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# Congestion Management Program

# 2015 Monitoring Report

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# ES Executive Summary

As the designated Congestion Management Agency for Contra Costa County, Contra Costa Transportation Authority (CCTA) monitors traffic performance along its Congestion Management Program (CMP) network every two years. The aim of this monitoring is to evaluate traffic level-of-service (LOS) standards on the CMP network per the state CMP legislative requirements. This LOS monitoring helps CCTA understand the congestions trends in the county, which is vital to successful implementation of the regional transportation programs and policies.

The CMP network was adopted in 1991 and comprises of all the state highways and principal arterials in the county. LOS standards were established separately for freeway segments and for intersections along principal arterials. Since the first CMP in 1991, monitoring was undertaken by measuring the average speed of the traffic for the freeways segments and by conducting traffic counts for the intersections. Using this data, LOS was determined based on the guidelines outlined in CCTA's *Technical Procedures* and the results are published in a series of monitoring reports.

This report summarizes the LOS results for the 2015 monitoring effort both for freeways and intersections. Similar to previous years, traffic speeds and intersection counts were used for calculating the LOS. Guidelines provided by the Highway Capacity Manual along with CCTA's *Technical Procedures* were used to compute the LOS. As a part of the CMP monitoring, CCTA also collects bicycle and pedestrian volumes on all the CMP intersections, which are included in this report.

New to this monitoring is the use of commercial speed data for freeways. Recently, new data technologies and performance measurement approaches have been radically transforming congestion monitoring practices nationwide. These technologies that revolve around the emerging fields of Big Data and Analytics provide more data for a lower cost and help widen the scope of congestion analysis. Use of this commercial speed data from INRIX was validated by CCTA in spring 2015 through a separate study, which is provided in Appendix C.

A total of 23 freeway segments and 65 intersections were monitored in 2015. The freeway segments were monitored with INRIX data and the intersections were monitored with manual intersection counts to capture auto, bicycle and pedestrian modes.

The purpose of the LOS monitoring is to ensure that standards are being met, or to identify where standards are being exceeded. In the AM peak, one freeway segment and one intersection were found not to achieve the adopted LOS standards. In the PM peak, two freeway segments and one intersection were found not to achieve the adopted LOS standards. The results are summarized in Table ES-1.

*Table ES-1: Summary of 2015 Intersection LOS Results*

| CMP Component | Peak Period | Total Intersections/ Segments | Achieving LOS Standard | Not Achieving LOS Standard |
|---|---|---|---|---|
| Freeways | AM Peak Hour | 23 | 22 | 1 |
| | PM Peak Hour | | 21 | 2 |
| Intersections | AM Peak Hour | 65 | 64 | 1 |
| | PM Peak Hour | | 64 | 1 |

CCTA will conduct further evaluation on the intersections exceeding LOS standards through the preparation of an exclusions study, if required. Based on the results of such an exclusion study, the local jurisdiction may be required to prepare a deficiency plan per the CMP legislative requirements. This deficiency plan would identify measures to improve the performance of the intersection.

# 1 Introduction

Contra Costa Transportation Authority (CCTA), the designated Congestion Management Agency (CMA) for Contra Costa County, has been performing Level of Service (LOS) monitoring every two years since 1991. This monitoring is performed on the Congestion Management Program (CMP) network to comply with California legislative requirements and to ensure that the roadway network is performing at or above the required minimum standards. This report summarizes the results of the 2015 LOS monitoring.

The report is divided into four sections:

- **Section 1 – Introduction** gives a brief overview of the CMP process and describes the Contra Costa CMP roadway network.
- **Section 2 – Methodology** presents the data collection approach and subsequent data analytics tasks.
- **Section 3 – Level of Service Monitoring Results** provides the LOS monitoring results for CMP network freeway segments and intersections.
- **Section 4 – Summary of Results and Recommendations** presents a comparison of the results, summary of future improvements and recommendations for future monitoring.

Supporting tables and additional technical information are included in the Appendices.

## 1.1 CMP Network

Consistent with the CMP legislation, the CMP network contains all state highways – and consequently all freeways – within Contra Costa County. The CMP network also includes certain intersections along principal arterials, as designated by the appropriate regional transportation planning committee. Since 1991 the network has expanded and now includes:

- 23 freeway segments; and
- 65 intersections, including 30 locations in Central County, 26 locations in West County and 9 locations in East County.

Figure 1-1 shows a map of the CMP network. Table 1-1 provides a summary of these freeway segments and intersections.

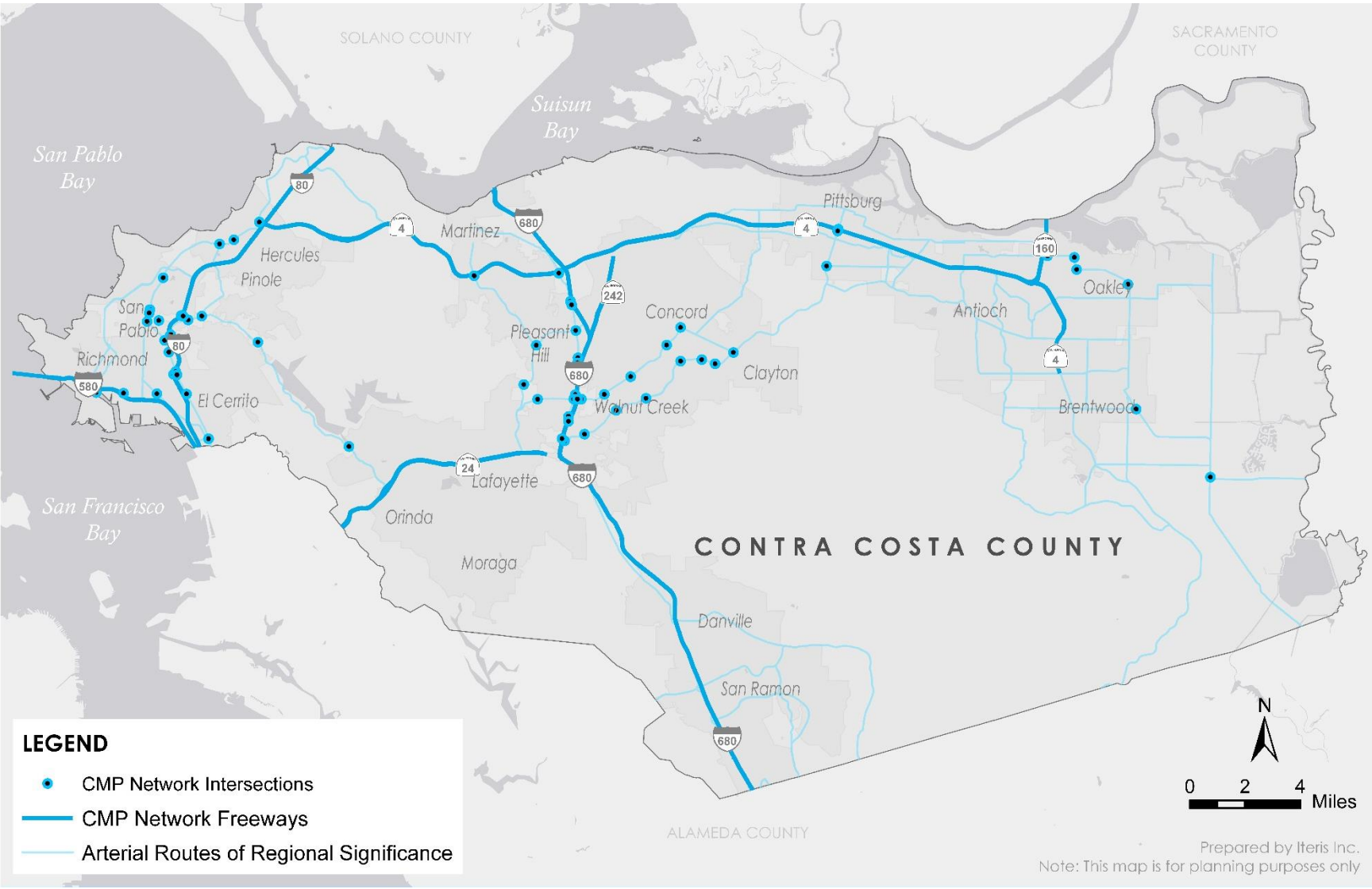



*Figure 1-1: Contra Costa County CMP Network*

*Table 1-1: List of CMP Segments and Intersections Monitored in 2015*

| Roadway Type | Name of the Facility | Number of Segments/ Intersections |
|---|---|---|
| **Freeway Segments** | | |
| Freeways | I-80 | 5 |
| | I-580 | 1 |
| | I-680 | 5 |
| | SR-4 | 7 |
| | SR-24 | 3 |
| | SR-160 | 1 |
| | SR-242 | 1 |
| **Arterial Intersections** | | |
| Arterials | Alhambra Avenue/Pleasant Hill Rd | 2 |
| | Brentwood Boulevard/State Route 4 | 2 |
| | Contra Costa Boulevard | 6 |
| | Cutting Boulevard | 3 |
| | El Portal Drive | 3 |
| | Geary Road | 1 |
| | Main Street | 4 |
| | North Main Street/San Luis Rd | 4 |
| | Pacheco Boulevard | 1 |
| | Railroad Avenue | 3 |
| | San Pablo Avenue/Barrett Avenue | 14 |
| | San Pablo Dam Road | 6 |
| | Taylor Avenue | 1 |
| | Treat Boulevard | 6 |
| | Ygnacio Valley Road | 9 |

## 1.2 CMP Requirements

As part of the first CMP in 1991, CCTA established certain LOS standards for all freeway segments and intersections belonging to the CMP network. For freeway segments, travel speed was used as the indicator for determining the LOS based on the Highway Capacity Manual (HCM). For intersections, the LOS was calculated mainly using volume-to-capacity (V/C) ratios based on the peak hour intersection turning movement counts. LOS F was the adopted standard for all monitored freeway segments and intersections that operated at LOS F in 1991. The standard for all other freeway segments and intersections was adopted to be LOS E.

Since 1991, LOS monitoring has been conducted biannually to ensure that these adopted LOS standards are being met. When the LOS calculated at an intersection exceeds the adopted standard, it is further evaluated by conducting additional counts and preparing an exclusions study, as required. Through an exclusion study, LOS is recalculated by accounting for traffic exclusions allowed under the CMP legislation. If the intersection LOS is found to exceed the adopted standard even after applying relevant exclusions, then the intersection is subject to a deficiency plan. Preparation of deficiency plans is not a part of the current CMP monitoring effort. Note that intersections at freeway ramps that are operated by Caltrans are not subject to this additional investigation and preparation of a deficiency plan by CCTA.

Apart from LOS, another monitoring requirement established as a part of the CMP is to conduct bicycle and pedestrian counts at all the CMP intersections. This data is collected to support the Countywide Bicycle and Pedestrian Plan and to provide additional data for monitoring non-motorized travel.

## 1.3 Updates to 2015 Monitoring

To date, CCTA has performed LOS monitoring on the CMP freeway network by collecting travel time and speed data using Caltrans Performance Measurement System (PeMS) and floating car runs. In view of commercial speed data that has become increasingly available, CCTA used INRIX[1] data for the 2015 freeway LOS monitoring. In spring 2015, CCTA undertook a validation task to confirm that INRIX data was an acceptable source for LOS monitoring. Based on the results of the validation, INRIX data was used for LOS monitoring for the entire Contra Costa County freeway CMP network. The use of commercial speed data provides a cost effective approach and allows increased analysis opportunities at relatively low incremental cost. Additional information on INRIX is provided in Section 2.2 and Appendix B.

