3	26.3
LnGrp LOS	D	C	D	D		D	D	C	C	D	C	C
Approach Vol, veh/h		443			165			1136			876	
Approach Delay, s/veh		34.8			37.7			23.2			26.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	38.6	9.6	18.5	14.4	33.1	13.6	14.5
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.5	18.1	4.1	9.9	9.2	17.5	8.1	6.6
Green Ext Time (p_c), s	0.0	9.2	0.0	2.1	0.2	8.1	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	147	120	176	50	115	174	962	36	840
v/c Ratio	0.64	0.30	0.37	0.36	0.46	0.68	0.59	0.28	0.72
Control Delay	54.9	36.9	7.8	53.5	44.1	54.6	24.1	52.6	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	36.9	7.8	53.5	44.1	54.6	24.1	52.6	34.8
Queue Length 50th (ft)	87	64	0	30	61	103	245	22	233
Queue Length 95th (ft)	169	129	56	77	131	193	398	60	#422
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	437	579	613	437	568	446	1627	437	1159
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	0.34	0.21	0.29	0.11	0.20	0.39	0.59	0.08	0.72

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	42	59	13	31	10	51	128	17	12	104	33
Future Vol, veh/h	29	42	59	13	31	10	51	128	17	12	104	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	46	64	14	34	11	55	139	18	13	113	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.4	9.4	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	22%	24%	8%
Vol Thru, %	65%	32%	57%	70%
Vol Right, %	9%	45%	19%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	130	54	149
LT Vol	51	29	13	12
Through Vol	128	42	31	104
RT Vol	17	59	10	33
Lane Flow Rate	213	141	59	162
Geometry Grp	1	1	1	1
Degree of Util (X)	0.272	0.182	0.08	0.204
Departure Headway (Hd)	4.597	4.645	4.915	4.543
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	780	770	726	789
Service Time	2.634	2.687	2.964	2.581
HCM Lane V/C Ratio	0.273	0.183	0.081	0.205
HCM Control Delay	9.4	8.7	8.4	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.7	0.3	0.8

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	338	83	31	326	15	112	24	33	9	8	7
Future Vol, veh/h	22	338	83	31	326	15	112	24	33	9	8	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	367	90	34	354	16	122	26	36	10	9	8
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	11.6	11.4	13.2	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	66%	100%	0%	0%	100%	0%	0%	38%
Vol Thru, %	14%	0%	100%	58%	0%	100%	88%	33%
Vol Right, %	20%	0%	0%	42%	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	169	22	225	196	31	217	124	24
LT Vol	112	22	0	0	31	0	0	9
Through Vol	24	0	225	113	0	217	109	8
RT Vol	33	0	0	83	0	0	15	7
Lane Flow Rate	184	24	245	213	34	236	134	26
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.348	0.042	0.396	0.326	0.06	0.388	0.217	0.051
Departure Headway (Hd)	6.817	6.334	5.827	5.526	6.413	5.906	5.819	7.01
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	565	617	651	558	609	617	510
Service Time	4.559	4.072	3.565	3.264	4.153	3.646	3.559	4.767
HCM Lane V/C Ratio	0.349	0.042	0.397	0.327	0.061	0.388	0.217	0.051
HCM Control Delay	13.2	9.4	12.4	10.9	9.6	12.4	10.2	10.1
HCM Lane LOS	B	A	B	B	A	B	B	B
HCM 95th-tile Q	1.5	0.1	1.9	1.4	0.2	1.8	0.8	0.2

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	19	61	8	31	13	295	50	48	539	2
Future Vol, veh/h	4	5	19	61	8	31	13	295	50	48	539	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	5	21	66	9	34	14	321	54	52	586	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1089	1094	587	1080	1068	348	588	0	0	375	0	0
Stage 1	691	691	-	376	376	-	-	-	-	-	-	-
Stage 2	398	403	-	704	692	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	193	214	510	196	222	695	987	-	-	1183	-	-
Stage 1	435	446	-	645	616	-	-	-	-	-	-	-
Stage 2	628	600	-	428	445	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	170	202	510	176	209	695	987	-	-	1183	-	-
Mov Cap-2 Maneuver	170	202	-	176	209	-	-	-	-	-	-	-
Stage 1	429	426	-	636	607	-	-	-	-	-	-	-
Stage 2	581	592	-	388	425	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.1	33.3	0.3	0.7
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	987	-	-	327	233	1183	-	-
HCM Lane V/C Ratio	0.014	-	-	0.093	0.467	0.044	-	-
HCM Control Delay (s)	8.7	-	-	17.1	33.3	8.2	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	2.3	0.1	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	84	71	32	57	23	31
Future Vol, veh/h	84	71	32	57	23	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	77	35	62	25	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	168	0	262	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1410	-	727	920
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1410	-	708	920
Mov Cap-2 Maneuver	-	-	-	-	708	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	816	-	-	1410	-
HCM Lane V/C Ratio	0.072	-	-	0.025	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	47	16	352	599	65
Future Vol, veh/h	52	47	16	352	599	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	51	17	383	651	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1068	651	651	0	-	0
Stage 1	651	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	245	469	935	-	-	0
Stage 1	519	-	-	-	-	0
Stage 2	665	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	239	469	935	-	-	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	935	-	455	-
HCM Lane V/C Ratio	0.019	-	0.237	-
HCM Control Delay (s)	8.9	0	15.3	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	17	375	637	4
Future Vol, veh/h	3	13	17	375	637	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	18	408	692	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1136	346	696	0	-	0
Stage 1	692	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	209	651	898	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	205	651	898	-	-	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	898	-	205	651	-	-
HCM Lane V/C Ratio	0.021	-	0.016	0.022	-	-
HCM Control Delay (s)	9.1	-	22.8	10.7	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	174	97	208	306
Demand Flow Rate, veh/h	177	99	212	313
Vehicles Circulating, veh/h	234	314	243	60
Vehicles Exiting, veh/h	139	141	168	353
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.1	5.6	6.6	6.4
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	177	99	212	313
Cap Entry Lane, veh/h	894	825	886	1064
Entry HV Adj Factor	0.984	0.982	0.983	0.979
Flow Entry, veh/h	174	97	208	306
Cap Entry, veh/h	880	811	871	1041
V/C Ratio	0.198	0.120	0.239	0.294
Control Delay, s/veh	6.1	5.6	6.6	6.4
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

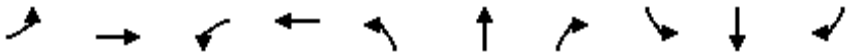
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	19	81	6	15	28	44	337	9	25	620	13
Future Volume (veh/h)	15	19	81	6	15	28	44	337	9	25	620	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	16	21	88	7	16	30	48	366	10	27	674	14
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	252	226	20	230	206	193	1331	595	65	1262	565
Arrive On Green	0.02	0.14	0.14	0.01	0.13	0.13	0.06	0.38	0.38	0.04	0.36	0.36
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	16	21	88	7	16	30	48	366	10	27	674	14
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.6	2.9	0.2	0.5	1.0	0.8	4.1	0.2	0.8	8.6	0.3
Cycle Q Clear(g_c), s	0.5	0.6	2.9	0.2	0.5	1.0	0.8	4.1	0.2	0.8	8.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	252	226	20	230	206	193	1331	595	65	1262	565
V/C Ratio(X)	0.38	0.08	0.39	0.36	0.07	0.15	0.25	0.27	0.02	0.42	0.53	0.02
Avail Cap(c_a), veh/h	782	1310	1172	782	1185	1061	1517	2184	977	782	2184	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	21.1	22.1	27.9	21.7	21.9	25.6	12.3	11.1	26.7	14.5	11.8
Incr Delay (d2), s/veh	2.1	0.4	3.2	4.0	0.4	0.9	0.2	0.4	0.0	1.6	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	1.4	0.1	0.2	0.5	0.4	2.1	0.1	0.4	4.3	0.2
LnGrp Delay(d),s/veh	29.4	21.5	25.3	31.9	22.0	22.8	25.9	12.7	11.2	28.3	15.8	11.9
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		125			53			424			715	
Approach Delay, s/veh		25.2			23.8			14.2			16.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	28.1	6.3	14.5	8.9	27.0	7.0	13.8
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.8	6.1	2.2	4.9	2.8	10.6	2.5	3.0
Green Ext Time (p_c), s	0.0	5.2	0.0	0.9	0.1	9.6	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	109	7	46	48	366	10	27	674	14
v/c Ratio	0.06	0.16	0.03	0.07	0.10	0.18	0.01	0.11	0.35	0.02
Control Delay	30.3	10.9	30.3	15.6	28.8	10.0	0.0	30.1	12.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	10.9	30.3	15.6	28.8	10.0	0.0	30.1	12.3	0.0
Queue Length 50th (ft)	5	3	2	2	7	23	0	8	83	0
Queue Length 95th (ft)	26	27	15	18	27	93	0	37	173	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	988	2488	988	2540	1916	2482	1142	988	2482	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.04	0.01	0.02	0.03	0.15	0.01	0.03	0.27	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	36	0	0	50	0
Future Vol, veh/h	0	36	0	0	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	0	0	54	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.053	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	48.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	77	625	45	32	443	67	17	67	48	5	85	49
Future Vol, veh/h	77	625	45	32	443	67	17	67	48	5	85	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	679	49	35	482	73	18	73	52	5	92	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	555	0	0	728	0	0	1533	1497	704	1523	1485	519
Stage 1	-	-	-	-	-	-	872	872	-	589	589	-
Stage 2	-	-	-	-	-	-	661	625	-	934	896	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1015	-	-	876	-	-	95	123	437	97	125	557
Stage 1	-	-	-	-	-	-	345	368	-	494	495	-
Stage 2	-	-	-	-	-	-	452	477	-	319	359	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1015	-	-	876	-	-	23	108	437	36	110	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	23	108	-	36	110	-
Stage 1	-	-	-	-	-	-	316	337	-	453	475	-
Stage 2	-	-	-	-	-	-	316	458	-	202	329	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	$ 394.5	164.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	90	1015	-	-	876	-	-	139
HCM Lane V/C Ratio	1.594	0.082	-	-	0.04	-	-	1.087
HCM Control Delay (s)	$ 394.5	8.9	-	-	9.3	-	-	164.7
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	11.4	0.3	-	-	0.1	-	-	8.3

Notes

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

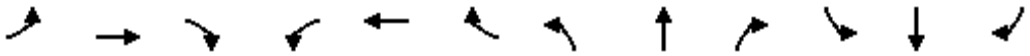
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	365	193	124	304	41	117	316	38	88	426	103
Future Volume (veh/h)	168	365	193	124	304	41	117	316	38	88	426	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	183	397	210	135	330	45	127	343	41	96	463	112
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	870	389	171	765	342	254	883	395	237	866	387
Arrive On Green	0.13	0.25	0.25	0.10	0.22	0.22	0.07	0.25	0.25	0.07	0.24	0.24
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	183	397	210	135	330	45	127	343	41	96	463	112
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	7.6	7.2	8.7	5.6	6.1	1.7	2.7	6.1	1.5	2.0	8.6	4.4
Cycle Q Clear(g_c), s	7.6	7.2	8.7	5.6	6.1	1.7	2.7	6.1	1.5	2.0	8.6	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	870	389	171	765	342	254	883	395	237	866	387
V/C Ratio(X)	0.82	0.46	0.54	0.79	0.43	0.13	0.50	0.39	0.10	0.41	0.53	0.29
Avail Cap(c_a), veh/h	351	1963	878	351	1823	816	682	1683	753	682	1730	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	24.2	24.8	33.5	25.6	23.9	33.7	23.6	21.9	33.8	24.9	23.2
Incr Delay (d2), s/veh	4.1	1.1	3.4	3.1	1.1	0.5	0.6	1.0	0.4	0.4	1.9	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.7	4.2	2.9	3.1	0.8	1.3	3.1	0.7	1.0	4.4	2.1
LnGrp Delay(d),s/veh	36.3	25.3	28.2	36.6	26.8	24.4	34.3	24.6	22.3	34.2	26.7	24.7
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		790			510			511			671	
Approach Delay, s/veh		28.6			29.1			26.8			27.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	26.4	13.0	25.4	11.3	26.0	15.2	23.2
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.0	8.1	7.6	10.7	4.7	10.6	9.6	8.1
Green Ext Time (p_c), s	0.1	5.3	0.1	7.9	0.1	7.9	0.1	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	183	397	210	135	330	45	127	343	41	96	463	112
v/c Ratio	0.62	0.48	0.40	0.58	0.47	0.11	0.40	0.35	0.08	0.33	0.55	0.24
Control Delay	45.7	31.8	7.1	47.4	33.6	0.5	42.6	27.8	0.3	42.9	32.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	31.8	7.1	47.4	33.6	0.5	42.6	27.8	0.3	42.9	32.1	6.1
Queue Length 50th (ft)	90	96	0	68	83	0	33	80	0	25	113	0
Queue Length 95th (ft)	#213	166	57	145	138	0	70	136	0	56	186	36
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	315	1768	896	315	1768	855	612	1557	765	612	1557	765
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.22	0.23	0.43	0.19	0.05	0.21	0.22	0.05	0.16	0.30	0.15

Intersection Summary

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

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	366	35	31	356	16	43	13	23	23	16	3
Future Vol, veh/h	28	366	35	31	356	16	43	13	23	23	16	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	398	38	34	387	17	47	14	25	25	17	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	404	0	0	436	0	0	747	949	218	730	960	202
Stage 1	-	-	-	-	-	-	477	477	-	464	464	-
Stage 2	-	-	-	-	-	-	270	472	-	266	496	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1151	-	-	1120	-	-	301	259	786	310	255	805
Stage 1	-	-	-	-	-	-	538	554	-	548	562	-
Stage 2	-	-	-	-	-	-	713	557	-	716	544	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1151	-	-	1120	-	-	271	245	786	275	241	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	245	-	275	241	-
Stage 1	-	-	-	-	-	-	524	540	-	534	545	-
Stage 2	-	-	-	-	-	-	667	540	-	657	530	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	17.8	19.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	271	437	1151	-	-	1120	-	-	275	271
HCM Lane V/C Ratio	0.172	0.09	0.026	-	-	0.03	-	-	0.091	0.076
HCM Control Delay (s)	21	14	8.2	-	-	8.3	-	-	19.4	19.4
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.6	0.3	0.1	-	-	0.1	-	-	0.3	0.2

Intersection	
Intersection Delay, s/veh	30.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	214	55	41	266	72	37	195	43	78	201	70
Future Vol, veh/h	64	214	55	41	266	72	37	195	43	78	201	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	233	60	45	289	78	40	212	47	85	218	76
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	24.9	38	31.7	27.6
HCM LOS	C	E	D	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	13%	100%	0%	100%	0%	28%	0%
Vol Thru, %	71%	0%	80%	0%	79%	72%	0%
Vol Right, %	16%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	275	64	269	41	338	279	70
LT Vol	37	64	0	41	0	78	0
Through Vol	195	0	214	0	266	201	0
RT Vol	43	0	55	0	72	0	70
Lane Flow Rate	299	70	292	45	367	303	76
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.724	0.175	0.682	0.11	0.837	0.728	0.164
Departure Headway (Hd)	8.723	9.065	8.395	8.874	8.199	8.638	7.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	413	394	430	402	441	419	460
Service Time	6.816	6.854	6.183	6.656	5.98	6.421	5.55
HCM Lane V/C Ratio	0.724	0.178	0.679	0.112	0.832	0.723	0.165
HCM Control Delay	31.7	13.8	27.5	12.8	41.1	31.5	12.1
HCM Lane LOS	D	B	D	B	E	D	B
HCM 95th-tile Q	5.6	0.6	5	0.4	8.1	5.7	0.6

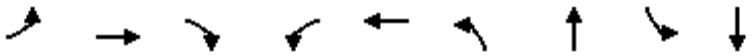
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	94	323	64	59	45	69	464	30	24	874	51
Future Volume (veh/h)	106	94	323	64	59	45	69	464	30	24	874	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	115	102	351	70	64	49	75	504	33	26	950	55
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	480	408	100	227	174	102	1224	80	57	1167	68
Arrive On Green	0.08	0.26	0.26	0.06	0.23	0.23	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	980	750	1774	3373	220	1774	3401	197
Grp Volume(v), veh/h	115	102	351	70	0	113	75	264	273	26	494	511
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1730	1774	1770	1824	1774	1770	1828
Q Serve(g_s), s	5.5	3.7	18.4	3.4	0.0	4.7	3.6	9.7	9.8	1.3	22.2	22.2
Cycle Q Clear(g_c), s	5.5	3.7	18.4	3.4	0.0	4.7	3.6	9.7	9.8	1.3	22.2	22.2
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.12	1.00		0.11
Lane Grp Cap(c), veh/h	146	480	408	100	0	401	102	642	662	57	607	627
V/C Ratio(X)	0.79	0.21	0.86	0.70	0.00	0.28	0.73	0.41	0.41	0.46	0.81	0.81
Avail Cap(c_a), veh/h	485	601	511	485	0	596	495	665	685	485	651	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	25.4	30.8	40.4	0.0	27.5	40.3	20.8	20.8	41.4	26.0	26.0
Incr Delay (d2), s/veh	3.5	0.4	14.3	3.3	0.0	0.8	3.8	1.3	1.3	2.1	9.7	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.0	9.7	1.7	0.0	2.3	1.9	5.0	5.2	0.6	12.4	12.7
LnGrp Delay(d),s/veh	42.7	25.8	45.1	43.7	0.0	28.3	44.1	22.0	22.0	43.5	35.8	35.5
LnGrp LOS	D	C	D	D		C	D	C	C	D	D	D
Approach Vol, veh/h		568			183			612			1031	
Approach Delay, s/veh		41.1			34.2			24.7			35.8	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	39.1	10.6	28.8	10.2	37.4	12.9	26.6
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.3	11.8	5.4	20.4	5.6	24.2	7.5	6.7
Green Ext Time (p_c), s	0.0	6.4	0.1	2.0	0.1	5.7	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	102	351	70	113	75	537	26	1005
v/c Ratio	0.55	0.28	0.59	0.41	0.43	0.43	0.33	0.19	0.75
Control Delay	48.1	35.6	8.6	46.8	33.7	47.0	17.4	44.7	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	35.6	8.6	46.8	33.7	47.0	17.4	44.7	29.5
Queue Length 50th (ft)	60	50	0	37	44	40	79	14	250
Queue Length 95th (ft)	124	104	77	86	103	90	181	43	#441
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	503	667	792	503	641	513	1629	503	1344
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	0.23	0.15	0.44	0.14	0.18	0.15	0.33	0.05	0.75

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	67	64	76	77	67	48	74	49	57	106	41
Future Vol, veh/h	24	67	64	76	77	67	48	74	49	57	106	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	73	70	83	84	73	52	80	53	62	115	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	10.9	10.2	10.8
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	15%	35%	28%
Vol Thru, %	43%	43%	35%	52%
Vol Right, %	29%	41%	30%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	171	155	220	204
LT Vol	48	24	76	57
Through Vol	74	67	77	106
RT Vol	49	64	67	41
Lane Flow Rate	186	168	239	222
Geometry Grp	1	1	1	1
Degree of Util (X)	0.271	0.243	0.344	0.323
Departure Headway (Hd)	5.251	5.188	5.177	5.244
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	684	692	696	685
Service Time	3.287	3.223	3.209	3.278
HCM Lane V/C Ratio	0.272	0.243	0.343	0.324
HCM Control Delay	10.2	9.9	10.9	10.8
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.1	0.9	1.5	1.4

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	441	103	96	366	9	69	24	103	11	30	15
Future Vol, veh/h	13	441	103	96	366	9	69	24	103	11	30	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	479	112	104	398	10	75	26	112	12	33	16
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	15.4	13.2	14.9	11.6
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	35%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	12%	0%	100%	59%	0%	100%	93%	54%
Vol Right, %	53%	0%	0%	41%	0%	0%	7%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	13	294	250	96	244	131	56
LT Vol	69	13	0	0	96	0	0	11
Through Vol	24	0	294	147	0	244	122	30
RT Vol	103	0	0	103	0	0	9	15
Lane Flow Rate	213	14	320	272	104	265	142	61
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.418	0.027	0.561	0.455	0.201	0.473	0.252	0.131
Departure Headway (Hd)	7.068	6.835	6.325	6.031	6.936	6.426	6.377	7.72
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	521	566	592	514	557	560	467
Service Time	4.857	4.619	4.109	3.815	4.724	4.213	4.164	5.42
HCM Lane V/C Ratio	0.42	0.027	0.565	0.459	0.202	0.476	0.254	0.131
HCM Control Delay	14.9	9.8	17	13.8	11.5	14.9	11.3	11.6
HCM Lane LOS	B	A	C	B	B	B	B	B
HCM 95th-tile Q	2	0.1	3.4	2.4	0.7	2.5	1	0.4

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	12	28	5	31	28	595	50	17	554	6
Future Vol, veh/h	2	2	12	28	5	31	28	595	50	17	554	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	13	30	5	34	30	647	54	18	602	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1396	1403	606	1383	1379	674	609	0	0	701	0	0
Stage 1	642	642	-	734	734	-	-	-	-	-	-	-
Stage 2	754	761	-	649	645	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	119	140	497	121	144	455	970	-	-	896	-	-
Stage 1	463	469	-	412	426	-	-	-	-	-	-	-
Stage 2	401	414	-	458	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	103	133	497	112	137	455	970	-	-	896	-	-
Mov Cap-2 Maneuver	103	133	-	112	137	-	-	-	-	-	-	-
Stage 1	449	460	-	399	413	-	-	-	-	-	-	-
Stage 2	355	401	-	435	458	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.1	37.1	0.4	0.3
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	970	-	-	273	180	896	-	-
HCM Lane V/C Ratio	0.031	-	-	0.064	0.386	0.021	-	-
HCM Control Delay (s)	8.8	-	-	19.1	37.1	9.1	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.7	0.1	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	38	35	61	21	26
Future Vol, veh/h	70	38	35	61	21	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	41	38	66	23	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	117	0	239	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1471	-	749	959
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1471	-	729	959
Mov Cap-2 Maneuver	-	-	-	-	729	-
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	841	-	-	1471	-
HCM Lane V/C Ratio	0.061	-	-	0.026	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	32	30	657	639	51
Future Vol, veh/h	44	32	30	657	639	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	35	33	714	695	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1475	695	695	0	-	0
Stage 1	695	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	139	442	901	-	-	0
Stage 1	495	-	-	-	-	0
Stage 2	452	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	131	442	901	-	-	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	452	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.8	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	901	-	226	-
HCM Lane V/C Ratio	0.036	-	0.366	-
HCM Control Delay (s)	9.1	0	29.8	-
HCM Lane LOS	A	A	D	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	54	93	668	646	15
Future Vol, veh/h	4	54	93	668	646	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	59	101	726	702	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1630	351	718	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	102	646	881	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	90	646	881	-	-	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	402	-	-	-	-	-
Stage 2	384	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	881	-	90	646	-	-
HCM Lane V/C Ratio	0.115	-	0.048	0.091	-	-
HCM Control Delay (s)	9.6	-	47	11.1	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.1	0.3	-	-

Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	124	95	160	88
Demand Flow Rate, veh/h	126	97	163	90
Vehicles Circulating, veh/h	74	175	140	73
Vehicles Exiting, veh/h	89	128	60	198
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.8	5.3	4.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	126	97	163	90
Cap Entry Lane, veh/h	1049	949	982	1050
Entry HV Adj Factor	0.981	0.979	0.980	0.980
Flow Entry, veh/h	124	95	160	88
Cap Entry, veh/h	1030	928	962	1030
V/C Ratio	0.120	0.102	0.166	0.086
Control Delay, s/veh	4.6	4.8	5.3	4.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

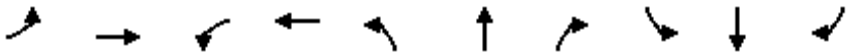
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	11	43	35	28	70	76	692	13	30	647	18
Future Volume (veh/h)	15	11	43	35	28	70	76	692	13	30	647	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	16	12	47	38	30	76	83	752	14	33	703	20
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	221	197	83	262	234	255	1362	609	75	1248	558
Arrive On Green	0.02	0.12	0.12	0.05	0.15	0.15	0.07	0.38	0.38	0.04	0.35	0.35
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	16	12	47	38	30	76	83	752	14	33	703	20
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.4	1.6	1.3	0.9	2.6	1.4	10.2	0.3	1.1	9.8	0.5
Cycle Q Clear(g_c), s	0.5	0.4	1.6	1.3	0.9	2.6	1.4	10.2	0.3	1.1	9.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	221	197	83	262	234	255	1362	609	75	1248	558
V/C Ratio(X)	0.39	0.05	0.24	0.46	0.11	0.32	0.33	0.55	0.02	0.44	0.56	0.04
Avail Cap(c_a), veh/h	724	1214	1086	724	1098	983	1405	2023	905	724	2023	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	23.6	24.2	28.4	22.6	23.3	26.9	14.7	11.7	28.6	16.0	13.0
Incr Delay (d2), s/veh	2.2	0.3	1.8	1.5	0.6	2.3	0.3	1.3	0.1	1.5	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.8	0.7	0.5	1.3	0.7	5.1	0.2	0.6	5.0	0.2
LnGrp Delay(d),s/veh	31.6	23.9	26.0	29.9	23.2	25.6	27.2	16.0	11.7	30.1	17.5	13.1
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		75			144			849			756	
Approach Delay, s/veh		26.8			26.3			17.0			17.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	30.4	8.6	14.0	10.2	28.4	7.1	15.5
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	3.1	12.2	3.3	3.6	3.4	11.8	2.5	4.6
Green Ext Time (p_c), s	0.0	10.5	0.0	0.4	0.1	9.8	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	59	38	106	83	752	14	33	703	20
v/c Ratio	0.08	0.11	0.18	0.14	0.20	0.37	0.01	0.15	0.38	0.02
Control Delay	36.5	14.7	36.1	12.1	34.7	14.7	0.0	36.2	15.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	14.7	36.1	12.1	34.7	14.7	0.0	36.2	15.9	0.1
Queue Length 50th (ft)	7	2	17	5	19	136	0	15	126	0
Queue Length 95th (ft)	28	21	49	30	43	207	0	44	192	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	842	2084	842	2120	1633	2079	974	842	2074	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.03	0.05	0.05	0.05	0.36	0.01	0.04	0.34	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	72	0	0	55	0
Future Vol, veh/h	0	72	0	0	55	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	78	0	0	60	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.058	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	34.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	534	24	80	667	17	19	49	61	4	35	41
Future Vol, veh/h	87	534	24	80	667	17	19	49	61	4	35	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	580	26	87	725	18	21	53	66	4	38	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	743	0	0	606	0	0	1733	1700	593	1751	1704	734
Stage 1	-	-	-	-	-	-	783	783	-	908	908	-
Stage 2	-	-	-	-	-	-	950	917	-	843	796	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	864	-	-	972	-	-	69	92	506	67	91	420
Stage 1	-	-	-	-	-	-	387	404	-	330	354	-
Stage 2	-	-	-	-	-	-	312	351	-	358	399	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	864	-	-	972	-	-	32	75	506	22	74	420
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	75	-	22	74	-
Stage 1	-	-	-	-	-	-	344	360	-	294	322	-
Stage 2	-	-	-	-	-	-	224	319	-	236	355	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.9	$ 348.7	117.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	94	864	-	-	972	-	-	106
HCM Lane V/C Ratio	1.492	0.109	-	-	0.089	-	-	0.82
HCM Control Delay (s)	$ 348.7	9.7	-	-	9.1	-	-	117.6
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	10.7	0.4	-	-	0.3	-	-	4.6

Notes

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

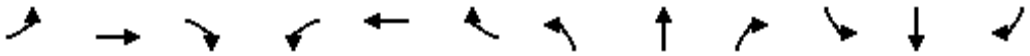
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	284	84	174	371	63	173	751	51	103	408	124
Future Volume (veh/h)	214	284	84	174	371	63	173	751	51	103	408	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	233	309	91	189	403	68	188	816	55	112	443	135
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	763	341	223	676	303	262	1138	509	210	1084	485
Arrive On Green	0.15	0.22	0.22	0.13	0.19	0.19	0.08	0.32	0.32	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	233	309	91	189	403	68	188	816	55	112	443	135
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	12.0	7.0	4.5	9.7	9.7	3.4	5.0	18.9	2.3	2.9	9.2	6.0
Cycle Q Clear(g_c), s	12.0	7.0	4.5	9.7	9.7	3.4	5.0	18.9	2.3	2.9	9.2	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	763	341	223	676	303	262	1138	509	210	1084	485
V/C Ratio(X)	0.87	0.41	0.27	0.85	0.60	0.22	0.72	0.72	0.11	0.53	0.41	0.28
Avail Cap(c_a), veh/h	286	1598	715	286	1484	664	555	1370	613	555	1408	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	31.4	30.4	39.8	34.3	31.8	42.0	27.8	22.2	42.4	25.6	24.5
Incr Delay (d2), s/veh	22.3	1.0	1.2	14.0	2.4	1.1	1.4	3.2	0.3	0.8	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	3.5	2.1	5.6	4.9	1.6	2.4	9.7	1.0	1.4	4.6	2.8
LnGrp Delay(d),s/veh	61.0	32.4	31.6	53.7	36.8	32.9	43.4	31.1	22.5	43.2	26.5	25.6
LnGrp LOS	E	C	C	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		633			660			1059			690	
Approach Delay, s/veh		42.8			41.2			32.8			29.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	37.4	17.4	26.8	12.8	36.0	19.7	24.6
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.9	20.9	11.7	9.0	7.0	11.2	14.0	11.7
Green Ext Time (p_c), s	0.1	9.0	0.1	5.2	0.2	7.8	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	233	309	91	189	403	68	188	816	55	112	443	135
v/c Ratio	0.87	0.45	0.22	0.72	0.59	0.17	0.54	0.73	0.09	0.41	0.43	0.24
Control Delay	73.9	38.3	3.7	58.6	41.1	0.9	50.0	35.2	0.3	50.2	30.3	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.9	38.3	3.7	58.6	41.1	0.9	50.0	35.2	0.3	50.2	30.3	6.2
Queue Length 50th (ft)	148	93	0	117	124	0	60	239	0	36	118	0
Queue Length 95th (ft)	#326	143	19	#248	185	1	102	340	0	68	181	45
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	268	1505	747	268	1505	747	521	1326	670	521	1326	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.21	0.12	0.71	0.27	0.09	0.36	0.62	0.08	0.21	0.33	0.20

Intersection Summary

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

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	362	65	43	423	52	51	35	57	58	25	15
Future Vol, veh/h	62	362	65	43	423	52	51	35	57	58	25	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	393	71	47	460	57	55	38	62	63	27	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	517	0	0	464	0	0	901	1174	232	933	1181	259
Stage 1	-	-	-	-	-	-	563	563	-	583	583	-
Stage 2	-	-	-	-	-	-	338	611	-	350	598	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1045	-	-	1094	-	-	233	190	770	221	189	740
Stage 1	-	-	-	-	-	-	478	507	-	465	497	-
Stage 2	-	-	-	-	-	-	650	482	-	639	489	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1045	-	-	1094	-	-	184	170	770	155	169	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	184	170	-	155	169	-
Stage 1	-	-	-	-	-	-	447	475	-	435	476	-
Stage 2	-	-	-	-	-	-	574	461	-	506	458	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.7	25	35.2
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	184	329	1045	-	-	1094	-	-	155	238
HCM Lane V/C Ratio	0.301	0.304	0.064	-	-	0.043	-	-	0.407	0.183
HCM Control Delay (s)	32.8	20.7	8.7	-	-	8.4	-	-	43.3	23.5
HCM Lane LOS	D	C	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	1.2	1.3	0.2	-	-	0.1	-	-	1.8	0.7

Intersection	
Intersection Delay, s/veh	30.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	215	39	44	371	65	50	115	50	45	120	62
Future Vol, veh/h	57	215	39	44	371	65	50	115	50	45	120	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	234	42	48	403	71	54	125	54	49	130	67
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	18.8	49.6	19.9	15.3
HCM LOS	C	E	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	23%	100%	0%	100%	0%	27%	0%
Vol Thru, %	53%	0%	85%	0%	85%	73%	0%
Vol Right, %	23%	0%	15%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	57	254	44	436	165	62
LT Vol	50	57	0	44	0	45	0
Through Vol	115	0	215	0	371	120	0
RT Vol	50	0	39	0	65	0	62
Lane Flow Rate	234	62	276	48	474	179	67
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.527	0.141	0.58	0.103	0.942	0.414	0.139
Departure Headway (Hd)	8.123	8.191	7.563	7.775	7.154	8.307	7.443
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	444	439	480	463	507	434	481
Service Time	6.18	5.909	5.281	5.489	4.868	6.06	5.196
HCM Lane V/C Ratio	0.527	0.141	0.575	0.104	0.935	0.412	0.139
HCM Control Delay	19.9	12.3	20.2	11.4	53.5	16.8	11.4
HCM Lane LOS	C	B	C	B	F	C	B
HCM 95th-tile Q	3	0.5	3.6	0.3	11.6	2	0.5

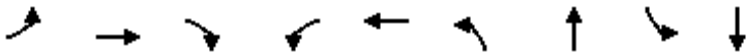
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	120	177	50	94	22	175	875	25	36	666	94
Future Volume (veh/h)	130	120	177	50	94	22	175	875	25	36	666	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	141	130	192	54	102	24	190	951	27	39	724	102
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	316	268	94	179	42	231	1439	41	78	1027	145
Arrive On Green	0.10	0.17	0.17	0.05	0.12	0.12	0.13	0.41	0.41	0.04	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	1459	343	1774	3515	100	1774	3116	439
Grp Volume(v), veh/h	141	130	192	54	0	126	190	479	499	39	411	415
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1802	1774	1770	1845	1774	1770	1785
Q Serve(g_s), s	6.1	4.9	8.9	2.3	0.0	5.2	8.1	17.1	17.1	1.7	15.8	15.9
Cycle Q Clear(g_c), s	6.1	4.9	8.9	2.3	0.0	5.2	8.1	17.1	17.1	1.7	15.8	15.9
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.25
Lane Grp Cap(c), veh/h	178	316	268	94	0	221	231	725	756	78	583	588
V/C Ratio(X)	0.79	0.41	0.72	0.57	0.00	0.57	0.82	0.66	0.66	0.50	0.70	0.71
Avail Cap(c_a), veh/h	541	670	570	541	0	692	552	741	773	541	725	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	28.9	30.6	36.1	0.0	32.3	33.1	18.7	18.7	36.5	22.9	22.9
Incr Delay (d2), s/veh	3.0	1.7	7.0	2.0	0.0	4.7	2.8	3.6	3.5	1.8	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	3.1	2.6	4.4	1.2	0.0	2.8	4.2	9.0	9.3	0.9	8.5	8.5
LnGrp Delay(d),s/veh	37.4	30.7	37.7	38.2	0.0	37.0	35.9	22.3	22.1	38.3	27.9	27.9
LnGrp LOS	D	C	D	D		D	D	C	C	D	C	C
Approach Vol, veh/h		463			180			1168			865	
Approach Delay, s/veh		35.6			37.4			24.4			28.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	39.5	9.8	19.6	15.4	33.2	13.5	16.0
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.7	19.1	4.3	10.9	10.1	17.9	8.1	7.2
Green Ext Time (p_c), s	0.0	8.8	0.0	2.3	0.2	7.9	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	141	130	192	54	126	190	978	39	826
v/c Ratio	0.63	0.33	0.39	0.38	0.48	0.70	0.60	0.30	0.72
Control Delay	56.0	38.0	7.8	54.8	45.2	55.4	24.5	54.0	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	38.0	7.8	54.8	45.2	55.4	24.5	54.0	35.6
Queue Length 50th (ft)	85	71	0	33	69	114	254	24	234
Queue Length 95th (ft)	166	141	59	81	143	211	412	65	#423
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	430	571	618	430	560	439	1634	430	1143
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	0.33	0.23	0.31	0.13	0.23	0.43	0.60	0.09	0.72

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	45	64	15	34	11	56	122	18	13	96	36
Future Vol, veh/h	31	45	64	15	34	11	56	122	18	13	96	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	49	70	16	37	12	61	133	20	14	104	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.5	9.4	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	22%	25%	9%
Vol Thru, %	62%	32%	57%	66%
Vol Right, %	9%	46%	18%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	140	60	145
LT Vol	56	31	15	13
Through Vol	122	45	34	96
RT Vol	18	64	11	36
Lane Flow Rate	213	152	65	158
Geometry Grp	1	1	1	1
Degree of Util (X)	0.274	0.196	0.089	0.2
Departure Headway (Hd)	4.636	4.646	4.927	4.573
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	770	724	782
Service Time	2.678	2.691	2.979	2.616
HCM Lane V/C Ratio	0.276	0.197	0.09	0.202
HCM Control Delay	9.4	8.8	8.5	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.7	0.3	0.7

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	352	57	34	339	16	89	26	36	10	9	8
Future Vol, veh/h	24	352	57	34	339	16	89	26	36	10	9	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	383	62	37	368	17	97	28	39	11	10	9
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	11.5	11.3	12.5	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	59%	100%	0%	0%	100%	0%	0%	37%
Vol Thru, %	17%	0%	100%	67%	0%	100%	88%	33%
Vol Right, %	24%	0%	0%	33%	0%	0%	12%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	151	24	235	174	34	226	129	27
LT Vol	89	24	0	0	34	0	0	10
Through Vol	26	0	235	117	0	226	113	9
RT Vol	36	0	0	57	0	0	16	8
Lane Flow Rate	164	26	255	189	37	246	140	29
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.308	0.045	0.409	0.291	0.065	0.397	0.223	0.057
Departure Headway (Hd)	6.759	6.273	5.767	5.535	6.321	5.815	5.727	6.953
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	532	571	625	650	567	619	627	514
Service Time	4.503	4.008	3.501	3.269	4.056	3.55	3.462	4.707
HCM Lane V/C Ratio	0.308	0.046	0.408	0.291	0.065	0.397	0.223	0.056
HCM Control Delay	12.5	9.3	12.5	10.5	9.5	12.3	10.1	10.1
HCM Lane LOS	B	A	B	B	A	B	B	B
HCM 95th-tile Q	1.3	0.1	2	1.2	0.2	1.9	0.8	0.2

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	19	76	8	31	13	325	65	48	569	2
Future Vol, veh/h	4	5	19	76	8	31	13	325	65	48	569	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	5	21	83	9	34	14	353	71	52	618	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1161	1175	619	1153	1141	389	620	0	0	424	0	0
Stage 1	723	723	-	417	417	-	-	-	-	-	-	-
Stage 2	438	452	-	736	724	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	172	192	489	174	201	659	960	-	-	1135	-	-
Stage 1	417	431	-	613	591	-	-	-	-	-	-	-
Stage 2	597	570	-	411	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	150	180	489	155	189	659	960	-	-	1135	-	-
Mov Cap-2 Maneuver	150	180	-	155	189	-	-	-	-	-	-	-
Stage 1	411	411	-	604	582	-	-	-	-	-	-	-
Stage 2	550	561	-	371	410	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.4	50	0.3	0.6
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	960	-	-	300	198	1135	-	-
HCM Lane V/C Ratio	0.015	-	-	0.101	0.631	0.046	-	-
HCM Control Delay (s)	8.8	-	-	18.4	50	8.3	-	-
HCM Lane LOS	A	-	-	C	F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	3.7	0.1	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	84	81	32	57	38	21
Future Vol, veh/h	84	81	32	57	38	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	88	35	62	41	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	179	0	267	135
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1397	-	722	914
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1397	-	703	914
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	766	-	-	1397	-
HCM Lane V/C Ratio	0.084	-	-	0.025	-
HCM Control Delay (s)	10.1	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	47	16	397	644	65
Future Vol, veh/h	52	47	16	397	644	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	51	17	432	700	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1166	700	700	0	-	0
Stage 1	700	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	214	439	897	-	-	0
Stage 1	493	-	-	-	-	0
Stage 2	632	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	209	439	897	-	-	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	897	-	398	-
HCM Lane V/C Ratio	0.019	-	0.27	-
HCM Control Delay (s)	9.1	0	17.4	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	17	420	682	4
Future Vol, veh/h	3	13	17	420	682	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	18	457	741	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1234	371	745	0	-	0
Stage 1	741	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	181	627	861	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	177	627	861	-	-	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	424	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	861	-	177	627	-	-
HCM Lane V/C Ratio	0.021	-	0.018	0.023	-	-
HCM Control Delay (s)	9.3	-	25.7	10.9	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	191	226	305	322
Demand Flow Rate, veh/h	194	230	311	329
Vehicles Circulating, veh/h	349	314	276	175
Vehicles Exiting, veh/h	155	273	267	369
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.3	7.5	8.5	7.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	194	230	311	329
Cap Entry Lane, veh/h	797	825	857	949
Entry HV Adj Factor	0.984	0.982	0.982	0.980
Flow Entry, veh/h	191	226	305	322
Cap Entry, veh/h	784	811	842	929
V/C Ratio	0.243	0.279	0.363	0.347
Control Delay, s/veh	7.3	7.5	8.5	7.7
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	2

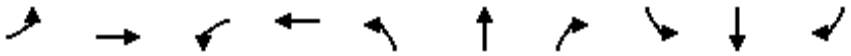
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	137	81	80	133	73	44	337	83	70	620	13
Future Volume (veh/h)	15	137	81	80	133	73	44	337	83	70	620	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	16	149	88	87	145	79	48	366	90	76	674	14
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	291	163	133	417	216	187	1146	513	125	1203	538
Arrive On Green	0.02	0.13	0.13	0.08	0.18	0.18	0.05	0.32	0.32	0.07	0.34	0.34
Sat Flow, veh/h	1774	2191	1225	1774	2259	1167	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	16	119	118	87	112	112	48	366	90	76	674	14
Grp Sat Flow(s),veh/h/ln	1774	1770	1647	1774	1770	1657	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	3.9	4.2	3.0	3.4	3.7	0.8	4.8	2.5	2.6	9.6	0.4
Cycle Q Clear(g_c), s	0.6	3.9	4.2	3.0	3.4	3.7	0.8	4.8	2.5	2.6	9.6	0.4
Prop In Lane	1.00		0.74	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	235	219	133	327	306	187	1146	513	125	1203	538
V/C Ratio(X)	0.39	0.50	0.54	0.65	0.34	0.37	0.26	0.32	0.18	0.61	0.56	0.03
Avail Cap(c_a), veh/h	717	1201	1117	717	1087	1017	1390	2002	895	717	2002	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	24.9	25.1	27.8	22.0	22.1	28.1	15.8	15.0	27.9	16.7	13.6
Incr Delay (d2), s/veh	2.2	4.8	5.9	2.0	1.8	2.1	0.3	0.6	0.6	1.8	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.2	2.2	1.5	1.8	1.9	0.4	2.4	1.2	1.3	4.9	0.2
LnGrp Delay(d),s/veh	32.0	29.8	31.0	29.8	23.7	24.2	28.3	16.4	15.6	29.7	18.1	13.7
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		253			311			504			764	
Approach Delay, s/veh		30.5			25.6			17.4			19.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	26.8	10.4	14.6	9.1	27.8	7.1	17.8
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	4.6	6.8	5.0	6.2	2.8	11.6	2.6	5.7
Green Ext Time (p_c), s	0.1	4.4	0.1	2.1	0.1	9.4	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	237	87	224	48	366	90	76	674	14
v/c Ratio	0.10	0.36	0.39	0.21	0.15	0.32	0.15	0.36	0.49	0.02
Control Delay	40.3	23.1	40.3	16.4	38.7	22.2	4.3	40.3	20.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	23.1	40.3	16.4	38.7	22.2	4.3	40.3	20.6	0.1
Queue Length 50th (ft)	7	36	40	27	11	71	0	35	137	0
Queue Length 95th (ft)	30	81	96	72	31	125	25	87	217	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	669	2113	669	2116	1299	1875	889	669	1875	889
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.11	0.13	0.11	0.04	0.20	0.10	0.11	0.36	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	95	0	0	109	0
Future Vol, veh/h	0	95	0	0	109	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	0	0	118	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.116	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.4	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	122	625	45	32	443	67	17	112	48	5	130	94
Future Vol, veh/h	122	625	45	32	443	67	17	112	48	5	130	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	133	679	49	35	482	73	18	122	52	5	141	102