[1] INRIX website: http://inrix.com/trafficinformation.asp

Also new to 2015 is the change in LOS methodology for intersection monitoring. Until the current CMP monitoring, CCTA analyzed intersection LOS using Contra Costa Transportation Authority LOS (CCTALOS), which is a V/C modified Circular 212 planning-based methodology. As a part of its updates to the *Technical Procedures* and based on guidance from the Metropolitan Transportation Commission (MTC), CCTA transitioned to analyzing intersection LOS using a delay-based methodology provided in HCM. Thus, the LOS results reported for the current monitoring is based on HCM methodology both for intersections and freeways.

# 2 Methodology

This section describes the methodology for collection data and calculating the LOS performance measures for intersections and freeways.

## 2.1 Intersection Level of Service

This sub-section explains the steps involved in computing LOS for intersections. The steps included collecting traffic counts and using Synchro software to perform the analysis based on HCM methodology.

### 2.1.1 Step 1: Data Collection

This section summarizes the monitoring days and methodology for collecting intersection count data for 2015 LOS Monitoring.

#### MONITORING DAYS

As part of the data collection effort, it was first necessary to identify days on which the LOS monitoring should take place to capture representative traffic conditions. To ensure that LOS results are representative of normal traffic conditions experienced by a daily commuter, CCTA has published guidelines for traffic count data collection in the *Technical Procedures* (*Appendix B – Traffic Counting Protocol*). The following factors were considered to ensure that these guidelines were followed:

- ***Base Monitoring Times:*** Data for LOS monitoring is typically collected in spring or fall when schools are in session. For 2015 monitoring, data was collected during April and May[2]. Weekday data was collected on Tuesdays, Wednesdays, or Thursdays for the morning and afternoon peak periods, which were 7am to 9am and 4pm to 6pm, respectively.
- ***Public Holidays and Spring Breaks:*** Public holidays and school spring breaks during the monitoring period were reviewed for all school districts/colleges across Contra Costa County and at major universities in adjacent counties, and were excluded from the monitoring days. Figure 2-1 shows the calendar of major holidays and spring breaks on which data collection did not occur.

[2] Additional data at one intersection that exceeded the LOS threshold will be collected during August & September when schools are back in session.

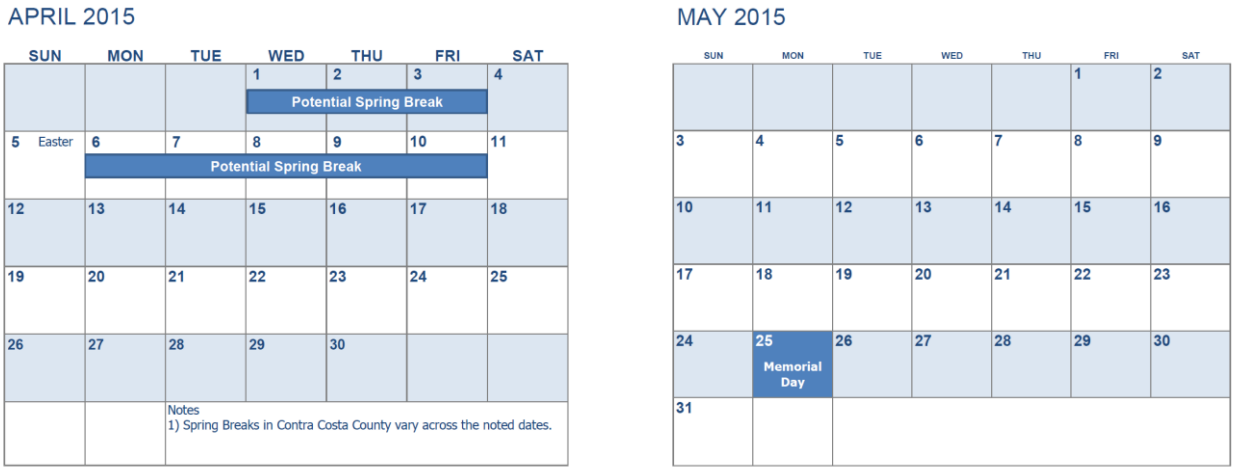



*Figure 2-1: Public Holidays and Spring Break Periods in Contra Cost County, Spring 2015*

- ***Special Events:*** In Contra Costa County, no special events were observed to impact traffic conditions during the 2015 monitoring period.
- ***Weather Events:*** No adverse weather conditions that disrupted traffic flow were observed during the 2015 monitoring period.
- ***Incidents or Accidents:*** Data collectors were instructed to repeat data collection if an incident or accident occurred in the vicinity of the count location and disrupted the flow of traffic during the data collection period. However, no such events occurred during the 2015 monitoring.
- ***Construction Activity:*** Various sources were reviewed to identify any construction activity that could have disrupted the flow of traffic during the monitoring period. If any construction activity was noted to affect the monitoring locations, such construction days were excluded from the monitoring days. However, if long-term construction activity prevailed at an intersection, then monitoring was conducted during construction and the LOS results were annotated accordingly. Sources of construction information reviewed for the current monitoring effort included the following (Figure 2-2):
    - CCTA internal resources and their online project pages;
    - Facebook and Twitter feeds;
    - Other government websites (including Caltrans District 4);
    - Specific construction project websites (including the Hwy 4 reconstruction project website).

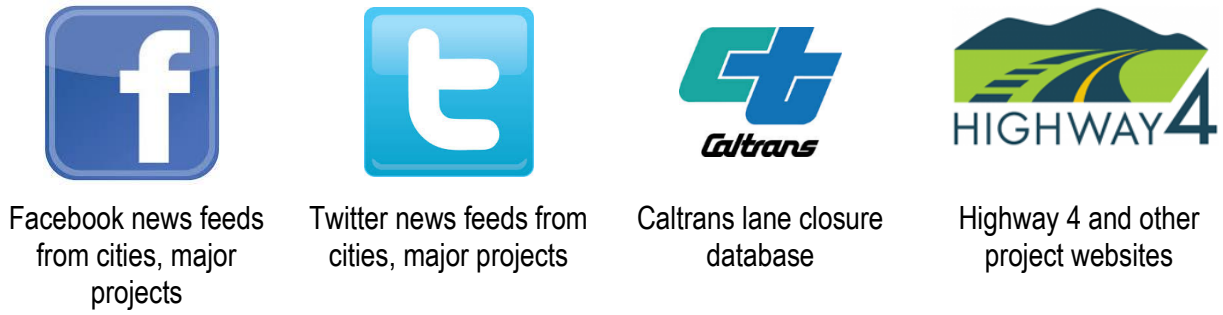



*Figure 2-2: Sources of Construction Activity Information*

DATA COLLECTION METHODOLOGY

Data collection at each intersection included the following three primary components:

- **Vehicles** – turning movement counts
- **Bicycles** – approach counts
- **Pedestrians** – crossing counts

Data collection firms used field deployed video recording units for collecting data. The methods followed for collecting and processing the data are described below:

- **Video cameras with manual counting:** One of the firms used a combination of video cameras and count personnel. Video cameras were set up in the field at an optimal location that captured the entire intersection layout. Recorded video was then played back in a controlled environment from which vehicle, pedestrian and bicycles counts were manually obtained. The firm undertook a thorough quality control process to review data for accuracy.
- **Video cameras with automated processing:** The second firm used Miovision[3] video units and associated proprietary algorithms and software for automated processing of vehicle, pedestrian and bicycle counts. A multi-step quality control process was undertaken by the firm to ensure accuracy of the counts through manual review.

### 2.1.2 Step 2: Synchro Analysis

Synchro was used to calculate intersection LOS using HCM methodology consistent with the revised 2013 CCTA *Technical Procedures*. Synchro files that included most of the monitoring intersections were available through CCTA. Since this was the first time that Synchro was used

[3] https://miovision.com/

for CMP LOS monitoring, the following steps were taken to review and update the monitoring intersections in these files prior to analyzing the LOS:

- Updated basic intersection details such as street names and street directions consistent with field count reports;
- Revised intersection geometry using a combination of Google Maps imagery surveys, data collection videos, and field surveys, as required;
- Where deemed appropriate and in consultation with CCTA, revised the signal timing information to match the most current timing plans available from member agencies;
- Updated intersection volumes in the Synchro files using the 2015 monitoring data; and
- Updated other input parameters per the guidelines provided in the *Technical Procedures (Appendix C – Guidelines for the Use of the 2010 Highway Capacity Manual Operational Method Methodology).* Note that some exceptions to these guidelines were made in consultation with CCTA (see Appendix A).

Intersections that were not included in the available Synchro files were coded following the same general methodology described above. If current timing plans were not available for an intersection, then guidelines provided in the *Technical Procedures (Appendix C – Guidelines for the Use of the 2010 Highway Capacity Manual Operational Method Methodology)* were used to code the signal timings in Synchro.

### 2.1.3 Step 3: LOS Assignment

Per the guidelines available in the *Technical Procedures*, the HCM 2010 methodology was primarily used to compute intersection LOS. However, some intersections that could not be readily analyzed in Synchro using HCM 2010 methodology were analyzed per HCM 2000 procedures. Such intersections include those with more than four approaches or intersections that do not have strict National Electrical Manufacturers Association (NEMA) phasing.[4]

Both HCM 2010 and HCM 2000 calculate signalized intersection LOS as a function of intersection control delay (Table 2-1). This LOS extends from LOS A to LOS F and denotes information about the quality of service to drivers. LOS A represents the best travel conditions from the driver's perspective where most through traffic on the main street arrives during a green light and does not stop, and LOS F represents very congested conditions where most drivers wait multiple signal cycles before they are able to travel through the intersection.

[4] Note - Such intersections could be analyzed in Synchro per HCM 2010 in future monitoring with additional investigation and adjustments.

*Table 2-1: HCM 2010 & 2000 Level of Service Standards for Signalized Intersections*

| Level of Service | Control Delay (s/veh) |
|---|---|
| A | ≤ 10 |
| B | >10-20 |
| C | >20-35 |
| D | >35-55 |
| E | >55-80 |
| F | >80 |

## 2.2 Freeway Level of Service

This sub-section outlines the steps involved for computing the LOS for freeway CMP segments.

### 2.2.1 Step 1: Data Collection

As noted earlier, this is the first monitoring period in which commercial speed data was used to measure speed and LOS for freeway segments. This section summarizes the monitoring days and methodology for collecting the speed data.

#### MONITORING DAYS

To be consistent with previous monitoring cycles, speed data was collected during the spring months of February, March, and April 2015. Similar to intersections, freeway data was collected on Tuesdays, Wednesdays, and Thursdays for the morning and afternoon peak periods, which were 6am to 10am and 3pm to 7pm, respectively. This resulted in a total of 39 monitoring days. No public holidays were observed on these days.

PeMS lane closure database & incident feeds

However, days affected by incidents and construction events were identified and excluded from the analysis. These days were identified through various agency websites and social media sources as described earlier in Section 2.1.1. In addition to those sources, data from the PeMS lane closure database and incident feed were reviewed for additional construction and incident events. When these events were identified, the speed data records were removed for the affected time period and CMP segments. Figure 2-3 shows a heat map of freeway incidents using data from PeMS. Locations with higher densities of incidents are shown in red.