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	555	0	0	728	0	0	1680	1595	704	1646	1583	519
Stage 1	-	-	-	-	-	-	970	970	-	589	589	-
Stage 2	-	-	-	-	-	-	710	625	-	1057	994	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1015	-	-	876	-	-	75	~ 107	437	79	~ 109	557
Stage 1	-	-	-	-	-	-	304	331	-	494	495	-
Stage 2	-	-	-	-	-	-	424	477	-	272	323	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1015	-	-	876	-	-	-	~ 89	437	-	~ 91	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 89	-	-	~ 91	-
Stage 1	-	-	-	-	-	-	264	288	-	429	475	-
Stage 2	-	-	-	-	-	-	234	458	-	120	281	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.5		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1015	-	-	876	-	-	-
HCM Lane V/C Ratio	-	0.131	-	-	0.04	-	-	-
HCM Control Delay (s)	-	9.1	-	-	9.3	-	-	-
HCM Lane LOS	-	A	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-	0.1	-	-	-

Notes

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

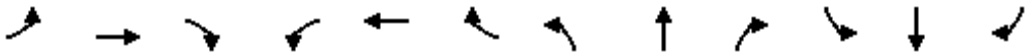
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	365	193	124	304	41	117	390	38	88	500	103
Future Volume (veh/h)	168	365	193	124	304	41	117	390	38	88	500	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	183	397	210	135	330	45	127	424	41	96	543	112
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	850	380	170	746	334	244	969	434	229	954	427
Arrive On Green	0.13	0.24	0.24	0.10	0.21	0.21	0.07	0.27	0.27	0.07	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	183	397	210	135	330	45	127	424	41	96	543	112
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	8.0	7.6	9.2	5.9	6.4	1.8	2.8	7.8	1.5	2.1	10.5	4.4
Cycle Q Clear(g_c), s	8.0	7.6	9.2	5.9	6.4	1.8	2.8	7.8	1.5	2.1	10.5	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	850	380	170	746	334	244	969	434	229	954	427
V/C Ratio(X)	0.82	0.47	0.55	0.79	0.44	0.13	0.52	0.44	0.09	0.42	0.57	0.26
Avail Cap(c_a), veh/h	335	1872	837	335	1738	778	650	1604	718	650	1649	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	25.8	26.4	35.1	27.3	25.5	35.6	23.8	21.5	35.6	25.0	22.8
Incr Delay (d2), s/veh	5.8	1.2	3.6	3.2	1.2	0.5	0.6	1.1	0.3	0.5	1.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.8	4.4	3.0	3.3	0.8	1.4	4.0	0.7	1.0	5.4	2.1
LnGrp Delay(d),s/veh	39.7	27.0	30.0	38.3	28.5	26.0	36.2	24.9	21.8	36.1	27.0	24.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		790			510			592			751	
Approach Delay, s/veh		30.7			30.9			27.1			27.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	29.3	13.3	25.9	11.3	28.9	15.6	23.5
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.1	9.8	7.9	11.2	4.8	12.5	10.0	8.4
Green Ext Time (p_c), s	0.1	6.5	0.1	7.8	0.1	8.9	0.1	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	183	397	210	135	330	45	127	424	41	96	543	112
v/c Ratio	0.64	0.49	0.40	0.59	0.48	0.11	0.40	0.41	0.07	0.34	0.61	0.23
Control Delay	48.3	33.3	7.3	49.5	34.8	0.5	44.3	28.1	0.3	44.6	32.9	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	33.3	7.3	49.5	34.8	0.5	44.3	28.1	0.3	44.6	32.9	5.8
Queue Length 50th (ft)	94	101	0	71	86	0	34	102	0	26	137	0
Queue Length 95th (ft)	#224	172	58	151	144	0	72	167	0	58	221	35
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	305	1711	873	305	1711	832	593	1507	745	593	1507	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.23	0.24	0.44	0.19	0.05	0.21	0.28	0.06	0.16	0.36	0.15

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	366	35	31	356	61	43	28	23	68	31	3
Future Vol, veh/h	28	366	35	31	356	61	43	28	23	68	31	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	398	38	34	387	66	47	30	25	74	34	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	453	0	0	436	0	0	756	998	218	762	984	227
Stage 1	-	-	-	-	-	-	477	477	-	488	488	-
Stage 2	-	-	-	-	-	-	279	521	-	274	496	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1104	-	-	1120	-	-	297	242	786	294	247	776
Stage 1	-	-	-	-	-	-	538	554	-	530	548	-
Stage 2	-	-	-	-	-	-	704	530	-	709	544	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1104	-	-	1120	-	-	252	228	786	245	233	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	252	228	-	245	233	-
Stage 1	-	-	-	-	-	-	523	539	-	516	532	-
Stage 2	-	-	-	-	-	-	637	514	-	630	529	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	20	24.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	252	335	1104	-	-	1120	-	-	245	248
HCM Lane V/C Ratio	0.185	0.165	0.028	-	-	0.03	-	-	0.302	0.149
HCM Control Delay (s)	22.5	17.9	8.4	-	-	8.3	-	-	25.9	22
HCM Lane LOS	C	C	A	-	-	A	-	-	D	C
HCM 95th %tile Q(veh)	0.7	0.6	0.1	-	-	0.1	-	-	1.2	0.5

Intersection	
Intersection Delay, s/veh	41.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	214	55	41	266	72	37	225	43	78	231	85
Future Vol, veh/h	79	214	55	41	266	72	37	225	43	78	231	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	233	60	45	289	78	40	245	47	85	251	92
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	29.3	49.3	48.2	39.6
HCM LOS	D	E	E	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	100%	0%	25%	0%
Vol Thru, %	74%	0%	80%	0%	79%	75%	0%
Vol Right, %	14%	0%	20%	0%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	305	79	269	41	338	309	85
LT Vol	37	79	0	41	0	78	0
Through Vol	225	0	214	0	266	231	0
RT Vol	43	0	55	0	72	0	85
Lane Flow Rate	332	86	292	45	367	336	92
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.856	0.232	0.736	0.118	0.902	0.853	0.213
Departure Headway (Hd)	9.297	9.737	9.063	9.523	8.843	9.145	8.284
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	388	368	398	377	411	396	433
Service Time	7.362	7.498	6.824	7.281	6.602	6.903	6.042
HCM Lane V/C Ratio	0.856	0.234	0.734	0.119	0.893	0.848	0.212
HCM Control Delay	48.2	15.4	33.4	13.6	53.6	46.8	13.3
HCM Lane LOS	E	C	D	B	F	E	B
HCM 95th-tile Q	8.2	0.9	5.8	0.4	9.5	8.2	0.8

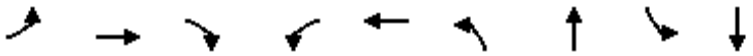
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	94	323	64	59	45	69	523	30	24	933	66
Future Volume (veh/h)	121	94	323	64	59	45	69	523	30	24	933	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	102	351	70	64	49	75	568	33	26	1014	72
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	478	407	99	215	165	101	1257	73	57	1174	83
Arrive On Green	0.09	0.26	0.26	0.06	0.22	0.22	0.06	0.37	0.37	0.03	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	1774	980	750	1774	3400	197	1774	3352	238
Grp Volume(v), veh/h	132	102	351	70	0	113	75	295	306	26	535	551
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1730	1774	1770	1828	1774	1770	1821
Q Serve(g_s), s	6.4	3.8	18.7	3.4	0.0	4.8	3.7	11.2	11.2	1.3	24.9	24.9
Cycle Q Clear(g_c), s	6.4	3.8	18.7	3.4	0.0	4.8	3.7	11.2	11.2	1.3	24.9	24.9
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	165	478	407	99	0	379	101	654	676	57	620	638
V/C Ratio(X)	0.80	0.21	0.86	0.71	0.00	0.30	0.74	0.45	0.45	0.46	0.86	0.86
Avail Cap(c_a), veh/h	477	592	503	477	0	587	487	654	676	477	640	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	25.9	31.4	41.1	0.0	28.8	41.1	21.1	21.1	42.1	26.8	26.8
Incr Delay (d2), s/veh	3.3	0.4	14.9	3.5	0.0	0.9	3.9	1.5	1.5	2.1	13.4	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.0	9.9	1.8	0.0	2.4	1.9	5.7	5.9	0.7	14.4	14.9
LnGrp Delay(d),s/veh	42.6	26.3	46.3	44.5	0.0	29.7	45.0	22.6	22.6	44.2	40.2	39.9
LnGrp LOS	D	C	D	D		C	D	C	C	D	D	D
Approach Vol, veh/h		585			183			676			1112	
Approach Delay, s/veh		42.0			35.4			25.1			40.2	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	40.2	10.6	29.1	10.3	38.5	13.9	25.8
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.3	13.2	5.4	20.7	5.7	26.9	8.4	6.8
Green Ext Time (p_c), s	0.0	7.0	0.1	2.0	0.1	4.0	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.2
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	132	102	351	70	113	75	601	26	1086
v/c Ratio	0.59	0.27	0.58	0.41	0.43	0.43	0.37	0.19	0.82
Control Delay	48.5	35.1	8.2	47.5	34.3	47.7	18.4	45.5	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	35.1	8.2	47.5	34.3	47.7	18.4	45.5	33.0
Queue Length 50th (ft)	70	50	0	37	45	40	94	14	286
Queue Length 95th (ft)	139	105	76	87	104	91	210	43	#516
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	497	659	787	497	633	507	1613	497	1327
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	0.27	0.15	0.45	0.14	0.18	0.15	0.37	0.05	0.82

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	67	64	76	77	67	48	89	49	57	121	41
Future Vol, veh/h	24	67	64	76	77	67	48	89	49	57	121	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	73	70	83	84	73	52	97	53	62	132	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11.2	10.6	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	15%	35%	26%
Vol Thru, %	48%	43%	35%	55%
Vol Right, %	26%	41%	30%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	186	155	220	219
LT Vol	48	24	76	57
Through Vol	89	67	77	121
RT Vol	49	64	67	41
Lane Flow Rate	202	168	239	238
Geometry Grp	1	1	1	1
Degree of Util (X)	0.298	0.248	0.351	0.35
Departure Headway (Hd)	5.311	5.298	5.281	5.298
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	677	682	678
Service Time	3.353	3.339	3.319	3.338
HCM Lane V/C Ratio	0.299	0.248	0.35	0.351
HCM Control Delay	10.6	10.1	11.2	11.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.2	1	1.6	1.6

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	456	133	96	381	9	99	24	103	11	30	15
Future Vol, veh/h	13	456	133	96	381	9	99	24	103	11	30	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	496	145	104	414	10	108	26	112	12	33	16
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	17.8	14.5	17.6	12.1
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	44%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	11%	0%	100%	53%	0%	100%	93%	54%
Vol Right, %	46%	0%	0%	47%	0%	0%	7%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	226	13	304	285	96	254	136	56
LT Vol	99	13	0	0	96	0	0	11
Through Vol	24	0	304	152	0	254	127	30
RT Vol	103	0	0	133	0	0	9	15
Lane Flow Rate	246	14	330	310	104	276	148	61
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.508	0.028	0.612	0.545	0.212	0.522	0.278	0.136
Departure Headway (Hd)	7.438	7.175	6.663	6.328	7.319	6.807	6.759	8.054
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	486	500	542	570	490	530	532	445
Service Time	5.174	4.911	4.398	4.064	5.057	4.544	4.497	5.802
HCM Lane V/C Ratio	0.506	0.028	0.609	0.544	0.212	0.521	0.278	0.137
HCM Control Delay	17.6	10.1	19.4	16.4	12	16.8	12.1	12.1
HCM Lane LOS	C	B	C	C	B	C	B	B
HCM 95th-tile Q	2.8	0.1	4.1	3.3	0.8	3	1.1	0.5

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	12	44	5	31	28	626	66	17	585	6
Future Vol, veh/h	2	2	12	44	5	31	28	626	66	17	585	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	13	48	5	34	30	680	72	18	636	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1472	1488	640	1459	1455	716	643	0	0	752	0	0
Stage 1	676	676	-	776	776	-	-	-	-	-	-	-
Stage 2	796	812	-	683	679	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	105	124	475	107	130	430	942	-	-	858	-	-
Stage 1	443	453	-	390	407	-	-	-	-	-	-	-
Stage 2	380	392	-	439	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	90	118	475	99	123	430	942	-	-	858	-	-
Mov Cap-2 Maneuver	90	118	-	99	123	-	-	-	-	-	-	-
Stage 1	429	443	-	378	394	-	-	-	-	-	-	-
Stage 2	334	379	-	416	442	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.6	62.3	0.3	0.3
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	942	-	-	248	144	858	-	-
HCM Lane V/C Ratio	0.032	-	-	0.07	0.604	0.022	-	-
HCM Control Delay (s)	8.9	-	-	20.6	62.3	9.3	-	-
HCM Lane LOS	A	-	-	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	3.2	0.1	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	48	35	61	37	26
Future Vol, veh/h	70	48	35	61	37	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	52	38	66	40	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	128	0	244	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1458	-	744	953
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1458	-	724	953
Mov Cap-2 Maneuver	-	-	-	-	724	-
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	804	-	-	1458	-
HCM Lane V/C Ratio	0.085	-	-	0.026	-
HCM Control Delay (s)	9.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	32	30	703	685	51
Future Vol, veh/h	44	32	30	703	685	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	35	33	764	745	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1575	745	745	0	-	0
Stage 1	745	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	121	414	863	-	-	0
Stage 1	469	-	-	-	-	0
Stage 2	428	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	113	414	863	-	-	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.4	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	863	-	195	-
HCM Lane V/C Ratio	0.038	-	0.424	-
HCM Control Delay (s)	9.3	0	36.4	-
HCM Lane LOS	A	A	E	-
HCM 95th %tile Q(veh)	0.1	-	1.9	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	54	93	714	692	15
Future Vol, veh/h	4	54	93	714	692	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	59	101	776	752	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1730	376	768	0	-	0
Stage 1	752	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	88	622	844	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	77	622	844	-	-	-
Mov Cap-2 Maneuver	77	-	-	-	-	-
Stage 1	376	-	-	-	-	-
Stage 2	363	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	844	-	77	622	-	-
HCM Lane V/C Ratio	0.12	-	0.056	0.094	-	-
HCM Control Delay (s)	9.8	-	54.5	11.4	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.2	0.3	-	-

Intersection	
Intersection Delay, s/veh	6.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	142	229	259	106
Demand Flow Rate, veh/h	145	233	264	109
Vehicles Circulating, veh/h	194	175	178	192
Vehicles Exiting, veh/h	107	267	161	216
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	6.4	6.8	5.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	145	233	264	109
Cap Entry Lane, veh/h	931	949	946	933
Entry HV Adj Factor	0.981	0.981	0.980	0.975
Flow Entry, veh/h	142	229	259	106
Cap Entry, veh/h	913	931	927	909
V/C Ratio	0.156	0.246	0.279	0.117
Control Delay, s/veh	5.4	6.4	6.8	5.1
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	0

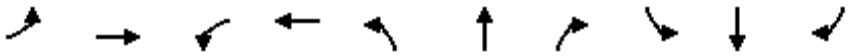
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	132	43	111	149	116	76	692	89	75	647	18
Future Volume (veh/h)	15	132	43	111	149	116	76	692	89	75	647	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	16	143	47	121	162	126	83	752	97	82	703	20
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	319	101	157	363	266	244	1236	553	125	1235	552
Arrive On Green	0.02	0.12	0.12	0.09	0.19	0.19	0.07	0.35	0.35	0.07	0.35	0.35
Sat Flow, veh/h	1774	2645	839	1774	1953	1427	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	16	94	96	121	146	142	83	752	97	82	703	20
Grp Sat Flow(s),veh/h/ln	1774	1770	1715	1774	1770	1611	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	3.3	3.5	4.4	4.8	5.2	1.5	11.6	2.8	3.0	10.7	0.6
Cycle Q Clear(g_c), s	0.6	3.3	3.5	4.4	4.8	5.2	1.5	11.6	2.8	3.0	10.7	0.6
Prop In Lane	1.00		0.49	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	214	207	157	329	300	244	1236	553	125	1235	552
V/C Ratio(X)	0.39	0.44	0.46	0.77	0.44	0.47	0.34	0.61	0.18	0.66	0.57	0.04
Avail Cap(c_a), veh/h	669	1121	1086	669	1014	923	1298	1869	836	669	1869	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	27.1	27.2	29.6	23.9	24.1	29.3	17.8	15.0	30.0	17.5	14.2
Incr Delay (d2), s/veh	2.2	4.1	4.7	3.0	2.7	3.4	0.3	1.8	0.5	2.2	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.8	1.9	2.3	2.6	2.6	0.7	5.9	1.3	1.5	5.4	0.3
LnGrp Delay(d),s/veh	34.2	31.2	31.8	32.6	26.6	27.5	29.6	19.6	15.5	32.2	19.0	14.3
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		206			409			932			805	
Approach Delay, s/veh		31.7			28.7			20.1			20.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	30.0	11.6	14.4	10.4	29.9	7.2	18.7
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	5.0	13.6	6.4	5.5	3.5	12.7	2.6	7.2
Green Ext Time (p_c), s	0.1	9.5	0.2	1.6	0.1	9.6	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	190	121	288	83	752	97	82	703	20
v/c Ratio	0.12	0.36	0.55	0.27	0.29	0.58	0.15	0.45	0.51	0.03
Control Delay	46.0	33.0	48.5	16.7	44.9	25.6	4.8	48.5	22.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	33.0	48.5	16.7	44.9	25.6	4.8	48.5	22.8	0.1
Queue Length 50th (ft)	9	45	68	35	24	176	0	46	155	0
Queue Length 95th (ft)	33	85	132	83	51	284	30	99	246	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	531	1732	531	1729	1030	1487	727	531	1550	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.11	0.23	0.17	0.08	0.51	0.13	0.15	0.45	0.03

Intersection Summary

Intersection	
Int Delay, s/veh	8.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	133	0	0	116	0
Future Vol, veh/h	0	133	0	0	116	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	145	0	0	126	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.123	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.4	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	133	534	24	80	667	17	19	95	61	4	81	87
Future Vol, veh/h	133	534	24	80	667	17	19	95	61	4	81	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	145	580	26	87	725	18	21	103	66	4	88	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	743	0	0	606	0	0	1883	1800	593	1876	1804	734
Stage 1	-	-	-	-	-	-	883	883	-	908	908	-
Stage 2	-	-	-	-	-	-	1000	917	-	968	896	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	864	-	-	972	-	-	54	~ 80	506	55	~ 79	420
Stage 1	-	-	-	-	-	-	340	364	-	330	354	-
Stage 2	-	-	-	-	-	-	293	351	-	305	359	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	864	-	-	972	-	-	-	~ 61	506	-	~ 60	420
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 61	-	-	~ 60	-
Stage 1	-	-	-	-	-	-	283	303	-	275	322	-
Stage 2	-	-	-	-	-	-	150	319	-	145	299	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.9		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	864	-	-	972	-	-	-
HCM Lane V/C Ratio	-	0.167	-	-	0.089	-	-	-
HCM Control Delay (s)	-	10	-	-	9.1	-	-	-
HCM Lane LOS	-	B	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-	0.3	-	-	-

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

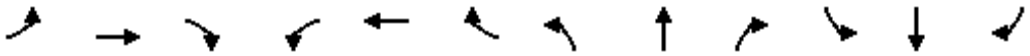
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	284	84	174	371	63	173	827	51	103	484	124
Future Volume (veh/h)	214	284	84	174	371	63	173	827	51	103	484	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	233	309	91	189	403	68	188	899	55	112	526	135
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	754	337	222	668	299	260	1182	529	205	1125	503
Arrive On Green	0.15	0.21	0.21	0.13	0.19	0.19	0.08	0.33	0.33	0.06	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	233	309	91	189	403	68	188	899	55	112	526	135
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	12.3	7.2	4.6	10.0	10.0	3.5	5.1	21.7	2.3	3.0	11.4	6.1
Cycle Q Clear(g_c), s	12.3	7.2	4.6	10.0	10.0	3.5	5.1	21.7	2.3	3.0	11.4	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	754	337	222	668	299	260	1182	529	205	1125	503
V/C Ratio(X)	0.88	0.41	0.27	0.85	0.60	0.23	0.72	0.76	0.10	0.55	0.47	0.27
Avail Cap(c_a), veh/h	278	1552	694	278	1441	645	539	1330	595	539	1367	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	32.5	31.5	41.0	35.6	32.9	43.3	28.5	22.0	43.8	26.2	24.4
Incr Delay (d2), s/veh	24.0	1.0	1.2	15.4	2.5	1.1	1.4	4.0	0.3	0.8	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	3.6	2.1	5.8	5.1	1.6	2.5	11.3	1.1	1.5	5.7	2.8
LnGrp Delay(d),s/veh	63.9	33.5	32.7	56.4	38.1	34.1	44.7	32.5	22.3	44.6	27.3	25.4
LnGrp LOS	E	C	C	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		633			660			1142			773	
Approach Delay, s/veh		44.6			42.9			34.0			29.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	39.5	17.7	27.2	12.9	38.0	20.0	24.9
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	5.0	23.7	12.0	9.2	7.1	13.4	14.3	12.0
Green Ext Time (p_c), s	0.1	8.3	0.1	5.2	0.2	8.7	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	233	309	91	189	403	68	188	899	55	112	526	135
v/c Ratio	0.89	0.46	0.22	0.73	0.60	0.17	0.55	0.77	0.09	0.42	0.48	0.23
Control Delay	79.3	39.4	3.7	61.0	42.3	0.9	51.2	36.2	0.3	51.3	30.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.3	39.4	3.7	61.0	42.3	0.9	51.2	36.2	0.3	51.3	30.9	6.1
Queue Length 50th (ft)	154	96	0	122	130	0	62	272	0	37	144	0
Queue Length 95th (ft)	#328	143	19	#248	185	1	102	385	0	68	218	45
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	261	1464	730	261	1464	730	507	1290	655	507	1290	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.21	0.12	0.72	0.28	0.09	0.37	0.70	0.08	0.22	0.41	0.20

Intersection Summary

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

Intersection	
Int Delay, s/veh	14.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	362	65	43	423	98	51	51	57	104	41	15
Future Vol, veh/h	62	362	65	43	423	98	51	51	57	104	41	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	393	71	47	460	107	55	55	62	113	45	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	567	0	0	464	0	0	910	1224	232	966	1206	284
Stage 1	-	-	-	-	-	-	563	563	-	608	608	-
Stage 2	-	-	-	-	-	-	347	661	-	358	598	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1001	-	-	1094	-	-	230	178	770	209	182	713
Stage 1	-	-	-	-	-	-	478	507	-	450	484	-
Stage 2	-	-	-	-	-	-	642	458	-	633	489	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1001	-	-	1094	-	-	164	159	770	129	163	713
Mov Cap-2 Maneuver	-	-	-	-	-	-	164	159	-	129	163	-
Stage 1	-	-	-	-	-	-	446	473	-	420	463	-
Stage 2	-	-	-	-	-	-	543	438	-	479	456	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.6	30.9	84.3
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	164	274	1001	-	-	1094	-	-	129	205
HCM Lane V/C Ratio	0.338	0.428	0.067	-	-	0.043	-	-	0.876	0.297
HCM Control Delay (s)	37.8	27.6	8.9	-	-	8.4	-	-	113.6	29.8
HCM Lane LOS	E	D	A	-	-	A	-	-	F	D
HCM 95th %tile Q(veh)	1.4	2	0.2	-	-	0.1	-	-	5.6	1.2

Intersection	
Intersection Delay, s/veh	37.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	215	39	44	371	65	50	146	50	45	151	78
Future Vol, veh/h	73	215	39	44	371	65	50	146	50	45	151	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	234	42	48	403	71	54	159	54	49	164	85
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	21	66.6	25.3	17.9
HCM LOS	C	F	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	100%	0%	100%	0%	23%	0%
Vol Thru, %	59%	0%	85%	0%	85%	77%	0%
Vol Right, %	20%	0%	15%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	73	254	44	436	196	78
LT Vol	50	73	0	44	0	45	0
Through Vol	146	0	215	0	371	151	0
RT Vol	50	0	39	0	65	0	78
Lane Flow Rate	267	79	276	48	474	213	85
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.63	0.19	0.616	0.11	1.011	0.508	0.182
Departure Headway (Hd)	8.651	8.793	8.162	8.302	7.678	8.748	7.903
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	420	410	444	434	474	415	457
Service Time	6.651	6.493	5.862	6.012	5.388	6.448	5.603
HCM Lane V/C Ratio	0.636	0.193	0.622	0.111	1	0.513	0.186
HCM Control Delay	25.3	13.5	23.1	12	72.1	20.1	12.4
HCM Lane LOS	D	B	C	B	F	C	B
HCM 95th-tile Q	4.2	0.7	4	0.4	13.6	2.8	0.7

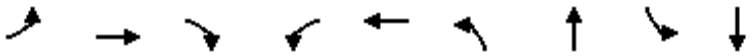
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	120	177	50	94	22	175	936	25	36	727	110
Future Volume (veh/h)	146	120	177	50	94	22	175	936	25	36	727	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	159	130	192	54	102	24	190	1017	27	39	790	120
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	312	266	93	159	37	230	1491	40	77	1058	161
Arrive On Green	0.11	0.17	0.17	0.05	0.11	0.11	0.13	0.42	0.42	0.04	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	1459	343	1774	3522	94	1774	3082	468
Grp Volume(v), veh/h	159	130	192	54	0	126	190	511	533	39	454	456
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1802	1774	1770	1846	1774	1770	1780
Q Serve(g_s), s	7.1	5.0	9.3	2.4	0.0	5.4	8.4	18.9	18.9	1.7	18.3	18.3
Cycle Q Clear(g_c), s	7.1	5.0	9.3	2.4	0.0	5.4	8.4	18.9	18.9	1.7	18.3	18.3
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	197	312	266	93	0	196	230	749	782	77	607	611
V/C Ratio(X)	0.81	0.42	0.72	0.58	0.00	0.64	0.83	0.68	0.68	0.51	0.75	0.75
Avail Cap(c_a), veh/h	523	648	551	523	0	670	534	749	782	523	701	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	30.1	31.8	37.4	0.0	34.5	34.2	18.9	18.9	37.8	23.4	23.4
Incr Delay (d2), s/veh	3.0	1.8	7.4	2.2	0.0	7.0	2.9	3.9	3.8	1.9	6.3	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.8	4.6	1.2	0.0	3.1	4.3	10.0	10.4	0.9	10.0	10.1
LnGrp Delay(d),s/veh	38.0	31.9	39.2	39.6	0.0	41.4	37.1	22.8	22.7	39.7	29.7	29.7
LnGrp LOS	D	C	D	D		D	D	C	C	D	C	C
Approach Vol, veh/h		481			180			1234			949	
Approach Delay, s/veh		36.8			40.9			24.9			30.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	41.7	9.9	19.9	15.7	35.2	14.7	15.2
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.7	20.9	4.4	11.3	10.4	20.3	9.1	7.4
Green Ext Time (p_c), s	0.0	8.3	0.0	2.3	0.2	7.4	0.2	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	159	130	192	54	126	190	1044	39	910
v/c Ratio	0.67	0.31	0.38	0.39	0.49	0.70	0.65	0.31	0.81
Control Delay	56.8	37.4	7.6	55.9	46.1	56.3	26.3	55.0	39.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	37.4	7.6	55.9	46.1	56.3	26.3	55.0	39.7
Queue Length 50th (ft)	97	72	0	33	70	116	285	24	273
Queue Length 95th (ft)	187	141	58	83	146	214	462	66	#514
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	424	563	612	424	552	433	1617	424	1126
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	0.38	0.23	0.31	0.13	0.23	0.44	0.65	0.09	0.81

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	45	64	15	34	11	56	138	18	13	112	36
Future Vol, veh/h	31	45	64	15	34	11	56	138	18	13	112	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	49	70	16	37	12	61	150	20	14	122	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	8.6	9.7	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	22%	25%	8%
Vol Thru, %	65%	32%	57%	70%
Vol Right, %	8%	46%	18%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	140	60	161
LT Vol	56	31	15	13
Through Vol	138	45	34	112
RT Vol	18	64	11	36
Lane Flow Rate	230	152	65	175
Geometry Grp	1	1	1	1
Degree of Util (X)	0.299	0.2	0.091	0.224
Departure Headway (Hd)	4.666	4.73	5.016	4.615
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	767	755	710	774
Service Time	2.713	2.783	3.078	2.665
HCM Lane V/C Ratio	0.3	0.201	0.092	0.226
HCM Control Delay	9.7	9	8.6	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.7	0.3	0.9

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	368	88	34	355	16	120	26	36	10	9	8
Future Vol, veh/h	24	368	88	34	355	16	120	26	36	10	9	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	400	96	37	386	17	130	28	39	11	10	9
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	12.5	12.2	14.1	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	66%	100%	0%	0%	100%	0%	0%	37%
Vol Thru, %	14%	0%	100%	58%	0%	100%	88%	33%
Vol Right, %	20%	0%	0%	42%	0%	0%	12%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	24	245	211	34	237	134	27
LT Vol	120	24	0	0	34	0	0	10
Through Vol	26	0	245	123	0	237	118	9
RT Vol	36	0	0	88	0	0	16	8
Lane Flow Rate	198	26	267	229	37	257	146	29
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.385	0.047	0.443	0.362	0.068	0.434	0.243	0.059
Departure Headway (Hd)	7.001	6.493	5.986	5.689	6.579	6.071	5.986	7.252
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	551	600	632	544	592	599	492
Service Time	4.755	4.242	3.734	3.436	4.329	3.821	3.736	5.025
HCM Lane V/C Ratio	0.387	0.047	0.445	0.362	0.068	0.434	0.244	0.059
HCM Control Delay	14.1	9.6	13.4	11.7	9.8	13.4	10.7	10.5
HCM Lane LOS	B	A	B	B	A	B	B	B
HCM 95th-tile Q	1.8	0.1	2.3	1.6	0.2	2.2	0.9	0.2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	6	21	66	8	34	15	320	54	52	584	2
Future Vol, veh/h	4	6	21	66	8	34	15	320	54	52	584	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	7	23	72	9	37	16	348	59	57	635	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1183	1189	636	1175	1161	378	637	0	0	407	0	0
Stage 1	750	750	-	410	410	-	-	-	-	-	-	-
Stage 2	433	439	-	765	751	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	166	188	478	168	195	669	947	-	-	1152	-	-
Stage 1	403	419	-	619	595	-	-	-	-	-	-	-
Stage 2	601	578	-	396	418	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	144	176	478	148	182	669	947	-	-	1152	-	-
Mov Cap-2 Maneuver	144	176	-	148	182	-	-	-	-	-	-	-
Stage 1	396	398	-	608	585	-	-	-	-	-	-	-
Stage 2	550	568	-	353	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.9	45.8	0.3	0.7
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	947	-	-	293	200	1152	-	-
HCM Lane V/C Ratio	0.017	-	-	0.115	0.587	0.049	-	-
HCM Control Delay (s)	8.9	-	-	18.9	45.8	8.3	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	3.2	0.2	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	77	35	62	25	22
Future Vol, veh/h	91	77	35	62	25	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	84	38	67	27	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	284	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1392	-	706	907
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1392	-	686	907
Mov Cap-2 Maneuver	-	-	-	-	686	-
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	774	-	-	1392	-
HCM Lane V/C Ratio	0.066	-	-	0.027	-
HCM Control Delay (s)	10	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	50	17	382	649	71
Future Vol, veh/h	57	50	17	382	649	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	54	18	415	705	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1156	705	705	0	-	0
Stage 1	705	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	217	436	893	-	-	0
Stage 1	490	-	-	-	-	0
Stage 2	642	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	211	436	893	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	642	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.8	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	893	-	396	-
HCM Lane V/C Ratio	0.021	-	0.294	-
HCM Control Delay (s)	9.1	0	17.8	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.2	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	15	18	406	690	4
Future Vol, veh/h	3	15	18	406	690	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	16	20	441	750	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1231	375	754	0	-	0
Stage 1	750	-	-	-	-	-
Stage 2	481	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	182	623	854	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	178	623	854	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	621	-	-	-	-	-

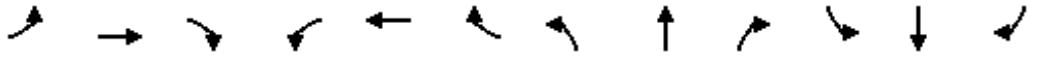
Approach	EB	NB	SB
HCM Control Delay, s	13.4	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	854	-	178	623	-	-
HCM Lane V/C Ratio	0.023	-	0.018	0.026	-	-
HCM Control Delay (s)	9.3	-	25.6	10.9	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

Intersection	
Intersection Delay, s/veh	6.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	190	104	225	331
Demand Flow Rate, veh/h	193	106	229	338
Vehicles Circulating, veh/h	253	340	264	63
Vehicles Exiting, veh/h	148	153	182	383
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	5.9	7.0	6.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	193	106	229	338
Cap Entry Lane, veh/h	877	804	868	1061
Entry HV Adj Factor	0.985	0.983	0.982	0.979
Flow Entry, veh/h	190	104	225	331
Cap Entry, veh/h	864	790	853	1039
V/C Ratio	0.220	0.132	0.264	0.319
Control Delay, s/veh	6.4	5.9	7.0	6.7
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1



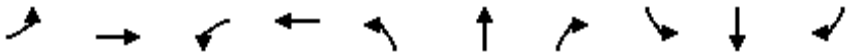
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	21	88	7	16	30	48	365	9	27	672	15
Future Volume (veh/h)	16	21	88	7	16	30	48	365	9	27	672	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	23	96	8	17	33	52	397	10	29	730	16
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	249	222	22	227	203	201	1384	619	68	1314	588
Arrive On Green	0.02	0.14	0.14	0.01	0.13	0.13	0.06	0.39	0.39	0.04	0.37	0.37
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	17	23	96	8	17	33	52	397	10	29	730	16
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.7	3.3	0.3	0.5	1.1	0.9	4.5	0.2	0.9	9.6	0.4
Cycle Q Clear(g_c), s	0.6	0.7	3.3	0.3	0.5	1.1	0.9	4.5	0.2	0.9	9.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	249	222	22	227	203	201	1384	619	68	1314	588
V/C Ratio(X)	0.39	0.09	0.43	0.36	0.07	0.16	0.26	0.29	0.02	0.42	0.56	0.03
Avail Cap(c_a), veh/h	753	1261	1128	753	1141	1021	1460	2102	940	753	2102	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	22.1	23.2	28.9	22.6	22.9	26.5	12.3	11.0	27.7	14.7	11.8
Incr Delay (d2), s/veh	2.1	0.5	3.8	3.6	0.4	1.1	0.3	0.4	0.0	1.6	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	1.6	0.2	0.3	0.5	0.4	2.3	0.1	0.5	4.9	0.2
LnGrp Delay(d),s/veh	30.4	22.5	27.0	32.5	23.0	24.0	26.8	12.7	11.0	29.2	16.0	11.8
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		136			58			459			775	
Approach Delay, s/veh		26.7			24.9			14.3			16.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	29.9	6.4	14.7	9.1	28.7	7.2	14.0
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	2.9	6.5	2.3	5.3	2.9	11.6	2.6	3.1
Green Ext Time (p_c), s	0.0	5.7	0.0	1.0	0.1	10.3	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	119	8	50	52	397	10	29	730	16
v/c Ratio	0.07	0.18	0.03	0.08	0.11	0.19	0.01	0.12	0.37	0.02
Control Delay	31.8	11.1	31.9	16.0	30.1	9.7	0.0	31.5	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	11.1	31.9	16.0	30.1	9.7	0.0	31.5	12.0	0.0
Queue Length 50th (ft)	5	3	3	2	8	25	0	9	92	0
Queue Length 95th (ft)	28	29	18	20	30	101	0	39	190	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	956	2422	956	2467	1854	2403	1109	956	2393	1105
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.01	0.02	0.03	0.17	0.01	0.03	0.31	0.01

Intersection Summary

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	39	0	0	54	0
Future Vol, veh/h	0	39	0	0	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	0	0	59	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.057	-
HCM Control Delay (s)	8.7	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	37.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	678	49	35	480	72	18	72	52	6	93	53
Future Vol, veh/h	84	678	49	35	480	72	18	72	52	6	93	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	737	53	38	522	78	20	78	57	7	101	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	600	0	0	790	0	0	1663	1622	764	1650	1609	561
Stage 1	-	-	-	-	-	-	946	946	-	637	637	-
Stage 2	-	-	-	-	-	-	717	676	-	1013	972	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	977	-	-	830	-	-	77	103	404	79	105	527
Stage 1	-	-	-	-	-	-	314	340	-	465	471	-
Stage 2	-	-	-	-	-	-	421	453	-	288	331	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	977	-	-	830	-	-	-	89	404	15	~ 91	527
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	89	-	15	~ 91	-
Stage 1	-	-	-	-	-	-	285	308	-	422	449	-
Stage 2	-	-	-	-	-	-	277	432	-	168	300	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.6		$ 407.5
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	977	-	-	830	-	-	100
HCM Lane V/C Ratio	-	0.093	-	-	0.046	-	-	1.652
HCM Control Delay (s)	-	9.1	-	-	9.5	-	-	-$ 407.5
HCM Lane LOS	-	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	-	0.3	-	-	0.1	-	-	12.9

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

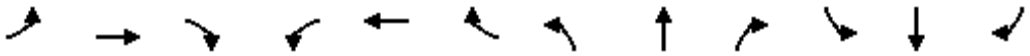
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	396	209	135	329	44	127	342	41	95	463	112
Future Volume (veh/h)	182	396	209	135	329	44	127	342	41	95	463	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	198	430	227	147	358	48	138	372	45	103	503	122
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	902	403	183	794	355	244	910	407	230	896	401
Arrive On Green	0.13	0.25	0.25	0.10	0.22	0.22	0.07	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	198	430	227	147	358	48	138	372	45	103	503	122
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	8.8	8.3	10.1	6.5	7.1	2.0	3.1	7.1	1.8	2.3	10.0	5.0
Cycle Q Clear(g_c), s	8.8	8.3	10.1	6.5	7.1	2.0	3.1	7.1	1.8	2.3	10.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	902	403	183	794	355	244	910	407	230	896	401
V/C Ratio(X)	0.84	0.48	0.56	0.80	0.45	0.14	0.57	0.41	0.11	0.45	0.56	0.30
Avail Cap(c_a), veh/h	329	1840	823	329	1708	764	639	1577	705	639	1621	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	25.5	26.2	35.4	27.0	25.1	36.3	24.9	22.9	36.3	26.3	24.4
Incr Delay (d2), s/veh	9.2	1.1	3.6	3.1	1.2	0.5	0.8	1.1	0.4	0.5	2.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	4.2	4.8	3.3	3.6	0.9	1.5	3.6	0.8	1.1	5.1	2.4
LnGrp Delay(d),s/veh	43.3	26.7	29.7	38.5	28.2	25.6	37.1	26.0	23.4	36.8	28.3	26.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		855			553			555			728	
Approach Delay, s/veh		31.3			30.7			28.5			29.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	28.3	14.0	27.4	11.4	28.0	16.5	24.9
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.3	9.1	8.5	12.1	5.1	12.0	10.8	9.1
Green Ext Time (p_c), s	0.1	5.8	0.1	8.5	0.1	8.5	0.1	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	430	227	147	358	48	138	372	45	103	503	122
v/c Ratio	0.66	0.51	0.41	0.62	0.50	0.11	0.43	0.42	0.09	0.36	0.59	0.26
Control Delay	49.5	33.3	7.0	50.2	34.6	0.5	44.9	30.1	0.4	45.1	33.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	33.3	7.0	50.2	34.6	0.5	44.9	30.1	0.4	45.1	33.7	7.0
Queue Length 50th (ft)	103	111	0	77	94	0	37	89	0	28	128	0
Queue Length 95th (ft)	#252	185	60	164	154	0	77	150	0	62	207	43
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	300	1685	872	300	1685	821	583	1484	735	583	1484	735
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.26	0.26	0.49	0.21	0.06	0.24	0.25	0.06	0.18	0.34	0.17

Intersection Summary

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

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	397	38	34	386	17	47	15	25	25	17	3
Future Vol, veh/h	30	397	38	34	386	17	47	15	25	25	17	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	432	41	37	420	18	51	16	27	27	18	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	438	0	0	473	0	0	812	1031	237	793	1042	219
Stage 1	-	-	-	-	-	-	519	519	-	503	503	-
Stage 2	-	-	-	-	-	-	293	512	-	290	539	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1118	-	-	1085	-	-	271	232	764	279	228	785
Stage 1	-	-	-	-	-	-	508	531	-	519	540	-
Stage 2	-	-	-	-	-	-	691	535	-	694	520	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1118	-	-	1085	-	-	240	217	764	242	214	785
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	217	-	242	214	-
Stage 1	-	-	-	-	-	-	493	515	-	503	522	-
Stage 2	-	-	-	-	-	-	641	517	-	629	504	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	20	21.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	240	393	1118	-	-	1085	-	-	242	240
HCM Lane V/C Ratio	0.213	0.111	0.029	-	-	0.034	-	-	0.112	0.091
HCM Control Delay (s)	24	15.3	8.3	-	-	8.4	-	-	21.7	21.5
HCM Lane LOS	C	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.8	0.4	0.1	-	-	0.1	-	-	0.4	0.3

Intersection	
Intersection Delay, s/veh	50.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	232	59	44	288	79	40	212	47	85	218	76
Future Vol, veh/h	70	232	59	44	288	79	40	212	47	85	218	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	252	64	48	313	86	43	230	51	92	237	83
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	36.8	67.8	51.7	42.6
HCM LOS	E	F	F	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	13%	100%	0%	100%	0%	28%	0%
Vol Thru, %	71%	0%	80%	0%	78%	72%	0%
Vol Right, %	16%	0%	20%	0%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	299	70	291	44	367	303	76
LT Vol	40	70	0	44	0	85	0
Through Vol	212	0	232	0	288	218	0
RT Vol	47	0	59	0	79	0	76
Lane Flow Rate	325	76	316	48	399	329	83
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.87	0.21	0.813	0.128	0.995	0.865	0.197
Departure Headway (Hd)	9.633	9.927	9.253	9.658	8.976	9.459	8.581
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	374	361	389	371	403	382	417
Service Time	7.718	7.707	7.032	7.431	6.748	7.238	6.36
HCM Lane V/C Ratio	0.869	0.211	0.812	0.129	0.99	0.861	0.199
HCM Control Delay	51.7	15.3	42	13.9	74.3	49.9	13.5
HCM Lane LOS	F	C	E	B	F	E	B
HCM 95th-tile Q	8.4	0.8	7.2	0.4	12.1	8.3	0.7

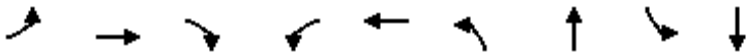
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	102	350	70	64	49	75	504	32	26	948	56
Future Volume (veh/h)	114	102	350	70	64	49	75	504	32	26	948	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	124	111	380	76	70	53	82	548	35	28	1030	61
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	503	428	100	235	178	106	1228	78	59	1163	69
Arrive On Green	0.09	0.27	0.27	0.06	0.24	0.24	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	985	746	1774	3379	215	1774	3396	201
Grp Volume(v), veh/h	124	111	380	76	0	123	82	287	296	28	537	554
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1731	1774	1770	1825	1774	1770	1827
Q Serve(g_s), s	6.3	4.2	21.1	3.9	0.0	5.3	4.2	11.2	11.3	1.4	26.1	26.2
Cycle Q Clear(g_c), s	6.3	4.2	21.1	3.9	0.0	5.3	4.2	11.2	11.3	1.4	26.1	26.2
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.12	1.00		0.11
Lane Grp Cap(c), veh/h	156	503	428	100	0	413	106	643	663	59	606	626
V/C Ratio(X)	0.80	0.22	0.89	0.76	0.00	0.30	0.77	0.45	0.45	0.47	0.89	0.89
Avail Cap(c_a), veh/h	462	573	487	462	0	568	472	643	663	462	620	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	25.9	32.0	42.5	0.0	28.5	42.3	22.1	22.1	43.4	28.3	28.3
Incr Delay (d2), s/veh	3.5	0.4	18.5	4.5	0.0	0.8	4.5	1.5	1.5	2.2	16.0	15.6
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	3.2	2.2	11.3	2.0	0.0	2.6	2.2	5.8	5.9	0.7	15.4	15.8
LnGrp Delay(d),s/veh	44.4	26.3	50.5	47.0	0.0	29.3	46.8	23.6	23.6	45.5	44.3	43.9
LnGrp LOS	D	C	D	D		C	D	C	C	D	D	D
Approach Vol, veh/h		615			199			665			1119	
Approach Delay, s/veh		44.9			36.1			26.4			44.1	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	40.7	10.8	31.1	10.7	38.8	13.7	28.2
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.4	13.3	5.9	23.1	6.2	28.2	8.3	7.3
Green Ext Time (p_c), s	0.0	6.7	0.1	1.6	0.1	3.1	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.2
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	124	111	380	76	123	82	583	28	1091
v/c Ratio	0.57	0.30	0.61	0.44	0.46	0.46	0.36	0.21	0.83
Control Delay	48.9	35.9	8.5	48.1	34.9	48.3	18.3	45.8	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	35.9	8.5	48.1	34.9	48.3	18.3	45.8	33.7
Queue Length 50th (ft)	66	55	0	41	50	44	90	15	290
Queue Length 95th (ft)	134	113	80	93	113	98	204	46	#528
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	495	656	803	495	630	505	1614	495	1322
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	0.25	0.17	0.47	0.15	0.20	0.16	0.36	0.06	0.83

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	72	70	82	84	72	52	80	53	62	114	44
Future Vol, veh/h	26	72	70	82	84	72	52	80	53	62	114	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	78	76	89	91	78	57	87	58	67	124	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.4	11.7	10.8	11.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	15%	34%	28%
Vol Thru, %	43%	43%	35%	52%
Vol Right, %	29%	42%	30%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	185	168	238	220
LT Vol	52	26	82	62
Through Vol	80	72	84	114
RT Vol	53	70	72	44
Lane Flow Rate	201	183	259	239
Geometry Grp	1	1	1	1
Degree of Util (X)	0.303	0.272	0.383	0.359
Departure Headway (Hd)	5.418	5.353	5.33	5.405
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	668	673	665
Service Time	3.466	3.404	3.376	3.451
HCM Lane V/C Ratio	0.304	0.274	0.385	0.359
HCM Control Delay	10.8	10.4	11.7	11.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.3	1.1	1.8	1.6

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	478	112	104	397	9	75	26	112	12	32	16
Future Vol, veh/h	15	478	112	104	397	9	75	26	112	12	32	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	520	122	113	432	10	82	28	122	13	35	17
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	18.1	14.8	16.8	12.2
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	35%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	12%	0%	100%	59%	0%	100%	94%	53%
Vol Right, %	53%	0%	0%	41%	0%	0%	6%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	213	15	319	271	104	265	141	60
LT Vol	75	15	0	0	104	0	0	12
Through Vol	26	0	319	159	0	265	132	32
RT Vol	112	0	0	112	0	0	9	16
Lane Flow Rate	232	16	346	295	113	288	154	65
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.477	0.032	0.64	0.52	0.229	0.541	0.287	0.146
Departure Headway (Hd)	7.41	7.16	6.649	6.353	7.278	6.766	6.72	8.061
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	486	501	544	569	494	535	535	445
Service Time	5.147	4.895	4.383	4.088	5.013	4.501	4.455	5.808
HCM Lane V/C Ratio	0.477	0.032	0.636	0.518	0.229	0.538	0.288	0.146
HCM Control Delay	16.8	10.1	20.5	15.8	12.2	17.2	12.2	12.2
HCM Lane LOS	C	B	C	C	B	C	B	B
HCM 95th-tile Q	2.5	0.1	4.5	3	0.9	3.2	1.2	0.5

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	13	30	6	34	30	646	54	18	601	7
Future Vol, veh/h	2	2	13	30	6	34	30	646	54	18	601	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	14	33	7	37	33	702	59	20	653	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1517	1524	657	1503	1499	732	661	0	0	761	0	0
Stage 1	697	697	-	798	798	-	-	-	-	-	-	-
Stage 2	820	827	-	705	701	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	98	118	465	100	122	421	927	-	-	851	-	-
Stage 1	431	443	-	380	398	-	-	-	-	-	-	-
Stage 2	369	386	-	427	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	111	465	91	115	421	927	-	-	851	-	-
Mov Cap-2 Maneuver	82	111	-	91	115	-	-	-	-	-	-	-
Stage 1	415	432	-	366	384	-	-	-	-	-	-	-
Stage 2	319	372	-	402	430	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.1	50.9	0.4	0.3
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	927	-	-	242	151	851	-	-
HCM Lane V/C Ratio	0.035	-	-	0.076	0.504	0.023	-	-
HCM Control Delay (s)	9	-	-	21.1	50.9	9.3	-	-
HCM Lane LOS	A	-	-	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	2.4	0.1	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	41	38	66	22	29
Future Vol, veh/h	76	41	38	66	22	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	45	41	72	24	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	128	0	260	106
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1458	-	729	948
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1458	-	708	948
Mov Cap-2 Maneuver	-	-	-	-	708	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	849	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	827	-	-	1458	-
HCM Lane V/C Ratio	0.067	-	-	0.028	-
HCM Control Delay (s)	9.7	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	35	32	712	693	56
Future Vol, veh/h	48	35	32	712	693	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	38	35	774	753	61

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1597	753	753	0	-	0
Stage 1	753	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	117	410	857	-	-	0
Stage 1	465	-	-	-	-	0
Stage 2	422	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	109	410	857	-	-	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	422	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40.7	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	857	-	188	-
HCM Lane V/C Ratio	0.041	-	0.48	-
HCM Control Delay (s)	9.4	0	40.7	-
HCM Lane LOS	A	A	E	-
HCM 95th %tile Q(veh)	0.1	-	2.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	58	100	725	701	16
Future Vol, veh/h	4	58	100	725	701	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	63	109	788	762	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1768	381	779	0	-	0
Stage 1	762	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	83	618	836	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	72	618	836	-	-	-
Mov Cap-2 Maneuver	72	-	-	-	-	-
Stage 1	367	-	-	-	-	-
Stage 2	352	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	836	-	72	618	-	-
HCM Lane V/C Ratio	0.13	-	0.06	0.102	-	-
HCM Control Delay (s)	9.9	-	58.2	11.5	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.2	0.3	-	-

Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	135	103	174	95
Demand Flow Rate, veh/h	137	105	178	97
Vehicles Circulating, veh/h	80	191	153	79
Vehicles Exiting, veh/h	96	140	64	217
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.7	5.0	5.6	4.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	137	105	178	97
Cap Entry Lane, veh/h	1043	933	970	1044
Entry HV Adj Factor	0.982	0.979	0.980	0.981
Flow Entry, veh/h	135	103	174	95
Cap Entry, veh/h	1024	914	950	1024
V/C Ratio	0.131	0.112	0.184	0.093
Control Delay, s/veh	4.7	5.0	5.6	4.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

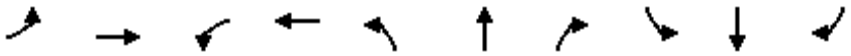
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	12	47	38	30	76	82	751	15	32	702	20
Future Volume (veh/h)	16	12	47	38	30	76	82	751	15	32	702	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	13	51	41	33	83	89	816	16	35	763	22
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	216	193	86	259	231	257	1412	632	77	1301	582
Arrive On Green	0.02	0.12	0.12	0.05	0.15	0.15	0.07	0.40	0.40	0.04	0.37	0.37
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	17	13	51	41	33	83	89	816	16	35	763	22
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.4	1.9	1.4	1.0	3.0	1.6	11.4	0.4	1.2	11.0	0.6
Cycle Q Clear(g_c), s	0.6	0.4	1.9	1.4	1.0	3.0	1.6	11.4	0.4	1.2	11.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	216	193	86	259	231	257	1412	632	77	1301	582
V/C Ratio(X)	0.39	0.06	0.26	0.48	0.13	0.36	0.35	0.58	0.03	0.45	0.59	0.04
Avail Cap(c_a), veh/h	698	1169	1046	698	1058	947	1354	1949	872	698	1949	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	24.7	25.3	29.4	23.6	24.5	27.9	14.9	11.6	29.7	16.2	12.9
Incr Delay (d2), s/veh	2.1	0.3	2.1	1.5	0.6	2.7	0.3	1.4	0.1	1.5	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.9	0.7	0.6	1.5	0.8	5.8	0.2	0.6	5.6	0.3
LnGrp Delay(d),s/veh	32.7	25.0	27.4	31.0	24.3	27.2	28.2	16.3	11.7	31.2	17.7	13.0
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		81			157			921			820	
Approach Delay, s/veh		28.1			27.5			17.4			18.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	32.2	8.8	14.2	10.5	30.2	7.3	15.7
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	3.2	13.4	3.4	3.9	3.6	13.0	2.6	5.0
Green Ext Time (p_c), s	0.0	11.0	0.0	0.5	0.1	10.3	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	64	41	116	89	816	16	35	763	22
v/c Ratio	0.11	0.15	0.24	0.17	0.27	0.47	0.02	0.21	0.48	0.03
Control Delay	38.1	14.9	38.6	12.3	36.6	15.7	0.1	38.4	16.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	14.9	38.6	12.3	36.6	15.7	0.1	38.4	16.8	0.1
Queue Length 50th (ft)	8	3	20	6	22	152	0	17	141	0
Queue Length 95th (ft)	29	22	52	32	45	231	0	46	213	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	650	1942	650	1982	1261	1872	887	650	1820	866
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.06	0.06	0.07	0.44	0.02	0.05	0.42	0.03

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	79	0	0	59	0
Future Vol, veh/h	0	79	0	0	59	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	86	0	0	64	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	8.8
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.063	-
HCM Control Delay (s)	8.8	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	92

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	579	26	86	724	18	21	53	66	4	38	44
Future Vol, veh/h	94	579	26	86	724	18	21	53	66	4	38	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	102	629	28	93	787	20	23	58	72	4	41	48

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	807	0	0	657	0	0	1875	1840	643	1895	1844	797
Stage 1	-	-	-	-	-	-	847	847	-	983	983	-
Stage 2	-	-	-	-	-	-	1028	993	-	912	861	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	818	-	-	931	-	-	55	75	473	53	75	387
Stage 1	-	-	-	-	-	-	357	378	-	299	327	-
Stage 2	-	-	-	-	-	-	283	323	-	328	372	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	818	-	-	931	-	-	~ 18	59	473	~ 4	59	387
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 18	59	-	~ 4	59	-
Stage 1	-	-	-	-	-	-	312	331	-	262	294	-
Stage 2	-	-	-	-	-	-	192	291	-	201	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	1	$ 766.6	$ 606.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	64	818	-	-	931	-	-	49
HCM Lane V/C Ratio	2.378	0.125	-	-	0.1	-	-	1.908
HCM Control Delay (s)	$ 766.6	10	-	-	9.3	-	-	-$ 606.4
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	14.9	0.4	-	-	0.3	-	-	9.3

Notes

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

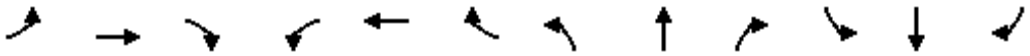
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	308	91	189	402	68	187	815	56	112	442	135
Future Volume (veh/h)	232	308	91	189	402	68	187	815	56	112	442	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	252	335	99	205	437	74	203	886	61	122	480	147
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	775	347	237	707	316	274	1157	517	203	1084	485
Arrive On Green	0.15	0.22	0.22	0.13	0.20	0.20	0.08	0.33	0.33	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	252	335	99	205	437	74	203	886	61	122	480	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	13.8	8.0	5.1	11.1	11.1	3.9	5.7	22.1	2.6	3.4	10.7	7.0
Cycle Q Clear(g_c), s	13.8	8.0	5.1	11.1	11.1	3.9	5.7	22.1	2.6	3.4	10.7	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	775	347	237	707	316	274	1157	517	203	1084	485
V/C Ratio(X)	0.93	0.43	0.29	0.86	0.62	0.23	0.74	0.77	0.12	0.60	0.44	0.30
Avail Cap(c_a), veh/h	271	1514	677	271	1405	629	526	1297	580	526	1333	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	33.1	32.0	41.7	35.9	33.0	44.2	29.7	23.1	45.1	27.3	26.1
Incr Delay (d2), s/veh	35.9	1.1	1.3	20.1	2.6	1.1	1.5	4.2	0.4	1.1	1.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	4.0	2.4	6.8	5.7	1.8	2.8	11.4	1.2	1.6	5.4	3.2
LnGrp Delay(d),s/veh	77.0	34.2	33.3	61.7	38.4	34.1	45.7	33.9	23.5	46.2	28.4	27.3
LnGrp LOS	E	C	C	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		686			716			1150			749	
Approach Delay, s/veh		49.8			44.6			35.4			31.1	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	39.6	18.8	28.3	13.5	37.6	20.7	26.4
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	5.4	24.1	13.1	10.0	7.7	12.7	15.8	13.1
Green Ext Time (p_c), s	0.1	8.0	0.1	5.7	0.2	8.3	0.0	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	252	335	99	205	437	74	203	886	61	122	480	147
v/c Ratio	0.98	0.48	0.24	0.79	0.62	0.18	0.58	0.77	0.10	0.45	0.45	0.25
Control Delay	96.9	39.6	4.4	67.1	42.6	1.6	51.9	37.1	0.3	52.1	31.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.9	39.6	4.4	67.1	42.6	1.6	51.9	37.1	0.3	52.1	31.3	6.1
Queue Length 50th (ft)	~172	106	0	136	143	0	68	273	0	41	133	0
Queue Length 95th (ft)	#367	155	25	#284	202	6	110	387	0	74	203	47
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	258	1448	724	258	1448	724	501	1276	649	501	1276	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.23	0.14	0.79	0.30	0.10	0.41	0.69	0.09	0.24	0.38	0.22

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.

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	392	71	47	459	57	56	38	62	63	27	16
Future Vol, veh/h	67	392	71	47	459	57	56	38	62	63	27	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	426	77	51	499	62	61	41	67	68	29	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	561	0	0	503	0	0	977	1274	252	1012	1281	281
Stage 1	-	-	-	-	-	-	611	611	-	632	632	-
Stage 2	-	-	-	-	-	-	366	663	-	380	649	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1006	-	-	1058	-	-	205	166	748	193	164	716
Stage 1	-	-	-	-	-	-	448	482	-	435	472	-
Stage 2	-	-	-	-	-	-	626	457	-	614	464	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1006	-	-	1058	-	-	154	147	748	126	145	716
Mov Cap-2 Maneuver	-	-	-	-	-	-	154	147	-	126	145	-
Stage 1	-	-	-	-	-	-	415	447	-	403	449	-
Stage 2	-	-	-	-	-	-	543	435	-	470	430	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.7	31	48.8
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	154	293	1006	-	-	1058	-	-	126	206
HCM Lane V/C Ratio	0.395	0.371	0.072	-	-	0.048	-	-	0.543	0.227
HCM Control Delay (s)	42.9	24.4	8.9	-	-	8.6	-	-	63.3	27.5
HCM Lane LOS	E	C	A	-	-	A	-	-	F	D
HCM 95th %tile Q(veh)	1.7	1.7	0.2	-	-	0.2	-	-	2.6	0.8

Intersection	
Intersection Delay, s/veh	43.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	233	43	48	402	71	54	125	54	49	130	67
Future Vol, veh/h	62	233	43	48	402	71	54	125	54	49	130	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	253	47	52	437	77	59	136	59	53	141	73
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	22	79	23.1	16.8
HCM LOS	C	F	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	23%	100%	0%	100%	0%	27%	0%
Vol Thru, %	54%	0%	84%	0%	85%	73%	0%
Vol Right, %	23%	0%	16%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	233	62	276	48	473	179	67
LT Vol	54	62	0	48	0	49	0
Through Vol	125	0	233	0	402	130	0
RT Vol	54	0	43	0	71	0	67
Lane Flow Rate	253	67	300	52	514	195	73
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.586	0.154	0.644	0.117	1.063	0.454	0.155
Departure Headway (Hd)	8.621	8.615	7.983	8.066	7.442	8.797	7.929
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	420	419	456	446	488	412	455
Service Time	6.621	6.315	5.683	5.798	5.174	6.497	5.629
HCM Lane V/C Ratio	0.602	0.16	0.658	0.117	1.053	0.473	0.16
HCM Control Delay	23.1	12.9	24	11.9	85.8	18.6	12.1
HCM Lane LOS	C	B	C	B	F	C	B
HCM 95th-tile Q	3.6	0.5	4.4	0.4	15.9	2.3	0.5

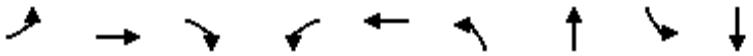
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	130	192	54	102	24	190	949	27	39	722	102
Future Volume (veh/h)	141	130	192	54	102	24	190	949	27	39	722	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	153	141	209	59	111	26	207	1032	29	42	785	111
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	331	282	95	182	43	247	1482	42	79	1038	147
Arrive On Green	0.11	0.18	0.18	0.05	0.12	0.12	0.14	0.42	0.42	0.04	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	1460	342	1774	3516	99	1774	3114	440
Grp Volume(v), veh/h	153	141	209	59	0	137	207	519	542	42	446	450
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1802	1774	1770	1845	1774	1770	1785
Q Serve(g_s), s	7.1	5.6	10.5	2.7	0.0	6.0	9.5	20.1	20.1	1.9	18.8	18.8
Cycle Q Clear(g_c), s	7.1	5.6	10.5	2.7	0.0	6.0	9.5	20.1	20.1	1.9	18.8	18.8
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.25
Lane Grp Cap(c), veh/h	190	331	282	95	0	224	247	746	778	79	590	595
V/C Ratio(X)	0.81	0.43	0.74	0.62	0.00	0.61	0.84	0.70	0.70	0.53	0.76	0.76
Avail Cap(c_a), veh/h	505	626	532	505	0	646	515	746	778	505	677	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	30.6	32.6	38.8	0.0	34.7	35.1	19.8	19.8	39.1	24.9	24.9
Incr Delay (d2), s/veh	3.1	1.8	7.6	2.5	0.0	5.4	2.9	4.3	4.1	2.0	6.9	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.1	5.2	1.4	0.0	3.3	4.9	10.7	11.1	1.0	10.3	10.4
LnGrp Delay(d),s/veh	39.6	32.4	40.2	41.2	0.0	40.1	38.0	24.1	23.9	41.1	31.7	31.7
LnGrp LOS	D	C	D	D		D	D	C	C	D	C	C
Approach Vol, veh/h		503			196			1268			938	
Approach Delay, s/veh		37.8			40.4			26.3			32.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	42.8	10.2	21.3	16.8	35.4	14.6	16.8
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.9	22.1	4.7	12.5	11.5	20.8	9.1	8.0
Green Ext Time (p_c), s	0.0	7.7	0.0	2.4	0.2	7.1	0.2	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	153	141	209	59	137	207	1061	42	896
v/c Ratio	0.66	0.34	0.41	0.41	0.51	0.73	0.65	0.33	0.81
Control Delay	57.7	38.6	7.6	57.1	46.9	57.8	26.7	56.2	40.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	38.6	7.6	57.1	46.9	57.8	26.7	56.2	40.4
Queue Length 50th (ft)	95	80	0	37	78	128	296	26	275
Queue Length 95th (ft)	183	153	61	88	157	234	476	70	#510
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	418	555	618	418	545	427	1623	418	1111
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	0.37	0.25	0.34	0.14	0.25	0.48	0.65	0.10	0.81

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	49	70	16	36	12	61	132	20	15	104	39
Future Vol, veh/h	34	49	70	16	36	12	61	132	20	15	104	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	53	76	17	39	13	66	143	22	16	113	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	8.6	9.8	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	22%	25%	9%
Vol Thru, %	62%	32%	56%	66%
Vol Right, %	9%	46%	19%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	213	153	64	158
LT Vol	61	34	16	15
Through Vol	132	49	36	104
RT Vol	20	70	12	39
Lane Flow Rate	232	166	70	172
Geometry Grp	1	1	1	1
Degree of Util (X)	0.303	0.219	0.097	0.222
Departure Headway (Hd)	4.708	4.737	5.033	4.654
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	759	753	707	768
Service Time	2.76	2.794	3.1	2.709
HCM Lane V/C Ratio	0.306	0.22	0.099	0.224
HCM Control Delay	9.8	9.1	8.6	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.8	0.3	0.8

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	382	62	36	368	17	96	29	39	11	9	8
Future Vol, veh/h	26	382	62	36	368	17	96	29	39	11	9	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	415	67	39	400	18	104	32	42	12	10	9
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	12.3	12.2	13.3	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	59%	100%	0%	0%	100%	0%	0%	39%
Vol Thru, %	18%	0%	100%	67%	0%	100%	88%	32%
Vol Right, %	24%	0%	0%	33%	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	164	26	255	189	36	245	140	28
LT Vol	96	26	0	0	36	0	0	11
Through Vol	29	0	255	127	0	245	123	9
RT Vol	39	0	0	62	0	0	17	8
Lane Flow Rate	178	28	277	206	39	267	152	30
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.343	0.05	0.454	0.325	0.07	0.442	0.248	0.061
Departure Headway (Hd)	6.935	6.417	5.91	5.678	6.471	5.964	5.877	7.208
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	519	558	609	632	553	603	610	495
Service Time	4.685	4.159	3.652	3.419	4.216	3.708	3.621	4.974
HCM Lane V/C Ratio	0.343	0.05	0.455	0.326	0.071	0.443	0.249	0.061
HCM Control Delay	13.3	9.5	13.5	11.1	9.7	13.4	10.6	10.4
HCM Lane LOS	B	A	B	B	A	B	B	B
HCM 95th-tile Q	1.5	0.2	2.4	1.4	0.2	2.3	1	0.2

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	6	21	81	8	34	15	350	69	52	614	2
Future Vol, veh/h	4	6	21	81	8	34	15	350	69	52	614	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	7	23	88	9	37	16	380	75	57	667	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1255	1269	668	1247	1233	418	669	0	0	455	0	0
Stage 1	782	782	-	450	450	-	-	-	-	-	-	-
Stage 2	473	487	-	797	783	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	148	168	458	150	177	635	921	-	-	1106	-	-
Stage 1	387	405	-	589	572	-	-	-	-	-	-	-
Stage 2	572	550	-	380	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	127	157	458	131	165	635	921	-	-	1106	-	-
Mov Cap-2 Maneuver	127	157	-	131	165	-	-	-	-	-	-	-
Stage 1	380	384	-	579	562	-	-	-	-	-	-	-
Stage 2	521	541	-	337	383	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.4	76	0.3	0.7
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	921	-	-	268	171	1106	-	-
HCM Lane V/C Ratio	0.018	-	-	0.126	0.782	0.051	-	-
HCM Control Delay (s)	9	-	-	20.4	76	8.4	-	-
HCM Lane LOS	A	-	-	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	5.1	0.2	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	87	35	62	40	22
Future Vol, veh/h	91	87	35	62	40	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	95	38	67	43	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	194	0	290	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1379	-	701	900
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1379	-	681	900
Mov Cap-2 Maneuver	-	-	-	-	681	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	858	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	745	-	-	1379	-
HCM Lane V/C Ratio	0.09	-	-	0.028	-
HCM Control Delay (s)	10.3	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	50	17	427	694	71
Future Vol, veh/h	57	50	17	427	694	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	54	18	464	754	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1254	754	754	0	-	0
Stage 1	754	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	190	409	856	-	-	0
Stage 1	465	-	-	-	-	0
Stage 2	609	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	185	409	856	-	-	-
Mov Cap-2 Maneuver	185	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	609	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	856	-	347	-
HCM Lane V/C Ratio	0.022	-	0.335	-
HCM Control Delay (s)	9.3	0	20.5	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.4	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	15	18	451	735	4
Future Vol, veh/h	3	15	18	451	735	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	16	20	490	799	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1329	400	803	0	-	0
Stage 1	799	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	158	600	819	-	-	-
Stage 1	404	-	-	-	-	-
Stage 2	589	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	154	600	819	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	394	-	-	-	-	-
Stage 2	589	-	-	-	-	-

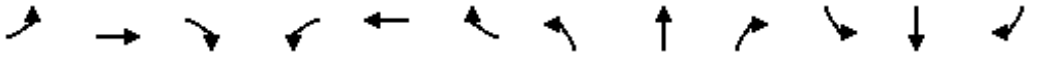
Approach	EB	NB	SB
HCM Control Delay, s	14.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	819	-	154	600	-	-
HCM Lane V/C Ratio	0.024	-	0.021	0.027	-	-
HCM Control Delay (s)	9.5	-	28.9	11.2	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	206	234	322	348
Demand Flow Rate, veh/h	209	238	328	355
Vehicles Circulating, veh/h	369	340	297	179
Vehicles Exiting, veh/h	165	285	281	399
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.7	7.9	9.1	8.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	209	238	328	355
Cap Entry Lane, veh/h	781	804	840	945
Entry HV Adj Factor	0.985	0.982	0.982	0.980
Flow Entry, veh/h	206	234	322	348
Cap Entry, veh/h	769	790	824	926
V/C Ratio	0.268	0.296	0.391	0.376
Control Delay, s/veh	7.7	7.9	9.1	8.1
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	2



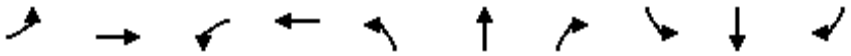
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	139	88	81	134	75	48	365	83	72	672	15
Future Volume (veh/h)	16	139	88	81	134	75	48	365	83	72	672	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	151	96	88	146	82	52	397	90	78	730	16
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	287	172	131	412	219	194	1202	538	124	1251	559
Arrive On Green	0.02	0.13	0.13	0.07	0.18	0.18	0.06	0.34	0.34	0.07	0.35	0.35
Sat Flow, veh/h	1774	2129	1278	1774	2234	1189	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	17	124	123	88	114	114	52	397	90	78	730	16
Grp Sat Flow(s),veh/h/ln	1774	1770	1637	1774	1770	1653	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	4.2	4.5	3.1	3.6	3.9	0.9	5.4	2.6	2.8	10.8	0.4
Cycle Q Clear(g_c), s	0.6	4.2	4.5	3.1	3.6	3.9	0.9	5.4	2.6	2.8	10.8	0.4
Prop In Lane	1.00		0.78	1.00		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	239	221	131	326	305	194	1202	538	124	1251	559
V/C Ratio(X)	0.39	0.52	0.56	0.67	0.35	0.37	0.27	0.33	0.17	0.63	0.58	0.03
Avail Cap(c_a), veh/h	688	1153	1067	688	1043	974	1335	1921	860	688	1921	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	25.9	26.1	29.1	22.9	23.0	29.1	15.8	14.9	29.2	17.0	13.6
Incr Delay (d2), s/veh	2.1	5.0	6.3	2.2	1.9	2.2	0.3	0.6	0.5	1.9	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.4	2.4	1.6	1.9	2.0	0.4	2.7	1.2	1.4	5.5	0.2
LnGrp Delay(d),s/veh	33.1	31.0	32.3	31.3	24.8	25.2	29.4	16.4	15.4	31.1	18.6	13.7
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		264			316			539			824	
Approach Delay, s/veh		31.7			26.8			17.5			19.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	28.7	10.5	15.1	9.3	29.6	7.3	18.3
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	4.8	7.4	5.1	6.5	2.9	12.8	2.6	5.9
Green Ext Time (p_c), s	0.1	4.9	0.1	2.2	0.1	9.9	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	247	88	228	52	397	90	78	730	16
v/c Ratio	0.11	0.39	0.42	0.25	0.17	0.31	0.14	0.39	0.53	0.02
Control Delay	41.3	23.0	42.7	19.1	40.1	21.4	4.2	42.5	21.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	23.0	42.7	19.1	40.1	21.4	4.2	42.5	21.9	0.1
Queue Length 50th (ft)	8	37	43	29	12	77	0	38	152	0
Queue Length 95th (ft)	31	80	97	73	34	137	26	88	241	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	629	2028	629	2027	1220	1761	841	629	1761	841
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.14	0.11	0.04	0.23	0.11	0.12	0.41	0.02

Intersection Summary

Intersection	
Int Delay, s/veh	8.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	98	0	0	113	0
Future Vol, veh/h	0	98	0	0	113	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	107	0	0	123	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.12	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.4	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	129	678	49	35	480	72	18	117	52	6	138	98
Future Vol, veh/h	129	678	49	35	480	72	18	117	52	6	138	98
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	737	53	38	522	78	20	127	57	7	150	107

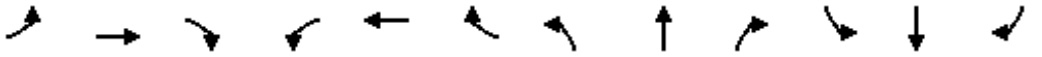
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	600	0	0	790	0	0	1810	1720	764	1773	1707	561
Stage 1	-	-	-	-	-	-	1044	1044	-	637	637	-
Stage 2	-	-	-	-	-	-	766	676	-	1136	1070	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	977	-	-	830	-	-	61	~ 89	404	65	~ 91	527
Stage 1	-	-	-	-	-	-	277	306	-	465	471	-
Stage 2	-	-	-	-	-	-	395	453	-	246	298	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	977	-	-	830	-	-	-	~ 73	404	-	~ 74	527
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 73	-	-	~ 74	-
Stage 1	-	-	-	-	-	-	237	262	-	399	449	-
Stage 2	-	-	-	-	-	-	200	432	-	93	255	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.6		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	977	-	-	830	-	-	-
HCM Lane V/C Ratio	-	0.144	-	-	0.046	-	-	-
HCM Control Delay (s)	-	9.3	-	-	9.5	-	-	-
HCM Lane LOS	-	A	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-	0.1	-	-	-

Notes

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



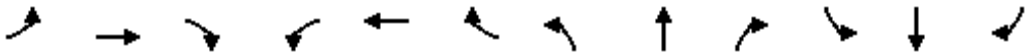
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	396	209	135	329	44	127	416	41	95	537	112
Future Volume (veh/h)	182	396	209	135	329	44	127	416	41	95	537	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	198	430	227	147	358	48	138	452	45	103	584	122
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	882	395	182	775	347	235	991	443	222	978	438
Arrive On Green	0.13	0.25	0.25	0.10	0.22	0.22	0.07	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	198	430	227	147	358	48	138	452	45	103	584	122
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	9.2	8.8	10.6	6.9	7.4	2.1	3.3	8.9	1.8	2.4	12.1	5.1
Cycle Q Clear(g_c), s	9.2	8.8	10.6	6.9	7.4	2.1	3.3	8.9	1.8	2.4	12.1	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	882	395	182	775	347	235	991	443	222	978	438
V/C Ratio(X)	0.84	0.49	0.58	0.81	0.46	0.14	0.59	0.46	0.10	0.46	0.60	0.28
Avail Cap(c_a), veh/h	314	1757	786	314	1631	730	610	1506	674	610	1548	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	27.2	27.8	37.1	28.7	26.6	38.3	25.2	22.6	38.2	26.5	24.0
Incr Delay (d2), s/veh	11.2	1.2	3.8	3.2	1.2	0.5	0.9	1.2	0.4	0.6	2.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	4.4	5.1	3.5	3.8	1.0	1.6	4.5	0.8	1.2	6.2	2.4
LnGrp Delay(d),s/veh	47.0	28.4	31.7	40.4	29.9	27.1	39.2	26.3	22.9	38.7	28.7	25.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		855			553			635			809	
Approach Delay, s/veh		33.6			32.5			28.9			29.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	31.2	14.4	27.9	11.5	30.9	16.9	25.3
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	4.4	10.9	8.9	12.6	5.3	14.1	11.2	9.4
Green Ext Time (p_c), s	0.1	6.9	0.1	8.5	0.1	9.3	0.1	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	430	227	147	358	48	138	452	45	103	584	122
v/c Ratio	0.68	0.52	0.42	0.63	0.50	0.11	0.44	0.47	0.09	0.37	0.63	0.24
Control Delay	53.0	35.0	7.2	53.3	36.2	0.5	47.0	30.5	0.3	47.2	34.3	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	35.0	7.2	53.3	36.2	0.5	47.0	30.5	0.3	47.2	34.3	6.7
Queue Length 50th (ft)	108	116	0	80	97	0	39	113	0	29	154	0
Queue Length 95th (ft)	#266	193	61	170	161	0	80	183	0	64	245	43
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	290	1623	849	290	1623	796	562	1430	713	562	1430	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.26	0.27	0.51	0.22	0.06	0.25	0.32	0.06	0.18	0.41	0.17

Intersection Summary

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

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	397	38	34	386	62	47	30	25	70	32	3
Future Vol, veh/h	30	397	38	34	386	62	47	30	25	70	32	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	432	41	37	420	67	51	33	27	76	35	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	0	473	0	0	821	1080	237	827	1067	244
Stage 1	-	-	-	-	-	-	519	519	-	528	528	-
Stage 2	-	-	-	-	-	-	302	561	-	299	539	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1072	-	-	1085	-	-	266	217	764	264	221	757
Stage 1	-	-	-	-	-	-	508	531	-	502	526	-
Stage 2	-	-	-	-	-	-	682	508	-	685	520	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1072	-	-	1085	-	-	220	203	764	213	207	757
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	203	-	213	207	-
Stage 1	-	-	-	-	-	-	492	515	-	486	508	-
Stage 2	-	-	-	-	-	-	611	491	-	600	504	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	22.7	28.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	220	305	1072	-	-	1085	-	-	213	221
HCM Lane V/C Ratio	0.232	0.196	0.03	-	-	0.034	-	-	0.357	0.172
HCM Control Delay (s)	26.2	19.7	8.5	-	-	8.4	-	-	31	24.6
HCM Lane LOS	D	C	A	-	-	A	-	-	D	C
HCM 95th %tile Q(veh)	0.9	0.7	0.1	-	-	0.1	-	-	1.5	0.6

Intersection	
Intersection Delay, s/veh	61.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	232	59	44	288	79	40	242	47	85	248	91
Future Vol, veh/h	85	232	59	44	288	79	40	242	47	85	248	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	252	64	48	313	86	43	263	51	92	270	99
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	38.7	81.3	70.1	56
HCM LOS	E	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	100%	0%	26%	0%
Vol Thru, %	74%	0%	80%	0%	78%	74%	0%
Vol Right, %	14%	0%	20%	0%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	329	85	291	44	367	333	91
LT Vol	40	85	0	44	0	85	0
Through Vol	242	0	232	0	288	248	0
RT Vol	47	0	59	0	79	0	91
Lane Flow Rate	358	92	316	48	399	362	99
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.958	0.258	0.825	0.134	1.044	0.951	0.239
Departure Headway (Hd)	10.061	10.451	9.774	10.104	9.419	9.836	8.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	365	346	373	357	387	373	403
Service Time	8.061	8.151	7.474	7.804	7.12	7.536	6.668
HCM Lane V/C Ratio	0.981	0.266	0.847	0.134	1.031	0.971	0.246
HCM Control Delay	70.1	16.7	45.1	14.4	89.3	67.3	14.5
HCM Lane LOS	F	C	E	B	F	F	B
HCM 95th-tile Q	10.4	1	7.4	0.5	13.3	10.4	0.9

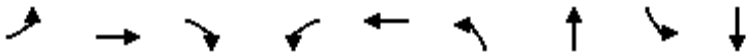
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	102	350	70	64	49	75	563	32	26	1007	71
Future Volume (veh/h)	129	102	350	70	64	49	75	563	32	26	1007	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	140	111	380	76	70	53	82	612	35	28	1095	77
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	502	427	99	224	170	106	1249	71	59	1161	82
Arrive On Green	0.10	0.27	0.27	0.06	0.23	0.23	0.06	0.37	0.37	0.03	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	1774	985	746	1774	3404	194	1774	3355	236
Grp Volume(v), veh/h	140	111	380	76	0	123	82	318	329	28	577	595
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1731	1774	1770	1828	1774	1770	1821
Q Serve(g_s), s	7.1	4.3	21.3	3.9	0.0	5.4	4.2	12.8	12.8	1.4	29.2	29.2
Cycle Q Clear(g_c), s	7.1	4.3	21.3	3.9	0.0	5.4	4.2	12.8	12.8	1.4	29.2	29.2
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	173	502	427	99	0	394	106	650	671	59	612	630
V/C Ratio(X)	0.81	0.22	0.89	0.77	0.00	0.31	0.77	0.49	0.49	0.47	0.94	0.94
Avail Cap(c_a), veh/h	458	568	483	458	0	563	468	650	671	458	614	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	26.2	32.4	42.9	0.0	29.6	42.7	22.5	22.5	43.8	29.3	29.3
Incr Delay (d2), s/veh	3.4	0.4	18.9	4.6	0.0	0.9	4.5	1.8	1.7	2.2	24.0	23.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.3	11.5	2.0	0.0	2.7	2.2	6.5	6.8	0.7	18.4	18.9
LnGrp Delay(d),s/veh	44.1	26.6	51.3	47.6	0.0	30.5	47.2	24.3	24.2	46.0	53.3	53.0
LnGrp LOS	D	C	D	D		C	D	C	C	D	D	D
Approach Vol, veh/h		631			199			729			1200	
Approach Delay, s/veh		45.4			37.0			26.8			53.0	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	41.3	10.8	31.2	10.7	39.4	14.7	27.4
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.4	14.8	5.9	23.3	6.2	31.2	9.1	7.4
Green Ext Time (p_c), s	0.0	7.2	0.1	1.6	0.1	0.7	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.2
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	140	111	380	76	123	82	647	28	1172
v/c Ratio	0.60	0.29	0.60	0.44	0.46	0.46	0.40	0.21	0.90
Control Delay	49.6	35.4	8.2	48.8	35.4	49.0	19.3	46.7	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	35.4	8.2	48.8	35.4	49.0	19.3	46.7	39.4
Queue Length 50th (ft)	76	56	0	41	51	45	106	15	329
Queue Length 95th (ft)	149	113	79	94	115	99	234	47	#606
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	489	649	799	489	624	499	1600	489	1305
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	0.29	0.17	0.48	0.16	0.20	0.16	0.40	0.06	0.90

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	72	70	82	84	72	52	95	53	62	129	44
Future Vol, veh/h	26	72	70	82	84	72	52	95	53	62	129	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	78	76	89	91	78	57	103	58	67	140	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	12	11.3	12
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	15%	34%	26%
Vol Thru, %	47%	43%	35%	55%
Vol Right, %	27%	42%	30%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	168	238	235
LT Vol	52	26	82	62
Through Vol	95	72	84	129
RT Vol	53	70	72	44
Lane Flow Rate	217	183	259	255
Geometry Grp	1	1	1	1
Degree of Util (X)	0.331	0.277	0.391	0.388
Departure Headway (Hd)	5.482	5.469	5.44	5.463
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	654	654	660	656
Service Time	3.537	3.529	3.492	3.515
HCM Lane V/C Ratio	0.332	0.28	0.392	0.389
HCM Control Delay	11.3	10.6	12	12
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.4	1.1	1.9	1.8

Intersection	
Intersection Delay, s/veh	18.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	493	142	104	412	9	105	26	112	12	32	16
Future Vol, veh/h	15	493	142	104	412	9	105	26	112	12	32	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	536	154	113	448	10	114	28	122	13	35	17
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	21.1	16.3	20	12.7
HCM LOS	C	C	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	43%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	11%	0%	100%	54%	0%	100%	94%	53%
Vol Right, %	46%	0%	0%	46%	0%	0%	6%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	15	329	306	104	275	146	60
LT Vol	105	15	0	0	104	0	0	12
Through Vol	26	0	329	164	0	275	137	32
RT Vol	112	0	0	142	0	0	9	16
Lane Flow Rate	264	16	357	333	113	299	159	65
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.564	0.034	0.686	0.609	0.238	0.586	0.31	0.152
Departure Headway (Hd)	7.688	7.431	6.917	6.584	7.585	7.07	7.026	8.401
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	482	522	549	474	511	512	427
Service Time	5.431	5.174	4.66	4.326	5.33	4.816	4.771	6.158
HCM Lane V/C Ratio	0.562	0.033	0.684	0.607	0.238	0.585	0.311	0.152
HCM Control Delay	20	10.4	23.5	19.1	12.7	19.4	12.9	12.7
HCM Lane LOS	C	B	C	C	B	C	B	B
HCM 95th-tile Q	3.4	0.1	5.2	4.1	0.9	3.7	1.3	0.5