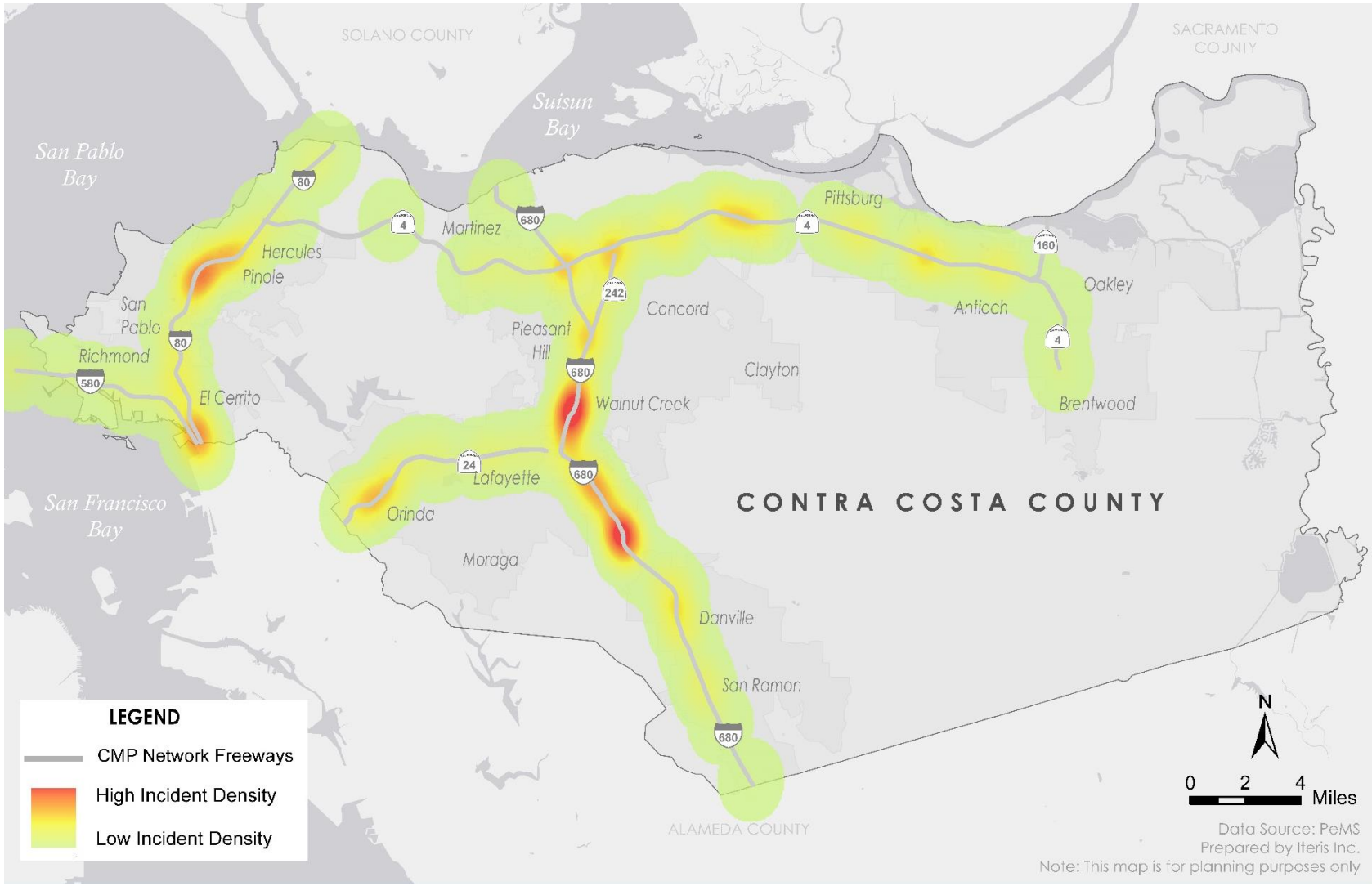



*Figure 2-3: Heat Map showing the Freeway Incident Density in Contra Costa County during 2015 Monitoring (combined morning and afternoon peak periods)*

DATA COLLECTION METHODOLOGY

The commercial speed data used for the current monitoring was obtained from INRIX Inc. This data was supplied free of cost to the Bay Area CMAs by MTC through a contract with INRIX.

INRIX is a private provider of speed data, which "aggregates traffic from GPS-enabled vehicles and mobile devices, traditional road sensors and hundreds of other sources"[5]. This traffic data is reported along discrete roadway links known as Traffic Message Channels (TMCs). Each TMC link is associated with a unique ID represented by a nine-digit code, where each individual number in the TMC code describes a portion of the geography including country, direction of travel and roadway segment (e.g. 105+10123).

INRIX data contains speeds aggregated at the one-minute level for each TMC code in the network. For the current monitoring, data at one minute intervals was accessed for the monitoring days and times across all of the identified TMCs in Contra Costa County. This resulted in a sample size of up to approximately 2,300 data points for the monitored CMP segments.

### 2.2.2 Step 2: Data Analysis

In the next step, raw speed data collected across all monitoring days and all freeway TMCs in Contra Costa was further filtered and processed to identify average peak hour speeds for CMP segments. This consisted of the following steps:

- Commercial speed data for TMCs was associated to the appropriate CMP segments through a spatial mapping process.
- Data with poor quality was removed to retain only speed data exclusively generated through direct observation.
- Data was then averaged on each CMP segment for every hour within each peak period, at 15 minute intervals. For example, average speed was computed from 6am to 7am, 6:15am to 7:15am, etc. The hour that had the lowest average speed was computed separately for each CMP segment and the corresponding speed was used as the peak hour speed.

Refer to Appendix B for technical details about INRIX data collection and analysis.

[5] INRIX website: http://inrix.com/trafficinformation.asp

During the previous monitoring cycles, 85th percentile speed was used as the metric for measurement of traffic performance along a CMP segment. However, in the 2015 monitoring the average speed was used based on the Validation Study conducted in spring 2015. This validation report is available upon request from CCTA. A summary of the recommendations from the validation report are included in Appendix C.

### 2.2.3 Step 3: LOS Assignment

LOS was assigned to each CMP segment based on the average peak hour speeds using the adopted standards from the HCM (Table 2-2). This LOS extends from LOS A to LOS F and denotes information about the quality of service to drivers. LOS A represents the best travel conditions from the driver's perspective where roadways are free flow, and LOS F represents congested or stop-and-go conditions.

*Table 2-2: Freeway Level of Service Standards (HCM 1985)*

| Level of Service | Speed (mph) |
|---|---|
| A | ≥ 60 |
| B | ≥ 57 |
| C | ≥ 54 |
| D | ≥ 46 |
| E | ≥ 30 |
| F | < 30 |

# 3 Level of Service Monitoring Results

This section summarizes the results of the 2015 LOS monitoring for intersections and freeway segments.

## 3.1 Intersection Level of Service

Intersection LOS was monitored for 65 locations: 26 locations in the West County, 30 locations in the Central County, and 9 locations in the East County. All except two intersections operate at an LOS equal to or better than the adopted LOS standard for both peak hours. LOS results for all the intersections are summarized in Table 3-1.

*Table 3-1: Summary of 2015 Intersection LOS Results*

| | Total Intersections | Achieving LOS Standard | Not Achieving LOS Standard |
|---|---|---|---|
| AM Peak Hour | 65 | 64 | 1 |
| PM Peak Hour | 65 | 64 | 1 |

One intersection exceeding the thresholds is located along Ygnacio Valley Road at Cowell Road in Concord. This intersection operates at LOS F in the PM peak hour. Two recounts were conducted during fall 2015 and the intersection exceeded the threshold for one of the two recounts. Further investigation is currently being conducted by CCTA and the City of Concord through an exclusions study and is being reported separately. Note that preparation of an exclusion study is not a part of the current CMP monitoring effort. Intersection count sheets and detailed analysis sheets from the Synchro software for the recounts are included in Appendix G.

The other intersection is also along Ygnacio Valley Road at the Northbound I–680 Ramps in Walnut Creek. This intersection operates at LOS F during the AM peak hour. However, this intersection also operated at LOS F in the 2013 monitoring. Further, it is located outside the jurisdiction of CCTA as it is maintained by Caltrans. Hence, recounts were not necessary for this intersection per CCTA policy.

Apart from these two intersections, one more intersection was observed to operate at LOS F: El Portal Drive and Eastbound I–80 Ramps. However, the LOS standard established for this intersection is LOS F per the operating conditions in 1991, and the intersection is under

Caltrans jurisdiction. Hence, no recounts were necessary for this intersection at this time. However, additional review shall be conducted for this intersection by CCTA upon receiving the requested signal timing plans from Caltrans.

Figure 3-4 summarizes the results by LOS category. The general trends are similar for both the AM and PM peak periods. In both cases, the majority of the intersections operate at LOS C and D, with fewer intersections operating towards either extreme LOS.

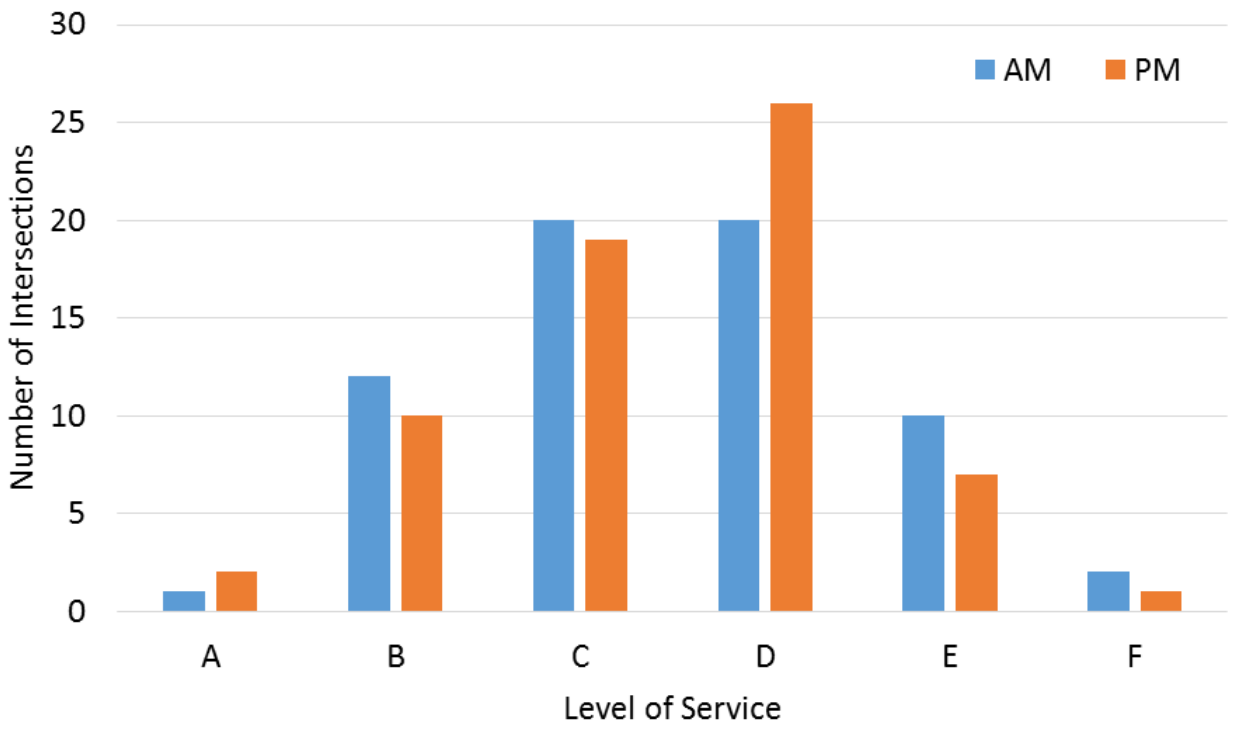



*Figure 3-1: Summary of 2015 Intersection LOS Results*

LOS results for all the intersections are presented in detail in Table 3-2, Figure 3-2 and Figure 3-3. Additional intersection count sheets and detailed analysis sheets from the Synchro software are included in Appendix D.