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	13	46	6	34	30	677	70	18	632	7
Future Vol, veh/h	2	2	13	46	6	34	30	677	70	18	632	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	14	50	7	37	33	736	76	20	687	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1593	1609	691	1579	1575	774	695	0	0	812	0	0
Stage 1	731	731	-	840	840	-	-	-	-	-	-	-
Stage 2	862	878	-	739	735	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	86	105	445	88	110	398	901	-	-	814	-	-
Stage 1	413	427	-	360	381	-	-	-	-	-	-	-
Stage 2	350	366	-	409	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	71	99	445	80	103	398	901	-	-	814	-	-
Mov Cap-2 Maneuver	71	99	-	80	103	-	-	-	-	-	-	-
Stage 1	398	416	-	347	367	-	-	-	-	-	-	-
Stage 2	300	352	-	384	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.9	99.2	0.4	0.3
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	219	120	814	-	-
HCM Lane V/C Ratio	0.036	-	-	0.084	0.779	0.024	-	-
HCM Control Delay (s)	9.1	-	-	22.9	99.2	9.5	-	-
HCM Lane LOS	A	-	-	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	4.5	0.1	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	51	38	66	38	29
Future Vol, veh/h	76	51	38	66	38	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	55	41	72	41	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	138	0	265	111
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1446	-	724	942
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1446	-	702	942
Mov Cap-2 Maneuver	-	-	-	-	702	-
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	789	-	-	1446	-
HCM Lane V/C Ratio	0.092	-	-	0.029	-
HCM Control Delay (s)	10	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	35	32	758	739	56
Future Vol, veh/h	48	35	32	758	739	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	38	35	824	803	61

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1697	803	803	0	-	0
Stage 1	803	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	102	383	821	-	-	0
Stage 1	441	-	-	-	-	0
Stage 2	399	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	94	383	821	-	-	-
Mov Cap-2 Maneuver	94	-	-	-	-	-
Stage 1	406	-	-	-	-	-
Stage 2	399	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	51.5	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	821	-	163	-
HCM Lane V/C Ratio	0.042	-	0.553	-
HCM Control Delay (s)	9.6	0	51.5	-
HCM Lane LOS	A	A	F	-
HCM 95th %tile Q(veh)	0.1	-	2.8	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	58	100	771	747	16
Future Vol, veh/h	4	58	100	771	747	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	63	109	838	812	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1868	406	829	0	-	0
Stage 1	812	-	-	-	-	-
Stage 2	1056	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	71	595	800	-	-	-
Stage 1	398	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	61	595	800	-	-	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	344	-	-	-	-	-
Stage 2	334	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.5	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	800	-	61	595	-	-
HCM Lane V/C Ratio	0.136	-	0.071	0.106	-	-
HCM Control Delay (s)	10.2	-	68.5	11.8	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.2	0.4	-	-

Intersection	
Intersection Delay, s/veh	6.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	152	237	272	112
Demand Flow Rate, veh/h	155	241	278	115
Vehicles Circulating, veh/h	199	191	189	197
Vehicles Exiting, veh/h	113	276	165	235
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	6.6	7.1	5.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	155	241	278	115
Cap Entry Lane, veh/h	926	933	935	928
Entry HV Adj Factor	0.982	0.981	0.980	0.975
Flow Entry, veh/h	152	237	272	112
Cap Entry, veh/h	909	916	917	905
V/C Ratio	0.167	0.258	0.297	0.124
Control Delay, s/veh	5.6	6.6	7.1	5.2
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	0

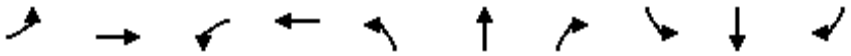
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	133	47	114	151	122	82	751	91	77	702	20
Future Volume (veh/h)	16	133	47	114	151	122	82	751	91	77	702	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	145	51	124	164	133	89	816	99	84	763	22
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	303	103	160	350	267	246	1291	578	124	1285	575
Arrive On Green	0.02	0.12	0.12	0.09	0.18	0.18	0.07	0.36	0.36	0.07	0.36	0.36
Sat Flow, veh/h	1774	2597	880	1774	1916	1459	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	17	97	99	124	151	146	89	816	99	84	763	22
Grp Sat Flow(s),veh/h/ln	1774	1770	1707	1774	1770	1605	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	3.5	3.7	4.7	5.2	5.6	1.7	13.1	2.9	3.2	12.0	0.6
Cycle Q Clear(g_c), s	0.6	3.5	3.7	4.7	5.2	5.6	1.7	13.1	2.9	3.2	12.0	0.6
Prop In Lane	1.00		0.52	1.00		0.91	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	206	199	160	323	293	246	1291	578	124	1285	575
V/C Ratio(X)	0.40	0.47	0.50	0.77	0.47	0.50	0.36	0.63	0.17	0.68	0.59	0.04
Avail Cap(c_a), veh/h	646	1083	1045	646	980	889	1254	1805	807	646	1805	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	28.3	28.4	30.5	25.1	25.2	30.4	18.0	14.8	31.2	17.7	14.1
Incr Delay (d2), s/veh	2.2	4.8	5.5	3.0	3.0	3.8	0.3	1.9	0.5	2.4	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.0	2.1	2.4	2.8	2.8	0.8	6.7	1.3	1.6	6.1	0.3
LnGrp Delay(d),s/veh	35.2	33.1	33.9	33.5	28.1	29.0	30.7	19.9	15.3	33.6	19.3	14.2
LnGrp LOS	D	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		213			421			1004			869	
Approach Delay, s/veh		33.7			30.0			20.4			20.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	31.8	11.9	14.4	10.6	31.7	7.4	18.9
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	5.2	15.1	6.7	5.7	3.7	14.0	2.6	7.6
Green Ext Time (p_c), s	0.1	10.0	0.2	1.7	0.1	10.0	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	196	124	297	89	816	99	84	763	22
v/c Ratio	0.14	0.39	0.57	0.29	0.32	0.59	0.14	0.47	0.52	0.03
Control Delay	46.6	33.5	50.2	16.6	45.7	25.9	4.9	50.1	23.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	33.5	50.2	16.6	45.7	25.9	4.9	50.1	23.1	0.1
Queue Length 50th (ft)	10	46	70	35	25	197	0	47	174	0
Queue Length 95th (ft)	33	87	135	84	54	316	32	101	274	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	501	1636	501	1641	972	1404	692	501	1476	722
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.25	0.18	0.09	0.58	0.14	0.17	0.52	0.03

Intersection Summary

Intersection	
Int Delay, s/veh	8.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	140	0	0	120	0
Future Vol, veh/h	0	140	0	0	120	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	152	0	0	130	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	1	-
Stage 1	-	-	0	-
Stage 2	-	-	1	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	1022	0
Stage 1	0	-	-	0
Stage 2	0	-	1022	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	1022	-
Mov Cap-2 Maneuver	-	-	1022	-
Stage 1	-	-	-	-
Stage 2	-	-	1022	-

Approach	WB	NB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBT
Capacity (veh/h)	1022	-
HCM Lane V/C Ratio	0.128	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.4	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	579	26	86	724	18	21	99	66	4	84	90
Future Vol, veh/h	140	579	26	86	724	18	21	99	66	4	84	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	152	629	28	93	787	20	23	108	72	4	91	98

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	807	0	0	657	0	0	2025	1940	643	2020	1944	797
Stage 1	-	-	-	-	-	-	947	947	-	983	983	-
Stage 2	-	-	-	-	-	-	1078	993	-	1037	961	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	818	-	-	931	-	-	43	~ 65	473	43	~ 65	387
Stage 1	-	-	-	-	-	-	314	340	-	299	327	-
Stage 2	-	-	-	-	-	-	265	323	-	279	335	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	818	-	-	931	-	-	-	~ 48	473	-	~ 48	387
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 48	-	-	~ 48	-
Stage 1	-	-	-	-	-	-	256	277	-	243	294	-
Stage 2	-	-	-	-	-	-	123	291	-	118	273	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	1		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	818	-	-	931	-	-	-
HCM Lane V/C Ratio	-	0.186	-	-	0.1	-	-	-
HCM Control Delay (s)	-	10.4	-	-	9.3	-	-	-
HCM Lane LOS	-	B	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	0.3	-	-	-

Notes

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

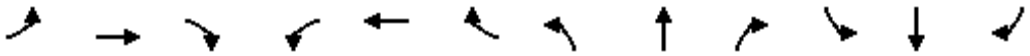
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	308	91	189	402	68	187	891	56	112	518	135
Future Volume (veh/h)	232	308	91	189	402	68	187	891	56	112	518	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	252	335	99	205	437	74	203	968	61	122	563	147
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	760	340	237	702	314	272	1192	533	199	1117	500
Arrive On Green	0.15	0.21	0.21	0.13	0.20	0.20	0.08	0.34	0.34	0.06	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	252	335	99	205	437	74	203	968	61	122	563	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	14.1	8.2	5.2	11.3	11.3	3.9	5.8	25.0	2.7	3.5	12.9	7.0
Cycle Q Clear(g_c), s	14.1	8.2	5.2	11.3	11.3	3.9	5.8	25.0	2.7	3.5	12.9	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	760	340	237	702	314	272	1192	533	199	1117	500
V/C Ratio(X)	0.95	0.44	0.29	0.87	0.62	0.24	0.74	0.81	0.11	0.61	0.50	0.29
Avail Cap(c_a), veh/h	266	1486	665	266	1380	617	516	1274	570	516	1309	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	34.1	32.9	42.5	36.7	33.7	45.1	30.3	22.9	46.0	27.9	25.8
Incr Delay (d2), s/veh	40.5	1.2	1.4	21.1	2.6	1.1	1.5	5.5	0.3	1.1	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	4.1	2.4	6.9	5.8	1.8	2.8	13.1	1.2	1.7	6.5	3.2
LnGrp Delay(d),s/veh	82.7	35.2	34.3	63.6	39.3	34.8	46.6	35.8	23.2	47.1	29.1	27.0
LnGrp LOS	F	D	C	E	D	C	D	D	C	D	C	C
Approach Vol, veh/h		686			716			1232			832	
Approach Delay, s/veh		52.5			45.8			36.9			31.4	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	41.2	19.0	28.3	13.6	39.1	20.7	26.6
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	5.5	27.0	13.3	10.2	7.8	14.9	16.1	13.3
Green Ext Time (p_c), s	0.1	6.7	0.1	5.7	0.2	9.0	0.0	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.5
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	252	335	99	205	437	74	203	968	61	122	563	147
v/c Ratio	1.00	0.49	0.24	0.82	0.63	0.18	0.59	0.80	0.10	0.46	0.50	0.24
Control Delay	105.4	40.5	4.3	71.0	43.7	1.6	53.1	38.4	0.3	53.1	32.0	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.4	40.5	4.3	71.0	43.7	1.6	53.1	38.4	0.3	53.1	32.0	6.0
Queue Length 50th (ft)	~172	106	0	136	143	0	68	308	0	41	161	0
Queue Length 95th (ft)	#375	156	25	#290	203	5	111	#439	0	75	243	48
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	251	1406	706	251	1406	706	487	1238	634	487	1238	649
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.24	0.14	0.82	0.31	0.10	0.42	0.78	0.10	0.25	0.45	0.23

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.

Intersection	
Int Delay, s/veh	23.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	392	71	47	459	103	56	54	62	109	43	16
Future Vol, veh/h	67	392	71	47	459	103	56	54	62	109	43	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	210	-	-	0	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	426	77	51	499	112	61	59	67	118	47	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	611	0	0	503	0	0	986	1324	252	1046	1306	306
Stage 1	-	-	-	-	-	-	611	611	-	657	657	-
Stage 2	-	-	-	-	-	-	375	713	-	389	649	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	964	-	-	1058	-	-	202	155	748	183	159	690
Stage 1	-	-	-	-	-	-	448	482	-	420	460	-
Stage 2	-	-	-	-	-	-	618	434	-	606	464	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	964	-	-	1058	-	-	133	136	748	~ 101	140	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	133	136	-	~ 101	140	-
Stage 1	-	-	-	-	-	-	414	445	-	388	438	-
Stage 2	-	-	-	-	-	-	512	413	-	442	429	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.7	40.9	156.8
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	133	242	964	-	-	1058	-	-	101	179
HCM Lane V/C Ratio	0.458	0.521	0.076	-	-	0.048	-	-	1.173	0.358
HCM Control Delay (s)	53.1	35	9	-	-	8.6	-	-	222.2	35.9
HCM Lane LOS	F	E	A	-	-	A	-	-	F	E
HCM 95th %tile Q(veh)	2.1	2.7	0.2	-	-	0.2	-	-	7.8	1.5

Notes

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

Intersection	
Intersection Delay, s/veh	52.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	233	43	48	402	71	54	156	54	49	161	83
Future Vol, veh/h	78	233	43	48	402	71	54	156	54	49	161	83
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	253	47	52	437	77	59	170	59	53	175	90
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	24.7	101.1	29.8	19.9
HCM LOS	C	F	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	100%	0%	100%	0%	23%	0%
Vol Thru, %	59%	0%	84%	0%	85%	77%	0%
Vol Right, %	20%	0%	16%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	78	276	48	473	210	83
LT Vol	54	78	0	48	0	49	0
Through Vol	156	0	233	0	402	161	0
RT Vol	54	0	43	0	71	0	83
Lane Flow Rate	287	85	300	52	514	228	90
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.686	0.206	0.679	0.124	1.13	0.552	0.198
Departure Headway (Hd)	9.102	9.202	8.567	8.537	7.91	9.181	8.33
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	399	393	426	418	458	395	434
Service Time	7.102	6.902	6.267	6.317	5.689	6.881	6.03
HCM Lane V/C Ratio	0.719	0.216	0.704	0.124	1.122	0.577	0.207
HCM Control Delay	29.8	14.3	27.6	12.5	110.1	22.6	13.1
HCM Lane LOS	D	B	D	B	F	C	B
HCM 95th-tile Q	5	0.8	4.9	0.4	18	3.2	0.7

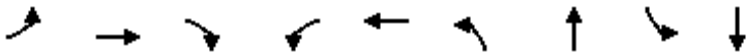
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	130	192	54	102	24	190	1010	27	39	783	118
Future Volume (veh/h)	157	130	192	54	102	24	190	1010	27	39	783	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	171	141	209	59	111	26	207	1098	29	42	851	128
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	329	279	94	163	38	246	1522	40	78	1061	160
Arrive On Green	0.12	0.18	0.18	0.05	0.11	0.11	0.14	0.43	0.43	0.04	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	1460	342	1774	3523	93	1774	3086	464
Grp Volume(v), veh/h	171	141	209	59	0	137	207	551	576	42	488	491
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1802	1774	1770	1846	1774	1770	1781
Q Serve(g_s), s	8.1	5.8	10.8	2.8	0.0	6.3	9.8	22.1	22.1	2.0	21.5	21.5
Cycle Q Clear(g_c), s	8.1	5.8	10.8	2.8	0.0	6.3	9.8	22.1	22.1	2.0	21.5	21.5
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	208	329	279	94	0	201	246	765	798	78	608	612
V/C Ratio(X)	0.82	0.43	0.75	0.63	0.00	0.68	0.84	0.72	0.72	0.54	0.80	0.80
Avail Cap(c_a), veh/h	492	609	518	492	0	629	502	765	798	492	659	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	31.5	33.6	39.9	0.0	36.7	36.1	20.1	20.1	40.2	25.5	25.5
Incr Delay (d2), s/veh	3.1	1.8	7.9	2.6	0.0	7.9	3.0	4.8	4.6	2.1	9.0	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	3.1	5.3	1.4	0.0	3.6	5.0	11.7	12.2	1.0	12.0	12.0
LnGrp Delay(d),s/veh	40.1	33.3	41.5	42.5	0.0	44.6	39.1	24.9	24.7	42.3	34.6	34.5
LnGrp LOS	D	C	D	D		D	D	C	C	D	C	C
Approach Vol, veh/h		521			196			1334			1021	
Approach Delay, s/veh		38.8			44.0			27.0			34.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	44.6	10.2	21.6	17.1	37.0	15.8	16.0
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	4.0	24.1	4.8	12.8	11.8	23.5	10.1	8.3
Green Ext Time (p_c), s	0.0	6.7	0.0	2.4	0.2	6.1	0.2	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	171	141	209	59	137	207	1127	42	979
v/c Ratio	0.69	0.33	0.40	0.42	0.52	0.74	0.70	0.33	0.89
Control Delay	58.5	37.9	7.4	58.0	47.7	59.0	28.7	57.1	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.5	37.9	7.4	58.0	47.7	59.0	28.7	57.1	46.9
Queue Length 50th (ft)	108	80	0	38	79	130	331	27	317
Queue Length 95th (ft)	202	152	61	90	159	238	533	71	#600
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	413	552	616	413	538	422	1605	413	1097
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	0.41	0.26	0.34	0.14	0.25	0.49	0.70	0.10	0.89

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	49	70	16	36	12	61	148	20	15	120	39
Future Vol, veh/h	34	49	70	16	36	12	61	148	20	15	120	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	53	76	17	39	13	66	161	22	16	130	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	8.8	10.1	9.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	22%	25%	9%
Vol Thru, %	65%	32%	56%	69%
Vol Right, %	9%	46%	19%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	229	153	64	174
LT Vol	61	34	16	15
Through Vol	148	49	36	120
RT Vol	20	70	12	39
Lane Flow Rate	249	166	70	189
Geometry Grp	1	1	1	1
Degree of Util (X)	0.328	0.223	0.099	0.247
Departure Headway (Hd)	4.739	4.823	5.124	4.696
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	738	694	760
Service Time	2.797	2.888	3.201	2.758
HCM Lane V/C Ratio	0.33	0.225	0.101	0.249
HCM Control Delay	10.1	9.3	8.8	9.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.4	0.9	0.3	1

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	398	93	36	384	17	127	29	39	11	9	8
Future Vol, veh/h	26	398	93	36	384	17	127	29	39	11	9	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	433	101	39	417	18	138	32	42	12	10	9
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	13.4	13.2	15.1	10.8
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	65%	100%	0%	0%	100%	0%	0%	39%
Vol Thru, %	15%	0%	100%	59%	0%	100%	88%	32%
Vol Right, %	20%	0%	0%	41%	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	26	265	226	36	256	145	28
LT Vol	127	26	0	0	36	0	0	11
Through Vol	29	0	265	133	0	256	128	9
RT Vol	39	0	0	93	0	0	17	8
Lane Flow Rate	212	28	288	245	39	278	158	30
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.422	0.052	0.492	0.398	0.073	0.481	0.269	0.063
Departure Headway (Hd)	7.169	6.644	6.136	5.842	6.737	6.228	6.145	7.511
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	500	538	585	613	530	576	583	474
Service Time	4.934	4.402	3.893	3.599	4.498	3.989	3.905	5.301
HCM Lane V/C Ratio	0.424	0.052	0.492	0.4	0.074	0.483	0.271	0.063
HCM Control Delay	15.1	9.8	14.7	12.4	10	14.7	11.2	10.8
HCM Lane LOS	C	A	B	B	A	B	B	B
HCM 95th-tile Q	2.1	0.2	2.7	1.9	0.2	2.6	1.1	0.2

Intersection	
Int Delay, s/veh	11.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	6	24	76	9	39	17	370	63	60	675	2
Future Vol, veh/h	5	6	24	76	9	39	17	370	63	60	675	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	7	26	83	10	42	18	402	68	65	734	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1363	1371	735	1354	1338	436	736	0	0	470	0	0
Stage 1	865	865	-	472	472	-	-	-	-	-	-	-
Stage 2	498	506	-	882	866	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	125	146	420	127	153	620	870	-	-	1092	-	-
Stage 1	348	371	-	573	559	-	-	-	-	-	-	-
Stage 2	554	540	-	341	370	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	104	134	420	108	141	620	870	-	-	1092	-	-
Mov Cap-2 Maneuver	104	134	-	108	141	-	-	-	-	-	-	-
Stage 1	341	349	-	561	547	-	-	-	-	-	-	-
Stage 2	496	529	-	295	348	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.4	109.2	0.3	0.7
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	870	-	-	233	149	1092	-	-
HCM Lane V/C Ratio	0.021	-	-	0.163	0.905	0.06	-	-
HCM Control Delay (s)	9.2	-	-	23.4	109.2	8.5	-	-
HCM Lane LOS	A	-	-	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	6.3	0.2	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	58	20	442	751	82
Future Vol, veh/h	66	58	20	442	751	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	63	22	480	816	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1340	816	816	0	-	0
Stage 1	816	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	168	377	812	-	-	0
Stage 1	435	-	-	-	-	0
Stage 2	594	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	162	377	812	-	-	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	419	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.9	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	812	-	304	-
HCM Lane V/C Ratio	0.027	-	0.443	-
HCM Control Delay (s)	9.6	0	25.9	-
HCM Lane LOS	A	A	D	-
HCM 95th %tile Q(veh)	0.1	-	2.2	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	17	21	470	798	5
Future Vol, veh/h	3	17	21	470	798	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	18	23	511	867	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1424	434	872	0	-	0
Stage 1	867	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	138	571	771	-	-	-
Stage 1	373	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	134	571	771	-	-	-
Mov Cap-2 Maneuver	134	-	-	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	771	-	134	571	-	-
HCM Lane V/C Ratio	0.03	-	0.024	0.032	-	-
HCM Control Delay (s)	9.8	-	32.5	11.5	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	24	101	8	18	35	55	422	11	32	777	17
Future Volume (veh/h)	18	24	101	8	18	35	55	422	11	32	777	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	26	110	9	20	38	60	459	12	35	845	18
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	243	217	25	218	195	213	1472	658	77	1407	629
Arrive On Green	0.03	0.14	0.14	0.01	0.12	0.12	0.06	0.42	0.42	0.04	0.40	0.40
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	26	110	9	20	38	60	459	12	35	845	18
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.7	0.8	4.1	0.3	0.6	1.4	1.1	5.5	0.3	1.2	11.9	0.4
Cycle Q Clear(g_c), s	0.7	0.8	4.1	0.3	0.6	1.4	1.1	5.5	0.3	1.2	11.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	243	217	25	218	195	213	1472	658	77	1407	629
V/C Ratio(X)	0.40	0.11	0.51	0.37	0.09	0.20	0.28	0.31	0.02	0.45	0.60	0.03
Avail Cap(c_a), veh/h	702	1177	1053	702	1065	952	1362	1961	877	702	1961	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	23.9	25.3	30.9	24.6	24.9	28.3	12.4	10.9	29.5	15.1	11.6
Incr Delay (d2), s/veh	1.9	0.6	5.2	3.3	0.5	1.4	0.3	0.4	0.0	1.5	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	2.1	0.2	0.3	0.7	0.5	2.8	0.1	0.6	6.0	0.2
LnGrp Delay(d),s/veh	32.1	24.4	30.5	34.2	25.1	26.3	28.6	12.8	10.9	31.0	16.6	11.7
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		156			67			531			898	
Approach Delay, s/veh		29.7			27.0			14.6			17.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	33.1	6.6	15.1	9.6	31.9	7.5	14.2
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	3.2	7.5	2.3	6.1	3.1	13.9	2.7	3.4
Green Ext Time (p_c), s	0.0	6.6	0.0	1.2	0.1	11.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

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

6: Dinuba Blvd (63) & Shannon Pkwy

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	136	9	58	60	459	12	35	845	18
v/c Ratio	0.12	0.27	0.06	0.13	0.19	0.24	0.01	0.21	0.47	0.02
Control Delay	34.3	11.5	33.9	16.2	33.3	10.8	0.0	34.9	13.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	11.5	33.9	16.2	33.3	10.8	0.0	34.9	13.5	0.1
Queue Length 50th (ft)	8	5	4	4	12	53	0	14	111	0
Queue Length 95th (ft)	31	32	19	22	34	119	0	45	229	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	657	1982	657	2005	1274	1949	920	657	1840	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.07	0.01	0.03	0.05	0.24	0.01	0.05	0.46	0.02

Intersection Summary

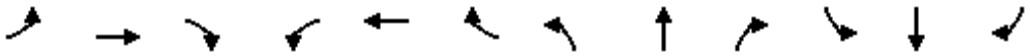
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	458	242	156	381	51	147	396	48	110	535	129
Future Volume (veh/h)	211	458	242	156	381	51	147	396	48	110	535	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	229	498	263	170	414	55	160	430	52	120	582	140
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	960	430	204	843	377	233	961	430	214	942	421
Arrive On Green	0.15	0.27	0.27	0.12	0.24	0.24	0.07	0.27	0.27	0.06	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	229	498	263	170	414	55	160	430	52	120	582	140
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	11.6	11.0	13.3	8.6	9.3	2.5	4.2	9.3	2.3	3.1	13.3	6.5
Cycle Q Clear(g_c), s	11.6	11.0	13.3	8.6	9.3	2.5	4.2	9.3	2.3	3.1	13.3	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	960	430	204	843	377	233	961	430	214	942	421
V/C Ratio(X)	0.87	0.52	0.61	0.83	0.49	0.15	0.69	0.45	0.12	0.56	0.62	0.33
Avail Cap(c_a), veh/h	290	1619	724	290	1503	672	562	1387	621	562	1426	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	28.4	29.2	39.8	30.2	27.6	41.9	27.7	25.2	41.8	29.6	27.1
Incr Delay (d2), s/veh	20.9	1.3	4.1	9.3	1.3	0.5	1.4	1.2	0.5	0.9	2.4	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	7.2	5.5	6.3	4.7	4.7	1.2	2.0	4.7	1.0	1.5	6.8	3.0
LnGrp Delay(d),s/veh	59.1	29.6	33.3	49.1	31.5	28.1	43.2	28.9	25.7	42.7	32.0	28.8
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		990			639			642			842	
Approach Delay, s/veh		37.4			35.9			32.2			33.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	32.4	16.3	31.7	11.9	31.9	19.3	28.7
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	5.1	11.3	10.6	15.3	6.2	15.3	13.6	11.3
Green Ext Time (p_c), s	0.1	6.5	0.1	9.6	0.1	9.2	0.1	6.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	229	498	263	170	414	55	160	430	52	120	582	140
v/c Ratio	0.83	0.59	0.46	0.69	0.53	0.12	0.49	0.45	0.10	0.42	0.64	0.27
Control Delay	68.0	37.3	7.0	58.0	36.7	0.5	49.9	31.8	0.4	50.2	36.3	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	37.3	7.0	58.0	36.7	0.5	49.9	31.8	0.4	50.2	36.3	6.7
Queue Length 50th (ft)	139	145	0	100	117	0	49	116	0	37	169	0
Queue Length 95th (ft)	#350	231	65	#238	191	0	95	185	0	76	260	47
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	276	1550	841	276	1550	765	537	1365	686	537	1365	696
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.32	0.31	0.62	0.27	0.07	0.30	0.32	0.08	0.22	0.43	0.20

Intersection Summary

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

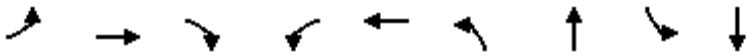
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	117	405	80	74	57	86	582	37	30	1096	64
Future Volume (veh/h)	132	117	405	80	74	57	86	582	37	30	1096	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	143	127	440	87	80	62	93	633	40	33	1191	70
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	536	456	112	246	190	119	1195	75	64	1114	65
Arrive On Green	0.10	0.29	0.29	0.06	0.25	0.25	0.07	0.35	0.35	0.04	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	974	755	1774	3381	213	1774	3398	200
Grp Volume(v), veh/h	143	127	440	87	0	142	93	331	342	33	620	641
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1729	1774	1770	1825	1774	1770	1828
Q Serve(g_s), s	7.7	5.1	26.7	4.7	0.0	6.5	5.0	14.5	14.6	1.8	32.0	32.0
Cycle Q Clear(g_c), s	7.7	5.1	26.7	4.7	0.0	6.5	5.0	14.5	14.6	1.8	32.0	32.0
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.12	1.00		0.11
Lane Grp Cap(c), veh/h	175	536	456	112	0	436	119	626	645	64	580	599
V/C Ratio(X)	0.82	0.24	0.97	0.78	0.00	0.33	0.78	0.53	0.53	0.51	1.07	1.07
Avail Cap(c_a), veh/h	433	536	456	433	0	532	442	626	645	433	580	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	26.6	34.3	45.1	0.0	29.7	44.8	25.1	25.1	46.2	32.8	32.8
Incr Delay (d2), s/veh	3.5	0.5	33.5	4.3	0.0	0.9	4.2	2.2	2.1	2.3	56.9	56.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	2.7	15.9	2.5	0.0	3.2	2.6	7.5	7.7	0.9	24.6	25.5
LnGrp Delay(d),s/veh	46.6	27.0	67.8	49.4	0.0	30.6	49.0	27.3	27.2	48.5	89.7	89.7
LnGrp LOS	D	C	E	D		C	D	C	C	D	F	F
Approach Vol, veh/h		710			229			766			1294	
Approach Delay, s/veh		56.2			37.7			29.9			88.7	
Approach LOS		E			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	42.0	11.9	34.5	11.7	39.5	15.3	31.0
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.8	16.6	6.7	28.7	7.0	34.0	9.7	8.5
Green Ext Time (p_c), s	0.0	7.0	0.1	0.0	0.1	0.0	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	62.1
HCM 2010 LOS	E

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	143	127	440	87	142	93	673	33	1261
v/c Ratio	0.61	0.32	0.64	0.48	0.50	0.50	0.45	0.24	0.99
Control Delay	50.6	36.3	8.4	50.7	36.8	50.8	22.3	48.6	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	36.3	8.4	50.7	36.8	50.8	22.3	48.6	54.3
Queue Length 50th (ft)	80	66	0	49	62	52	151	19	~412
Queue Length 95th (ft)	155	130	86	107	134	113	256	53	#709
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	478	633	829	478	610	488	1486	478	1277
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	0.30	0.20	0.53	0.18	0.23	0.19	0.45	0.07	0.99

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.

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	15	35	6	39	35	746	63	21	695	8
Future Vol, veh/h	2	2	15	35	6	39	35	746	63	21	695	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	16	38	7	42	38	811	68	23	755	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1752	1761	760	1736	1731	845	764	0	0	879	0	0
Stage 1	806	806	-	921	921	-	-	-	-	-	-	-
Stage 2	946	955	-	815	810	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	67	84	406	69	88	363	849	-	-	769	-	-
Stage 1	376	395	-	324	349	-	-	-	-	-	-	-
Stage 2	314	337	-	371	393	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	52	78	406	61	81	363	849	-	-	769	-	-
Mov Cap-2 Maneuver	52	78	-	61	81	-	-	-	-	-	-	-
Stage 1	359	383	-	309	333	-	-	-	-	-	-	-
Stage 2	260	322	-	343	381	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.5	117.6	0.4	0.3
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	849	-	-	188	106	769	-	-
HCM Lane V/C Ratio	0.045	-	-	0.11	0.82	0.03	-	-
HCM Control Delay (s)	9.4	-	-	26.5	117.6	9.8	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	4.6	0.1	-	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	40	37	823	801	64
Future Vol, veh/h	55	40	37	823	801	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	43	40	895	871	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1846	871	871	0	-	0
Stage 1	871	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	82	350	774	-	-	0
Stage 1	410	-	-	-	-	0
Stage 2	366	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	74	350	774	-	-	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	366	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	111.5	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	774	-	122	-
HCM Lane V/C Ratio	0.052	-	0.846	-
HCM Control Delay (s)	9.9	0	111.5	-
HCM Lane LOS	A	A	F	-
HCM 95th %tile Q(veh)	0.2	-	5.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	67	116	838	810	18
Future Vol, veh/h	5	67	116	838	810	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	73	126	911	880	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2043	440	900	0	-	0
Stage 1	880	-	-	-	-	-
Stage 2	1163	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	55	566	753	-	-	-
Stage 1	367	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	46	566	753	-	-	-
Mov Cap-2 Maneuver	46	-	-	-	-	-
Stage 1	306	-	-	-	-	-
Stage 2	296	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.9	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	753	-	46	566	-	-
HCM Lane V/C Ratio	0.167	-	0.118	0.129	-	-
HCM Control Delay (s)	10.7	-	93.5	12.3	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.4	0.4	-	-

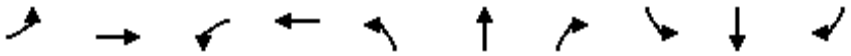
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	14	54	43	35	88	95	868	17	37	812	23
Future Volume (veh/h)	18	14	54	43	35	88	95	868	17	37	812	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	15	59	47	38	96	103	943	18	40	883	25
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	206	184	92	249	223	261	1494	668	83	1391	622
Arrive On Green	0.03	0.12	0.12	0.05	0.14	0.14	0.08	0.42	0.42	0.05	0.39	0.39
Sat Flow, veh/h	1774	1770	1583	1774	1770	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	15	59	47	38	96	103	943	18	40	883	25
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.8	0.5	2.3	1.7	1.3	3.8	1.9	14.2	0.5	1.5	13.7	0.7
Cycle Q Clear(g_c), s	0.8	0.5	2.3	1.7	1.3	3.8	1.9	14.2	0.5	1.5	13.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	206	184	92	249	223	261	1494	668	83	1391	622
V/C Ratio(X)	0.41	0.07	0.32	0.51	0.15	0.43	0.39	0.63	0.03	0.48	0.63	0.04
Avail Cap(c_a), veh/h	654	1096	981	654	992	887	1269	1827	817	654	1827	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	26.7	27.5	31.3	25.6	26.7	29.9	15.4	11.5	31.5	16.6	12.7
Incr Delay (d2), s/veh	2.0	0.4	2.9	1.6	0.8	3.8	0.4	1.6	0.1	1.6	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	1.2	0.9	0.7	1.9	0.9	7.3	0.2	0.8	7.0	0.3
LnGrp Delay(d),s/veh	34.4	27.1	30.4	32.9	26.4	30.5	30.2	17.1	11.5	33.1	18.4	12.8
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		94			181			1064			948	
Approach Delay, s/veh		30.7			30.3			18.2			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	35.4	9.2	14.3	10.8	33.5	7.6	15.9
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	3.5	16.2	3.7	4.3	3.9	15.7	2.8	5.8
Green Ext Time (p_c), s	0.0	11.5	0.0	0.6	0.1	11.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	74	47	134	103	943	18	40	883	25
v/c Ratio	0.14	0.18	0.30	0.24	0.33	0.51	0.02	0.26	0.55	0.03
Control Delay	39.1	14.8	40.6	13.2	38.1	16.3	0.1	40.1	18.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	14.8	40.6	13.2	38.1	16.3	0.1	40.1	18.4	0.1
Queue Length 50th (ft)	10	3	23	7	26	187	0	20	174	0
Queue Length 95th (ft)	32	24	57	35	52	283	0	51	261	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	575	1728	575	1770	1116	1867	885	575	1610	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.08	0.08	0.09	0.51	0.02	0.07	0.55	0.03

Intersection Summary

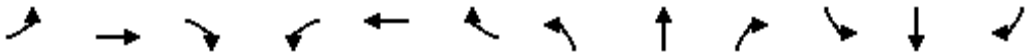
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	356	106	218	465	79	217	942	64	129	511	156
Future Volume (veh/h)	268	356	106	218	465	79	217	942	64	129	511	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	291	387	115	237	505	86	236	1024	70	140	555	170
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	776	347	254	776	347	303	1180	528	203	1078	482
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.09	0.33	0.33	0.06	0.30	0.30
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	291	387	115	237	505	86	236	1024	70	140	555	170
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	15.0	10.0	6.4	13.8	13.6	4.7	7.0	28.4	3.2	4.2	13.6	8.8
Cycle Q Clear(g_c), s	15.0	10.0	6.4	13.8	13.6	4.7	7.0	28.4	3.2	4.2	13.6	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	776	347	254	776	347	303	1180	528	203	1078	482
V/C Ratio(X)	1.15	0.50	0.33	0.93	0.65	0.25	0.78	0.87	0.13	0.69	0.51	0.35
Avail Cap(c_a), veh/h	254	1418	634	254	1317	589	493	1216	544	493	1249	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	35.9	34.5	44.4	37.3	33.8	46.8	32.8	24.4	48.4	30.1	28.4
Incr Delay (d2), s/veh	101.7	1.4	1.6	38.3	2.7	1.1	1.7	8.2	0.4	1.6	1.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	5.0	3.0	9.5	7.0	2.2	3.4	15.1	1.5	2.0	6.8	4.0
LnGrp Delay(d),s/veh	146.6	37.3	36.1	82.7	39.9	34.9	48.5	41.0	24.8	49.9	31.4	30.0
LnGrp LOS	F	D	D	F	D	C	D	D	C	D	C	C
Approach Vol, veh/h		793			828			1330			865	
Approach Delay, s/veh		77.2			51.7			41.5			34.1	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	42.4	20.7	29.8	14.9	39.4	20.7	29.8
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	6.2	30.4	15.8	12.0	9.0	15.6	17.0	15.6
Green Ext Time (p_c), s	0.1	4.5	0.0	6.6	0.2	9.0	0.0	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	291	387	115	237	505	86	236	1024	70	140	555	170
v/c Ratio	1.20	0.52	0.26	0.98	0.67	0.20	0.64	0.87	0.12	0.50	0.51	0.28
Control Delay	163.0	40.7	6.3	100.2	44.4	2.8	56.0	44.5	0.9	55.3	34.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	163.0	40.7	6.3	100.2	44.4	2.8	56.0	44.5	0.9	55.3	34.1	6.1
Queue Length 50th (ft)	~244	126	0	166	171	0	82	350	0	48	166	0
Queue Length 95th (ft)	#469	181	38	#367	237	14	132	#542	4	86	251	52
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	243	1365	690	243	1365	690	473	1203	619	473	1203	650
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.28	0.17	0.98	0.37	0.12	0.50	0.85	0.11	0.30	0.46	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.