*Table 3-2: 2015 Intersection LOS Results*

| ID | Synchro ID | Facility | Cross Street | Jurisdiction | LOS Standard | AM Peak | | PM Peak | | HCM Methodology |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Delay | LOS | Delay | LOS | |
| **W1** | 1 | San Pablo Avenue | John Muir Parkway | Hercules | E | 43.9 | D | 53.4 | D | 2010 |
| **W2** | 2 | San Pablo Avenue | Pinole Valley Road | Pinole | E | 6 | A | 12.4 | B | 2010 |

| ID | Synchro ID | Facility | Cross Street | Jurisdiction | LOS Standard | AM Peak | | PM Peak | | HCM Methodology |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Delay | LOS | Delay | LOS | |
| **W3** | 3 | San Pablo Avenue | Appian Way | Pinole | E | 25.1 | C | 28.6 | C | 2010 |
| **W4** | 4 | San Pablo Avenue | Hilltop Drive | Richmond | E | 46 | D | 62 | E | 2010 |
| **W5** | 5 | San Pablo Avenue | Rumrill Boulevard | San Pablo | F | 31.6 | C | 57.9 | E | 2010 |
| **W6** | 6 | San Pablo Avenue | El Portal Drive | San Pablo | E | 39.6 | D | 37.1 | D | 2010 |
| **W7** | 7 | San Pablo Avenue | Road 20 | San Pablo | E | 66.5 | E | 40.8 | D | 2000 |
| **W8** | 8 | San Pablo Avenue | San Pablo Dam Road | San Pablo | E | 29.1 | C | 36.2 | D | 2000 |
| **W9** | 9 | San Pablo Avenue | McBryde Avenue | Richmond | E | 25.6 | C | 34.7 | C | 2000 |
| **W10** | 10 | San Pablo Avenue/Barrett Avenue | Westbound I–80 Ramps | Richmond | E | 30.8 | C | 28.5 | C | 2000 |
| **W11** | 11 | San Pablo Avenue | Eastbound I–80 Ramps/ Roosevelt Ave | Richmond | E | 17.4 | B | 22.4 | C | 2000 |
| **W12** | 12 | San Pablo Avenue | Barrett Avenue | Richmond | F | 61.5 | E | 56.4 | E | 2010 |
| **W13** | 13 | San Pablo Avenue | Cutting Boulevard | El Cerrito | E | 31 | C | 40 | D | 2000 |
| **W14** | 14 | San Pablo Avenue | Central Avenue | El Cerrito | E | 35.4 | D | 45.4 | D | 2000 |
| **W15** | 15 | San Pablo Dam Road | Westbound I–80 Ramps | San Pablo | F | 26.4 | C | 51.1 | D | 2000 |
| **W16** | 16 | San Pablo Dam Road | Eastbound I-80 Ramps/ Amador St | San Pablo | F | 59.4 | E | 59.1 | E | 2000 |
| **W17** | 17 | San Pablo Dam Road | El Portal Drive | Richmond, County | E | 33.7 | C | 40.8 | D | 2000 |
| **W18** | 18 | San Pablo Dam Road | Appian Way | County | E | 67.1 | E | 42.9 | D | 2010 |
| **W19** | 19 | San Pablo Dam Road | Castro Ranch Road | Richmond, County | E | 25.5 | C | 25.6 | C | 2010 |
| **W20** | 20 | San Pablo Dam Road | Bear Creek Road | Orinda, County | F | 19.4 | B | 32 | C | 2000 |
| **W21** | 21 | El Portal Drive | Road 20 | San Pablo | E | 14.1 | B | 16.6 | B | 2000 |

| ID | Synchro ID | Facility | Cross Street | Jurisdiction | LOS Standard | AM Peak | | PM Peak | | HCM Methodology |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Delay | LOS | Delay | LOS | |
| **W22** | 22 | El Portal Drive | Westbound I–80 Ramps | County | F | 26.4 | C | 25.6 | C | 2010 |
| **W23** | 23 | El Portal Drive | Eastbound I–80 Ramps | Richmond, County | F | 441.9 | F | 43.3 | D | 2010 |
| **W24** | 24 | Cutting Boulevard | Canal Boulevard | Richmond | E | 11.5 | B | 12.3 | A | 2000 |
| **W25** | 25 | Cutting Boulevard | Harbour Way | Richmond | E | 38.6 | D | 43.8 | D | 2010 |
| **W26** | 26 | Cutting Boulevard | Carlson Boulevard | Richmond | E | 23.9 | C | 23.4 | C | 2010 |
| **E1** | 27 | Railroad Avenue | Westbound SR-4 Ramps/ California Ave | Pittsburg | E | 21.3 | C | 15.7 | B | 2010 |
| **E2** | 28 | Railroad Avenue | Eastbound SR-4 Ramps | Pittsburg | E | 28 | C | 15.5 | B | 2000 |
| **E3** | 29 | Railroad Avenue | Buchanan Road | Pittsburg | E | 27.2 | C | 21 | C | 2000 |
| **E4** | 30 | Main Street | Neroly Road | Oakley | E | 25.4 | C | 35.4 | D | 2000 |
| **E5** | 31 | Main Street | Big Break Road | Oakley | E | 12.2 | B | 21.3 | C | 2010 |
| **E6** | 32 | Main Street | Oakley Road/Empire Rd | Oakley | E | 19.3 | B | 27.8 | C | 2010 |
| **E7** | 33 | Main Street | Cypress Road | Oakley | E | 22.7 | C | 24 | C | 2010 |
| **E8** | 34 | Brentwood Boulevard | Balfour Road | Brentwood | E | 46.3 | D | 75.9 | E | 2010 |
| **E9** | 35 | Brentwood Boulevard/ State Route 4 | Byron Highway | County | E | 34.9 | C | 29.4 | C | 2000 |
| **C1** | 36 | Alhambra Avenue | Eastbound Ramps to State Route 4 | Martinez | E | 21.7 | C | 17.8 | B | 2000 |
| **C2** | 37 | Alhambra Avenue/ Pleasant Hill Rd | Taylor Boulevard | Pleasant Hill | F | 43.6 | D | 55 | D | 2010 |
| **C3** | 38 | Pacheco Boulevard | Muir Road | County | E | 45.6 | D | 30 | C | 2010 |
| **C4** | 39 | Contra Costa Boulevard | Southbound Ramps to I–680 | Pleasant Hill | E | 41.2 | D | 64.2 | E | 2000 |

| ID | Synchro ID | Facility | Cross Street | Jurisdiction | LOS Standard | AM Peak | | PM Peak | | HCM Methodology |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Delay | LOS | Delay | LOS | |
| **C5** | 40 | Contra Costa Boulevard | Concord Avenue/ Chilpancingo Parkway | Pleasant Hill | E | 54.9 | D | 49 | D | 2010 |
| **C6** | 41 | Contra Costa Boulevard | Willow Pass Road/ Taylor Boulevard | Pleasant Hill, Concord | E | 37.2 | D | 48.1 | D | 2010 |
| **C7** | 42 | Contra Costa Boulevard | Gregory Lane/ Southbound I–680 Ramp | Pleasant Hill | E | 62.6 | E | 31 | C | 2000 |
| **C8** | 43 | Contra Costa Boulevard | Monument Boulevard | Pleasant Hill | F | 56.6 | E | 53.4 | D | 2010 |
| **C9** | 44 | Contra Costa Boulevard | Boyd Road/ Southbound I–680 Ramp | Pleasant Hill | E | 17.5 | B | 19.1 | B | 2000 |
| **C10** | 45 | North Main Street | Sunnyvale Avenue/ Southbound I–680 Ramps | Walnut Creek | E | 52.7 | D | 54.6 | D | 2010 |
| **C11** | 46 | North Main Street | Geary Road | Walnut Creek | E | 36.5 | D | 69.5 | E | 2000 |
| **C12** | 47 | North Main Street/ San Luis Rd | Southbound I-680 Ramps (near San Luis) | Walnut Creek | F | 12.9 | B | 20.5 | C | 2000 |
| **C13** | 48 | North Main Street | Northbound I-680 Ramps (north of Parkside) | Walnut Creek | F | 12.7 | B | 10.3 | B | 2000 |
| **C14** | 49 | Taylor Avenue | Withers Avenue | Lafayette, County | E | 18 | B | 15.5 | B | 2010 |
| **C15 [1]** | 50 | Geary Road | Pleasant Hill Road | Walnut Creek | E | 18.5 | B | 24.2 | C | 2000 |
| **C16** | 51 | Treat Boulevard | Clayton Road | Concord | E | 51.4 | D | 47.6 | D | 2000 |
| **C17** | 52 | Treat Boulevard | Cowell Road | Concord | E | 65 | E | 46.8 | D | 2010 |
| **C18** | 53 | Treat Boulevard | Oak Grove Road | Concord | E | 67.8 | E | 45.7 | D | 2010 |
| **C19** | 54 | Treat Boulevard | Bancroft Road | Walnut Creek | E | 51.4 | D | 46.2 | D | 2010 |

| ID | Synchro ID | Facility | Cross Street | Jurisdiction | LOS Standard | AM Peak | | PM Peak | | HCM Methodology |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Delay | LOS | Delay | LOS | |
| **C20** | 55 | Treat Boulevard | Oak Road | Walnut Creek, County | E | 44.8 | D | 30.6 | C | 2010 |
| **C21** | 56 | Treat Boulevard | Buskirk Avenue/ Northbound I–680 Ramps | Walnut Creek, County | E | 29.2 | C | 15.4 | B | 2010 |
| **C22** | 57 | Ygnacio Valley Road | Clayton Road | Concord | E | 46.6 | D | 45.6 | D | 2010 |
| **C23** | 58 | Ygnacio Valley Road | Alberta Way | Concord | E | 63.9 | E | 30.9 | C | 2010 |
| **C24** | 59 | Ygnacio Valley Road | Ayers Road | Concord | E | 66.3 | E | 49.2 | D | 2010 |
| **C25** | 60 | Ygnacio Valley Road | Cowell Road | Concord | E | 43.7 | D | 85.4 | F | 2010 |
| **C26** | 61 | Ygnacio Valley Road | Oak Grove Road | Walnut Creek | E | 48.8 | D | 36.4 | D | 2000 |
| **C27** | 62 | Ygnacio Valley Road | Bancroft Road | Walnut Creek | E | 38.5 | D | 42.5 | D | 2000 |
| **C28** | 63 | Ygnacio Valley Road | Walnut Boulevard | Walnut Creek | E | 34.9 | C | 19.7 | B | 2000 |
| **C29** | 64 | Ygnacio Valley Road | Northbound I–680 Ramps | Walnut Creek | E | 101.2 | F | 53.3 | D | 2000 |
| **C30** | 65 | Ygnacio Valley Road | Southbound I–680 Ramps | Walnut Creek | E | 11 | B | 7 | A | 2000 |

[1] Ongoing construction occurred at this intersection during monitoring. The intersection was analyzed based on the configuration during this construction period.
Note 1: Delay is reported in seconds
Note 2: Highlighted cells indicate LOS exceeds standard.