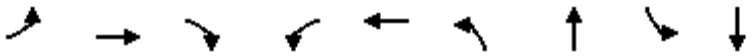
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	150	222	63	117	27	220	1097	32	45	835	117
Future Volume (veh/h)	163	150	222	63	117	27	220	1097	32	45	835	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	177	163	241	68	127	29	239	1192	35	49	908	127
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	360	306	94	187	43	275	1531	45	82	1038	145
Arrive On Green	0.12	0.19	0.19	0.05	0.13	0.13	0.16	0.44	0.44	0.05	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	1468	335	1774	3511	103	1774	3119	436
Grp Volume(v), veh/h	177	163	241	68	0	156	239	601	626	49	515	520
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1804	1774	1770	1845	1774	1770	1786
Q Serve(g_s), s	9.1	7.2	13.5	3.5	0.0	7.7	12.3	27.0	27.1	2.5	25.6	25.6
Cycle Q Clear(g_c), s	9.1	7.2	13.5	3.5	0.0	7.7	12.3	27.0	27.1	2.5	25.6	25.6
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.06	1.00		0.24
Lane Grp Cap(c), veh/h	212	360	306	94	0	229	275	772	804	82	589	594
V/C Ratio(X)	0.83	0.45	0.79	0.72	0.00	0.68	0.87	0.78	0.78	0.60	0.88	0.88
Avail Cap(c_a), veh/h	452	561	477	452	0	579	462	772	804	452	606	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	33.3	35.8	43.5	0.0	38.9	38.5	22.5	22.5	43.7	29.3	29.3
Incr Delay (d2), s/veh	3.3	1.8	8.9	3.8	0.0	7.0	4.5	6.5	6.3	2.6	15.2	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.9	6.7	1.8	0.0	4.3	6.4	14.6	15.2	1.3	14.9	15.1
LnGrp Delay(d),s/veh	43.5	35.1	44.7	47.3	0.0	46.0	43.0	29.0	28.8	46.3	44.5	44.4
LnGrp LOS	D	D	D	D		D	D	C	C	D	D	D
Approach Vol, veh/h		581			224			1466			1084	
Approach Delay, s/veh		41.6			46.4			31.2			44.5	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	48.2	10.7	24.5	19.7	38.6	16.9	18.3
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	4.5	29.1	5.5	15.5	14.3	27.6	11.1	9.7
Green Ext Time (p_c), s	0.0	3.1	0.1	2.5	0.2	3.5	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	177	163	241	68	156	239	1227	49	1035
v/c Ratio	0.71	0.37	0.45	0.47	0.56	0.78	0.81	0.38	0.98
Control Delay	61.2	39.5	10.2	61.3	50.2	62.1	34.8	60.4	62.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	39.5	10.2	61.3	50.2	62.1	34.8	60.4	62.5
Queue Length 50th (ft)	118	98	16	46	96	158	396	33	372
Queue Length 95th (ft)	212	175	87	102	181	281	#680	80	#671
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	396	535	606	396	517	404	1517	396	1055
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	0.45	0.30	0.40	0.17	0.30	0.59	0.81	0.12	0.98

Intersection Summary

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

Intersection	
Int Delay, s/veh	21.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	6	24	91	9	39	17	400	78	60	705	2
Future Vol, veh/h	5	6	24	91	9	39	17	400	78	60	705	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	7	26	99	10	42	18	435	85	65	766	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1437	1453	767	1428	1412	478	768	0	0	520	0	0
Stage 1	897	897	-	514	514	-	-	-	-	-	-	-
Stage 2	540	556	-	914	898	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	130	402	113	138	587	846	-	-	1046	-	-
Stage 1	334	358	-	543	535	-	-	-	-	-	-	-
Stage 2	526	513	-	327	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	91	119	402	~ 95	127	587	846	-	-	1046	-	-
Mov Cap-2 Maneuver	91	119	-	~ 95	127	-	-	-	-	-	-	-
Stage 1	327	336	-	532	524	-	-	-	-	-	-	-
Stage 2	469	502	-	281	336	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.7	206.4	0.3	0.7
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	846	-	-	212	127	1046	-	-
HCM Lane V/C Ratio	0.022	-	-	0.179	1.19	0.062	-	-
HCM Control Delay (s)	9.3	-	-	25.7	206.4	8.7	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	9.2	0.2	-	-

Notes

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

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	59	20	487	796	82
Future Vol, veh/h	66	59	20	487	796	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	64	22	529	865	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1438	865	865	0	-	0
Stage 1	865	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	147	353	778	-	-	0
Stage 1	412	-	-	-	-	0
Stage 2	564	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	141	353	778	-	-	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	564	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.7	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	778	-	267	-
HCM Lane V/C Ratio	0.028	-	0.509	-
HCM Control Delay (s)	9.8	0	31.7	-
HCM Lane LOS	A	A	D	-
HCM 95th %tile Q(veh)	0.1	-	2.7	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	17	21	515	843	5
Future Vol, veh/h	3	17	21	515	843	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	18	23	560	916	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1522	458	921	0	-	0
Stage 1	916	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	119	551	739	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	115	551	739	-	-	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	340	-	-	-	-	-
Stage 2	544	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	739	-	115	551	-	-
HCM Lane V/C Ratio	0.031	-	0.028	0.034	-	-
HCM Control Delay (s)	10	-	37.2	11.8	-	-
HCM Lane LOS	B	-	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-

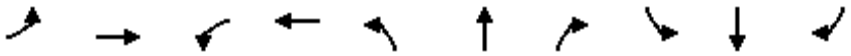
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	142	101	82	136	80	55	422	85	77	777	17
Future Volume (veh/h)	18	142	101	82	136	80	55	422	85	77	777	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	154	110	89	148	87	60	459	92	84	845	18
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	280	188	126	398	222	204	1299	581	123	1335	597
Arrive On Green	0.03	0.14	0.14	0.07	0.18	0.18	0.06	0.37	0.37	0.07	0.38	0.38
Sat Flow, veh/h	1774	2029	1363	1774	2195	1221	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	133	131	89	118	117	60	459	92	84	845	18
Grp Sat Flow(s),veh/h/ln	1774	1770	1622	1774	1770	1647	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.8	4.9	5.3	3.4	4.0	4.4	1.2	6.5	2.7	3.2	13.6	0.5
Cycle Q Clear(g_c), s	0.8	4.9	5.3	3.4	4.0	4.4	1.2	6.5	2.7	3.2	13.6	0.5
Prop In Lane	1.00		0.84	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	244	224	126	321	299	204	1299	581	123	1335	597
V/C Ratio(X)	0.41	0.54	0.58	0.71	0.37	0.39	0.29	0.35	0.16	0.68	0.63	0.03
Avail Cap(c_a), veh/h	639	1071	982	639	969	902	1240	1785	799	639	1785	799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	27.9	28.0	31.5	24.9	25.0	31.2	16.0	14.8	31.5	17.7	13.6
Incr Delay (d2), s/veh	2.0	5.4	6.9	2.7	2.0	2.4	0.3	0.6	0.5	2.5	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	2.8	1.8	2.1	2.2	0.6	3.3	1.2	1.6	6.9	0.2
LnGrp Delay(d),s/veh	35.2	33.3	34.9	34.2	26.9	27.5	31.5	16.6	15.2	34.0	19.5	13.7
LnGrp LOS	D	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		284			324			611			947	
Approach Delay, s/veh		34.2			29.1			17.8			20.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	32.3	10.6	16.0	9.8	33.0	7.6	19.0
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	5.2	8.5	5.4	7.3	3.2	15.6	2.8	6.4
Green Ext Time (p_c), s	0.1	5.8	0.1	2.3	0.1	10.6	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	264	89	235	60	459	92	84	845	18
v/c Ratio	0.15	0.45	0.46	0.28	0.22	0.32	0.13	0.44	0.55	0.02
Control Delay	43.0	22.7	45.8	19.3	41.9	21.1	4.4	45.7	21.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	22.7	45.8	19.3	41.9	21.1	4.4	45.7	21.9	0.1
Queue Length 50th (ft)	10	40	47	32	16	92	0	44	184	0
Queue Length 95th (ft)	35	81	99	74	38	163	27	94	293	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	551	1788	551	1785	1069	1543	751	551	1543	751
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.15	0.16	0.13	0.06	0.30	0.12	0.15	0.55	0.02

Intersection Summary

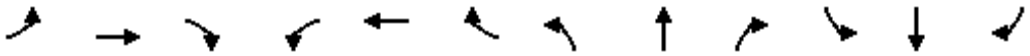
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	458	242	156	381	51	147	470	48	110	609	129
Future Volume (veh/h)	211	458	242	156	381	51	147	470	48	110	609	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	229	498	263	170	414	55	160	511	52	120	662	140
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	941	421	203	825	369	230	1032	462	207	1008	451
Arrive On Green	0.15	0.27	0.27	0.11	0.23	0.23	0.07	0.29	0.29	0.06	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	229	498	263	170	414	55	160	511	52	120	662	140
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	12.1	11.5	14.0	9.0	9.7	2.6	4.4	11.5	2.3	3.3	15.8	6.7
Cycle Q Clear(g_c), s	12.1	11.5	14.0	9.0	9.7	2.6	4.4	11.5	2.3	3.3	15.8	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	941	421	203	825	369	230	1032	462	207	1008	451
V/C Ratio(X)	0.88	0.53	0.62	0.84	0.50	0.15	0.70	0.50	0.11	0.58	0.66	0.31
Avail Cap(c_a), veh/h	278	1550	694	278	1440	644	538	1329	594	538	1366	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	30.1	31.0	41.6	31.9	29.2	43.8	28.1	24.9	43.9	30.2	26.9
Incr Delay (d2), s/veh	23.3	1.3	4.4	11.4	1.4	0.5	1.4	1.3	0.4	1.0	2.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	5.8	6.6	5.0	4.9	1.2	2.1	5.8	1.1	1.6	8.1	3.1
LnGrp Delay(d),s/veh	63.3	31.4	35.4	52.9	33.3	29.8	45.2	29.5	25.3	44.9	32.8	28.3
LnGrp LOS	E	C	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		990			639			723			922	
Approach Delay, s/veh		39.8			38.2			32.6			33.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	35.5	16.7	32.3	12.1	34.8	19.8	29.1
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	5.3	13.5	11.0	16.0	6.4	17.8	14.1	11.7
Green Ext Time (p_c), s	0.1	7.5	0.1	9.5	0.1	9.5	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	36.2
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	229	498	263	170	414	55	160	511	52	120	662	140
v/c Ratio	0.85	0.60	0.46	0.71	0.53	0.12	0.50	0.50	0.10	0.43	0.68	0.26
Control Delay	73.4	38.8	7.1	61.0	38.1	0.6	51.7	32.4	0.4	51.9	37.1	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	38.8	7.1	61.0	38.1	0.6	51.7	32.4	0.4	51.9	37.1	6.5
Queue Length 50th (ft)	148	153	0	106	124	0	52	144	0	39	200	0
Queue Length 95th (ft)	#358	236	65	#244	195	0	97	220	0	77	298	47
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	268	1501	823	268	1501	745	520	1333	673	520	1322	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.33	0.32	0.63	0.28	0.07	0.31	0.38	0.08	0.23	0.50	0.21

Intersection Summary

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

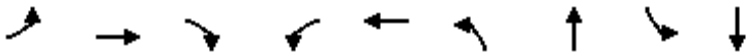
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	117	405	80	74	57	86	641	37	30	1155	79
Future Volume (veh/h)	147	117	405	80	74	57	86	641	37	30	1155	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	160	127	440	87	80	62	93	697	40	33	1255	86
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	536	456	112	236	183	119	1203	69	64	1102	75
Arrive On Green	0.11	0.29	0.29	0.06	0.24	0.24	0.07	0.35	0.35	0.04	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	974	755	1774	3403	195	1774	3362	230
Grp Volume(v), veh/h	160	127	440	87	0	142	93	362	375	33	660	681
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1729	1774	1770	1828	1774	1770	1822
Q Serve(g_s), s	8.6	5.1	26.7	4.7	0.0	6.6	5.0	16.2	16.3	1.8	32.0	32.0
Cycle Q Clear(g_c), s	8.6	5.1	26.7	4.7	0.0	6.6	5.0	16.2	16.3	1.8	32.0	32.0
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	193	536	456	112	0	419	119	626	646	64	580	597
V/C Ratio(X)	0.83	0.24	0.97	0.78	0.00	0.34	0.78	0.58	0.58	0.51	1.14	1.14
Avail Cap(c_a), veh/h	433	536	456	433	0	532	442	626	646	433	580	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	26.6	34.3	45.1	0.0	30.5	44.8	25.6	25.7	46.2	32.8	32.8
Incr Delay (d2), s/veh	3.4	0.5	33.5	4.3	0.0	1.0	4.2	2.8	2.7	2.3	81.2	82.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	2.7	15.9	2.5	0.0	3.3	2.6	8.4	8.7	0.9	28.6	29.5
LnGrp Delay(d),s/veh	46.0	27.0	67.8	49.4	0.0	31.5	49.0	28.4	28.4	48.5	114.0	114.9
LnGrp LOS	D	C	E	D		C	D	C	C	D	F	F
Approach Vol, veh/h		727			229			830			1374	
Approach Delay, s/veh		55.9			38.3			30.7			112.8	
Approach LOS		E			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	42.0	11.9	34.5	11.7	39.5	16.3	30.0
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	3.8	18.3	6.7	28.7	7.0	34.0	10.6	8.6
Green Ext Time (p_c), s	0.0	7.1	0.1	0.0	0.1	0.0	0.2	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	72.8
HCM 2010 LOS	E

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	127	440	87	142	93	737	33	1341
v/c Ratio	0.64	0.30	0.63	0.48	0.50	0.50	0.50	0.25	1.07
Control Delay	51.1	35.7	8.1	51.6	37.3	51.6	23.6	49.4	76.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	35.7	8.1	51.6	37.3	51.6	23.6	49.4	76.2
Queue Length 50th (ft)	90	66	0	49	63	53	173	19	~476
Queue Length 95th (ft)	173	130	87	109	136	114	292	54	#794
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	471	626	824	471	603	481	1470	471	1259
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	0.34	0.20	0.53	0.18	0.24	0.19	0.50	0.07	1.07

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.

Intersection	
Int Delay, s/veh	15.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	15	51	6	39	35	777	79	21	726	8
Future Vol, veh/h	2	2	15	51	6	39	35	777	79	21	726	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	16	55	7	42	38	845	86	23	789	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1829	1847	794	1813	1808	888	798	0	0	931	0	0
Stage 1	840	840	-	964	964	-	-	-	-	-	-	-
Stage 2	989	1007	-	849	844	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	59	75	388	61	79	343	824	-	-	735	-	-
Stage 1	360	381	-	307	334	-	-	-	-	-	-	-
Stage 2	297	319	-	356	379	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	45	69	388	~ 54	73	343	824	-	-	735	-	-
Mov Cap-2 Maneuver	45	69	-	~ 54	73	-	-	-	-	-	-	-
Stage 1	343	369	-	293	319	-	-	-	-	-	-	-
Stage 2	243	304	-	328	367	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.1	266.5	0.4	0.3
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	824	-	-	170	84	735	-	-
HCM Lane V/C Ratio	0.046	-	-	0.121	1.242	0.031	-	-
HCM Control Delay (s)	9.6	-	-	29.1	266.5	10.1	-	-
HCM Lane LOS	A	-	-	D	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	7.7	0.1	-	-

Notes

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

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	40	37	869	847	64
Future Vol, veh/h	55	40	37	869	847	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	43	40	945	921	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1946	921	921	0	-	0
Stage 1	921	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	71	328	741	-	-	0
Stage 1	388	-	-	-	-	0
Stage 2	346	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	63	328	741	-	-	-
Mov Cap-2 Maneuver	63	-	-	-	-	-
Stage 1	344	-	-	-	-	-
Stage 2	346	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	169.9	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	741	-	102	-
HCM Lane V/C Ratio	0.054	-	1.012	-
HCM Control Delay (s)	10.1	0	169.9	-
HCM Lane LOS	B	A	F	-
HCM 95th %tile Q(veh)	0.2	-	6.3	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	67	116	884	856	18
Future Vol, veh/h	5	67	116	884	856	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	73	126	961	930	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2143	465	950	0	-	0
Stage 1	930	-	-	-	-	-
Stage 2	1213	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	47	545	721	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	39	545	721	-	-	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	285	-	-	-	-	-
Stage 2	280	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.5	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	721	-	39	545	-	-
HCM Lane V/C Ratio	0.175	-	0.139	0.134	-	-
HCM Control Delay (s)	11	-	111.7	12.6	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.4	0.5	-	-

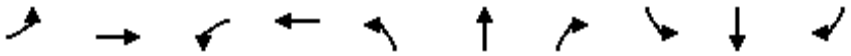
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	135	54	119	156	134	95	868	93	82	812	23
Future Volume (veh/h)	18	135	54	119	156	134	95	868	93	82	812	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	147	59	129	170	146	103	943	101	89	883	25
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	275	106	166	328	264	248	1381	618	122	1369	613
Arrive On Green	0.03	0.11	0.11	0.09	0.18	0.18	0.07	0.39	0.39	0.07	0.39	0.39
Sat Flow, veh/h	1774	2499	963	1774	1865	1503	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	102	104	129	161	155	103	943	101	89	883	25
Grp Sat Flow(s),veh/h/ln	1774	1770	1693	1774	1770	1598	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.8	4.0	4.2	5.2	6.0	6.5	2.1	16.1	3.0	3.6	14.8	0.7
Cycle Q Clear(g_c), s	0.8	4.0	4.2	5.2	6.0	6.5	2.1	16.1	3.0	3.6	14.8	0.7
Prop In Lane	1.00		0.57	1.00		0.94	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	194	186	166	311	281	248	1381	618	122	1369	613
V/C Ratio(X)	0.41	0.53	0.56	0.78	0.52	0.55	0.41	0.68	0.16	0.73	0.64	0.04
Avail Cap(c_a), veh/h	609	1020	976	609	923	833	1181	1701	761	609	1701	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	30.6	30.7	32.3	27.2	27.4	32.3	18.5	14.5	33.2	18.2	13.9
Incr Delay (d2), s/veh	2.1	6.3	7.4	3.0	3.8	4.9	0.4	2.2	0.4	3.1	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	2.4	2.7	3.3	3.2	1.0	8.3	1.4	1.9	7.6	0.3
LnGrp Delay(d),s/veh	36.9	36.9	38.2	35.3	31.0	32.3	32.7	20.7	14.9	36.4	20.1	14.0
LnGrp LOS	D	D	D	D	C	C	C	C	B	D	C	B
Approach Vol, veh/h		226			445			1147			997	
Approach Delay, s/veh		37.5			32.7			21.3			21.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	35.2	12.5	14.4	11.0	35.0	7.7	19.2
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.4	* 5.7	6.8	* 5.7	6.4
Max Green Setting (Gmax), s	* 25	35.0	* 25	42.0	* 25	35.0	* 25	38.0
Max Q Clear Time (g_c+I1), s	5.6	18.1	7.2	6.2	4.1	16.8	2.8	8.5
Green Ext Time (p_c), s	0.1	10.3	0.2	1.8	0.1	10.5	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	206	129	316	103	943	101	89	883	25
v/c Ratio	0.17	0.42	0.60	0.32	0.37	0.66	0.14	0.51	0.63	0.04
Control Delay	47.6	33.1	51.9	16.9	46.5	27.8	5.0	51.4	26.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	33.1	51.9	16.9	46.5	27.8	5.0	51.4	26.1	0.1
Queue Length 50th (ft)	11	47	73	38	30	243	0	50	214	0
Queue Length 95th (ft)	38	90	141	89	61	386	33	106	335	0
Internal Link Dist (ft)		393		313		391			328	
Turn Bay Length (ft)	300		235		252		260	305		265
Base Capacity (vph)	476	1554	476	1568	924	1434	705	476	1403	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.13	0.27	0.20	0.11	0.66	0.14	0.19	0.63	0.04

Intersection Summary

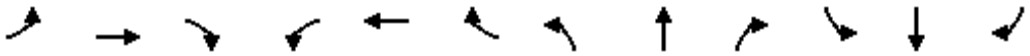
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	356	106	218	465	79	217	1018	64	129	587	156
Future Volume (veh/h)	268	356	106	218	465	79	217	1018	64	129	587	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	291	387	115	237	505	86	236	1107	70	140	638	170
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	773	346	252	773	346	302	1196	535	203	1094	489
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.09	0.34	0.34	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	291	387	115	237	505	86	236	1107	70	140	638	170
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	15.0	10.1	6.5	14.0	13.8	4.7	7.1	31.9	3.2	4.2	16.1	8.8
Cycle Q Clear(g_c), s	15.0	10.1	6.5	14.0	13.8	4.7	7.1	31.9	3.2	4.2	16.1	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	773	346	252	773	346	302	1196	535	203	1094	489
V/C Ratio(X)	1.16	0.50	0.33	0.94	0.65	0.25	0.78	0.93	0.13	0.69	0.58	0.35
Avail Cap(c_a), veh/h	252	1406	629	252	1305	584	488	1205	539	488	1238	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	45.4	36.3	34.8	44.9	37.7	34.2	47.2	33.7	24.3	48.8	30.8	28.3
Incr Delay (d2), s/veh	105.7	1.5	1.6	40.6	2.7	1.1	1.7	13.0	0.4	1.6	1.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	5.1	3.0	9.7	7.0	2.2	3.4	17.7	1.5	2.0	8.1	4.0
LnGrp Delay(d),s/veh	151.0	37.7	36.5	85.5	40.4	35.2	48.9	46.8	24.7	50.4	32.6	29.8
LnGrp LOS	F	D	D	F	D	D	D	D	C	D	C	C
Approach Vol, veh/h		793			828			1413			948	
Approach Delay, s/veh		79.1			52.8			46.0			34.7	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	43.2	20.7	29.9	15.0	40.2	20.7	29.9
Change Period (Y+Rc), s	* 5.7	7.5	* 5.7	6.8	* 5.7	7.5	* 5.7	6.8
Max Green Setting (Gmax), s	* 15	36.0	* 15	42.0	* 15	37.0	* 15	39.0
Max Q Clear Time (g_c+I1), s	6.2	33.9	16.0	12.1	9.1	18.1	17.0	15.8
Green Ext Time (p_c), s	0.1	1.9	0.0	6.5	0.2	9.4	0.0	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	51.3
HCM 2010 LOS	D

Notes

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

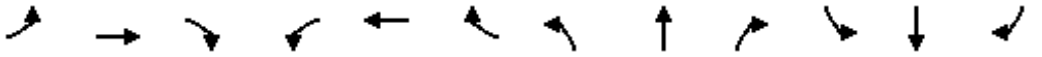


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	291	387	115	237	505	86	236	1107	70	140	638	170
v/c Ratio	1.20	0.52	0.26	0.98	0.67	0.20	0.65	0.93	0.11	0.50	0.58	0.28
Control Delay	165.8	41.1	6.4	102.1	44.8	2.8	56.6	51.1	0.8	55.9	35.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	165.8	41.1	6.4	102.1	44.8	2.8	56.6	51.1	0.8	55.9	35.5	6.0
Queue Length 50th (ft)	~245	126	0	166	171	0	82	392	0	48	197	0
Queue Length 95th (ft)	#483	186	38	#380	245	13	136	#603	4	88	292	51
Internal Link Dist (ft)		356			359			374			504	
Turn Bay Length (ft)	260		305	280		300	370		190	375		330
Base Capacity (vph)	242	1356	686	242	1356	686	470	1211	622	470	1195	647
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.29	0.17	0.98	0.37	0.13	0.50	0.91	0.11	0.30	0.53	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.



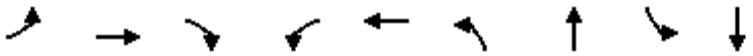
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	150	222	63	117	27	220	1158	32	45	896	133
Future Volume (veh/h)	179	150	222	63	117	27	220	1158	32	45	896	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	195	163	241	68	127	29	239	1259	35	49	974	145
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	363	309	94	173	40	275	1546	43	81	1038	155
Arrive On Green	0.13	0.20	0.20	0.05	0.12	0.12	0.15	0.44	0.44	0.05	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	1774	1468	335	1774	3517	98	1774	3091	460
Grp Volume(v), veh/h	195	163	241	68	0	156	239	633	661	49	557	562
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1804	1774	1770	1845	1774	1770	1782
Q Serve(g_s), s	10.2	7.3	13.7	3.6	0.0	7.9	12.5	29.6	29.7	2.6	29.0	29.0
Cycle Q Clear(g_c), s	10.2	7.3	13.7	3.6	0.0	7.9	12.5	29.6	29.7	2.6	29.0	29.0
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	230	363	309	94	0	213	275	778	811	81	594	599
V/C Ratio(X)	0.85	0.45	0.78	0.73	0.00	0.73	0.87	0.81	0.81	0.60	0.94	0.94
Avail Cap(c_a), veh/h	445	552	469	445	0	571	455	778	811	445	597	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	33.7	36.2	44.2	0.0	40.4	39.1	23.2	23.2	44.4	30.5	30.5
Incr Delay (d2), s/veh	3.3	1.8	8.7	4.0	0.0	9.5	5.2	8.1	7.8	2.6	23.6	23.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	3.9	6.7	1.9	0.0	4.5	6.5	16.2	16.8	1.3	18.0	18.1
LnGrp Delay(d),s/veh	43.7	35.4	44.9	48.2	0.0	49.9	44.3	31.3	31.0	47.0	54.1	54.2
LnGrp LOS	D	D	D	D		D	D	C	C	D	D	D
Approach Vol, veh/h		599			224			1533			1168	
Approach Delay, s/veh		41.9			49.4			33.2			53.9	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	49.2	10.7	24.9	19.9	39.4	18.0	17.6
Change Period (Y+Rc), s	* 5.7	* 7.5	* 5.7	6.4	* 5.2	7.5	* 5.7	6.4
Max Green Setting (Gmax), s	* 24	* 33	* 24	28.1	* 24	32.0	* 24	30.0
Max Q Clear Time (g_c+I1), s	4.6	31.7	5.6	15.7	14.5	31.0	12.2	9.9
Green Ext Time (p_c), s	0.0	1.0	0.1	2.5	0.2	0.9	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	42.6
HCM 2010 LOS	D

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	195	163	241	68	156	239	1294	49	1119
v/c Ratio	0.74	0.36	0.44	0.47	0.57	0.78	0.86	0.38	1.07
Control Delay	62.6	39.1	10.0	62.1	50.9	62.9	38.1	61.2	88.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	39.1	10.0	62.1	50.9	62.9	38.1	61.2	88.1
Queue Length 50th (ft)	132	98	16	47	98	161	441	34	~467
Queue Length 95th (ft)	232	175	86	102	183	#284	#748	81	#756
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	392	530	603	392	511	400	1503	392	1041
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	0.50	0.31	0.40	0.17	0.31	0.60	0.86	0.13	1.07

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	551	40	29	390	59	15	88	42	5	104	72
Future Volume (veh/h)	97	551	40	29	390	59	15	88	42	5	104	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	105	599	43	32	424	64	16	96	46	5	113	78
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	657	47	62	541	82	95	394	171	70	351	235
Arrive On Green	0.08	0.38	0.38	0.04	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1774	1718	123	1774	1582	239	69	1160	505	12	1033	690
Grp Volume(v), veh/h	105	0	642	32	0	488	158	0	0	196	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1841	1774	0	1821	1734	0	0	1735	0	0
Q Serve(g_s), s	3.2	0.0	18.4	1.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	18.4	1.0	0.0	13.4	3.6	0.0	0.0	4.7	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.13	0.10		0.29	0.03		0.40
Lane Grp Cap(c), veh/h	135	0	705	62	0	622	660	0	0	656	0	0
V/C Ratio(X)	0.78	0.00	0.91	0.51	0.00	0.78	0.24	0.00	0.00	0.30	0.00	0.00
Avail Cap(c_a), veh/h	207	0	744	163	0	690	660	0	0	656	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.3	0.0	16.3	26.4	0.0	16.5	13.3	0.0	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	9.8	0.0	15.0	6.4	0.0	5.4	0.9	0.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	12.2	0.6	0.0	7.6	1.9	0.0	0.0	2.4	0.0	0.0
LnGrp Delay(d),s/veh	35.0	0.0	31.2	32.8	0.0	21.8	14.2	0.0	0.0	14.8	0.0	0.0
LnGrp LOS	D		C	C		C	B			B		
Approach Vol, veh/h		747			520			158			196	
Approach Delay, s/veh		31.8			22.5			14.2			14.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.4	6.5	25.8		23.4	8.7	23.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		18.9	5.1	22.5		18.9	6.5	21.1
Max Q Clear Time (g_c+I1), s		5.6	3.0	20.4		6.7	5.2	15.4
Green Ext Time (p_c), s		0.7	0.0	0.9		0.8	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	105	642	32	488	158	196
v/c Ratio	0.53	0.80	0.20	0.76	0.26	0.31
Control Delay	36.3	25.7	28.7	25.8	13.4	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	25.7	28.7	25.8	13.4	12.7
Queue Length 50th (ft)	37	148	11	147	32	37
Queue Length 95th (ft)	#90	#409	34	#283	71	81
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	206	845	162	700	610	633
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	0.51	0.76	0.20	0.70	0.26	0.31

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	471	21	70	588	15	17	73	54	4	61	66
Future Volume (veh/h)	106	471	21	70	588	15	17	73	54	4	61	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	115	512	23	76	639	16	18	79	59	4	66	72
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	725	33	104	698	17	92	306	203	63	260	271
Arrive On Green	0.08	0.41	0.41	0.06	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	1769	79	1774	1809	45	86	974	645	12	828	864
Grp Volume(v), veh/h	115	0	535	76	0	655	156	0	0	142	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1849	1774	0	1855	1706	0	0	1704	0	0
Q Serve(g_s), s	3.9	0.0	14.9	2.6	0.0	20.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	14.9	2.6	0.0	20.8	4.2	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.12		0.38	0.03		0.51
Lane Grp Cap(c), veh/h	147	0	758	104	0	716	600	0	0	595	0	0
V/C Ratio(X)	0.78	0.00	0.71	0.73	0.00	0.92	0.26	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	186	0	801	146	0	761	600	0	0	595	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.9	0.0	15.2	28.7	0.0	18.1	16.1	0.0	0.0	15.9	0.0	0.0
Incr Delay (d2), s/veh	15.4	0.0	2.7	10.7	0.0	15.2	1.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	8.1	1.6	0.0	13.6	2.2	0.0	0.0	2.0	0.0	0.0
LnGrp Delay(d),s/veh	43.3	0.0	17.9	39.4	0.0	33.3	17.1	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	D		B	D		C	B			B		
Approach Vol, veh/h		650			731			156			142	
Approach Delay, s/veh		22.4			33.9			17.1			16.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		24.0	8.2	30.0		24.0	9.6	28.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		19.5	5.1	26.9		19.5	6.5	25.5
Max Q Clear Time (g_c+I1), s		6.2	4.6	16.9		5.9	5.9	22.8
Green Ext Time (p_c), s		0.6	0.0	2.5		0.6	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	115	535	76	655	156	142
v/c Ratio	0.61	0.71	0.51	0.91	0.27	0.23
Control Delay	44.5	21.6	42.7	37.7	14.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	21.6	42.7	37.7	14.0	10.8
Queue Length 50th (ft)	45	166	30	235	32	20
Queue Length 95th (ft)	#112	271	#81	#433	73	58
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	192	833	150	789	586	610
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	0.60	0.64	0.51	0.83	0.27	0.23

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	572	42	30	405	61	16	106	44	5	123	90
Future Volume (veh/h)	116	572	42	30	405	61	16	106	44	5	123	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	126	622	46	33	440	66	17	115	48	5	134	98
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	702	52	63	560	84	89	391	150	66	326	232
Arrive On Green	0.09	0.41	0.41	0.04	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	1714	127	1774	1583	238	67	1208	464	10	1006	716
Grp Volume(v), veh/h	126	0	668	33	0	506	180	0	0	237	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1840	1774	0	1821	1739	0	0	1731	0	0
Q Serve(g_s), s	4.1	0.0	19.6	1.1	0.0	14.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.1	0.0	19.6	1.1	0.0	14.5	4.4	0.0	0.0	6.2	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.13	0.09		0.27	0.02		0.41
Lane Grp Cap(c), veh/h	161	0	754	63	0	645	630	0	0	624	0	0
V/C Ratio(X)	0.78	0.00	0.89	0.52	0.00	0.79	0.29	0.00	0.00	0.38	0.00	0.00
Avail Cap(c_a), veh/h	234	0	867	155	0	777	630	0	0	624	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.0	0.0	16.0	27.7	0.0	16.9	14.8	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	10.0	0.0	10.0	6.6	0.0	4.4	1.1	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	11.9	0.6	0.0	8.0	2.3	0.0	0.0	3.3	0.0	0.0
LnGrp Delay(d),s/veh	35.9	0.0	26.0	34.3	0.0	21.3	16.0	0.0	0.0	17.2	0.0	0.0
LnGrp LOS	D		C	C		C	B			B		
Approach Vol, veh/h		794			539			180			237	
Approach Delay, s/veh		27.5			22.1			16.0			17.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.4	6.6	28.4		23.4	9.8	25.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		18.9	5.1	27.5		18.9	7.7	24.9
Max Q Clear Time (g_c+I1), s		6.4	3.1	21.6		8.2	6.1	16.5
Green Ext Time (p_c), s		0.7	0.0	2.3		1.0	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

8: Giddings Street & W Riggin Avenue

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	126	668	33	506	180	237
v/c Ratio	0.57	0.79	0.21	0.76	0.31	0.39
Control Delay	38.3	23.3	31.3	25.5	16.5	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	23.3	31.3	25.5	16.5	15.9
Queue Length 50th (ft)	46	157	12	161	44	53
Queue Length 95th (ft)	#112	#420	37	265	94	114
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	236	942	156	795	584	610
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	0.53	0.71	0.21	0.64	0.31	0.39

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	489	22	73	611	16	18	91	56	4	78	83
Future Volume (veh/h)	125	489	22	73	611	16	18	91	56	4	78	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	136	532	24	79	664	17	20	99	61	4	85	90
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	774	35	102	720	18	86	318	177	58	255	261
Arrive On Green	0.10	0.44	0.44	0.06	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	1769	80	1774	1808	46	87	1046	581	10	839	858
Grp Volume(v), veh/h	136	0	556	79	0	681	180	0	0	179	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1849	1774	0	1855	1713	0	0	1706	0	0
Q Serve(g_s), s	5.1	0.0	16.3	3.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.1	0.0	16.3	3.0	0.0	23.5	5.3	0.0	0.0	5.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.11		0.34	0.02		0.50
Lane Grp Cap(c), veh/h	172	0	809	102	0	739	581	0	0	574	0	0
V/C Ratio(X)	0.79	0.00	0.69	0.78	0.00	0.92	0.31	0.00	0.00	0.31	0.00	0.00
Avail Cap(c_a), veh/h	198	0	821	161	0	785	581	0	0	574	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.8	0.0	15.2	31.3	0.0	19.3	18.1	0.0	0.0	18.2	0.0	0.0
Incr Delay (d2), s/veh	17.3	0.0	2.4	11.9	0.0	15.7	1.4	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	8.7	1.8	0.0	15.1	2.8	0.0	0.0	2.8	0.0	0.0
LnGrp Delay(d),s/veh	47.1	0.0	17.6	43.2	0.0	35.0	19.5	0.0	0.0	19.6	0.0	0.0
LnGrp LOS	D		B	D		C	B			B		
Approach Vol, veh/h		692			760			180			179	
Approach Delay, s/veh		23.4			35.8			19.5			19.6	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.0	8.4	34.0		25.0	11.0	31.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.5	6.1	29.9		20.5	7.5	28.5
Max Q Clear Time (g_c+I1), s		7.3	5.0	18.3		7.5	7.1	25.5
Green Ext Time (p_c), s		0.8	0.0	2.8		0.8	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

8: Giddings Street & W Riggin Avenue

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	136	556	79	681	180	179
v/c Ratio	0.72	0.67	0.51	0.93	0.34	0.32
Control Delay	53.2	20.6	43.4	41.1	17.4	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	20.6	43.4	41.1	17.4	13.4
Queue Length 50th (ft)	58	187	33	265	47	34
Queue Length 95th (ft)	#140	298	#82	#473	96	80
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	193	832	157	772	536	568
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	0.70	0.67	0.50	0.88	0.34	0.32

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	625	45	32	443	67	17	112	48	5	130	94
Future Volume (veh/h)	122	625	45	32	443	67	17	112	48	5	130	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	133	679	49	35	482	73	18	122	52	5	141	102
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	737	53	65	585	89	87	373	146	63	315	222
Arrive On Green	0.10	0.43	0.43	0.04	0.37	0.37	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	1717	124	1774	1581	239	69	1196	470	9	1010	712
Grp Volume(v), veh/h	133	0	728	35	0	555	192	0	0	248	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1841	1774	0	1820	1735	0	0	1732	0	0
Q Serve(g_s), s	4.4	0.0	22.7	1.2	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	22.7	1.2	0.0	16.8	5.1	0.0	0.0	7.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.13	0.09		0.27	0.02		0.41
Lane Grp Cap(c), veh/h	170	0	790	65	0	674	606	0	0	600	0	0
V/C Ratio(X)	0.78	0.00	0.92	0.54	0.00	0.82	0.32	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	231	0	835	149	0	741	606	0	0	600	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.8	0.0	16.4	28.7	0.0	17.3	16.1	0.0	0.0	16.8	0.0	0.0
Incr Delay (d2), s/veh	11.5	0.0	15.0	6.7	0.0	6.9	1.4	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	14.6	0.7	0.0	9.6	2.7	0.0	0.0	3.7	0.0	0.0
LnGrp Delay(d),s/veh	38.3	0.0	31.4	35.4	0.0	24.3	17.5	0.0	0.0	18.9	0.0	0.0
LnGrp LOS	D		C	D		C	B			B		
Approach Vol, veh/h		861			590			192			248	
Approach Delay, s/veh		32.5			24.9			17.5			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.4	6.7	30.5		23.4	10.3	26.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		18.9	5.1	27.5		18.9	7.9	24.7
Max Q Clear Time (g_c+I1), s		7.1	3.2	24.7		9.0	6.4	18.8
Green Ext Time (p_c), s		0.8	0.0	1.4		1.0	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	133	728	35	555	192	248
v/c Ratio	0.60	0.82	0.23	0.79	0.34	0.42
Control Delay	40.5	25.6	32.2	27.2	17.2	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	25.6	32.2	27.2	17.2	16.8
Queue Length 50th (ft)	51	181	13	184	50	61
Queue Length 95th (ft)	#118	#478	38	#344	101	120
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	232	931	149	756	559	585
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	0.57	0.78	0.23	0.73	0.34	0.42

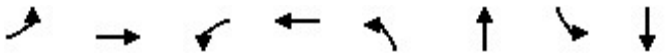
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	366	35	31	356	61	43	28	23	68	31	3
Future Volume (veh/h)	28	366	35	31	356	61	43	28	23	68	31	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	30	398	38	34	387	66	47	30	25	74	34	3
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	726	69	71	686	116	93	136	113	130	279	25
Arrive On Green	0.04	0.22	0.22	0.04	0.23	0.23	0.05	0.14	0.14	0.07	0.17	0.17
Sat Flow, veh/h	1774	3267	310	1774	3029	512	1774	941	784	1774	1688	149
Grp Volume(v), veh/h	30	215	221	34	225	228	47	0	55	74	0	37
Grp Sat Flow(s),veh/h/ln	1774	1770	1808	1774	1770	1772	1774	0	1724	1774	0	1836
Q Serve(g_s), s	0.6	3.7	3.8	0.6	3.9	4.0	0.9	0.0	1.0	1.4	0.0	0.6
Cycle Q Clear(g_c), s	0.6	3.7	3.8	0.6	3.9	4.0	0.9	0.0	1.0	1.4	0.0	0.6
Prop In Lane	1.00		0.17	1.00		0.29	1.00		0.45	1.00		0.08
Lane Grp Cap(c), veh/h	64	393	402	71	401	401	93	0	249	130	0	304
V/C Ratio(X)	0.47	0.55	0.55	0.48	0.56	0.57	0.50	0.00	0.22	0.57	0.00	0.12
Avail Cap(c_a), veh/h	256	919	939	256	919	921	256	0	921	282	0	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	11.9	11.9	16.3	11.9	11.9	16.0	0.0	13.1	15.5	0.0	12.3
Incr Delay (d2), s/veh	5.2	1.2	1.2	4.8	1.2	1.3	4.2	0.0	0.4	3.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	2.0	0.4	2.0	2.0	0.5	0.0	0.5	0.8	0.0	0.3
LnGrp Delay(d),s/veh	21.6	13.1	13.1	21.1	13.1	13.2	20.1	0.0	13.5	19.4	0.0	12.5
LnGrp LOS	C	B	B	C	B	B	C		B	B		B
Approach Vol, veh/h		466			487			102			111	
Approach Delay, s/veh		13.7			13.7			16.6			17.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	9.5	5.9	12.2	6.3	10.2	5.8	12.3
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	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.4	3.0	2.6	5.8	2.9	2.6	2.6	6.0
Green Ext Time (p_c), s	0.0	0.2	0.0	1.8	0.0	0.1	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	436	34	453	47	55	74	37
v/c Ratio	0.11	0.41	0.12	0.38	0.17	0.15	0.24	0.08
Control Delay	20.4	13.0	20.5	10.7	20.7	13.1	20.6	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	13.0	20.5	10.7	20.7	13.1	20.6	15.2
Queue Length 50th (ft)	5	33	6	33	8	5	12	3
Queue Length 95th (ft)	29	87	31	88	39	32	54	29
Internal Link Dist (ft)		286		435		296		217
Turn Bay Length (ft)	150		210				120	
Base Capacity (vph)	283	2018	283	2055	283	1105	311	1120
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	0.22	0.12	0.22	0.17	0.05	0.24	0.03

Intersection Summary

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

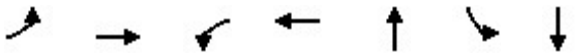
Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	466	487	102	111
Demand Flow Rate, veh/h	476	497	105	113
Vehicles Circulating, veh/h	145	110	512	478
Vehicles Exiting, veh/h	443	481	70	62
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.6	7.8	6.0	6.1
Approach LOS	A	A	A	A

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.608	0.392		0.682	0.318	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	437	39	430	67	48	31	25	75	35	3
Cap Entry Lane, veh/h	977	1054	1012	1062	677	677	698	701	701	726
Entry HV Adj Factor	0.979	0.980	0.980	0.980	0.979	0.980	0.980	0.987	0.980	0.980
Flow Entry, veh/h	428	38	421	66	47	30	25	74	34	3
Cap Entry, veh/h	957	1033	992	1041	663	664	685	691	687	711
V/C Ratio	0.447	0.037	0.425	0.063	0.071	0.046	0.037	0.107	0.050	0.004
Control Delay, s/veh	9.0	3.8	8.4	4.0	6.2	5.9	5.6	6.4	5.8	5.1
LOS	A	A	A	A	A	A	A	A	A	A
95th %tile Queue, veh	2	0	2	0	0	0	0	0	0	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	214	55	41	266	72	37	225	43	78	231	85
Future Volume (veh/h)	79	214	55	41	266	72	37	225	43	78	231	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	86	233	60	45	289	78	40	245	47	85	251	92
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	399	103	83	361	97	111	329	59	123	524	192
Arrive On Green	0.07	0.28	0.28	0.05	0.26	0.26	0.24	0.24	0.24	0.07	0.40	0.40
Sat Flow, veh/h	1774	1430	368	1774	1414	382	123	1355	244	1774	1302	477
Grp Volume(v), veh/h	86	0	293	45	0	367	332	0	0	85	0	343
Grp Sat Flow(s),veh/h/ln	1774	0	1798	1774	0	1795	1721	0	0	1774	0	1779
Q Serve(g_s), s	2.4	0.0	7.0	1.2	0.0	9.5	4.2	0.0	0.0	2.3	0.0	7.1
Cycle Q Clear(g_c), s	2.4	0.0	7.0	1.2	0.0	9.5	8.8	0.0	0.0	2.3	0.0	7.1
Prop In Lane	1.00		0.20	1.00		0.21	0.12		0.14	1.00		0.27
Lane Grp Cap(c), veh/h	124	0	501	83	0	459	499	0	0	123	0	716
V/C Ratio(X)	0.69	0.00	0.58	0.54	0.00	0.80	0.67	0.00	0.00	0.69	0.00	0.48
Avail Cap(c_a), veh/h	196	0	670	179	0	651	714	0	0	179	0	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	15.4	23.2	0.0	17.3	17.5	0.0	0.0	22.6	0.0	11.0
Incr Delay (d2), s/veh	6.8	0.0	1.1	5.5	0.0	4.7	1.5	0.0	0.0	6.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	3.6	0.7	0.0	5.3	4.5	0.0	0.0	1.4	0.0	3.5
LnGrp Delay(d),s/veh	29.3	0.0	16.5	28.7	0.0	22.0	19.0	0.0	0.0	29.3	0.0	11.5
LnGrp LOS	C		B	C		C	B			C		B
Approach Vol, veh/h		379			412			332			428	
Approach Delay, s/veh		19.4			22.8			19.0			15.0	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	8.0	16.6	6.8	18.4		24.5	8.0	17.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5		28.0	5.5	18.0
Max Q Clear Time (g_c+I1), s	4.3	10.8	3.2	9.0		9.1	4.4	11.5
Green Ext Time (p_c), s	0.0	1.2	0.0	1.2		2.0	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	86	293	45	367	332	85	343
v/c Ratio	0.42	0.49	0.24	0.71	0.69	0.46	0.46
Control Delay	36.6	20.1	31.6	28.0	28.1	39.5	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	20.1	31.6	28.0	28.1	39.5	13.6
Queue Length 50th (ft)	33	88	17	119	110	32	79
Queue Length 95th (ft)	#89	161	46	#235	#202	#93	142
Internal Link Dist (ft)		170		163	110		138
Turn Bay Length (ft)							
Base Capacity (vph)	203	746	185	693	659	185	1018
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.39	0.24	0.53	0.50	0.46	0.34

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	534	24	80	667	17	19	95	61	4	81	87
Future Volume (veh/h)	133	534	24	80	667	17	19	95	61	4	81	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	145	580	26	87	725	18	21	103	66	4	88	95
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	839	38	112	787	20	81	280	162	54	227	237
Arrive On Green	0.10	0.47	0.47	0.06	0.43	0.43	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	1769	79	1774	1810	45	90	1024	593	10	829	866
Grp Volume(v), veh/h	145	0	606	87	0	743	190	0	0	187	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1849	1774	0	1855	1708	0	0	1705	0	0
Q Serve(g_s), s	5.7	0.0	18.3	3.4	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.7	0.0	18.3	3.4	0.0	26.9	6.3	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.11		0.35	0.02		0.51
Lane Grp Cap(c), veh/h	181	0	877	112	0	807	523	0	0	518	0	0
V/C Ratio(X)	0.80	0.00	0.69	0.78	0.00	0.92	0.36	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	211	0	915	167	0	871	523	0	0	518	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.3	0.0	14.7	32.9	0.0	19.0	21.1	0.0	0.0	21.1	0.0	0.0
Incr Delay (d2), s/veh	16.9	0.0	2.1	12.6	0.0	14.3	1.9	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	9.8	2.1	0.0	16.8	3.3	0.0	0.0	3.3	0.0	0.0
LnGrp Delay(d),s/veh	48.2	0.0	16.8	45.5	0.0	33.3	23.1	0.0	0.0	23.1	0.0	0.0
LnGrp LOS	D		B	D		C	C			C		
Approach Vol, veh/h		751			830			190			187	
Approach Delay, s/veh		22.9			34.5			23.1			23.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		24.0	9.0	38.3		24.0	11.8	35.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		19.5	6.7	35.3		19.5	8.5	33.5
Max Q Clear Time (g_c+I1), s		8.3	5.4	20.3		8.4	7.7	28.9
Green Ext Time (p_c), s		0.8	0.0	3.6		0.7	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	145	606	87	743	190	187
v/c Ratio	0.72	0.67	0.55	0.92	0.40	0.37
Control Delay	54.8	19.4	47.4	38.5	21.4	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	19.4	47.4	38.5	21.4	17.0
Queue Length 50th (ft)	66	209	40	305	59	44
Queue Length 95th (ft)	#152	327	#94	#530	115	98
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	206	909	162	852	479	509
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	0.70	0.67	0.54	0.87	0.40	0.37