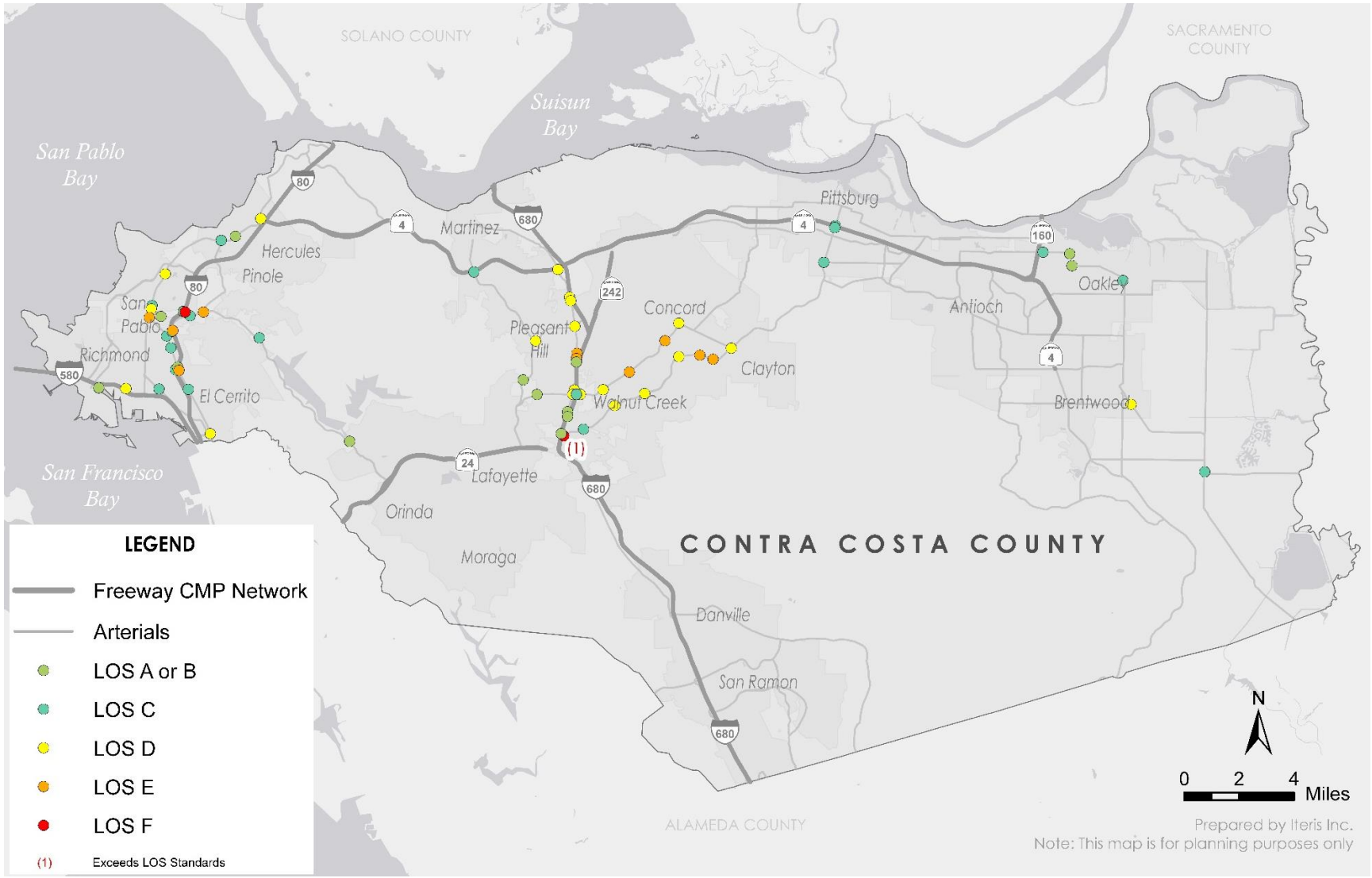



*Figure 3-2: 2015 Intersection LOS Results during AM Peak Period*

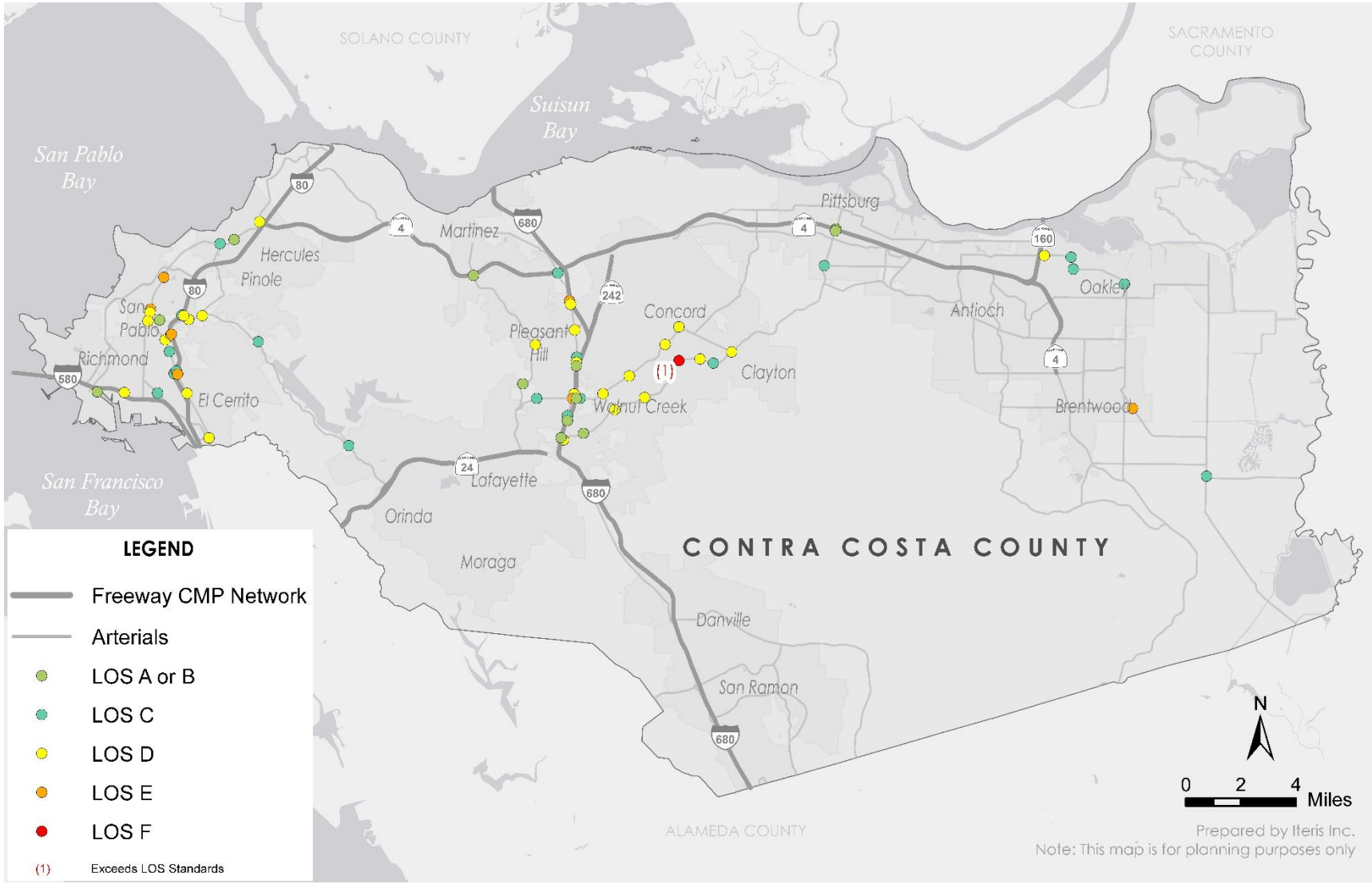



*Figure 3-3: 2015 Intersection LOS Results during PM Peak Period*

## 3.2 Freeway Level of Service

Freeway LOS was monitored for a total of 23 CMP segments in both directions. This monitoring includes two new segments compared to 2013 monitoring. The new segments are SR-4 between SR-160 and Sand Creek Road, and SR-160 between SR-4 and the north County Line. Table 3-3 summarizes the overall freeway LOS results.

*Table 3-3: Summary of 2015 Freeway LOS Results*

| | Total Segments | Achieving LOS Standard | Not Achieving LOS Standard |
|---|---|---|---|
| AM Peak Hour | 23 | 22 | 1 |
| PM Peak Hour | 23 | 21 | 2 |

Of the 23 segments monitored during 2015, 22 segments meet the LOS standards in the AM peak and 21 segments meet the standards in the PM peak. The three segments that do not meet the LOS standard are noted below:

- Westbound SR-24 between Oak Hill Road and I-680 in the AM peak (new to 2015)
- Northbound I-680 between El Cerro Boulevard and Bollinger Canyon Road in the PM peak (new to 2015)
- Eastbound SR-4 between I-680 and SR-242 in the PM peak (same as 2013)

Figure 3-4 summarizes the results by centerline miles operating at each LOS. Of the total freeway CMP network, 83 miles (43%) operated at LOS A in the AM and 81 miles (42%) operated at LOS A in the PM peak period. On the other hand, 42 miles (22%) operated at LOS F in the AM and 41 miles (21%) operated at LOS F in the PM peak period.

By corridor, I-580 experienced the lowest average bi-direction speed in the AM peak hour at 36 mph, and the highest average speed in the PM peak hour at 60 mph (Figure 3-5). The average speeds for the remaining freeway corridors ranged between 46 mph to 56 mph in the AM and PM peak hours.

Table 3-4, Figure 3-6 and Figure 3-7 present the LOS calculated for each freeway CMP segment. Additional tables comparing the results with 2013 monitoring are included in Appendix E.

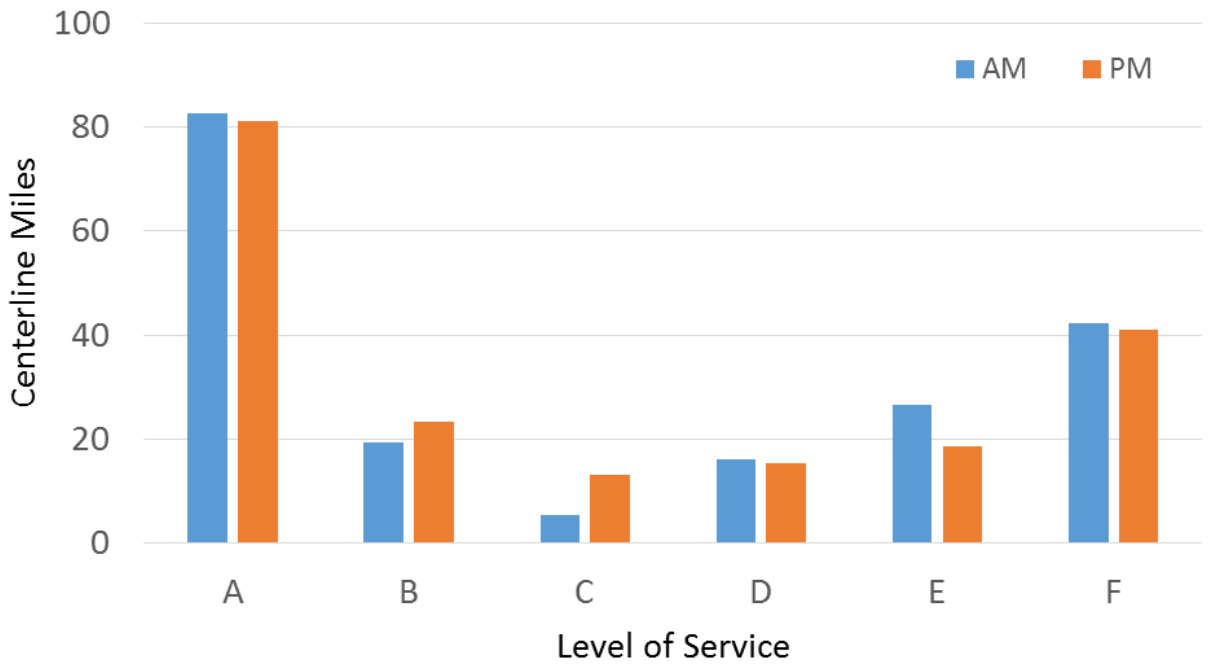



*Figure 3-4: Centerline Miles of the CMP Network Performing at each LOS*

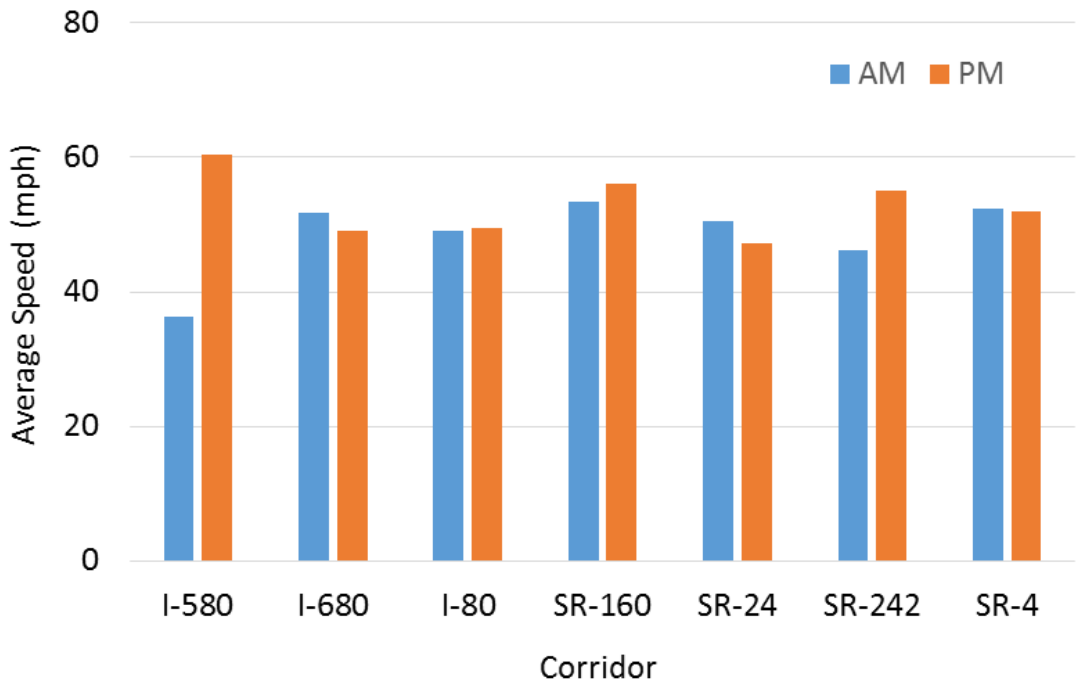



*Figure 3-5: Average Bi-directional Speed by Corridor in the CMP Network*

*Table 3-4: 2015 CMP Freeway Segments LOS Results*

| Segment Information | | | | AM Peak | | PM Peak | | LOS |
|---|---|---|---|---|---|---|---|---|
| **ID** | Route | Limits | Dir. | Speed | LOS | Speed | LOS | **Standard** |
| **F80-1** | I-80 | Carquinez Bridge to Cummings Skyway | EB | 63.3 | A | 61.6 | A | F |
| **F80-1** | I-80 | Carquinez Bridge to Cummings Skyway | WB | 64.4 | A | 65 | A | E |
| **F80-2** | I-80 | Cummings Skyway to State Route 4 | EB | 65.4 | A | 66.7 | A | F |
| **F80-2** | I-80 | Cummings Skyway to State Route 4 | WB | 61.4 | A | 67.5 | A | E |
| **F80-3** | I-80 | State Route 4 to San Pablo Dam Road | EB | 63.6 | A | 28 | F | F |
| **F80-3** | I-80 | State Route 4 to San Pablo Dam Road | WB | 24.8 | F | 63 | A | F |
| **F80-4** | I-80 | San Pablo Dam Road to Cutting Blvd. | EB | 62.6 | A | 25 | F | F |
| **F80-4** | I-80 | San Pablo Dam Road to Cutting Blvd. | WB | 25.8 | F | 49.9 | D | F |
| **F80-5** | I-80 | Cutting Blvd. to Alameda County | EB | 63.7 | A | 23 | F | F |
| **F80-5** | I-80 | Cutting Blvd. to Alameda County | WB | 18.6 | F | 64.7 | A | F |
| **F580-1** | I-580 | Richmond Bridge to Alameda County Line | EB | 41.5 | E | 58.7 | B | E |
| **F580-1** | I-580 | Richmond Bridge to Alameda County Line | WB | 31.1 | E | 62.2 | A | E |
| **F680-1** | I-680 | Benicia Bridge to State Route 4 | NB | 60.7 | A | 58.4 | B | F |
| **F680-1** | I-680 | Benicia Bridge to State Route 4 | SB | 53.9 | D | 66.3 | A | F |
| **F680-2** | I-680 | State Route 4 to State Route 242 | NB | 65.9 | A | 59.2 | B | E |
| **F680-2** | I-680 | State Route 4 to State Route 242 | SB | 44.1 | E | 65.7 | A | F |
| **F680-3** | I-680 | State Route 242 to El Cerro Blvd. | NB | 59.1 | B | 26 | F | F |
| **F680-3** | I-680 | State Route 242 to El Cerro Blvd. | SB | 27 | F | 52.2 | D | F |
| **F680-4** | I-680 | El Cerro Blvd. to Bollinger Canyon Road | NB | 48.3 | D | 29.3 | F | E |
| **F680-4** | I-680 | El Cerro Blvd. to Bollinger Canyon Road | SB | 66 | A | 60.5 | A | F |
| **F680-5** | I-680 | Bollinger Canyon Rd. to Alameda County Line | NB | 56.7 | C | 66.8 | A | E |
| **F680-5** | I-680 | Bollinger Canyon Rd. to Alameda County Line | SB | 66.8 | A | 56.9 | C | E |
| **F4-1** | SR-4 | I-80 to Cummings Skyway | EB | 57.2 | B | 59.5 | B | F |
| **F4-1** | SR-4 | I-80 to Cummings Skyway | WB | 61.6 | A | 61.8 | A | F |

| Segment Information | | | | AM Peak | | PM Peak | | LOS |
|---|---|---|---|---|---|---|---|---|
| **ID** | Route | Limits | Dir. | Speed | LOS | Speed | LOS | **Standard** |
| **F4-2** | SR-4 | Cummings Skyway to I-680 | EB | 61.7 | A | 36.9 | E | E |
| **F4-2** | SR-4 | Cummings Skyway to I-680 | WB | 63.8 | A | 63.3 | A | E |
| **F4-3** | SR-4 | I-680 to State Route 242 | EB | 60.7 | A | 16.3 | F | E |
| **F4-3** | SR-4 | I-680 to State Route 242 | WB | 40.4 | E | 55.3 | C | E |
| **F4-4** | SR-4 | State Route 242 to Bailey Road | EB | 65.1 | A | 40.9 | E | F |
| **F4-4** | SR-4 | State Route 242 to Bailey Road | WB | 27.4 | F | 65.2 | A | F |
| **F4-5** | SR-4 | Bailey Road to Loveridge Road | EB | 66.5 | A | 56.6 | C | F |
| **F4-5** | SR-4 | Bailey Road to Loveridge Road | WB | 21.4 | F | 66.8 | A | F |
| **F4-6 [1]** | SR-4 | Loveridge Road to State Route 160 | EB | 60.7 | A | 22.7 | F | F |
| **F4-6 [1]** | SR-4 | Loveridge Road to State Route 160 | WB | 29.5 | F | 63.1 | A | F |
| **F4-7** | SR-4 | State Route 160 to Sand Creek Road | EB | 57.9 | B | 56.9 | C | F |
| **F4-7** | SR-4 | State Route 160 to Sand Creek Road | WB | 51.2 | D | 58.9 | B | F |
| **F24-1** | SR-24 | Alameda County Line to Camino Pablo | EB | 61.3 | A | 30.2 | E | E |
| **F24-1** | SR-24 | Alameda County Line to Camino Pablo | WB | 36.7 | E | 61.4 | A | E |
| **F24-2** | SR-24 | Camino Pablo to Oak Hill Road | EB | 66.8 | A | 28.8 | F | F |
| **F24-2** | SR-24 | Camino Pablo to Oak Hill Road | WB | 39 | E | 66.8 | A | F |
| **F24-3** | SR-24 | Oak Hill Road to I-680 | EB | 66.6 | A | 29.4 | F | F |
| **F24-3** | SR-24 | Oak Hill Road to I-680 | WB | 29.5 | F | 64.9 | A | E |
| **F160-1** | SR-160 | SR-4 to County Line | EB | 52.3 | D | 52.3 | D | F |
| **F160-1** | SR-160 | SR-4 to County Line | WB | 54.5 | C | 60.2 | A | F |
| **F242-1** | SR-242 | I-680 to State Route 4 | NB | 63.9 | A | 44.8 | E | E |
| **F242-1** | SR-242 | I-680 to State Route 4 | SB | 28.4 | F | 65.5 | A | F |

[1] 95% TMC coverage used for analysis. See Appendix B for additional details.

Note 1: Average speed is reported in mph

Note 2: Highlighted cells indicate LOS exceeds standard.