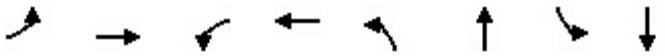
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	362	65	43	423	98	51	51	57	104	41	15
Future Volume (veh/h)	62	362	65	43	423	98	51	51	57	104	41	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	67	393	71	47	460	107	55	55	62	113	45	16
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	656	118	78	596	138	86	304	342	144	541	192
Arrive On Green	0.05	0.22	0.22	0.04	0.21	0.21	0.05	0.38	0.38	0.08	0.41	0.41
Sat Flow, veh/h	1774	3000	538	1774	2856	660	1774	801	903	1774	1313	467
Grp Volume(v), veh/h	67	230	234	47	284	283	55	0	117	113	0	61
Grp Sat Flow(s),veh/h/ln	1774	1770	1768	1774	1770	1746	1774	0	1703	1774	0	1780
Q Serve(g_s), s	2.4	7.6	7.7	1.7	9.8	10.0	2.0	0.0	3.0	4.1	0.0	1.4
Cycle Q Clear(g_c), s	2.4	7.6	7.7	1.7	9.8	10.0	2.0	0.0	3.0	4.1	0.0	1.4
Prop In Lane	1.00		0.30	1.00		0.38	1.00		0.53	1.00		0.26
Lane Grp Cap(c), veh/h	96	387	387	78	369	364	86	0	646	144	0	733
V/C Ratio(X)	0.70	0.60	0.60	0.60	0.77	0.78	0.64	0.00	0.18	0.78	0.00	0.08
Avail Cap(c_a), veh/h	136	490	490	136	490	484	136	0	646	150	0	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	30.2	22.8	22.9	30.5	24.2	24.3	30.4	0.0	13.4	29.3	0.0	11.6
Incr Delay (d2), s/veh	8.9	1.5	1.5	7.2	5.2	5.7	7.7	0.0	0.6	22.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.9	3.9	1.0	5.3	5.4	1.1	0.0	1.5	2.9	0.0	0.7
LnGrp Delay(d),s/veh	39.1	24.3	24.4	37.8	29.5	30.0	38.1	0.0	14.1	51.9	0.0	11.9
LnGrp LOS	D	C	C	D	C	C	D		B	D		B
Approach Vol, veh/h		531			614			172			174	
Approach Delay, s/veh		26.2			30.4			21.7			37.9	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	29.2	7.4	18.7	7.6	31.3	8.0	18.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	6.1	5.0	3.7	9.7	4.0	3.4	4.4	12.0
Green Ext Time (p_c), s	0.0	0.4	0.0	1.6	0.0	0.2	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	464	47	567	55	117	113	61
v/c Ratio	0.31	0.53	0.24	0.67	0.31	0.19	0.49	0.09
Control Delay	29.2	21.4	28.7	24.3	32.2	13.7	37.2	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	21.4	28.7	24.3	32.2	13.7	37.2	17.2
Queue Length 50th (ft)	25	76	17	97	20	18	41	14
Queue Length 95th (ft)	55	107	44	134	53	59	#122	44
Internal Link Dist (ft)		286		435		296		217
Turn Bay Length (ft)	150		210				120	
Base Capacity (vph)	216	1014	196	999	178	722	231	805
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	0.31	0.46	0.24	0.57	0.31	0.16	0.49	0.08

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

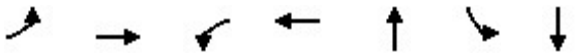
Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	531	614	172	174
Demand Flow Rate, veh/h	541	626	175	177
Vehicles Circulating, veh/h	209	180	584	573
Vehicles Exiting, veh/h	525	516	94	124
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.8	10.1	6.7	7.4
Approach LOS	A	B	A	A

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.500	0.500		0.714	0.286	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	469	72	517	109	56	56	63	115	46	16
Cap Entry Lane, veh/h	917	1029	944	998	630	630	674	637	637	668
Entry HV Adj Factor	0.981	0.980	0.980	0.980	0.982	0.980	0.980	0.983	0.980	0.980
Flow Entry, veh/h	460	71	507	107	55	55	62	113	45	16
Cap Entry, veh/h	900	1008	925	979	619	618	661	626	625	655
V/C Ratio	0.512	0.070	0.548	0.109	0.089	0.089	0.094	0.181	0.072	0.024
Control Delay, s/veh	10.7	4.2	11.2	4.7	6.8	6.8	6.5	7.9	6.6	5.8
LOS	B	A	B	A	A	A	A	A	A	A
95th %tile Queue, veh	3	0	3	0	0	0	0	1	0	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	215	39	44	371	65	50	146	50	45	151	78
Future Volume (veh/h)	73	215	39	44	371	65	50	146	50	45	151	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	234	42	48	403	71	54	159	54	49	164	85
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	458	82	79	438	77	139	372	113	80	520	270
Arrive On Green	0.06	0.30	0.30	0.04	0.28	0.28	0.34	0.34	0.34	0.05	0.45	0.45
Sat Flow, veh/h	1774	1538	276	1774	1543	272	216	1110	336	1774	1157	600
Grp Volume(v), veh/h	79	0	276	48	0	474	267	0	0	49	0	249
Grp Sat Flow(s),veh/h/ln	1774	0	1814	1774	0	1815	1662	0	0	1774	0	1757
Q Serve(g_s), s	2.9	0.0	8.2	1.7	0.0	16.5	0.4	0.0	0.0	1.8	0.0	5.9
Cycle Q Clear(g_c), s	2.9	0.0	8.2	1.7	0.0	16.5	7.6	0.0	0.0	1.8	0.0	5.9
Prop In Lane	1.00		0.15	1.00		0.15	0.20		0.20	1.00		0.34
Lane Grp Cap(c), veh/h	104	0	541	79	0	516	624	0	0	80	0	790
V/C Ratio(X)	0.76	0.00	0.51	0.61	0.00	0.92	0.43	0.00	0.00	0.61	0.00	0.32
Avail Cap(c_a), veh/h	139	0	541	139	0	517	624	0	0	136	0	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	18.9	30.5	0.0	22.5	16.9	0.0	0.0	30.5	0.0	11.5
Incr Delay (d2), s/veh	15.6	0.0	0.8	7.3	0.0	21.7	2.1	0.0	0.0	7.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	4.2	1.0	0.0	11.3	4.1	0.0	0.0	1.0	0.0	3.1
LnGrp Delay(d),s/veh	45.8	0.0	19.7	37.8	0.0	44.2	19.0	0.0	0.0	37.8	0.0	12.5
LnGrp LOS	D		B	D		D	B			D		B
Approach Vol, veh/h		355			522			267			298	
Approach Delay, s/veh		25.5			43.6			19.0			16.7	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	7.4	26.3	7.4	23.9		33.7	8.3	23.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	18.4	5.1	18.5		27.9	5.1	18.5
Max Q Clear Time (g_c+I1), s	3.8	9.6	3.7	10.2		7.9	4.9	18.5
Green Ext Time (p_c), s	0.0	1.0	0.0	1.0		1.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	79	276	48	474	267	49	249
v/c Ratio	0.57	0.48	0.35	0.92	0.43	0.35	0.29
Control Delay	47.5	21.1	35.8	48.2	19.4	36.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.5	21.1	35.8	48.2	19.4	36.0	10.6
Queue Length 50th (ft)	31	86	18	174	82	19	48
Queue Length 95th (ft)	#84	153	48	#341	151	49	95
Internal Link Dist (ft)		170		163	110		138
Turn Bay Length (ft)							
Base Capacity (vph)	138	581	138	528	622	139	848
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.48	0.35	0.90	0.43	0.35	0.29

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	6	21	81	8	34	15	350	69	52	614	2
Future Volume (veh/h)	4	6	21	81	8	34	15	350	69	52	614	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	4	7	23	88	9	37	16	380	75	57	667	2
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	54	134	209	19	49	35	916	181	91	1183	4
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.02	0.61	0.61	0.05	0.64	0.64
Sat Flow, veh/h	85	457	1132	927	163	416	1774	1512	298	1774	1856	6
Grp Volume(v), veh/h	34	0	0	134	0	0	16	0	455	57	0	669
Grp Sat Flow(s),veh/h/ln	1673	0	0	1506	0	0	1774	0	1810	1774	0	1862
Q Serve(g_s), s	0.0	0.0	0.0	4.0	0.0	0.0	0.5	0.0	7.9	1.9	0.0	12.2
Cycle Q Clear(g_c), s	1.1	0.0	0.0	5.1	0.0	0.0	0.5	0.0	7.9	1.9	0.0	12.2
Prop In Lane	0.12		0.68	0.66		0.28	1.00		0.16	1.00		0.00
Lane Grp Cap(c), veh/h	265	0	0	277	0	0	35	0	1096	91	0	1187
V/C Ratio(X)	0.13	0.00	0.00	0.48	0.00	0.00	0.46	0.00	0.41	0.63	0.00	0.56
Avail Cap(c_a), veh/h	556	0	0	541	0	0	148	0	1096	151	0	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	25.5	0.0	0.0	29.1	0.0	6.2	27.9	0.0	6.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.3	0.0	0.0	9.3	0.0	1.2	7.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	2.2	0.0	0.0	0.4	0.0	4.3	1.1	0.0	6.8
LnGrp Delay(d),s/veh	24.0	0.0	0.0	26.8	0.0	0.0	38.4	0.0	7.4	34.9	0.0	8.1
LnGrp LOS	C			C			D		A	C		A
Approach Vol, veh/h		34			134			471			726	
Approach Delay, s/veh		24.0			26.8			8.4			10.2	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	40.8		11.6	5.7	42.7		11.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.1	23.4		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	3.9	9.9		3.1	2.5	14.2		7.1
Green Ext Time (p_c), s	0.0	2.4		0.1	0.0	3.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

1: Dinuba Blvd (63) & Avenue 320

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	134	16	455	57	669
v/c Ratio	0.12	0.53	0.09	0.41	0.27	0.52
Control Delay	12.1	24.4	25.1	11.5	26.8	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	24.4	25.1	11.5	26.8	11.2
Queue Length 50th (ft)	3	34	5	98	19	92
Queue Length 95th (ft)	21	73	20	210	47	#400
Internal Link Dist (ft)	101	81		42		61
Turn Bay Length (ft)						
Base Capacity (vph)	505	443	181	1114	212	1297
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	0.07	0.30	0.09	0.41	0.27	0.52

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	34	134	471	726
Demand Flow Rate, veh/h	34	137	480	740
Vehicles Circulating, veh/h	828	408	69	115
Vehicles Exiting, veh/h	25	65	770	392
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.6	6.0	6.7	13.4
Approach LOS	A	A	A	B

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.040	0.960		0.079	0.921	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	11	23	99	38	16	388	76	58	680	2
Cap Entry Lane, veh/h	494	523	751	764	1055	1055	1059	1007	1007	1102
Entry HV Adj Factor	0.988	0.980	0.978	0.980	1.000	0.980	0.980	0.983	0.980	0.980
Flow Entry, veh/h	11	23	97	37	16	380	75	57	667	2
Cap Entry, veh/h	488	513	735	749	1055	1034	1038	990	987	1080
V/C Ratio	0.022	0.045	0.132	0.049	0.015	0.368	0.072	0.058	0.675	0.002
Control Delay, s/veh	7.7	7.6	6.3	5.3	3.5	7.3	4.1	4.1	14.2	3.3
LOS	A	A	A	A	A	A	A	A	B	A
95th %tile Queue, veh	0	0	0	0	0	2	0	0	5	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	678	49	35	480	72	18	117	52	6	138	98
Future Volume (veh/h)	129	678	49	35	480	72	18	117	52	6	138	98
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	140	737	53	38	522	78	20	127	57	7	150	107
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	799	57	68	639	95	83	338	140	61	294	203
Arrive On Green	0.10	0.47	0.47	0.04	0.40	0.40	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	1717	124	1774	1584	237	77	1167	482	14	1015	702
Grp Volume(v), veh/h	140	0	790	38	0	600	204	0	0	264	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1841	1774	0	1821	1726	0	0	1731	0	0
Q Serve(g_s), s	5.0	0.0	26.2	1.4	0.0	19.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	26.2	1.4	0.0	19.1	6.0	0.0	0.0	8.3	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.13	0.10		0.28	0.03		0.41
Lane Grp Cap(c), veh/h	178	0	856	68	0	734	561	0	0	558	0	0
V/C Ratio(X)	0.79	0.00	0.92	0.56	0.00	0.82	0.36	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	242	0	917	139	0	801	561	0	0	558	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.7	0.0	16.3	30.8	0.0	17.3	18.6	0.0	0.0	19.4	0.0	0.0
Incr Delay (d2), s/veh	11.4	0.0	14.0	7.1	0.0	6.2	1.8	0.0	0.0	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	16.5	0.8	0.0	10.8	3.2	0.0	0.0	4.4	0.0	0.0
LnGrp Delay(d),s/veh	40.1	0.0	30.3	37.9	0.0	23.5	20.4	0.0	0.0	22.3	0.0	0.0
LnGrp LOS	D		C	D		C	C			C		
Approach Vol, veh/h		930			638			204			264	
Approach Delay, s/veh		31.8			24.4			20.4			22.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.4	7.0	34.8		23.4	11.0	30.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		18.9	5.1	32.5		18.9	8.9	28.7
Max Q Clear Time (g_c+I1), s		8.0	3.4	28.2		10.3	7.0	21.1
Green Ext Time (p_c), s		0.8	0.0	2.1		1.0	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	140	790	38	600	204	264
v/c Ratio	0.61	0.88	0.27	0.80	0.39	0.48
Control Delay	41.7	30.5	35.9	27.2	20.4	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	30.5	35.9	27.2	20.4	20.5
Queue Length 50th (ft)	58	300	16	214	62	77
Queue Length 95th (ft)	#128	#534	43	#385	119	146
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	245	963	140	823	522	548
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	0.57	0.82	0.27	0.73	0.39	0.48

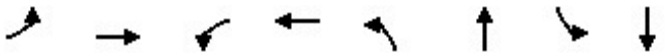
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	397	38	34	386	62	47	30	25	70	32	3
Future Volume (veh/h)	30	397	38	34	386	62	47	30	25	70	32	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	432	41	37	420	67	51	33	27	76	35	3
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	604	57	66	575	91	82	421	344	102	769	66
Arrive On Green	0.03	0.18	0.18	0.04	0.19	0.19	0.05	0.44	0.44	0.06	0.45	0.45
Sat Flow, veh/h	1774	3269	309	1774	3062	485	1774	949	777	1774	1692	145
Grp Volume(v), veh/h	33	233	240	37	242	245	51	0	60	76	0	38
Grp Sat Flow(s),veh/h/ln	1774	1770	1808	1774	1770	1777	1774	0	1726	1774	0	1837
Q Serve(g_s), s	1.2	8.0	8.1	1.3	8.3	8.5	1.8	0.0	1.3	2.7	0.0	0.7
Cycle Q Clear(g_c), s	1.2	8.0	8.1	1.3	8.3	8.5	1.8	0.0	1.3	2.7	0.0	0.7
Prop In Lane	1.00		0.17	1.00		0.27	1.00		0.45	1.00		0.08
Lane Grp Cap(c), veh/h	61	327	334	66	332	334	82	0	765	102	0	835
V/C Ratio(X)	0.54	0.71	0.72	0.56	0.73	0.74	0.62	0.00	0.08	0.75	0.00	0.05
Avail Cap(c_a), veh/h	136	490	501	136	490	492	136	0	765	150	0	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	30.9	24.9	24.9	30.8	24.8	24.9	30.4	0.0	10.4	30.2	0.0	9.9
Incr Delay (d2), s/veh	7.2	2.9	2.9	7.1	3.0	3.2	7.4	0.0	0.2	10.7	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	0.7	4.1	4.3	0.8	4.3	4.5	1.1	0.0	0.7	1.6	0.0	0.4
LnGrp Delay(d),s/veh	38.0	27.8	27.8	37.8	27.9	28.0	37.9	0.0	10.6	40.9	0.0	10.0
LnGrp LOS	D	C	C	D	C	C	D		B	D		A
Approach Vol, veh/h		506			524			111			114	
Approach Delay, s/veh		28.5			28.7			23.1			30.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	33.3	6.9	16.5	7.5	34.0	6.7	16.7
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	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	4.7	3.3	3.3	10.1	3.8	2.7	3.2	10.5
Green Ext Time (p_c), s	0.0	0.2	0.0	1.7	0.0	0.1	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	473	37	487	51	60	76	38
v/c Ratio	0.24	0.61	0.27	0.62	0.31	0.08	0.42	0.04
Control Delay	32.9	25.2	33.7	24.9	32.8	10.9	35.6	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	25.2	33.7	24.9	32.8	10.9	35.6	14.2
Queue Length 50th (ft)	13	85	14	85	19	7	28	7
Queue Length 95th (ft)	37	120	40	121	50	34	#76	29
Internal Link Dist (ft)		286		435		296		217
Turn Bay Length (ft)	150		210				120	
Base Capacity (vph)	136	978	136	979	167	783	182	892
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	0.24	0.48	0.27	0.50	0.31	0.08	0.42	0.04

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

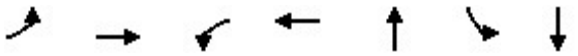
Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	506	524	111	114
Demand Flow Rate, veh/h	517	534	114	117
Vehicles Circulating, veh/h	152	120	553	518
Vehicles Exiting, veh/h	480	519	74	68
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.3	8.5	6.3	6.5
Approach LOS	A	A	A	A

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.605	0.395		0.684	0.316	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	475	42	466	68	52	34	28	78	36	3
Cap Entry Lane, veh/h	971	1049	1002	1056	650	650	672	673	673	699
Entry HV Adj Factor	0.980	0.980	0.980	0.980	0.981	0.980	0.980	0.974	0.980	0.980
Flow Entry, veh/h	465	41	457	67	51	33	27	76	35	3
Cap Entry, veh/h	951	1029	982	1035	637	637	659	656	660	685
V/C Ratio	0.489	0.040	0.465	0.065	0.080	0.052	0.041	0.116	0.053	0.004
Control Delay, s/veh	9.8	3.8	9.1	4.0	6.5	6.2	5.9	6.8	6.0	5.3
LOS	A	A	A	A	A	A	A	A	A	A
95th %tile Queue, veh	3	0	3	0	0	0	0	0	0	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	232	59	44	288	79	40	242	47	85	248	91
Future Volume (veh/h)	85	232	59	44	288	79	40	242	47	85	248	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	92	252	64	48	313	86	43	263	51	92	270	99
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	393	100	79	355	98	103	456	83	118	616	226
Arrive On Green	0.07	0.27	0.27	0.04	0.25	0.25	0.34	0.34	0.34	0.07	0.47	0.47
Sat Flow, veh/h	1774	1434	364	1774	1408	387	122	1350	245	1774	1301	477
Grp Volume(v), veh/h	92	0	316	48	0	399	357	0	0	92	0	369
Grp Sat Flow(s),veh/h/ln	1774	0	1798	1774	0	1794	1717	0	0	1774	0	1779
Q Serve(g_s), s	3.3	0.0	10.1	1.7	0.0	13.9	2.2	0.0	0.0	3.3	0.0	9.0
Cycle Q Clear(g_c), s	3.3	0.0	10.1	1.7	0.0	13.9	10.8	0.0	0.0	3.3	0.0	9.0
Prop In Lane	1.00		0.20	1.00		0.22	0.12		0.14	1.00		0.27
Lane Grp Cap(c), veh/h	118	0	493	79	0	453	642	0	0	118	0	842
V/C Ratio(X)	0.78	0.00	0.64	0.61	0.00	0.88	0.56	0.00	0.00	0.78	0.00	0.44
Avail Cap(c_a), veh/h	139	0	501	136	0	497	642	0	0	139	0	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	20.8	30.5	0.0	23.4	17.7	0.0	0.0	29.9	0.0	11.4
Incr Delay (d2), s/veh	21.2	0.0	2.7	7.3	0.0	15.7	3.4	0.0	0.0	21.2	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	2.3	0.0	5.4	1.0	0.0	8.8	5.9	0.0	0.0	2.3	0.0	4.8
LnGrp Delay(d),s/veh	51.1	0.0	23.5	37.8	0.0	39.0	21.2	0.0	0.0	51.1	0.0	13.0
LnGrp LOS	D		C	D		D	C			D		B
Approach Vol, veh/h		408			447			357			461	
Approach Delay, s/veh		29.7			38.9			21.2			20.6	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	8.8	26.5	7.4	22.3		35.3	8.8	20.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.8	5.0	18.1		28.4	5.1	18.0
Max Q Clear Time (g_c+I1), s	5.3	12.8	3.7	12.1		11.0	5.3	15.9
Green Ext Time (p_c), s	0.0	1.1	0.0	0.9		2.1	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	92	316	48	399	357	92	369
v/c Ratio	0.67	0.60	0.35	0.84	0.57	0.61	0.42
Control Delay	55.2	24.1	36.1	38.6	23.9	49.6	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	24.1	36.1	38.6	23.9	49.6	12.6
Queue Length 50th (ft)	36	102	19	137	121	36	87
Queue Length 95th (ft)	#101	178	48	#269	#235	#101	153
Internal Link Dist (ft)		170		163	110		138
Turn Bay Length (ft)							
Base Capacity (vph)	138	561	136	514	621	150	889
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.56	0.35	0.78	0.57	0.61	0.42

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	13	46	6	34	30	677	70	18	632	7
Future Volume (veh/h)	2	2	13	46	6	34	30	677	70	18	632	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	2	2	14	50	7	37	33	736	76	20	687	8
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	23	105	133	16	49	59	1189	123	40	1296	15
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.72	0.72	0.02	0.71	0.71
Sat Flow, veh/h	82	287	1290	730	194	600	1774	1661	172	1774	1838	21
Grp Volume(v), veh/h	18	0	0	94	0	0	33	0	812	20	0	695
Grp Sat Flow(s),veh/h/ln	1659	0	0	1525	0	0	1774	0	1832	1774	0	1859
Q Serve(g_s), s	0.0	0.0	0.0	3.7	0.0	0.0	1.4	0.0	17.0	0.8	0.0	13.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	4.5	0.0	0.0	1.4	0.0	17.0	0.8	0.0	13.2
Prop In Lane	0.11		0.78	0.53		0.39	1.00		0.09	1.00		0.01
Lane Grp Cap(c), veh/h	189	0	0	198	0	0	59	0	1311	40	0	1311
V/C Ratio(X)	0.10	0.00	0.00	0.47	0.00	0.00	0.56	0.00	0.62	0.50	0.00	0.53
Avail Cap(c_a), veh/h	441	0	0	436	0	0	121	0	1311	121	0	1311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	0.0	33.6	0.0	0.0	35.7	0.0	5.4	36.2	0.0	5.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.8	0.0	0.0	8.1	0.0	2.2	9.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.0	0.0	0.0	0.8	0.0	9.1	0.5	0.0	7.1
LnGrp Delay(d),s/veh	32.2	0.0	0.0	35.4	0.0	0.0	43.8	0.0	7.6	45.4	0.0	6.7
LnGrp LOS	C			D			D		A	D		A
Approach Vol, veh/h		18			94			845			715	
Approach Delay, s/veh		32.2			35.4			9.1			7.8	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	58.2		10.6	7.0	57.4		10.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.1	38.3		18.1	5.1	38.3		18.1
Max Q Clear Time (g_c+I1), s	2.8	19.0		2.8	3.4	15.2		6.5
Green Ext Time (p_c), s	0.0	6.1		0.0	0.0	5.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	94	33	812	20	695
v/c Ratio	0.09	0.47	0.20	0.57	0.13	0.51
Control Delay	17.1	27.9	33.8	8.9	33.2	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	27.9	33.8	8.9	33.2	9.3
Queue Length 50th (ft)	2	25	15	112	9	88
Queue Length 95th (ft)	18	64	39	#456	28	347
Internal Link Dist (ft)	101	81		42		61
Turn Bay Length (ft)						
Base Capacity (vph)	402	378	163	1419	151	1369
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	0.04	0.25	0.20	0.57	0.13	0.51

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	18	94	845	715
Demand Flow Rate, veh/h	18	96	863	729
Vehicles Circulating, veh/h	772	787	24	92
Vehicles Exiting, veh/h	41	22	752	753
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	8.3	12.3	13.8
Approach LOS	A	A	B	B

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.043	0.957		0.028	0.972	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	4	14	58	38	34	751	78	20	701	8
Cap Entry Lane, veh/h	522	533	514	532	1103	1103	1105	1031	1031	1085
Entry HV Adj Factor	0.990	0.980	0.980	0.980	0.971	0.980	0.980	1.000	0.980	0.980
Flow Entry, veh/h	4	14	57	37	33	736	76	20	687	8
Cap Entry, veh/h	517	522	504	522	1071	1082	1084	1031	1010	1063
V/C Ratio	0.008	0.027	0.113	0.071	0.031	0.681	0.070	0.019	0.680	0.008
Control Delay, s/veh	7.1	7.2	8.6	7.8	3.6	13.5	3.9	3.7	14.2	3.4
LOS	A	A	A	A	A	B	A	A	B	A
95th %tile Queue, veh	0	0	0	0	0	6	0	0	6	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	579	26	86	724	18	21	99	66	4	84	90
Future Volume (veh/h)	140	579	26	86	724	18	21	99	66	4	84	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	152	629	28	93	787	20	23	108	72	4	91	98
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	885	39	119	835	21	77	260	157	50	216	225
Arrive On Green	0.11	0.50	0.50	0.07	0.46	0.46	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	1770	79	1774	1809	46	98	999	603	9	830	866
Grp Volume(v), veh/h	152	0	657	93	0	807	203	0	0	193	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1849	1774	0	1855	1701	0	0	1705	0	0
Q Serve(g_s), s	6.5	0.0	21.5	4.0	0.0	32.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	21.5	4.0	0.0	32.4	7.6	0.0	0.0	7.4	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.11		0.35	0.02		0.51
Lane Grp Cap(c), veh/h	187	0	924	119	0	856	494	0	0	490	0	0
V/C Ratio(X)	0.81	0.00	0.71	0.78	0.00	0.94	0.41	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	198	0	926	161	0	891	494	0	0	490	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.2	0.0	15.1	35.8	0.0	20.0	24.2	0.0	0.0	24.1	0.0	0.0
Incr Delay (d2), s/veh	21.2	0.0	2.6	15.6	0.0	17.6	2.5	0.0	0.0	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	11.6	2.5	0.0	20.5	4.0	0.0	0.0	3.8	0.0	0.0
LnGrp Delay(d),s/veh	55.4	0.0	17.7	51.4	0.0	37.6	26.7	0.0	0.0	26.5	0.0	0.0
LnGrp LOS	E		B	D		D	C			C		
Approach Vol, veh/h		809			900			203			193	
Approach Delay, s/veh		24.8			39.0			26.7			26.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		24.8	9.7	43.5		24.8	12.7	40.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.3	7.1	39.1		20.3	8.7	37.5
Max Q Clear Time (g_c+I1), s		9.6	6.0	23.5		9.4	8.5	34.4
Green Ext Time (p_c), s		0.8	0.0	4.1		0.8	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	152	657	93	807	203	193
v/c Ratio	0.78	0.69	0.60	0.95	0.44	0.39
Control Delay	63.6	20.2	52.5	42.2	24.3	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	20.2	52.5	42.2	24.3	19.3
Queue Length 50th (ft)	75	245	46	361	71	53
Queue Length 95th (ft)	#172	376	#106	#608	133	110
Internal Link Dist (ft)		523		765	506	402
Turn Bay Length (ft)						
Base Capacity (vph)	196	947	160	887	461	491
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	0.78	0.69	0.58	0.91	0.44	0.39

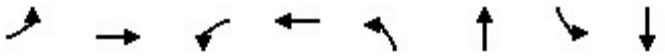
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	392	71	47	459	103	56	54	62	109	43	16
Future Volume (veh/h)	67	392	71	47	459	103	56	54	62	109	43	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	73	426	77	51	499	112	61	59	67	118	47	17
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	696	125	82	639	143	91	287	326	150	514	186
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.05	0.36	0.36	0.08	0.39	0.39
Sat Flow, veh/h	1774	2999	538	1774	2877	642	1774	797	906	1774	1307	473
Grp Volume(v), veh/h	73	250	253	51	306	305	61	0	126	118	0	64
Grp Sat Flow(s),veh/h/ln	1774	1770	1768	1774	1770	1749	1774	0	1703	1774	0	1779
Q Serve(g_s), s	2.6	8.2	8.3	1.8	10.6	10.7	2.2	0.0	3.3	4.2	0.0	1.5
Cycle Q Clear(g_c), s	2.6	8.2	8.3	1.8	10.6	10.7	2.2	0.0	3.3	4.2	0.0	1.5
Prop In Lane	1.00		0.30	1.00		0.37	1.00		0.53	1.00		0.27
Lane Grp Cap(c), veh/h	100	411	410	82	393	388	91	0	613	150	0	700
V/C Ratio(X)	0.73	0.61	0.62	0.62	0.78	0.79	0.67	0.00	0.21	0.79	0.00	0.09
Avail Cap(c_a), veh/h	136	490	490	136	490	484	136	0	613	150	0	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	30.2	22.3	22.4	30.4	23.8	23.8	30.3	0.0	14.4	29.2	0.0	12.4
Incr Delay (d2), s/veh	12.0	1.6	1.7	7.4	6.2	6.6	8.2	0.0	0.8	23.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.2	4.3	1.1	5.8	5.9	1.3	0.0	1.7	3.0	0.0	0.8
LnGrp Delay(d),s/veh	42.2	23.9	24.1	37.9	30.0	30.5	38.5	0.0	15.1	52.7	0.0	12.7
LnGrp LOS	D	C	C	D	C	C	D		B	D		B
Approach Vol, veh/h		576			662			187			182	
Approach Delay, s/veh		26.3			30.8			22.7			38.6	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	27.9	7.5	19.6	7.8	30.1	8.2	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	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	6.2	5.3	3.8	10.3	4.2	3.5	4.6	12.7
Green Ext Time (p_c), s	0.0	0.5	0.0	1.8	0.0	0.2	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	503	51	611	61	126	118	64
v/c Ratio	0.54	0.52	0.38	0.70	0.40	0.21	0.65	0.09
Control Delay	45.3	20.8	36.8	25.3	36.4	10.6	49.9	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	20.8	36.8	25.3	36.4	10.6	49.9	13.5
Queue Length 50th (ft)	29	84	20	106	23	17	46	13
Queue Length 95th (ft)	#78	125	50	152	#62	53	#128	39
Internal Link Dist (ft)		286		435		296		217
Turn Bay Length (ft)	150		210				120	
Base Capacity (vph)	136	1048	136	983	154	608	181	741
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	0.54	0.48	0.38	0.62	0.40	0.21	0.65	0.09

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

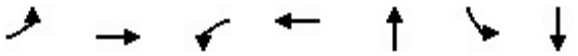
Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	576	662	187	182
Demand Flow Rate, veh/h	588	675	190	185
Vehicles Circulating, veh/h	220	196	629	623
Vehicles Exiting, veh/h	571	555	100	134
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.9	11.5	7.1	7.9
Approach LOS	B	B	A	A

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.508	0.492		0.714	0.286	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	509	79	561	114	62	60	68	120	48	17
Cap Entry Lane, veh/h	907	1022	929	988	602	602	649	606	606	638
Entry HV Adj Factor	0.981	0.980	0.980	0.980	0.984	0.980	0.980	0.983	0.980	0.980
Flow Entry, veh/h	499	77	550	112	61	59	67	118	47	17
Cap Entry, veh/h	890	1002	911	969	593	591	636	596	594	626
V/C Ratio	0.561	0.077	0.604	0.116	0.103	0.100	0.105	0.198	0.079	0.027
Control Delay, s/veh	11.9	4.3	12.8	4.8	7.3	7.3	6.9	8.5	7.0	6.0
LOS	B	A	B	A	A	A	A	A	A	A
95th %tile Queue, veh	4	0	4	0	0	0	0	1	0	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	233	43	48	402	71	54	156	54	49	161	83
Future Volume (veh/h)	78	233	43	48	402	71	54	156	54	49	161	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	85	253	47	52	437	77	59	170	59	53	175	90
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	490	91	81	470	83	137	359	112	82	512	263
Arrive On Green	0.06	0.32	0.32	0.05	0.30	0.30	0.33	0.33	0.33	0.05	0.44	0.44
Sat Flow, veh/h	1774	1529	284	1774	1543	272	226	1086	338	1774	1161	597
Grp Volume(v), veh/h	85	0	300	52	0	514	288	0	0	53	0	265
Grp Sat Flow(s),veh/h/ln	1774	0	1813	1774	0	1815	1650	0	0	1774	0	1757
Q Serve(g_s), s	3.3	0.0	9.4	2.0	0.0	19.2	2.2	0.0	0.0	2.1	0.0	6.9
Cycle Q Clear(g_c), s	3.3	0.0	9.4	2.0	0.0	19.2	9.2	0.0	0.0	2.1	0.0	6.9
Prop In Lane	1.00		0.16	1.00		0.15	0.20		0.20	1.00		0.34
Lane Grp Cap(c), veh/h	109	0	581	81	0	553	608	0	0	82	0	775
V/C Ratio(X)	0.78	0.00	0.52	0.65	0.00	0.93	0.47	0.00	0.00	0.65	0.00	0.34
Avail Cap(c_a), veh/h	139	0	581	160	0	557	608	0	0	129	0	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	19.4	32.9	0.0	23.6	18.7	0.0	0.0	32.8	0.0	12.9
Incr Delay (d2), s/veh	19.2	0.0	0.8	8.3	0.0	22.2	2.6	0.0	0.0	8.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	4.8	1.2	0.0	13.0	4.8	0.0	0.0	1.2	0.0	3.6
LnGrp Delay(d),s/veh	51.6	0.0	20.2	41.2	0.0	45.8	21.3	0.0	0.0	41.3	0.0	14.1
LnGrp LOS	D		C	D		D	C			D		B
Approach Vol, veh/h		385			566			288			318	
Approach Delay, s/veh		27.1			45.4			21.3			18.6	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	7.7	27.7	7.7	26.9		35.4	8.8	25.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	19.9	6.3	20.7		29.5	5.5	21.5
Max Q Clear Time (g_c+I1), s	4.1	11.2	4.0	11.4		8.9	5.3	21.2
Green Ext Time (p_c), s	0.0	1.1	0.0	1.2		1.5	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	85	300	52	514	288	53	265
v/c Ratio	0.61	0.51	0.34	0.93	0.47	0.41	0.32
Control Delay	52.2	22.3	36.2	49.2	21.5	40.8	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	22.3	36.2	49.2	21.5	40.8	12.2
Queue Length 50th (ft)	36	102	22	205	100	22	60
Queue Length 95th (ft)	#97	176	53	#383	177	55	111
Internal Link Dist (ft)		170		163	110		138
Turn Bay Length (ft)							
Base Capacity (vph)	139	603	159	568	612	130	833
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.50	0.33	0.90	0.47	0.41	0.32

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	6	24	91	9	39	17	400	78	60	705	2
Future Volume (veh/h)	5	6	24	91	9	39	17	400	78	60	705	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	5	7	26	99	10	42	18	435	85	65	766	2
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	56	147	204	20	54	37	951	186	91	1222	3
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.02	0.63	0.63	0.05	0.66	0.66
Sat Flow, veh/h	90	439	1145	929	158	419	1774	1515	296	1774	1857	5
Grp Volume(v), veh/h	38	0	0	151	0	0	18	0	520	65	0	768
Grp Sat Flow(s),veh/h/ln	1673	0	0	1505	0	0	1774	0	1811	1774	0	1862
Q Serve(g_s), s	0.0	0.0	0.0	5.3	0.0	0.0	0.7	0.0	10.5	2.5	0.0	16.8
Cycle Q Clear(g_c), s	1.4	0.0	0.0	6.7	0.0	0.0	0.7	0.0	10.5	2.5	0.0	16.8
Prop In Lane	0.13		0.68	0.66		0.28	1.00		0.16	1.00		0.00
Lane Grp Cap(c), veh/h	272	0	0	278	0	0	37	0	1137	91	0	1225
V/C Ratio(X)	0.14	0.00	0.00	0.54	0.00	0.00	0.48	0.00	0.46	0.71	0.00	0.63
Avail Cap(c_a), veh/h	478	0	0	465	0	0	127	0	1137	172	0	1225
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	0.0	29.4	0.0	0.0	33.9	0.0	6.8	32.7	0.0	7.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.7	0.0	0.0	9.3	0.0	1.3	10.0	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	0.7	0.0	0.0	2.9	0.0	0.0	0.4	0.0	5.6	1.5	0.0	9.4
LnGrp Delay(d),s/veh	27.5	0.0	0.0	31.1	0.0	0.0	43.1	0.0	8.1	42.7	0.0	9.4
LnGrp LOS	C			C			D		A	D		A
Approach Vol, veh/h		38			151			538			833	
Approach Delay, s/veh		27.5			31.1			9.3			12.0	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	48.4		13.5	6.0	50.6		13.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.8	31.7		18.0	5.0	33.5		18.0
Max Q Clear Time (g_c+I1), s	4.5	12.5		3.4	2.7	18.8		8.7
Green Ext Time (p_c), s	0.0	3.3		0.1	0.0	4.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

1: Dinuba Blvd (63) & Avenue 320

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	151	18	520	65	768
v/c Ratio	0.13	0.60	0.12	0.48	0.35	0.61
Control Delay	13.1	31.2	31.4	12.2	34.1	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	31.2	31.4	12.2	34.1	12.0
Queue Length 50th (ft)	4	50	7	131	26	133
Queue Length 95th (ft)	25	95	25	254	61	#496
Internal Link Dist (ft)	101	81		42		61
Turn Bay Length (ft)						
Base Capacity (vph)	435	379	150	1092	193	1260
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	0.09	0.40	0.12	0.48	0.34	0.61

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	38	151	538	833
Demand Flow Rate, veh/h	39	154	549	849
Vehicles Circulating, veh/h	948	467	78	129
Vehicles Exiting, veh/h	28	73	882	449
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.6	6.6	7.4	18.5
Approach LOS	A	A	A	C

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.039	0.961		0.078	0.922	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	12	27	111	43	18	444	87	66	781	2
Cap Entry Lane, veh/h	438	468	708	721	1045	1045	1050	993	993	1099
Entry HV Adj Factor	0.989	0.980	0.980	0.980	1.000	0.980	0.980	0.985	0.980	0.980
Flow Entry, veh/h	12	26	109	42	18	435	85	65	766	2
Cap Entry, veh/h	433	459	694	707	1045	1025	1030	978	974	1077
V/C Ratio	0.027	0.057	0.157	0.059	0.017	0.425	0.083	0.066	0.786	0.002
Control Delay, s/veh	8.7	8.6	6.9	5.7	3.6	8.2	4.2	4.3	19.7	3.4
LOS	A	A	A	A	A	A	A	A	C	A
95th %tile Queue, veh	0	0	1	0	0	2	0	0	8	0

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	125	20	487	796	82
Future Vol, veh/h	0	125	20	487	796	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	136	22	529	865	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	865	865	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	353	778	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	353	778	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.4	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	778	-	353	-
HCM Lane V/C Ratio	0.028	-	0.385	-
HCM Control Delay (s)	9.8	0	21.4	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.8	-

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	136	551	954
Demand Flow Rate, veh/h	138	562	973
Vehicles Circulating, veh/h	882	73	22
Vehicles Exiting, veh/h	22	882	613
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.9	10.1	17.6
Approach LOS	A	B	C

Lane	Left	Bypass	Left	Left	Bypass
Designated Moves	L	R	LT	T	R
Assumed Moves	L	R	LT	T	R
RT Channelized		Yield			Yield
Lane Util	1.000		1.000	1.000	
Critical Headway, s	5.193		5.193	5.193	
Entry Flow, veh/h	73	65	562	882	91
Cap Entry Lane, veh/h	468	468	1050	1105	1105
Entry HV Adj Factor	0.986	0.980	0.981	0.980	0.980
Flow Entry, veh/h	72	64	551	865	89
Cap Entry, veh/h	461	459	1031	1084	1084
V/C Ratio	0.156	0.140	0.535	0.798	0.082
Control Delay, s/veh	10.0	9.8	10.1	18.9	4.0
LOS	B	A	B	C	A
95th %tile Queue, veh	1	0	3	9	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	21	515	843	5
Future Vol, veh/h	0	20	21	515	843	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	23	560	916	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	458	921	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	0	551	739	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	551	739	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	739	-	551	-	-
HCM Lane V/C Ratio	0.031	-	0.039	-	-
HCM Control Delay (s)	10	-	11.8	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	7.0
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	21	583	921
Demand Flow Rate, veh/h	21	594	939
Vehicles Circulating, veh/h	934	3	23
Vehicles Exiting, veh/h	23	934	574
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.5	5.7	7.8
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Right	Left	Right	Bypass
Designated Moves	L	R	LT	TR	LT	TR	R
Assumed Moves	L	R	LT	TR	LT	TR	R
RT Channelized		Yield					Yield
Lane Util	1.000		0.470	0.530	0.470	0.530	
Critical Headway, s	4.113		4.293	4.113	4.293	4.113	
Entry Flow, veh/h	3	18	279	315	439	495	5
Cap Entry Lane, veh/h	588	444	1127	1128	1111	1112	1104
Entry HV Adj Factor	1.000	0.980	0.982	0.981	0.980	0.980	0.980
Flow Entry, veh/h	3	18	274	309	430	485	5
Cap Entry, veh/h	588	435	1107	1106	1089	1090	1083
V/C Ratio	0.005	0.041	0.247	0.279	0.395	0.445	0.005
Control Delay, s/veh	6.2	8.8	5.6	5.9	7.4	8.2	3.4
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	0	0	1	1	2	2	0