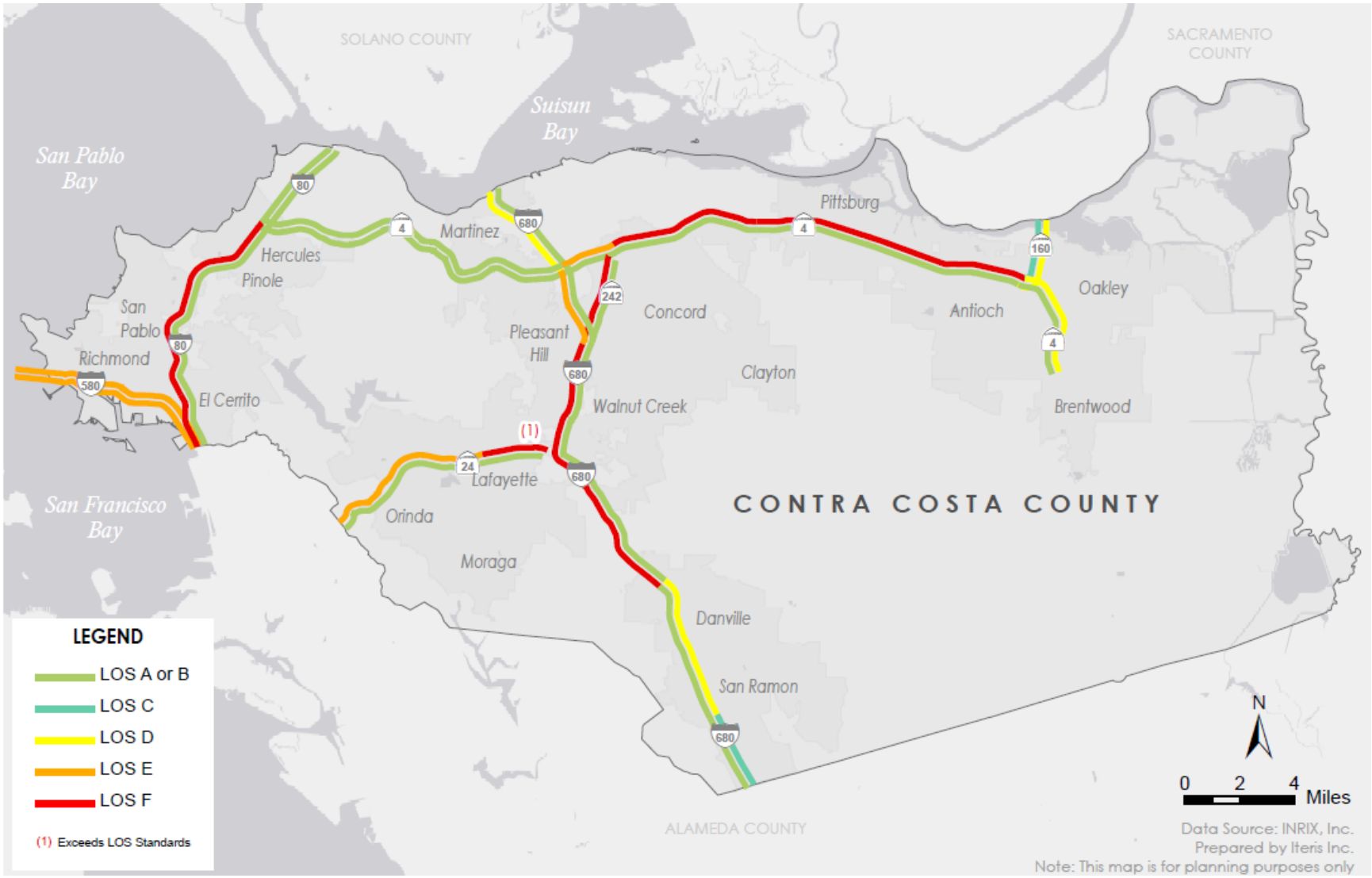



*Figure 3-6: 2015 Freeway LOS Results during AM Peak Period*

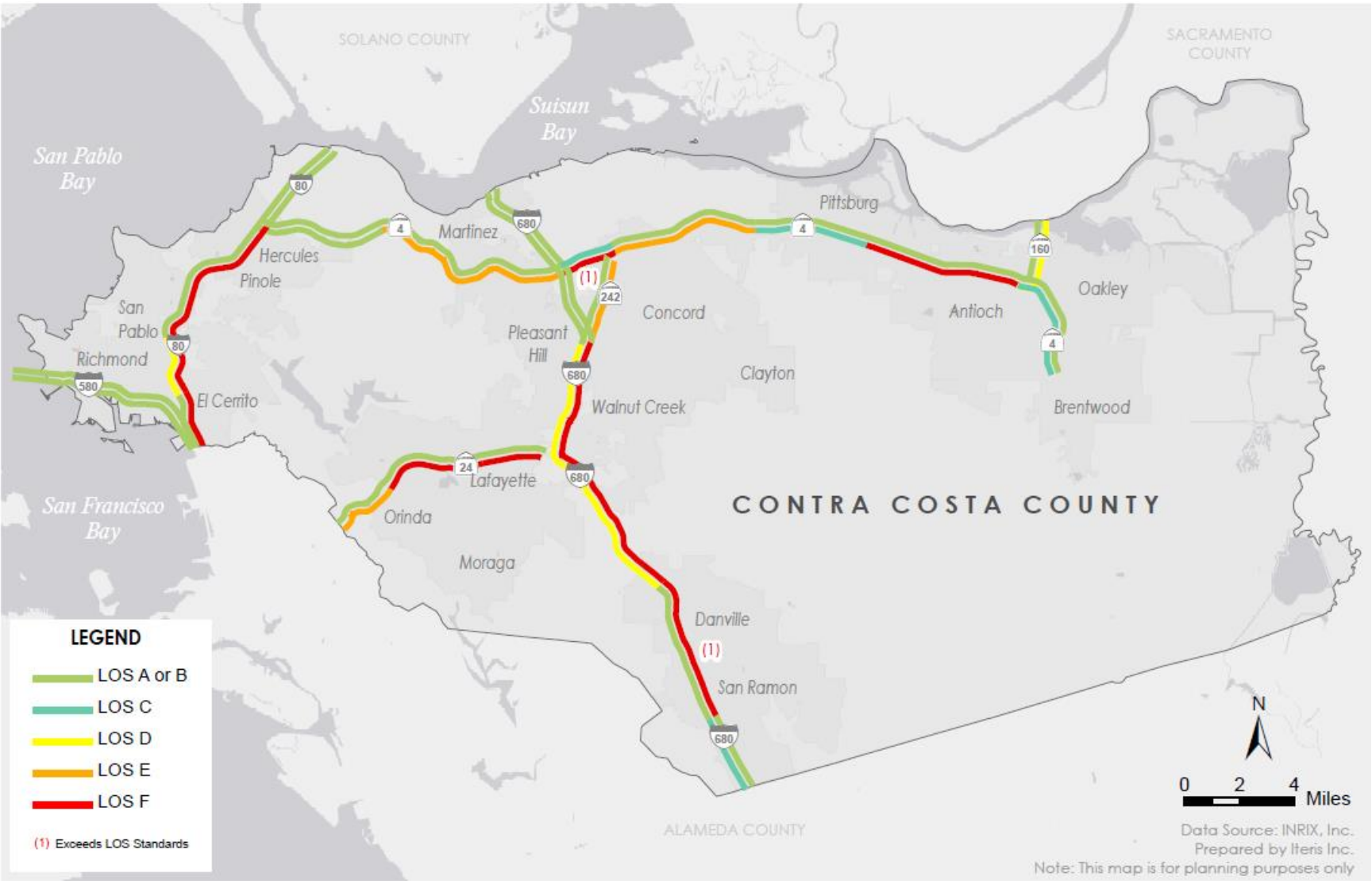



*Figure 3-7: 2015 Freeway LOS Results during PM Peak Period*

# 4 Conclusions and Recommendations

This section provides additional trends including comparisons to 2013 results and recommendations for future monitoring.

## 4.1 Trend Analysis

Traffic volumes generally increased between the 2013 and 2015 LOS monitoring. This increase in traffic is reflected in a general worsening of LOS in the 2015 monitoring for intersections and freeways as presented below.

### 4.1.1 Intersection LOS Trends

Figure 4-1 presents a comparison of the intersection LOS between 2013 and 2015 monitoring. As shown in this Figure, the number of intersections operating at LOS E or LOS F increased by 15% in the AM peak and 8% in the PM peak between 2013 and 2015.

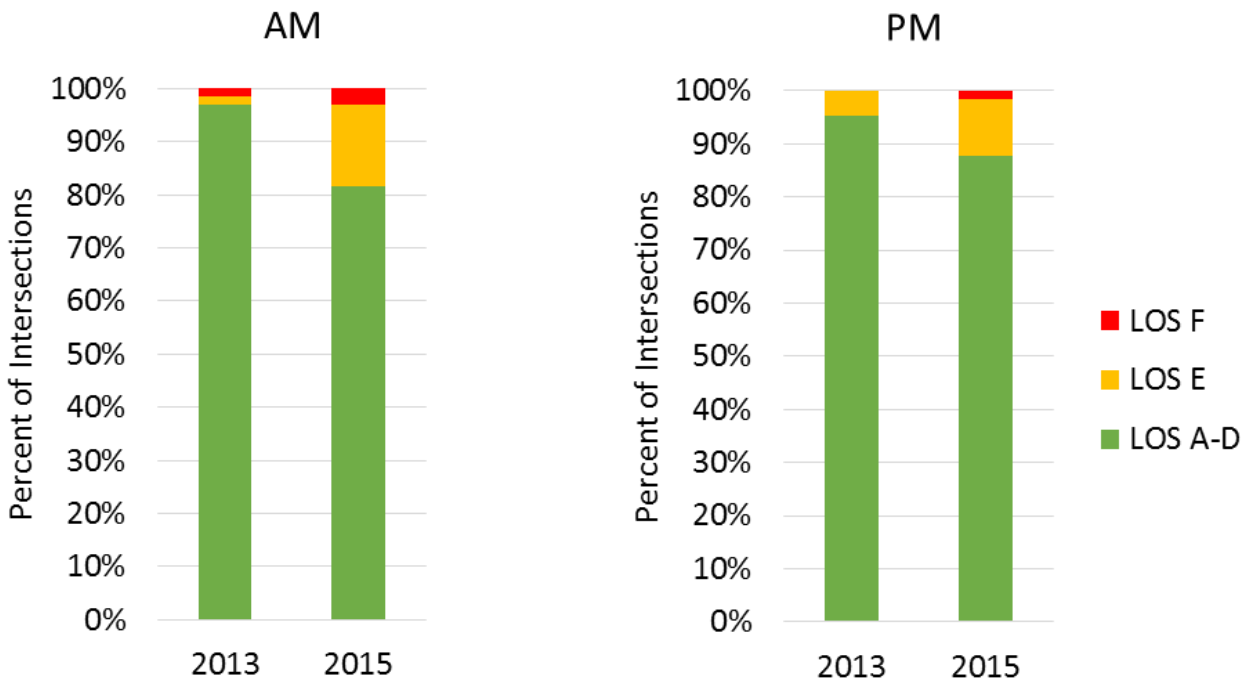



*Figure 4-1: Intersection LOS Comparison between 2013 and 2015 LOS Monitoring*

Figure 4-2 provides the change in LOS scores from 2013 to 2015, where a negative score indicates a worsening of LOS and a positive score indicates an improvement in LOS. For example, a value of -3 would indicate that an intersection worsened from LOS A (for example)

in 2013 to LOS D (for example) in 2015; a value of 2 would indicate that an intersection improved from LOS D (for example) in 2013 to LOS B (for example) in 2015.