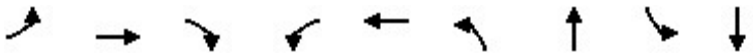
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	117	405	80	74	57	86	641	37	30	1155	79
Future Volume (veh/h)	147	117	405	80	74	57	86	641	37	30	1155	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	160	127	440	87	80	62	93	697	40	33	1255	86
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	582	495	302	304	236	183	1803	103	375	1781	122
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1241	1863	1583	841	974	755	406	3403	195	718	3362	230
Grp Volume(v), veh/h	160	127	440	87	0	142	93	362	375	33	660	681
Grp Sat Flow(s),veh/h/ln	1241	1863	1583	841	0	1729	406	1770	1828	718	1770	1822
Q Serve(g_s), s	9.8	4.4	23.3	7.5	0.0	5.4	19.7	10.7	10.7	2.5	24.6	24.8
Cycle Q Clear(g_c), s	15.2	4.4	23.3	11.9	0.0	5.4	44.4	10.7	10.7	13.2	24.6	24.8
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.11	1.00		0.13
Lane Grp Cap(c), veh/h	393	582	495	302	0	540	183	938	969	375	938	966
V/C Ratio(X)	0.41	0.22	0.89	0.29	0.00	0.26	0.51	0.39	0.39	0.09	0.70	0.71
Avail Cap(c_a), veh/h	428	634	539	325	0	589	183	939	971	375	938	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	22.4	28.9	26.8	0.0	22.7	32.2	12.2	12.3	16.2	15.5	15.6
Incr Delay (d2), s/veh	1.4	0.4	17.3	1.1	0.0	0.5	6.6	0.8	0.8	0.3	3.6	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.4	12.5	1.8	0.0	2.7	2.5	5.3	5.5	0.5	12.8	13.2
LnGrp Delay(d),s/veh	29.8	22.7	46.1	27.8	0.0	23.2	38.9	13.1	13.0	16.5	19.1	19.1
LnGrp LOS	C	C	D	C		C	D	B	B	B	B	B
Approach Vol, veh/h		727			229			830			1374	
Approach Delay, s/veh		38.4			25.0			15.9			19.0	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.2		33.9		54.2		33.9
Change Period (Y+Rc), s		* 7.5		6.4		7.5		6.4
Max Green Setting (Gmax), s		* 47		30.0		46.1		30.0
Max Q Clear Time (g_c+I1), s		46.4		25.3		26.8		13.9
Green Ext Time (p_c), s		0.3		2.2		15.3		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	127	440	87	142	93	737	33	1341
v/c Ratio	0.41	0.22	0.82	0.22	0.25	0.79	0.40	0.10	0.74
Control Delay	27.0	22.8	38.0	23.5	16.2	66.9	12.9	12.3	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	22.8	38.0	23.5	16.2	66.9	12.9	12.3	19.2
Queue Length 50th (ft)	69	51	197	35	38	41	124	9	297
Queue Length 95th (ft)	125	94	#348	72	82	#139	166	26	382
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	449	674	608	455	660	125	1987	349	1954
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	0.36	0.19	0.72	0.19	0.22	0.74	0.37	0.09	0.69

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	727	229	830	1374
Demand Flow Rate, veh/h	742	234	847	1402
Vehicles Circulating, veh/h	1403	969	327	266
Vehicles Exiting, veh/h	177	164	1369	874
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	6.2	9.3	15.5
Approach LOS	A	A	A	C

Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	TR	R	LT	TR	R	LT	TR	R	LT	TR	R
Assumed Moves	L	TR	R	L	TR	R	LT	TR	R	LT	TR	R
RT Channelized			Free			Free			Free			Free
Lane Util	0.556	0.444		0.520	0.480		0.470	0.530		0.470	0.530	
Critical Headway, s	4.293	4.113		4.293	4.113		4.293	4.113		4.293	4.113	
Entry Flow, veh/h	163	130	449	89	82	63	379	427	41	618	696	88
Cap Entry Lane, veh/h	395	423	1938	546	573	1938	884	899	1938	926	938	1938
Entry HV Adj Factor	0.982	0.980	0.980	0.978	0.980	0.980	0.980	0.981	0.980	0.979	0.981	0.980
Flow Entry, veh/h	160	127	440	87	80	62	371	419	40	605	683	86
Cap Entry, veh/h	387	415	1900	534	562	1900	866	881	1900	907	920	1900
V/C Ratio	0.413	0.307	0.232	0.163	0.143	0.033	0.429	0.475	0.021	0.668	0.742	0.045
Control Delay, s/veh	17.8	14.0	0.0	8.9	8.2	0.0	9.4	10.1	0.0	14.9	18.0	0.0
LOS	C	B	A	A	A	A	A	B	A	B	C	A
95th %tile Queue, veh	2	1	1	1	0	0	2	3	0	5	7	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	15	51	6	39	35	777	79	21	726	8
Future Volume (veh/h)	2	2	15	51	6	39	35	777	79	21	726	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	2	2	16	55	7	42	38	845	86	23	789	9
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	24	118	133	17	55	63	1193	121	44	1298	15
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.72	0.72	0.03	0.71	0.71
Sat Flow, veh/h	66	264	1319	716	191	615	1774	1664	169	1774	1838	21
Grp Volume(v), veh/h	20	0	0	104	0	0	38	0	931	23	0	798
Grp Sat Flow(s),veh/h/ln	1649	0	0	1522	0	0	1774	0	1833	1774	0	1859
Q Serve(g_s), s	0.0	0.0	0.0	4.4	0.0	0.0	1.7	0.0	23.4	1.0	0.0	17.7
Cycle Q Clear(g_c), s	0.9	0.0	0.0	5.3	0.0	0.0	1.7	0.0	23.4	1.0	0.0	17.7
Prop In Lane	0.10		0.80	0.53		0.40	1.00		0.09	1.00		0.01
Lane Grp Cap(c), veh/h	197	0	0	205	0	0	63	0	1314	44	0	1313
V/C Ratio(X)	0.10	0.00	0.00	0.51	0.00	0.00	0.60	0.00	0.71	0.52	0.00	0.61
Avail Cap(c_a), veh/h	413	0	0	409	0	0	113	0	1314	113	0	1313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	0.0	0.0	35.5	0.0	0.0	38.0	0.0	6.5	38.5	0.0	6.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.9	0.0	0.0	8.8	0.0	3.2	9.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.4	0.0	0.0	1.0	0.0	12.8	0.6	0.0	9.6
LnGrp Delay(d),s/veh	33.8	0.0	0.0	37.5	0.0	0.0	46.8	0.0	9.8	47.6	0.0	8.1
LnGrp LOS	C			D			D		A	D		A
Approach Vol, veh/h		20			104			969			821	
Approach Delay, s/veh		33.8			37.5			11.2			9.2	
Approach LOS		C			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	61.9		11.6	7.4	61.0		11.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.1	43.3		18.1	5.1	43.3		18.1
Max Q Clear Time (g_c+I1), s	3.0	25.4		2.9	3.7	19.7		7.3
Green Ext Time (p_c), s	0.0	7.2		0.0	0.0	6.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

1: Dinuba Blvd (63) & Avenue 320

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	104	38	931	23	798
v/c Ratio	0.10	0.52	0.24	0.68	0.16	0.60
Control Delay	17.2	30.6	36.8	13.1	36.0	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	30.6	36.8	13.1	36.0	12.3
Queue Length 50th (ft)	2	31	18	154	11	228
Queue Length 95th (ft)	20	74	45	#661	32	457
Internal Link Dist (ft)	101	81		42		61
Turn Bay Length (ft)						
Base Capacity (vph)	380	358	160	1376	146	1327
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	0.05	0.29	0.24	0.68	0.16	0.60

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	17.0
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	20	104	969	821
Demand Flow Rate, veh/h	20	106	989	837
Vehicles Circulating, veh/h	884	903	27	102
Vehicles Exiting, veh/h	46	25	861	864
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.1	9.5	16.3	18.9
Approach LOS	A	A	C	C

Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	L	TR	R	L	TR	R
Assumed Moves	LT	R	LT	R	L	TR	R	L	TR	R
RT Channelized		Yield		Yield			Yield			Yield
Lane Util	1.000		1.000		0.043	0.957		0.028	0.972	
Critical Headway, s	5.193		5.193		5.193	5.193		5.193	5.193	
Entry Flow, veh/h	4	16	63	43	39	862	88	23	805	9
Cap Entry Lane, veh/h	467	478	458	476	1100	1100	1102	1020	1020	1079
Entry HV Adj Factor	0.990	0.980	0.982	0.980	0.974	0.980	0.980	1.000	0.980	0.980
Flow Entry, veh/h	4	16	62	42	38	845	86	23	789	9
Cap Entry, veh/h	462	468	450	467	1072	1078	1080	1020	1000	1058
V/C Ratio	0.009	0.034	0.138	0.090	0.035	0.784	0.080	0.023	0.789	0.009
Control Delay, s/veh	7.9	8.1	10.0	8.9	3.7	18.1	4.0	3.7	19.5	3.5
LOS	A	A	A	A	A	C	A	A	C	A
95th %tile Queue, veh	0	0	0	0	0	8	0	0	8	0

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	95	37	869	847	64
Future Vol, veh/h	0	95	37	869	847	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Free	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	40	945	921	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	921	921	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	328	741	-	-	0
Stage 1	0	-	-	-	-	0
Stage 2	0	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	328	741	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.9	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	741	-	328	-
HCM Lane V/C Ratio	0.054	-	0.315	-
HCM Control Delay (s)	10.1	0	20.9	-
HCM Lane LOS	B	A	C	-
HCM 95th %tile Q(veh)	0.2	-	1.3	-

Intersection	
Intersection Delay, s/veh	28.7
Intersection LOS	D

Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	103	985	991
Demand Flow Rate, veh/h	105	1005	1010
Vehicles Circulating, veh/h	939	61	41
Vehicles Exiting, veh/h	41	939	1025
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.1	36.1	23.3
Approach LOS	B	E	C

Lane	Left	Bypass	Left	Left	Bypass
Designated Moves	L	R	LT	T	R
Assumed Moves	L	R	LT	T	R
RT Channelized		Yield			Yield
Lane Util	1.000		1.000	1.000	
Critical Headway, s	5.193		5.193	5.193	
Entry Flow, veh/h	61	44	1005	939	71
Cap Entry Lane, veh/h	442	442	1063	1085	1085
Entry HV Adj Factor	0.984	0.980	0.980	0.980	0.980
Flow Entry, veh/h	60	43	985	921	70
Cap Entry, veh/h	435	433	1042	1063	1063
V/C Ratio	0.138	0.099	0.945	0.866	0.066
Control Delay, s/veh	10.3	9.7	36.1	24.8	4.0
LOS	B	A	E	C	A
95th %tile Queue, veh	0	0	16	12	0

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	72	116	884	856	18
Future Vol, veh/h	0	72	116	884	856	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	78	126	961	930	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	465	950	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	0	545	721	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	545	721	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	721	-	545	-	-
HCM Lane V/C Ratio	0.175	-	0.144	-	-
HCM Control Delay (s)	11	-	12.7	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	15.8
Intersection LOS	C

Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	78	1087	950
Demand Flow Rate, veh/h	79	1109	969
Vehicles Circulating, veh/h	949	5	129
Vehicles Exiting, veh/h	129	949	985
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.7	22.2	8.8
Approach LOS	B	C	A

Lane	Left	Bypass	Left	Right	Left	Right	Bypass
Designated Moves	L	R	L	TR	LT	TR	R
Assumed Moves	L	R	L	TR	LT	TR	R
RT Channelized		Yield					Yield
Lane Util	1.000		0.116	0.884	0.470	0.530	
Critical Headway, s	4.113		4.293	4.113	4.293	4.113	
Entry Flow, veh/h	5	74	129	980	446	503	20
Cap Entry Lane, veh/h	582	437	1126	1126	1026	1032	993
Entry HV Adj Factor	1.000	0.980	0.977	0.980	0.980	0.980	0.980
Flow Entry, veh/h	5	73	126	961	437	493	20
Cap Entry, veh/h	582	429	1100	1104	1006	1012	974
V/C Ratio	0.009	0.170	0.115	0.870	0.435	0.487	0.021
Control Delay, s/veh	6.3	11.0	4.3	24.6	8.5	9.3	3.9
LOS	A	B	A	C	A	A	A
95th %tile Queue, veh	0	1	0	12	2	3	0

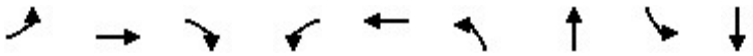
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	150	222	63	117	27	220	1158	32	45	896	133
Future Volume (veh/h)	179	150	222	63	117	27	220	1158	32	45	896	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	195	163	241	68	127	29	239	1259	35	49	974	145
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	295	478	406	247	377	86	286	2164	60	236	1902	283
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1226	1863	1583	977	1468	335	501	3517	98	425	3091	460
Grp Volume(v), veh/h	195	163	241	68	0	156	239	633	661	49	557	562
Grp Sat Flow(s),veh/h/ln	1226	1863	1583	977	0	1804	501	1770	1845	425	1770	1782
Q Serve(g_s), s	16.7	7.7	14.5	6.6	0.0	7.6	47.6	23.3	23.3	8.5	19.2	19.2
Cycle Q Clear(g_c), s	24.4	7.7	14.5	14.4	0.0	7.6	66.8	23.3	23.3	31.8	19.2	19.2
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	295	478	406	247	0	463	286	1089	1136	236	1089	1096
V/C Ratio(X)	0.66	0.34	0.59	0.27	0.00	0.34	0.84	0.58	0.58	0.21	0.51	0.51
Avail Cap(c_a), veh/h	319	515	438	267	0	498	286	1089	1136	236	1089	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	32.9	35.4	38.7	0.0	32.8	32.4	12.5	12.5	22.0	11.7	11.7
Incr Delay (d2), s/veh	6.5	0.9	3.2	1.2	0.0	0.9	21.9	1.6	1.6	1.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	4.1	6.7	1.9	0.0	3.9	8.8	11.8	12.2	1.1	9.6	9.7
LnGrp Delay(d),s/veh	49.2	33.7	38.5	39.9	0.0	33.7	54.3	14.1	14.1	23.4	12.9	12.9
LnGrp LOS	D	C	D	D		C	D	B	B	C	B	B
Approach Vol, veh/h		599			224			1533			1168	
Approach Delay, s/veh		40.7			35.6			20.4			13.3	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		74.3		34.3		74.3		34.3
Change Period (Y+Rc), s		* 7.5		6.4		7.5		6.4
Max Green Setting (Gmax), s		* 67		30.0		66.1		30.0
Max Q Clear Time (g_c+I1), s		68.8		26.4		33.8		16.4
Green Ext Time (p_c), s		0.0		1.5		19.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	195	163	241	68	156	239	1294	49	1119
v/c Ratio	0.73	0.38	0.52	0.26	0.37	0.94	0.57	0.25	0.50
Control Delay	53.5	36.1	20.0	34.8	33.5	64.8	12.5	14.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	36.1	20.0	34.8	33.5	64.8	12.5	14.2	11.5
Queue Length 50th (ft)	120	92	63	37	82	138	244	14	197
Queue Length 95th (ft)	201	152	138	76	141	#332	341	42	277
Internal Link Dist (ft)		87			125		66		78
Turn Bay Length (ft)	95		80	125		200		100	
Base Capacity (vph)	336	538	548	328	530	255	2270	193	2220
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	0.58	0.30	0.44	0.21	0.29	0.94	0.57	0.25	0.50

Intersection Summary

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

Intersection	
Intersection Delay, s/veh	22.7
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	599	224	1533	1168
Demand Flow Rate, veh/h	611	229	1564	1191
Vehicles Circulating, veh/h	1112	1727	415	443
Vehicles Exiting, veh/h	374	216	1062	1483
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.0	15.5	36.7	13.4
Approach LOS	A	C	E	B

Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	TR	R	LT	TR	R	LT	TR	R	LT	TR	R
Assumed Moves	L	TR	R	LT	TR	R	LT	TR	R	LT	TR	R
RT Channelized			Free			Free			Free			Free
Lane Util	0.545	0.455		0.472	0.528		0.470	0.530		0.470	0.530	
Critical Headway, s	4.293	4.113		4.293	4.113		4.293	4.113		4.293	4.113	
Entry Flow, veh/h	199	166	246	94	105	30	718	810	36	490	553	148
Cap Entry Lane, veh/h	491	519	1938	309	337	1938	828	845	1938	811	829	1938
Entry HV Adj Factor	0.980	0.980	0.980	0.977	0.987	0.980	0.980	0.980	0.980	0.981	0.980	0.980
Flow Entry, veh/h	195	163	241	92	104	29	704	794	35	481	542	145
Cap Entry, veh/h	481	509	1900	302	333	1900	812	828	1900	795	812	1900
V/C Ratio	0.406	0.320	0.127	0.304	0.311	0.015	0.867	0.958	0.018	0.605	0.667	0.076
Control Delay, s/veh	14.5	12.0	0.0	18.5	17.2	0.0	30.1	44.1	0.0	14.2	16.2	0.0
LOS	B	B	A	C	C	A	D	E	A	B	C	A
95th %tile Queue, veh	2	1	0	1	1	0	11	15	0	4	5	0

Appendix C

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE 11-27-18

DIST ___ CO ___ RTE ___ PM ___

CALC DMA DATE 12-12-18

CHK GR DATE 12-12-18

Major St: Riggin Avenue

Minor St: Gidding Street

Critical Approach Speed 45 mph

Critical Approach Speed 25/35 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒ } RURAL (R)

In built up area of isolated community of < 10,000 population..... ☐ or } RURAL (R)

☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☒ NO ☐

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☒

80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				12:00-1:00 PM	1:00-2:00 PM	2:00-3:00 PM	3:00-4:00 PM	4:00-5:00 PM	5:00-6:00 PM	6:00-7:00 PM	7:00-8:00 PM	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	786	784	908	1019	1146	1072	908	734	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	54	69	110	123	78	101	67	65	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☒ NO ☐

80% SATISFIED YES ☒ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				12:00-1:00 PM	1:00-2:00 PM	2:00-3:00 PM	3:00-4:00 PM	4:00-5:00 PM	5:00-6:00 PM	6:00-7:00 PM	7:00-8:00 PM	Hour
	U	R	U	R									
APPROACH LANES	1		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	786	784	908	1019	1146	1072	908	734	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	54	69	110	123	78	101	67	65	

Combination of Conditions A & B SATISFIED YES ☐ NO ☐

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☒ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	12:00 PM	1:00 PM	2:00 PM	3:00 PM	Hour
						4:00 PM	
Both Approaches - Major Street	X		786	789	908	1019	
Higher Approach - Minor Street	X		54	64	110	123	

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☒ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐ 1146 vph

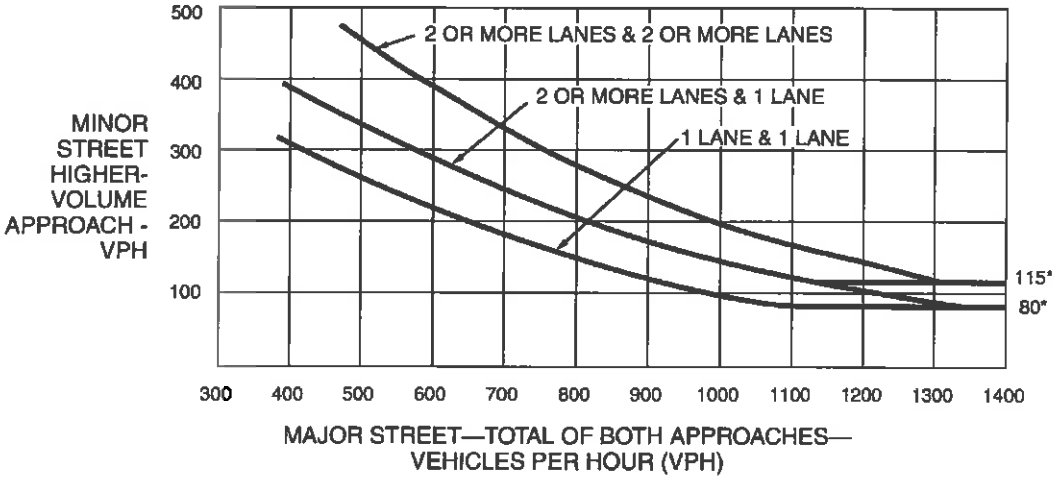
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	3:00 - 4:00 PM	Hour
Both Approaches - Major Street	X		1019	
Higher Approach - Minor Street	X		123	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

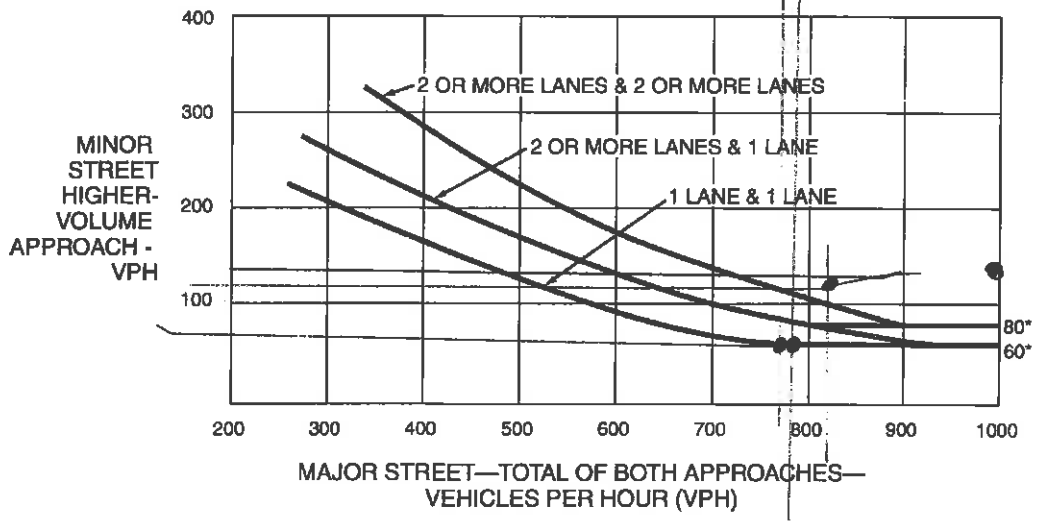
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

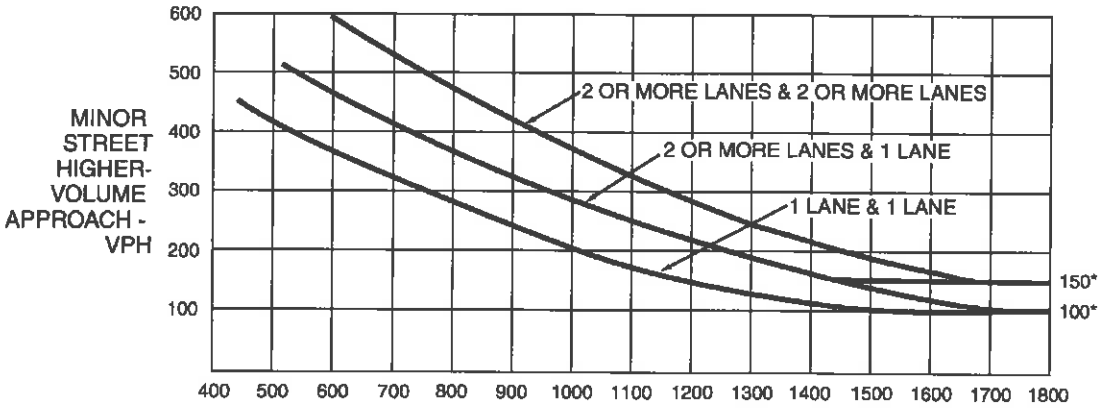
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

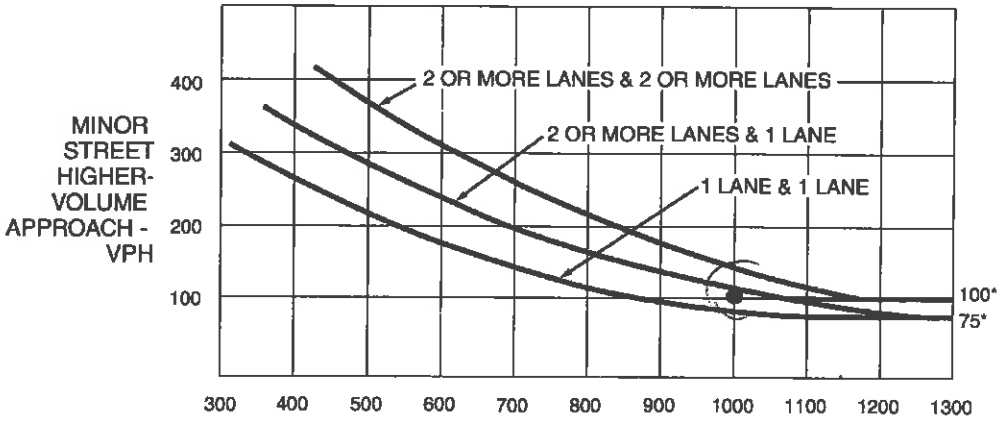
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☒
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☒
5 OR MORE	4 (2017)		
REQUIREMENTS	CONDITIONS	✓	Yes ☒ No ☐
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic	✓	
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE 11-27-18
CALC OLS DATE 12-12-18
CHK OLS DATE 12-12-18

DIST ____ CO ____ RTE ____ PM ____

Major St: Pigeon Avenue
Minor St: Court Street

Critical Approach Speed 45 mph
Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒ } RURAL (R)
In built up area of isolated community of < 10,000 population..... ☐ } or
☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☒
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				12:45 AM	1:45 AM	2:45 AM	3:45 AM	4:45 AM	5:45 AM	6:45 AM	7:45 AM	8:45 AM
	U	R	U	R									Hour
APPROACH LANES	1		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	440	615	746	740	760	740	569	492	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	73	104	93	130	100	86	77	88	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				12:45 AM	1:45 AM	2:45 AM	3:45 AM	4:45 AM	5:45 AM	6:45 AM	7:45 AM	8:45 AM
	U	R	U	R									Hour
APPROACH LANES	1		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	440	615	746	740	760	740	569	492	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	73	104	93	130	100	86	77	88	

Combination of Conditions A & B SATISFIED YES ☐ NO ☒

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☒
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☒**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	2-3 PM Hour	3-4 PM Hour	4-5 PM Hour	5-6 PM Hour
Both Approaches - Major Street		X	746	740	760	740
Higher Approach - Minor Street		X	93	130	100	86

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☒

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

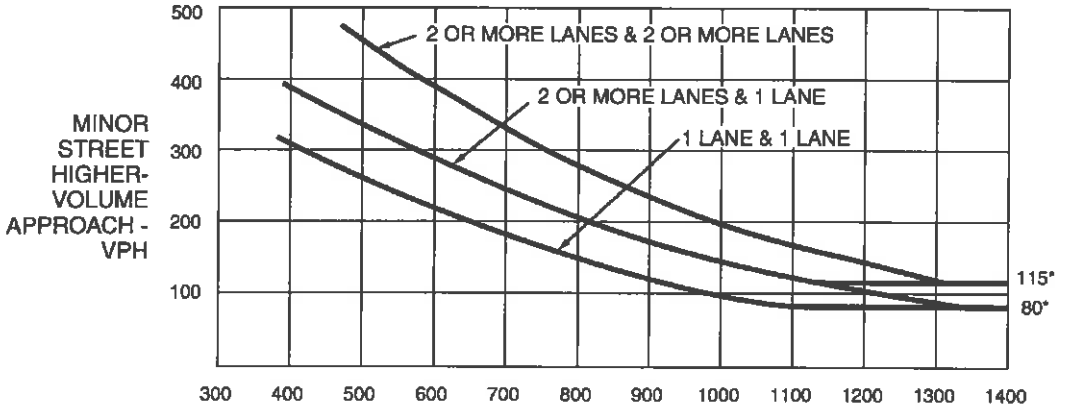
PART B **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	4:45-5:45 PM Hour
Both Approaches - Major Street		X	760
Higher Approach - Minor Street		X	100

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

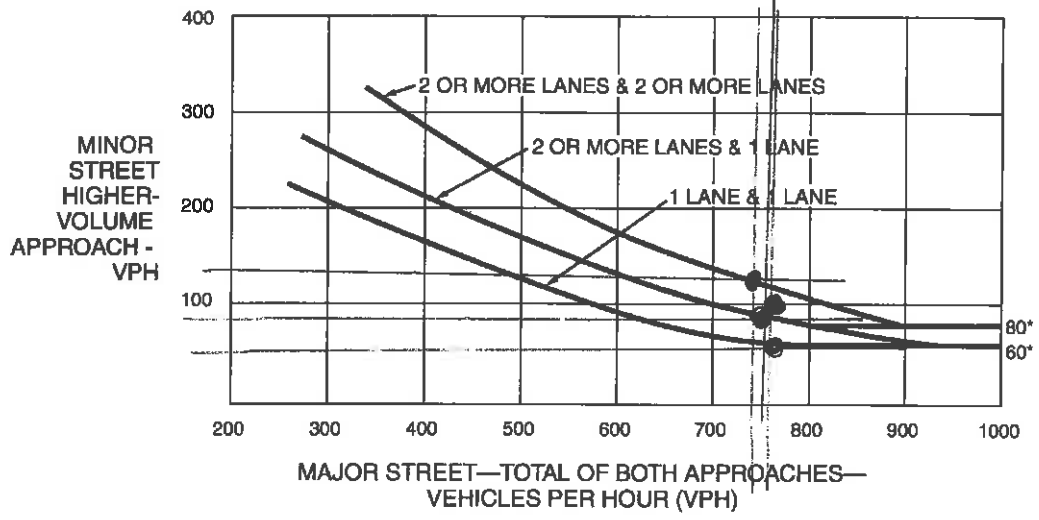
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

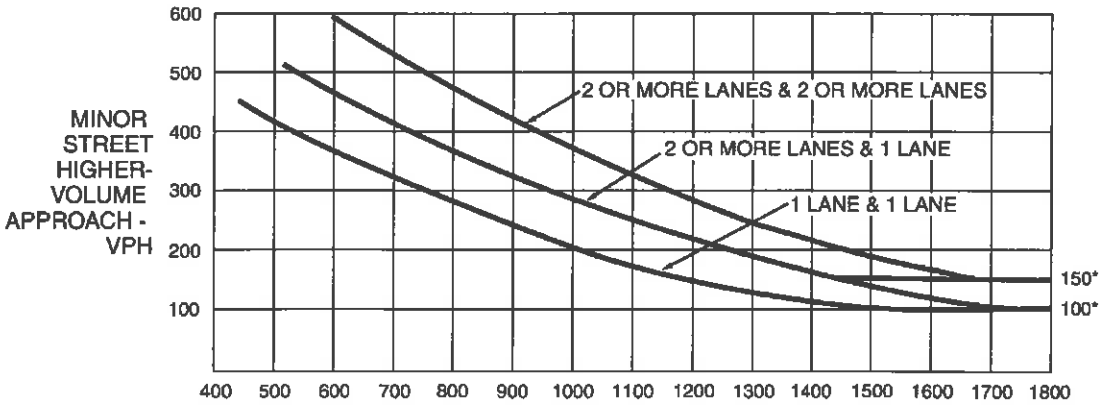
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

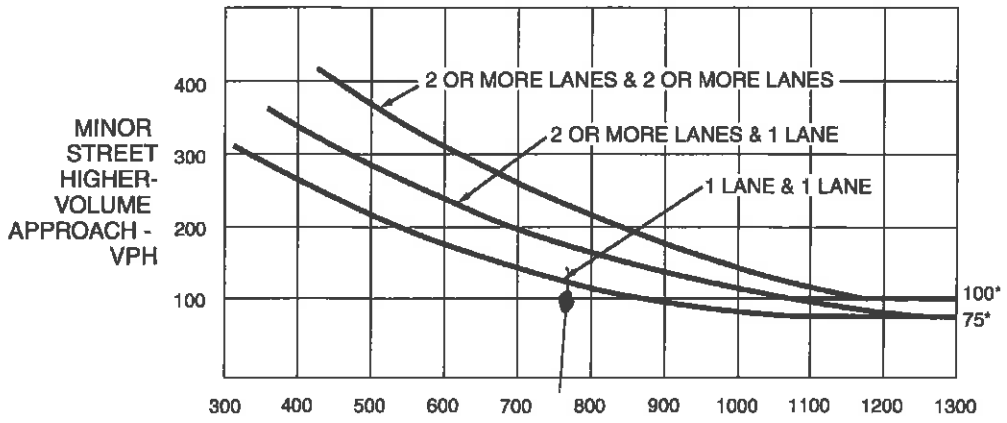
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☒
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☒
5 OR MORE	2 (2017)		
REQUIREMENTS	CONDITIONS	✓	Yes ☐ No ☒
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE 12/12/2018
CALC O M DATE 12/19/2018
CHK G R DATE 12/19/2018

DIST ____ CO ____ RTE ____ PM ____

Major St: Ferguson Avenue
Minor St: Gillings Street

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐
} RURAL (R)

☒ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☒
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				11:30 AM - 12:30 PM	12:30 - 1:30 PM	1:30 - 2:30 PM	2:30 - 3:30 PM	3:30 - 4:30 PM	4:30 - 5:30 PM	5:30 - 6:30 PM	6:30 - 7:30 PM	Hour
	(U)	R	U	R									
APPROACH LANES	(1)		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	381	401	490	521	530	632	525	361	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	109	98	220	163	163	192	131	87	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				11:30 AM - 12:30 PM	12:30 - 1:30 PM	1:30 - 2:30 PM	2:30 - 3:30 PM	3:30 - 4:30 PM	4:30 - 5:30 PM	5:30 - 6:30 PM	6:30 - 7:30 PM	Hour
	(U)	R	U	R									
APPROACH LANES	(1)		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	381	401	490	521	530	632	525	361	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	109	98	220	163	163	192	131	87	

Combination of Conditions A & B SATISFIED YES ☐ NO ☐

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☒**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	2:30 - 3:30 PM	3:30 - 4:30 PM	4:30 - 5:30 PM	5:30 - 6:30 PM
			Hour			
Both Approaches - Major Street	X		521	530	632	525
Higher Approach - Minor Street	X		163	163	192	131

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☒
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

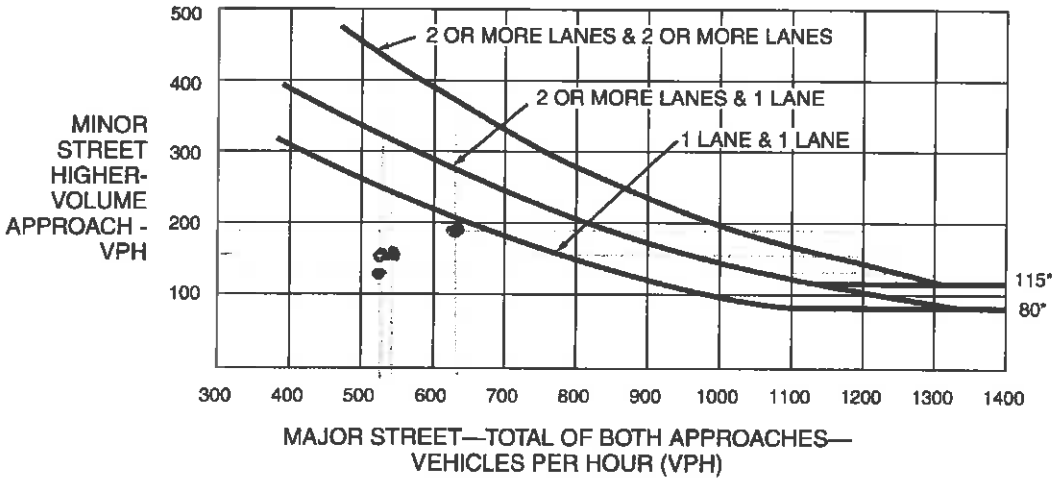
PART B **SATISFIED YES ☐ NO ☒**

APPROACH LANES	One	2 or More	4:30 - 5:30 PM
			Hour
Both Approaches - Major Street	X		632
Higher Approach - Minor Street	X		192

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☒
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

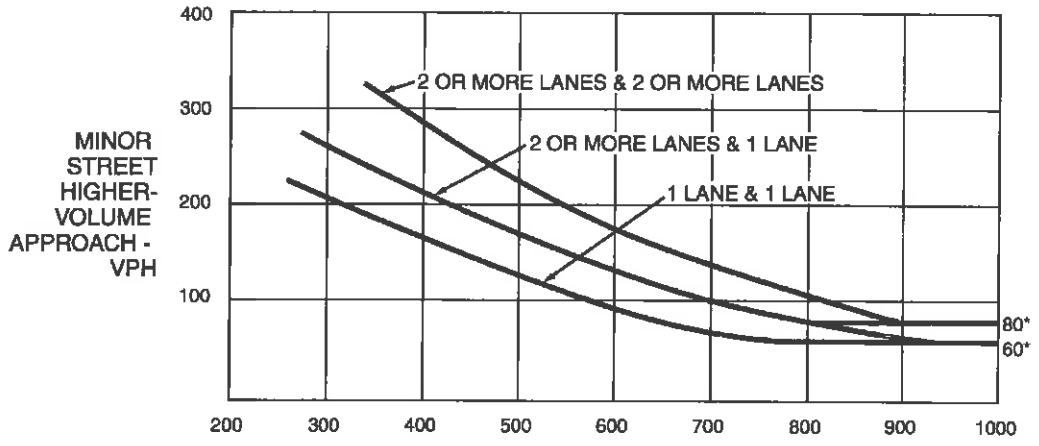
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

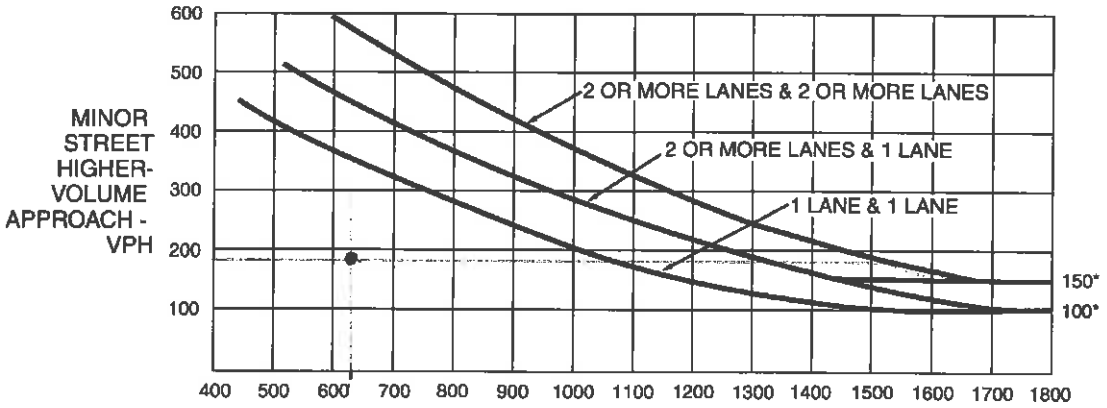
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

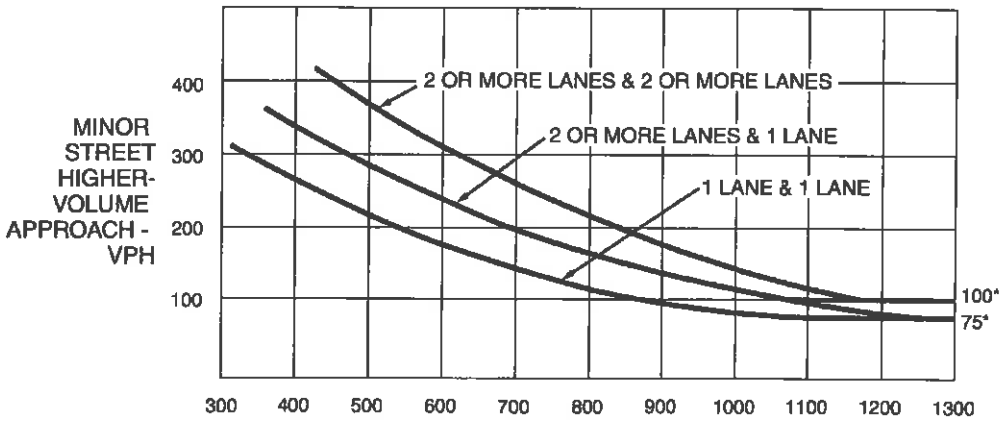
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☐
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☒
5 OR MORE	2 (2017)		
REQUIREMENTS	CONDITIONS	✓	Yes ☐ No ☒
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Appendix D

ZZ999

#2

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

RIVER WAY DR & GIDDINGS ST

Settings for Query:

Street: RIVER WAY DR
Cross Street: GIDDINGS ST
Intersection Related: True
Sorted By: Date and Time

NN728

#3

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 1
Injury Collisions: 1
Fatal Collisions: 0

Collision Summary Report

11/26/18

RIVER WAY DR & DINUBA BLVD

16-08155 **06/11/2016** **22:41** Saturday DINUBA BLVD - RIVER WAY DR 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801A Hit & Run: No Other Visible Injury # Inj: 4 # Killed: 0

Party 1 Driver West Making Left Turn Female Age: 19 2000 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep Other Visible Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Violation Lap/Shoulder Harness Used Not Stated

Party 2 Driver South Proceeding Straight Male Age: 37 2001 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep Complaint of Pain
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

Settings for Query:

Street: RIVER WAY DR
Cross Street: DINUBA BLVD
Intersection Related: True
Sorted By: Date and Time

07/01/2016 **12/31/2018** **TOTAL: 6**
#3 RIVERWAY / DINUBA

17-19122

Fri 03/10/17 14:11 W Riverway Ave & N Dinuba Blvd **Killed:** 0 **Injured:** 0
Collision Type: Hit Object **Road Surface:** **Light Conditions:**
Violation: At intersection with Riverway Ave struck the chained wodden pylons on south side of street

1	2000	DODG	DURANGO	South		NO735

17-37672

Sat 05/13/17 15:22 N Dinuba Blvd & W Riverway Ave **Killed:** 0 **Injured:** 3
Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22350 VC

1	2003	CHEV	TBZ	East	Proceeding Straight	NO735
2	2005	CHEV	TAH	East	Stopped	NO735

17-63209

Fri 08/04/17 11:09 3611 N DINUBA BLVD; RIVERWAY SPORTS PAF **Killed:** 0 **Injured:** 2
Collision Type: Rear End **Road Surface:** Wet **Light Conditions:** Daylight
Violation: 22350 VC

1	1997	TOYT	CAM	North	Proceeding Straight	NN729
2	2009		PTRB TRK	North	Making Left Turn	NN729

17-94030

Thu 11/09/17 17:30 W Riverway Ave & N Dinuba Blvd **Killed:** 0 **Injured:** 0
Collision Type: hit object **Road Surface:** **Light Conditions:**
Violation: lost control and struck dumpster, chain link wire, chain link fence, street sign and AT&T cable

1	1992	FORD	F15	East		NO735

18-086644

Sat 09/29/18 21:07 N Dinuba Blvd & W Riverway Ave **Killed:** 0 **Injured:** 0
Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 22350 VC 21703 VC

1	2004	BUIC	REG	South	Proceeding Straight	NO735
2	2016	FORD		South		NO735
2	2008	NISS	ALT			NO735

18-094885

Sat 10/27/18 13:23 3611 N DINUBA BLVD; RIVERWAY SPORTS PAF **Killed:** 0 **Injured:** 2
Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22350 VC

1	2005	HOND	ACC	North	Proceeding Straight	NN729
2	2005	FORD	ECP	North		NN729
3	2001	TOYT	CAM	North	Proceeding Straight	NN729
4	2012	DODG	DUR	North		NN729

07/01/2016 **12/31/2018** TOTAL: 2

#4 VISALIA RIVERWAY SPORTS PARK / DINBUA

16-26104

Mon 09/12/16 17:55 3611 N DINUBA BLVD; RIVERWAY SPORTS PAF **Killed:** 0 **Injured:** 1

Collision Type: Rear End **Road Surface**: Dry **Light Conditions:** Daylight
Violation:

1	2015	HOND ACC	North	Proceeding Straight	NN729
2	2000	ISU	North	Slowing or Stopping	NN729

18-044592

Sat 05/19/18 19:16 3611 N DINUBA BLVD; RIVERWAY SPORTS PAF **Killed:** 0 **Injured:** 0

Collision Type: **Road Surface**: **Light Conditions:**
Violation: leaving sports complex and collided into the left rear of v-2 fire engine

1	0	CHEV SLV	NN729
2	2018	OTHR ARROW XT	NN729

#3

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

SHANNON PKWY & GIDDINGS ST

Settings for Query:

Street: SHANNON PKWY
Cross Street: GIDDINGS ST
Intersection Related: True
Sorted By: Date and Time

NN728

#6

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

SHANNON PKWY & DINUBA BLVD

Settings for Query:

Street: SHANNON PKWY
Cross Street: DINUBA BLVD
Intersection Related: True
Sorted By: Date and Time

07/01/2016 **12/31/2018**

#6 SHANNON /DINUBA

16-33229

Thu 10/06/16 19:28 **Killed:** 0 **Injured:** 3

Collision Type: Head-On **Road Surface:** Dry **Light Conditions:** Dark - No Street Lights
Violation: 22350 VC

1	1994	TOYT 4RN	West	Proceeding Straight	NN729

18-059004

Tue 07/03/18 10:25 3611 N DINUBA BLVD; RIVERWAY SPORTS PAI **Killed:** 0 **Injured:** 0

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight

1	0	MT BIKE	North	Proceeding Straight	NN729
2	2005	CHRY SEB	East	Making Right Turn	NN729

#7

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 1
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

SHANNON PKWY & COURT ST

16-06555	**05/09/2016**	**14:00**	Monday	SHANNON PKWY - COURT ST		0'	Direction: Not Stated	Not Stated	Clear	Pty at Fault:1	
	Rear-End		Other Object	Unsafe Speed	22350		Hit & Run: Misde	Property Damage Only		# Inj: 0	# Killed: 0

Party 1	Driver	North	Making Left Turn	Age:	2001 BMW	SEDAN	Passenger Car, Station Wagon, Jeep		No Injury
Veh Type: Passenger Car			Sobriety: HBD Impairment Un	Assoc Factor: None Apparent			Not Stated		
Party 2	Parked Vehicle	West	Parked	Age:	2015 CIMC	TRAILER	Two Axle Truck		No Injury
Veh Type: Truck			Sobriety: Not Applicable	Assoc Factor: None Apparent			Not Stated		

Settings for Query:

Street: SHANNON PKWY
Cross Street: COURT ST
Intersection Related: True
Sorted By: Date and Time

07/01/2016 **12/31/2018** TOTAL: 1

#7 SHANNON / COURT

16-36294

Mon 10/17/16 13:14 3308 N DINUBA BLVD; TARGET **Killed:** 0 **Injured:** 0

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21804A VC

1	2010	HOND ACC	North	Entering Traffic	NO735
2	2006	ORION	West	Proceeding Straight	NO735

#5

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 1
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

RIGGIN AV & GIDDINGS ST

16-08872 **06/27/2016** **01:15** Monday RIGGIN AV - GIDDINGS ST 0' Direction: Not Stated Pty at Fault:
Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver	West		Male	Age:	2004 CHEVROLET		Pickups & Panels	No Injury
Veh Type: Pickup Truck		Sobriety:		Assoc Factor:				
Party 2 Driver	West		Male	Age: 19	2006 CHEVROLET	SILVERADO	Pickups & Panels	No Injury
Veh Type: Pickup Truck		Sobriety:		Assoc Factor:				

Settings for Query:

Street: RIGGIN AV
Cross Street: GIDDINGS ST
Intersection Related: True
Sorted By: Date and Time

17-09940

Mon 02/06/17 00:01 N Giddings St & W Riggin Ave **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Wet **Light Conditions:** Dark - Street Lights
Violation: 22450A VC

1	1998	FORD F15	North	Proceeding Straight	NN410
2	2008	NISS	East	Proceeding Straight	NN410

17-78852

Sun 09/24/17 16:55 **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21801A VC

1	1998	NISS ALT	North	Making Left Turn	NN410
2	2007	DODG R15	West	Proceeding Straight	NN410

17-83101

Sat 10/07/17 07:22 2935 N GIDDINGS ST **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21802A VC

1	1993	HOND CIV	South	Proceeding Straight	NN410
2	2000	FORD F35	West	Proceeding Straight	NN410

17-105454

Mon 12/18/17 10:09 2935 N GIDDINGS ST **Killed:** 0 **Injured:** 1

Collision Type: Hit Object **Road Surface:** Dry **Light Conditions:** Daylight
Violation:

1	2010	INTERNAT	West	Proceeding Straight	NN410
2	2004	HOND	West	Making Left Turn	NN410

18-018124

Wed 02/28/18 08:11 W Riggin Ave & N Giddings St **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21802A VC

1	2000	FORD XPL	South	Proceeding Straight	NN410
2	2011	GMC TERRAIN	East	Proceeding Straight	NN410

18-020332

Tue 03/06/18 22:59 **Killed:** 0 **Injured:** 2

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Dark - No Street Lights
Violation:

1	2001	BUIC CEN	North	Making Right Turn	NN410
2	2014	DODG DAR	East	Proceeding Straight	NN410

18-051791

Sun 06/10/18 19:49 W Riggin Ave & N Giddings St **Killed:** 0 **Injured:** 1

Collision Type: Sideswipe **Road Surface:** Dry **Light Conditions:** Dusk - Dawn
Violation: 22450A VC

1	2006	HOND CIV	North	Proceeding Straight	NN410
2	2018	NISS ROGUE	East	Proceeding Straight	NN410

17-43706

Fri 06/02/17 01:46 **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 23152 (A) VC

1	2011	TOYT PRIUS	North	Proceeding Straight	NO701
2	1999	TOYT CAM	East	Proceeding Straight	NO701

#9

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

RIGGIN AV & DINUBA BLVD

Settings for Query:

Street: RIGGIN AV
Cross Street: DINUBA BLVD
Intersection Related: True
Sorted By: Date and Time

16-18243

Thu 08/18/16 12:56 W Riggin & N Dinuba Blvd **Killed:** 0 **Injured:** 0

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 23152 (B) VC 22350 VC

1	2002	NISS SEN	West	Proceeding Straight	NO701
2	2012	HOND CIV	West	Stopped	NO701

16-40698

Mon 10/31/16 20:55 N Dinuba & W Riggin Ave **Killed:** 0 **Injured:** 2

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 22106 VC

1	2001	BMW X5	West	Stopped	NO701
2	2003	TOYT MTX	West	Proceeding Straight	NO701

17-04552

Tue 01/17/17 17:35 N Dinuba & W Riggin Ave **Killed:** 0 **Injured:** 0

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation:

1	2001	HYUN ELN	East	Proceeding Straight	NO701
2	2003	FORD F15	East	Stopped	NO701
3	2002	CHEV TAH	East	Stopped	NO701

17-47648

Wed 06/14/17 22:15 N Dinuba Blvd & W Riggin Ave **Killed:** 1 **Injured:** 0

Collision Type: Vehicle/Pedestrian **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation:

2	2009	DODG AVN	West	Proceeding Straight	NO701

17-50676

Sat 06/24/17 18:53 **Killed:** 0 **Injured:** 0

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation:

1	1993	CHEV LUM	South	Proceeding Straight	NO701
2	2008	GMC SRA	South	Proceeding Straight	NO701

17-91450

Wed 11/01/17 18:59 2910 N DINUBA BLVD; ARCO AMPM **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 21453C VC

1	2001	CHEV SLV	East	Making Left Turn	NO701
2	2011	NISS SEN	North	Proceeding Straight	NO701

18-011842

Thu 02/08/18 19:10 2910 N DINUBA BLVD; ARCO AMPM **Killed:** 0 **Injured:** 0

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dusk - Dawn
Violation: 22350 VC

1	2003	CHEV SLV	South	Proceeding Straight	NO701
2	2007	CHEV SLV	South	Stopped	NO701

18-034867

Thu 04/19/18 18:03 N Dinuba Blvd & W Riggin Ave **Killed:** 0 **Injured:** 0

Collision Type: Hit Object **Road Surface:** Dry **Light Conditions:** Daylight
Violation:

1	2015	TOYT YAR	West	Making Right Turn	NO701

18-089946

Wed 10/10/18 17:28 **Killed:** 0 **Injured:** 1

Collision Type: Sideswipe **Road Surface:** Dry **Light Conditions:** Daylight
Violation:

1	0	MAZD	North	Proceeding Straight	NO701

17-107138

Sun 12/24/17 09:05 3124 N DINUBA BLVD; ROSS DRESS FOR LESS **Killed:** 0 **Injured:** 1

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21703 VC

1	2010	FORD ECP	West	Proceeding Straight	NO735
2	2008	FORD ECP	West	Stopped	NO735

18-049161

Sun 06/03/18 00:12 3102 N DINUBA BLVD; MCDONALDS **Killed:** 0 **Injured:** 1

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation:

1	1988	TOYT CAM		Proceeding Straight	NO735
2	2011	NISS ALT	North	Stopped	NO735

#10

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

RIGGIN AV & COURT ST

Settings for Query:

Street: RIGGIN AV
Cross Street: COURT ST
Intersection Related: True
Sorted By: Date and Time

16-28849

Thu 09/22/16 06:00 **Killed:** 0 **Injured:** 0

Collision Type: Head-On **Road Surface:** Dry **Light Conditions:** Dusk - Dawn
Violation: 21650 VC 14601.1 (A) VC

1	2002	MERZ C24	West	Ran off Road	NO701

17-19231

Fri 03/10/17 20:14 E Riggin Ave & N Court St **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 22107 VC

1	2008	MAZD	East	Proceeding Straight	NO701
2	1997	TOYT CAM	North	Stopped	NO701

17-31194

Fri 04/21/17 14:23 E Riggin Ave & N Court St; U:5 **Killed:** 0 **Injured:** 0

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21802A VC

1	2008	TOYT HGH	North	Proceeding Straight	NO701
2	2015	FORD FUSION	West	Proceeding Straight	NO701

17-106723

Fri 12/22/17 19:11 N Court St & E Riggin Ave **Killed:** 0 **Injured:** 1

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 22350 VC

1	2002	HOND ODY	North	Proceeding Straight	NO701
2	2012	DODG CHA	East	Proceeding Straight	NO701

18-075388

Sat 08/25/18 18:03 N Court St & E Riggin Ave **Killed:** 0 **Injured:** 0

Collision Type: Hit Object **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21650 VC

1	2005	HOND ACC	East	Proceeding Straight	NO701

16-29163

Fri 09/23/16 05:13 3112 N DINUBA BLVD ; BEHND **Killed:** 0 **Injured:** 0

Collision Type: **Road Surface:** **Light Conditions:**
Violation: v-1 traveling SB Court north of Riggin lost control and struck ES curb striking a no parking sign

1	1996	CHEV BLZ			NO735

17-63428

Sat 08/05/17 01:14 **Killed:** 0 **Injured:** 0
Collision Type: Hit Object **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation:

17-101488

Tue 12/05/17 01:58 **Killed:** 0 **Injured:** 2
Collision Type: Hit Object **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation:

1	2015	TOYT YARIS	East	Ran off Road	NO201

#11

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 1
Injury Collisions: 1
Fatal Collisions: 0

Collision Summary Report

11/26/18

FERGUSON AV & GIDDINGS ST

15-16418 **11/24/2015** **20:52** Tuesday GIDDINGS ST - FERGUSON AV 0' Direction: Not Stated Dark - Street Lig Raining Pty at Fault:1
Broadside Bicycle Auto R/W Violation 21802A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Female Age: 63 2005 VOLKSWAGEN JETTA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Bicyclist South Proceeding Straight Male Age: 51 Bicycle Other Visible Injury
Veh Type: Bicycle Sobriety: HNBD Assoc Factor: Violation M/C Helmet Driver - No Cell Phone Not In Use

Settings for Query:

Street: FERGUSON AV
Cross Street: GIDDINGS ST
Intersection Related: True
Sorted By: Date and Time

07/01/2016 **12/31/2018** **TOTAL: 4**

#11 FERGUSON / GIDDINGS

16-55802

Sat 12/24/16 19:45 **Killed:** 0 **Injured:** 0

Collision Type: Hit Object **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 23152 (B) VC

1	2009	TOYT	SCION XB	North	Proceeding Straight	NN410

17-14893

Thu 02/23/17 17:15 N Giddings St & W Ferguson Ave **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22450A VC

1	1998	TOYT	COA	East	Entering Traffic	NN410
2	2016	OTHR	GILLIG	South	Proceeding Straight	NN410

17-90793

Mon 10/30/17 17:37 W Ferguson Ave & N Giddings St **Killed:** 0 **Injured:** 2

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Dusk - Dawn
Violation: 22450A VC

1	2010	CHEV	MAL	North	Proceeding Straight	NN410
2	1998	TOYT	COA	East	Proceeding Straight	NN410

18-031365

Sun 04/08/18 14:57 N Giddings St & W Ferguson Ave **Killed:** 0 **Injured:** 2

Collision Type: Sideswipe **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22450A VC

1	2014	KIA	OPT	South	Proceeding Straight	NN410
2	2003	HOND	CIV	West	Proceeding Straight	NN410

#12

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 1
Injury Collisions: 1
Fatal Collisions: 0

Collision Summary Report

11/26/18

FERGUSON AV & DINUBA BLVD

16-06236	**05/02/2016**	**19:31**	Monday	DINUBA BLVD - FERGUSON AV		0'	Direction: Not Stated	Dusk - Dawn	Clear		Pty at Fault:1
	Head-On		Other Motor Vehicle	Traffic Signals and Signs		21453A	Hit & Run: No	Other Visible Injury		# Inj: 3	# Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 31 2002 KIA SEDONA Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Hazardous Material

Party 2 Driver West Making Left Turn Male Age: 27 1991 HONDA ACCORD Passenger Car, Station Wagon, Jeep Complaint of Pain
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Hazardous Material

Settings for Query:

Street: FERGUSON AV
Cross Street: DINUBA BLVD
Intersection Related: True
Sorted By: Date and Time

16-48547

Tue 11/29/16 14:54 N Dinuba & W Ferguson Ave **Killed:** 0 **Injured:** 1

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22350 VC

1	2001	TOYO TACOMA	North	Proceeding Straight	NO702
2	2007	TOYT COA	North	Proceeding Straight	NO702

17-09213

Fri 02/03/17 16:21 **Killed:** 0 **Injured:** 0

Collision Type: Hit Object **Road Surface:** Wet **Light Conditions:** Daylight
Violation: 22350 VC

1	2006	GMC SIERRA	West	Making Right Turn	NO702

17-10307

Tue 02/07/17 14:08 W Ferguson Ave & N Dinuba Blvd **Killed:** 0 **Injured:** 0

Collision Type: Sideswipe **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21650 VC 2800.2 (A) VC FEL

1	2011	FORD F15	East	Ran off Road	NO702
2	2004	PONT TSP	East	Proceeding Straight	NO702
3	2016	FORD FUSION	West	Stopped	NO702

17-66183

Mon 08/14/17 16:01 W Ferguson Ave & N Dinuba Blvd **Killed:** 0 **Injured:** 0

Collision Type: Hit Object **Road Surface:** Slippery (Muddy, Oily, Etc.) **Light Conditions:** Daylight
Violation:

1	1996	FORD MUS	East	Ran off Road	NO702

18-058471

Sun 07/01/18 15:18 N Dinuba Blvd & W Ferguson Ave **Killed:** 0 **Injured:** 1

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22350 VC

1	1995	CHEV SUB	South	Proceeding Straight	NO702
2	2010	CHEV CAM	North	Stopped	NO702

17-67112

Thu 08/17/17 13:12 2025 N DINUBA BLVD; FOOD 4 LESS **Killed:** 0 **Injured:** 0

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 21804A VC

1	2014	FORD	East	Making Right Turn	NN410
2	2002	SUBA	South	Proceeding Straight	NN410

18-029528

Tue 04/03/18 06:36 W Ferguson Ave & N Giddings St **Killed:** 0 **Injured:** 0

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22106 VC

1	2016	HINO TRUCK	West	Backing	NN410

18-088476

Fri 10/05/18 21:33 2411 N DINUBA BLVD; SHOP N GO **Killed:** 0 **Injured:** 1

Collision Type: Head-On **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation:

1	2015	SUBA RX	South	Proceeding Straight	NN410

#13

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 0
Injury Collisions: 0
Fatal Collisions: 0

Collision Summary Report

11/26/18

FERGUSON AV & COURT ST

Settings for Query:

Street: FERGUSON AV
Cross Street: COURT ST
Intersection Related: True
Sorted By: Date and Time

07/01/2016 **12/31/2018** **TOTAL: 4**

#13 FERGUSON / COURT

17-39258

Thu 05/18/17 17:56 N Court St & E Ferguson Ave **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 12500 (A) VC

1	1997	HOND ACC	South	Stopped	NO703
2	2012	HOND ACC	West	Stopped	NO703

18-045738

Wed 05/23/18 13:16 N Court St & E Ferguson Ave **Killed:** 0 **Injured:** 1

Collision Type: Broadside **Road Surface:** Dry **Light Conditions:** Daylight
Violation: 22450A VC

1	2013	DODG JOURNEY	South	Proceeding Straight	NO703
2	2007	GMC ACADIA	East	Proceeding Straight	NO703

18-033777

Mon 04/16/18 08:20 214 E FERGUSON AVE; CROWLEY SCHOOL **Killed:** 0 **Injured:** 0

Collision Type: Broadside **Road Surface:** Wet **Light Conditions:** Daylight
Violation: 22450A VC

1	2010	TRITAN	South	Proceeding Straight	NO701
2	2003	FORD MUSTANG	West	Proceeding Straight	NO701

18-039380

Thu 05/03/18 21:49 200 W FERGUSON AVE **Killed:** 0 **Injured:** 0

Collision Type: Rear End **Road Surface:** Dry **Light Conditions:** Dark - Street Lights
Violation: 23152 (A) VC 21650 VC

1	2013	TOYT SUV	East	Ran off Road	NO701
2	1996	HOND CIV		Parked	NO701

#14

City of Visalia
Visalia Police Department

From 11/01/2015 to 12/31/2016

Total Collisions: 3
Injury Collisions: 2
Fatal Collisions: 0

Collision Summary Report

11/26/18

ST JOHNS PKWY & BURKE ST

15-15428 **11/03/2015** **18:03** Tuesday ST JOHNS PKWY - BURKE ST 0' Direction: Not Stated Dark - Street Lig Cloudy Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21800A Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 25 2014 DODGE RAM 2500 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Proceeding Straight Female Age: 62 2011 NISSAN XTERRA Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

16-06332 **05/04/2016** **12:23** Wednesday ST JOHNS PKWY - BURKE ST 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Bicycle Auto R/W Violation 21802A Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 80 2000 CADILLAC STS No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Making Left Turn Male Age: 35 2015 HD STRETLTLD Other Visible Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Cell Phone Not In Use

16-08388 **06/16/2016** **21:33** Thursday ST JOHNS PKWY - BURKE ST 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:
Vehicle - Pedestrian Bicycle Unknown Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Age: FORD F-150 No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Stated Cell Phone Not In Use
Party 2 Bicyclist South Proceeding Straight Male Age: 49 Bicycle Complaint of Pain
Veh Type: Bicycle Sobriety: HNBD Assoc Factor: None Stated M/C Helmet Driver - No Cell Phone Not In Use

Settings for Query:

Street: ST JOHNS PKWY
Cross Street: BURKE ST
Intersection Related: True
Sorted By: Date and Time

07/01/2016 **12/31/2018** **TOTAL: 2**

#14 ST. JOHNS / BURKE

17-81469

Mon 10/02/17 14:42 2449 N EDISON CT **Killed:** 0 **Injured:** 0

Collision Type: Vehicle/Pedestrian **Road Surface**: Dry **Light Conditions:** Daylight
Violation: 21950A VC

NO201

18-102460

Thu 11/22/18 03:02 **Killed:** 0 **Injured:** 0

Collision Type: Hit Object **Road Surface**: Wet **Light Conditions:** Dark - Street Lights
Violation: 22106 VC 22350 VC

1	1995	CHEV PK	West	Making Left Turn	NO201

Appendix E

1 - Avenue 320 and Dinuba Blvd Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	11	250	42	40	456	1	3	4	16	51	6	26
	PM	23	504	42	14	469	5	1	1	10	23	4	26
2020 Existing	AM	12	260	44	42	475	2	4	5	17	54	7	28
	PM	24	525	44	15	488	6	2	2	11	24	5	28
2020 Existing with Project (Phase 1)	AM	12	279	54	42	494	2	4	5	17	64	7	28
	PM	24	545	54	15	508	6	2	2	11	34	5	28
2022 Existing	AM	12	270	46	44	493	2	4	5	18	56	7	29
	PM	25	545	46	16	507	6	2	2	11	25	5	29
2022 Existing with Project (Phase 1&2)	AM	12	300	61	44	523	2	4	5	18	71	7	29
	PM	25	576	62	16	538	6	2	2	11	41	5	29
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	13	295	50	48	539	2	4	5	19	61	8	31
	PM	28	595	50	17	554	6	2	2	12	28	5	31
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	13	325	65	48	569	2	4	5	19	76	8	31
	PM	28	626	66	17	585	6	2	2	12	44	5	31
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	15	320	54	52	584	2	4	6	21	66	8	34
	PM	30	646	54	18	601	7	2	2	13	30	6	34
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	15	350	69	52	614	2	4	6	21	81	8	34
	PM	30	677	70	18	632	7	2	2	13	46	6	34
20-Year Cumulative Conditions Without Project (Phases 1&2)	AM	17	370	63	60	675	2	5	6	24	76	9	39
	PM	35	746	63	21	695	8	2	2	15	35	6	39
20-Year Cumulative Conditions With Project (Phases 1&2)	AM	17	400	78	60	705	2	5	6	24	91	9	39
	PM	35	777	79	21	726	8	2	2	15	51	6	39

2 - Riverway Drive and Giddings Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	19	0	17	0	0	0	0	71	60	27	48	0
	PM	17	0	22	0	0	0	0	59	32	29	51	0
2020 Existing	AM	20	0	18	--	--	--	0	74	63	29	50	0
	PM	18	0	23	--	--	--	0	62	34	31	54	0
2020 Existing with Project (Phase 1)	AM	30	0	18	--	--	--	0	74	73	29	50	0
	PM	28	0	23	--	--	--	0	62	44	31	54	0
2022 Existing	AM	21	0	19	--	--	--	0	77	65	30	52	0
	PM	19	0	24	--	--	--	0	64	35	32	56	0
2022 Existing with Project (Phase 1&2)	AM	36	0	19	--	--	--	0	77	75	30	52	0
	PM	35	0	24	--	--	--	0	64	45	32	56	0
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	23	0	21	--	--	--	0	84	71	32	57	0
	PM	21	0	26	--	--	--	0	70	38	35	61	0
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	38	0	21	--	--	--	0	84	81	32	57	0
	PM	37	0	26	--	--	--	0	70	48	35	61	0
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	25	0	22	--	--	--	0	91	77	35	62	0
	PM	22	0	29	--	--	--	0	76	41	38	66	0
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	40	0	22	--	--	--	0	91	87	35	62	0
	PM	38	0	29	--	--	--	0	76	51	38	66	0

Table 3 - Riverway Drive and Dinuba Blvd Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	13	298	0	0	507	55	44	0	39	0	0	0
	PM	25	556	0	0	541	43	37	0	27	0	0	0
2020 Existing	AM	14	310	0	0	528	58	46	0	41	--	--	--
	PM	26	579	0	0	563	45	39	0	29	--	--	--
2020 Existing with Project (Phase 1)	AM	14	339	0	0	557	58	46	0	41	--	--	--
	PM	26	609	0	0	593	45	39	0	29	--	--	--
2022 Existing	AM	15	322	0	0	548	60	48	0	43	--	--	--
	PM	27	601	0	0	585	47	40	0	30	--	--	--
2022 Existing with Project (Phase 1&2)	AM	15	367	0	0	593	60	48	0	43	--	--	--
	PM	27	647	0	0	631	47	40	0	30	--	--	--
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	16	352	0	0	599	65	52	0	47	--	--	--
	PM	30	657	0	0	639	51	44	0	32	--	--	--
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	16	397	0	0	644	65	52	0	47	--	--	--
	PM	30	703	0	0	685	51	44	0	32	--	--	--
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	17	382	0	0	649	71	57	0	50	--	--	--
	PM	32	712	0	0	693	56	48	0	35	--	--	--
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	17	427	0	0	694	71	57	0	50	--	--	--
	PM	32	758	0	0	739	56	48	0	35	--	--	--
20-Year Cumulative Conditions Without Project (Phases 1&2)	AM	20	442	0	0	751	82	66	0	58	--	--	--
	PM	37	823	0	0	801	64	55	0	40	--	--	--
20-Year Cumulative Conditions With Project (Phases 1&2)	AM	20	487	0	0	796	82	66	0	58	--	--	--
	PM	37	869	0	0	847	64	55	0	40	--	--	--

4 - Riverway Sports Park Driveway and Dinuba Blvd Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	14	317	0	0	539	3	2	0	11	0	0	0
	PM	78	566	0	0	547	12	3	0	45	0	0	0
2020 Existing	AM	15	330	0	0	561	4	3	0	12	--	--	--
	PM	82	589	0	0	569	13	4	0	47	--	--	--
2020 Existing with Project (Phase 1)	AM	15	359	0	0	590	4	3	0	12	--	--	--
	PM	82	619	0	0	599	13	4	0	47	--	--	--
2022 Existing	AM	16	343	0	0	583	4	3	0	12	--	--	--
	PM	85	612	0	0	591	13	4	0	49	--	--	--
2022 Existing with Project (Phase 1&2)	AM	16	388	0	0	628	4	3	0	12	--	--	--
	PM	85	658	0	0	637	13	4	0	49	--	--	--
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	17	375	0	0	637	4	3	0	13	--	--	--
	PM	93	668	0	0	646	15	4	0	54	--	--	--
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	17	420	0	0	682	4	3	0	13	--	--	--
	PM	93	714	0	0	692	15	4	0	54	--	--	--
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	18	406	0	0	690	4	3	0	15	--	--	--
	PM	100	725	0	0	701	16	4	0	58	--	--	--
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	18	451	0	0	735	4	3	0	15	--	--	--
	PM	100	771	0	0	747	16	4	0	58	--	--	--
20-Year Cumulative Conditions Without Project (Phases 1&2)	AM	21	470	0	0	798	5	3	0	17	--	--	--
	PM	116	838	0	0	810	18	5	0	67	--	--	--
20-Year Cumulative Conditions With Project (Phases 1&2)	AM	21	515	0	0	843	5	3	0	17	--	--	--
	PM	116	884	0	0	856	18	5	0	67	--	--	--

5 - Shannon Parkway and Giddings Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	7	144	10	65	105	67	88	32	15	7	30	37
	PM	1	91	32	14	29	24	41	52	3	13	41	19
2020 Existing	AM	8	150	11	68	110	70	92	34	16	8	32	39
	PM	2	95	34	15	31	25	43	55	4	14	43	20
2020 Existing with Project (Phase 1)	AM	8	150	68	78	110	70	92	44	16	65	42	49
	PM	2	95	94	25	31	25	43	65	4	74	53	30
2022 Existing	AM	8	156	11	71	114	73	96	35	17	8	33	40
	PM	2	99	35	16	32	26	45	57	4	15	45	21
2022 Existing with Project (Phase 1&2)	AM	8	156	100	86	114	73	96	50	17	97	48	55
	PM	2	99	126	32	32	26	45	73	4	106	61	37
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	9	170	12	77	124	80	104	38	18	9	36	44
	PM	2	108	38	17	35	29	49	62	4	16	49	23
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	9	170	101	92	124	80	104	53	18	98	51	59
	PM	2	108	129	33	35	29	49	78	4	107	65	39
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	9	185	13	84	135	86	113	41	20	9	39	48
	PM	2	117	41	18	38	31	53	67	4	17	53	25
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	9	185	102	99	135	86	113	56	20	98	54	63
	PM	2	117	132	34	38	31	53	83	4	108	69	41

6 - Shannon Parkway and Dinuba Blvd Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	37	285	7	21	525	11	12	16	68	5	12	23
	PM	64	586	11	25	548	15	12	9	36	29	23	59
2020 Existing	AM	39	297	8	22	546	12	13	17	71	6	13	24
	PM	67	610	12	26	570	16	13	10	38	31	24	62
2020 Existing with Project (Phase 1)	AM	39	297	55	51	546	12	13	93	71	53	89	53
	PM	67	610	62	56	570	16	13	90	38	81	104	92
2022 Existing	AM	40	308	8	23	567	12	13	18	74	6	13	25
	PM	70	633	12	27	592	17	13	10	39	32	25	64
2022 Existing with Project (Phase 1&2)	AM	40	308	82	68	567	12	13	136	74	80	131	70
	PM	70	633	88	72	592	17	13	131	39	108	146	110
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	44	337	9	25	620	13	15	19	81	6	15	28
	PM	76	692	13	30	647	18	15	11	43	35	28	70
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	44	337	83	70	620	13	15	137	81	80	133	73
	PM	76	692	89	75	647	18	15	132	43	111	149	116
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	48	365	9	27	672	15	16	21	88	7	16	30
	PM	82	751	15	32	702	20	16	12	47	38	30	76
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	48	365	83	72	672	15	16	139	88	81	134	75
	PM	82	751	91	77	702	20	16	133	47	114	151	122
20-Year Cumulative Conditions Without Project (Phases 1&2)	AM	55	422	11	32	777	17	18	24	101	8	18	35
	PM	95	868	17	37	812	23	18	14	54	43	35	88
20-Year Cumulative Conditions With Project (Phases 1&2)	AM	55	422	85	77	777	17	18	142	101	82	136	80
	PM	95	868	93	82	812	23	18	135	54	119	156	134

7 - Shannon Parkway and Court Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	42	0	0	0	0	0	0	0	30	0	0	0
	PM	46	0	0	0	0	0	0	0	61	0	0	0
2020 Existing	AM	44	0	0	--	--	--	0	0	32	--	--	--
	PM	48	0	0	--	--	--	0	0	64	--	--	--
2020 Existing with Project (Phase 1)	AM	82	0	0	--	--	--	0	0	70	--	--	--
	PM	88	0	0	--	--	--	0	0	104	--	--	--
2022 Existing	AM	46	0	0	--	--	--	0	0	33	--	--	--
	PM	50	0	0	--	--	--	0	0	66	--	--	--
2022 Existing with Project (Phase 1&2)	AM	105	0	0	--	--	--	0	0	92	--	--	--
	PM	111	0	0	--	--	--	0	0	127	--	--	--
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	50	0	0	--	--	--	0	0	36	--	--	--
	PM	55	0	0	--	--	--	0	0	72	--	--	--
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	109	0	0	--	--	--	0	0	95	--	--	--
	PM	116	0	0	--	--	--	0	0	133	--	--	--
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	54	0	0	--	--	--	0	0	39	--	--	--
	PM	59	0	0	--	--	--	0	0	79	--	--	--
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	113	0	0	--	--	--	0	0	98	--	--	--
	PM	120	0	0	--	--	--	0	0	140	--	--	--

8 - Riggin Avenue and Giddings Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	14	56	40	4	72	41	65	529	38	27	375	56
	PM	16	41	51	3	29	34	73	452	20	67	565	14
2020 Existing	AM	15	59	42	5	75	43	68	551	40	29	390	59
	PM	17	43	54	4	31	36	76	471	21	70	588	15
2020 Existing with Project (Phase 1)	AM	15	88	42	5	104	72	97	551	40	29	390	59
	PM	17	73	54	4	61	66	106	471	21	70	588	15
2022 Existing	AM	16	61	44	5	78	45	71	572	42	30	405	61
	PM	18	45	56	4	32	37	79	489	22	73	611	16
2022 Existing with Project (Phase 1&2)	AM	16	106	44	5	123	90	116	572	42	30	405	61
	PM	18	91	56	4	78	83	125	489	22	73	611	16
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	17	67	48	5	85	49	77	625	45	32	443	67
	PM	19	49	61	4	35	41	87	534	24	80	667	17
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	17	112	48	5	130	94	122	625	45	32	443	67
	PM	19	95	61	4	81	87	133	534	24	80	667	17
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	18	72	52	6	93	53	84	678	49	35	480	72
	PM	21	53	66	4	38	44	94	579	26	86	724	18
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	18	117	52	6	138	98	129	678	49	35	480	72
	PM	21	99	66	4	84	90	140	579	26	86	724	18

9 - Riggin Avenue and Dinuba Blvd Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	99	267	32	74	361	87	142	309	163	105	257	34
	PM	146	636	43	87	345	105	181	240	71	147	314	53
2020 Existing	AM	103	278	34	77	376	91	148	322	170	110	268	36
	PM	152	662	45	91	359	110	189	250	74	153	327	56
2020 Existing with Project (Phase 1)	AM	103	325	34	77	423	91	148	322	170	110	268	36
	PM	152	712	45	91	409	110	189	250	74	153	327	56
2022 Existing	AM	107	289	35	80	390	94	154	334	177	114	278	37
	PM	158	687	47	94	373	114	196	260	77	159	340	58
2022 Existing with Project (Phase 1&2)	AM	107	363	35	80	464	94	154	334	177	114	278	37
	PM	158	763	47	94	449	114	196	260	77	159	340	58
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	117	316	38	88	426	103	168	365	193	124	304	41
	PM	173	751	51	103	408	124	214	284	84	174	371	63
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	117	390	38	88	500	103	168	365	193	124	304	41
	PM	173	827	51	103	484	124	214	284	84	174	371	63
10-Year Cumulative Conditions Without Project	AM	127	342	41	95	463	112	182	396	209	135	329	44
	PM	187	815	56	112	442	135	232	308	91	189	402	68
10-Year Cumulative Conditions With Project	AM	127	416	41	95	537	112	182	396	209	135	329	44
	PM	187	891	56	112	518	135	232	308	91	189	402	68
20-Year Cumulative Conditions Without Project	AM	147	396	48	110	535	129	211	458	242	156	381	51
	PM	217	942	64	129	511	156	268	356	106	218	465	79
20-Year Cumulative Conditions With Project	AM	147	470	48	110	609	129	211	458	242	156	381	51
	PM	217	1018	64	129	587	156	268	356	106	218	465	79

10 - Riggin Avenue and Court Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	36	11	19	19	13	2	23	310	29	26	301	13
	PM	43	29	48	49	21	12	52	306	55	36	358	44
2020 Existing	AM	38	12	20	20	14	3	24	323	31	28	314	14
	PM	45	31	50	51	22	13	55	319	58	38	373	46
2020 Existing with Project (Phase 1)	AM	38	22	20	49	24	3	24	323	31	28	314	43
	PM	45	41	50	81	32	13	55	319	58	38	373	76
2022 Existing	AM	39	12	21	21	15	3	25	335	32	29	326	15
	PM	47	32	52	53	23	13	57	331	60	39	387	48
2022 Existing with Project (Phase 1&2)	AM	39	27	21	66	30	3	25	335	32	29	326	60
	PM	47	48	52	99	39	13	57	331	60	39	387	94
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	43	13	23	23	16	3	28	366	35	31	356	16
	PM	51	35	57	58	25	15	62	362	65	43	423	52
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	43	28	23	68	31	3	28	366	35	31	356	61
	PM	51	51	57	104	41	15	62	362	65	43	423	98
10-Year Cumulative Conditions Without Project	AM	47	15	25	25	17	3	30	397	38	34	386	17
	PM	56	38	62	63	27	16	67	392	71	47	459	57
10-Year Cumulative Conditions With Project	AM	47	30	25	70	32	3	30	397	38	34	386	62
	PM	56	54	62	109	43	16	67	392	71	47	459	103

11 - Ferguson Avenue and Giddings Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	31	165	36	66	170	59	54	181	46	34	225	61
	PM	42	97	42	38	101	52	48	182	33	37	314	55
2020 Existing	AM	33	172	38	69	177	62	57	189	48	36	234	64
	PM	44	101	44	40	106	55	50	190	35	39	327	58
2020 Existing with Project (Phase 1)	AM	33	191	38	69	196	72	67	189	48	36	234	64
	PM	44	121	44	40	126	65	60	190	35	39	327	58
2022 Existing	AM	34	179	39	72	184	64	59	196	50	37	243	66
	PM	46	105	46	42	110	57	52	197	36	40	340	60
2022 Existing with Project (Phase 1&2)	AM	34	209	39	72	214	79	74	196	50	37	243	66
	PM	46	136	46	42	141	73	68	197	36	40	340	60
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	37	195	43	78	201	70	64	214	55	41	266	72
	PM	50	115	50	45	120	62	57	215	39	44	371	65
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	37	225	43	78	231	85	79	214	55	41	266	72
	PM	50	146	50	45	151	78	73	215	39	44	371	65
10-Year Cumulative Conditions Without Project	AM	40	212	47	85	218	76	70	232	59	44	288	79
	PM	54	125	54	49	130	67	62	233	43	48	402	71
10-Year Cumulative Conditions With Project	AM	40	242	47	85	248	91	85	232	59	44	288	79
	PM	54	156	54	49	161	83	78	233	43	48	402	71

12 - Ferguson Avenue and Dinuba Blvd Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	58	393	25	20	740	43	89	79	273	54	50	38
	PM	148	741	21	30	564	79	110	101	150	42	79	18
2020 Existing	AM	61	409	26	21	770	45	93	83	284	57	52	40
	PM	154	771	22	32	587	83	115	106	156	44	83	19
2020 Existing with Project (Phase 1)	AM	61	447	26	21	808	55	103	83	284	57	52	40
	PM	154	811	22	32	627	93	125	106	156	44	83	19
2022 Existing	AM	63	425	27	22	800	47	97	86	295	59	54	42
	PM	160	801	23	33	610	86	119	110	162	46	86	20
2022 Existing with Project (Phase 1&2)	AM	63	484	27	22	859	62	112	86	295	59	54	42
	PM	160	862	23	33	671	102	135	110	162	46	86	20
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	69	464	30	24	874	51	106	94	323	64	59	45
	PM	175	875	25	36	666	94	130	120	177	50	94	22
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	69	523	30	24	933	66	121	94	323	64	59	45
	PM	175	936	25	36	727	110	146	120	177	50	94	22
10-Year Cumulative Conditions Without Project	AM	75	504	32	26	948	56	114	102	350	70	64	49
	PM	190	949	27	39	722	102	141	130	192	54	102	24
10-Year Cumulative Conditions With Project	AM	75	563	32	26	1007	71	129	102	350	70	64	49
	PM	190	1010	27	39	783	118	157	130	192	54	102	24
20-Year Cumulative Conditions Without Project	AM	86	582	37	30	1096	64	132	117	405	80	74	57
	PM	220	1097	32	45	835	117	163	150	222	63	117	27
20-Year Cumulative Conditions With Project	AM	86	641	37	30	1155	79	147	117	405	80	74	57
	PM	220	1158	32	45	896	133	179	150	222	63	117	27

13 - Ferguson Avenue and Court Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	40	62	41	48	89	34	20	56	54	64	65	56
	PM	47	103	15	11	81	30	26	38	54	12	28	9
2020 Existing	AM	42	65	43	50	93	36	21	59	57	67	68	59
	PM	49	108	16	12	85	32	28	40	57	13	30	10
2020 Existing with Project (Phase 1)	AM	42	75	43	50	103	36	21	59	57	67	68	59
	PM	49	118	16	12	95	32	28	40	57	13	30	10
2022 Existing	AM	44	67	45	52	97	37	22	61	59	70	71	61
	PM	51	112	17	12	88	33	29	42	59	13	31	10
2022 Existing with Project (Phase 1&2)	AM	44	82	45	52	112	37	22	61	59	70	71	61
	PM	51	128	17	12	104	33	29	42	59	13	31	10
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	48	74	49	57	106	41	24	67	64	76	77	67
	PM	56	122	18	13	96	36	31	45	64	15	34	11
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	48	89	49	57	121	41	24	67	64	76	77	67
	PM	56	138	18	13	112	36	31	45	64	15	34	11
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	52	80	53	62	114	44	26	72	70	82	84	72
	PM	61	132	20	15	104	39	34	49	70	16	36	12
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	52	95	53	62	129	44	26	72	70	82	84	72
	PM	61	148	20	15	120	39	34	49	70	16	36	12

14 - St John's Parkway and Burke Street Forecasted Traffic Volume Conditions

	Time	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2018 Existing	AM	58	20	87	9	25	12	11	373	87	81	310	7
	PM	75	22	30	8	7	6	20	298	48	28	287	13
2020 Existing	AM	61	21	91	10	26	13	12	388	91	85	323	8
	PM	78	23	32	9	8	7	21	310	50	30	299	14
2020 Existing with Project (Phase 1)	AM	80	21	91	10	26	13	12	398	110	85	333	8
	PM	98	23	32	9	8	7	21	320	70	30	309	14
2022 Existing	AM	63	22	94	10	27	13	12	403	94	88	335	8
	PM	81	24	33	9	8	7	22	322	52	31	310	15
2022 Existing with Project (Phase 1&2)	AM	93	22	94	10	27	13	12	418	124	88	350	8
	PM	112	24	33	9	8	7	22	338	83	31	326	15
5-Year Cumulative Conditions Without Project (Phases 1&2)	AM	69	24	103	11	30	15	13	441	103	96	366	9
	PM	89	26	36	10	9	8	24	352	57	34	339	16
5-Year Cumulative Conditions With Project (Phases 1&2)	AM	99	24	103	11	30	15	13	456	133	96	381	9
	PM	120	26	36	10	9	8	24	368	88	34	355	16
10-Year Cumulative Conditions Without Project (Phases 1&2)	AM	75	26	112	12	32	16	15	478	112	104	397	9
	PM	96	29	39	11	9	8	26	382	62	36	368	17
10-Year Cumulative Conditions With Project (Phases 1&2)	AM	105	26	112	12	32	16	15	493	142	104	412	9
	PM	127	29	39	11	9	8	26	398	93	36	384	17