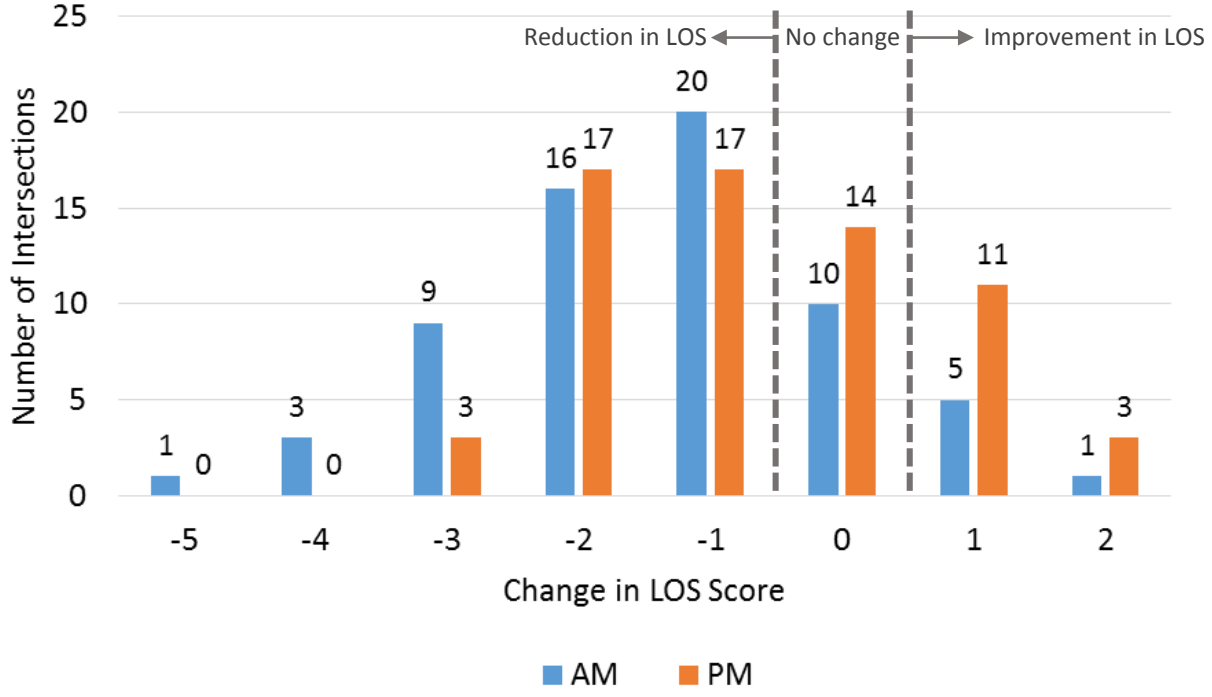



*Figure 4-2: Change in LOS Score from 2013 to 2015*

For both AM and PM, most intersections worsened by one or two LOS scores. In the AM, some intersections got worse by more than three LOS scores. For example, the intersection of El Portal Drive and Eastbound I-80 Ramps worsened from LOS A to LOS F (-5), which is a change that will be investigated by CCTA in consultation with Caltrans (see Section 3.1). The results also indicate that more intersections improved or stayed the same in the PM peak than in the AM peak.

While comparing these results between 2013 and 2015, it should be noted that some of these differences may also be attributed to the change in LOS methodology between the two years. In 2013, a volume-to-capacity methodology was used, while in 2015 a delay-based methodology was used. In general, the former methodology used in 2013 produces better LOS results for a given intersection and traffic condition compared to the 2015 methodology.

### 4.1.2 Freeway LOS Trends

Figure 4-3 presents a comparison of the freeway LOS between 2013 and 2015 monitoring. Similar to the intersections, freeways also indicate a general worsening of LOS in the 2015 monitoring. On an average, the number of intersections operating at LOS F increased by 14% in 2015 when compared to 2013 monitoring.

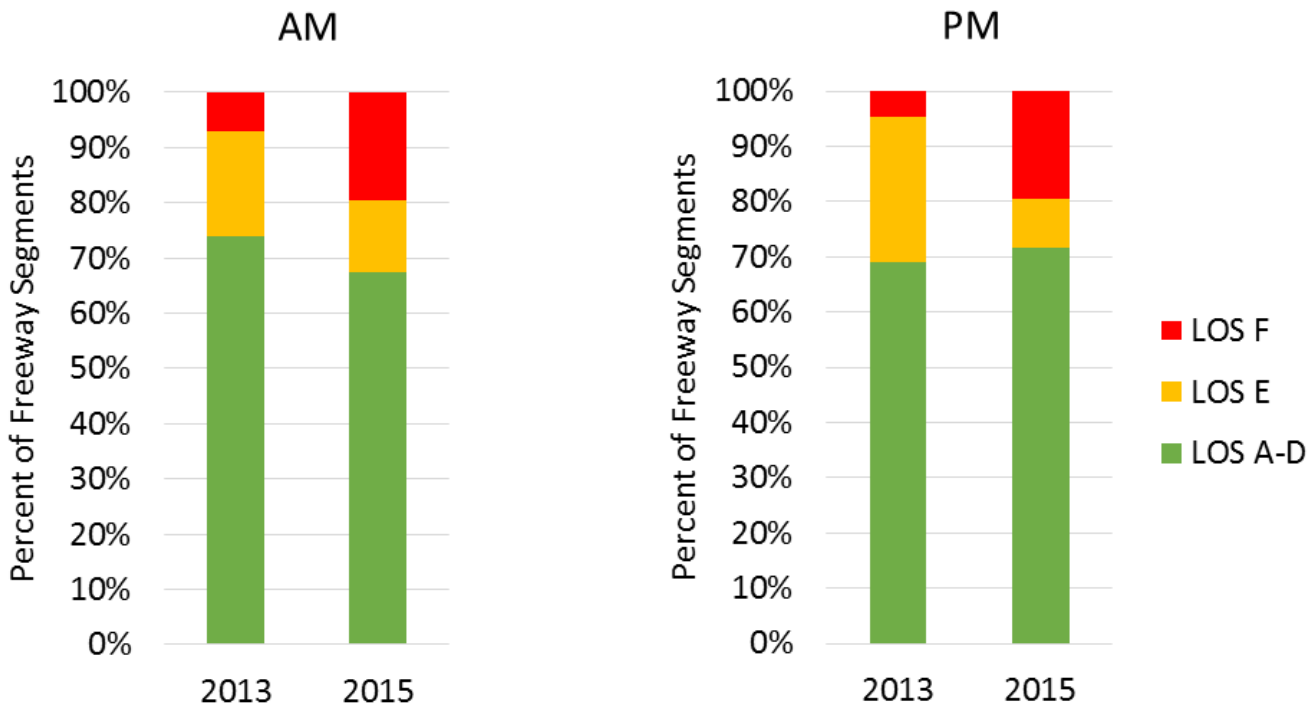



*Figure 4-3: Freeway Segment LOS Comparison between 2013 and 2015 LOS Monitoring*

Figure 4-4 presents similar comparisons in speeds (in both directions combined) between 2013 and 2015. Out of the 6 freeway corridors reviewed, the majority of corridors had average speeds up to 5 mph less than 2013 results. The two exceptions include I-580 in the AM peak and SR-24 in the PM peak. I-580 showed a significant reduction in speed in the AM peak, especially in the westbound direction. However, SR-242 showed a slight increase in speed during the PM peak, resulting from improved speed in the southbound direction.

While comparing these results between 2013 and 2015, it should be noted that some of these differences may also be attributed to the change in data source. In 2013 a combination of PeMS and floating car runs was used, while in 2015 commercial speed data provided from INRIX was used. Due to this change in data sources, this comparison may not fully reflect the actual

change in speeds between 2013 and 2015. For example, the reduction in average bi-directional speed along I-580 is approximately 23 mph or 40% compared to the 2013 monitoring speeds (Figure 4-4). However, when compared to the 2013 INRIX validation results, this reduction in speed is observed to be only 8 mph or 20%. Refer to Appendix C for an additional comparison of 2015 freeway INRIX speeds with 2013 freeway INRIX speeds from the Validation Study.

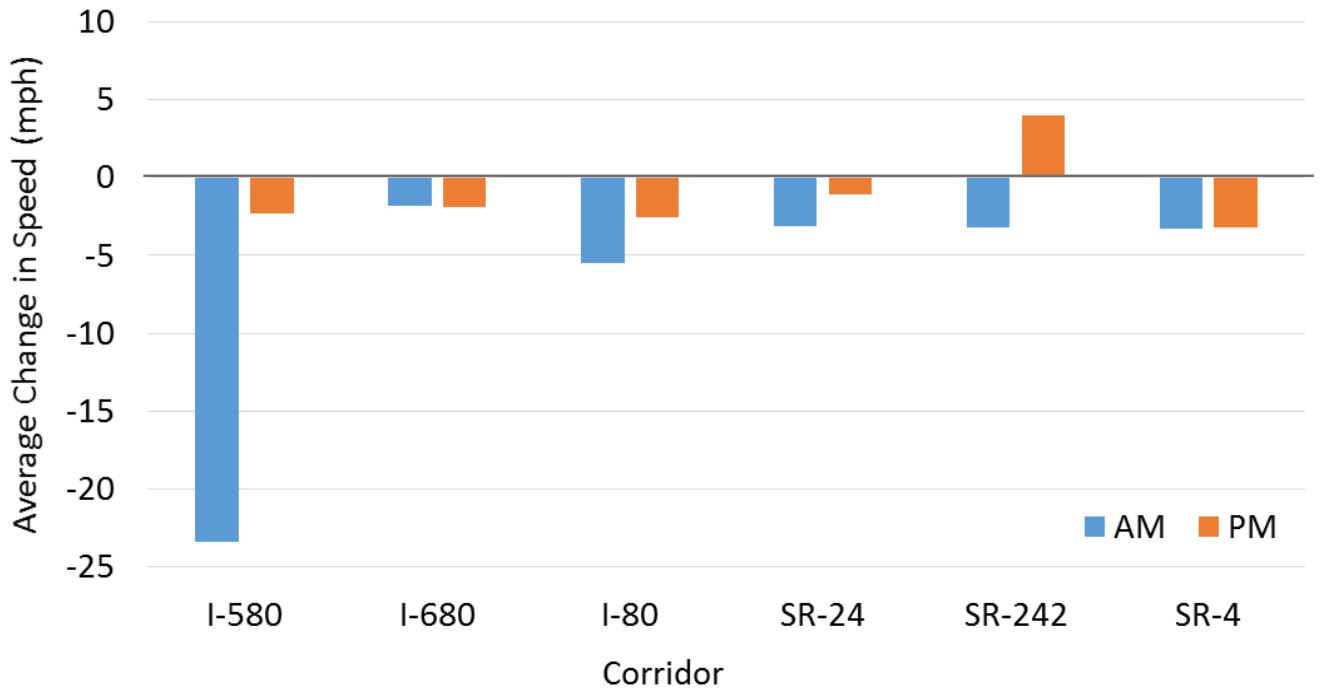



*Figure 4-4: Change in Freeway Corridor Speed from 2013 Monitoring Results to 2015*

It is expected that similar comparisons in the future would provide better insights, as CCTA continues to the use commercial speed data for 2017 LOS monitoring.

### 4.1.3 Employment Trends

Barring the differences in methodology and data sources, some of these noticeable changes in performance are influenced by employment growth in the Bay Area. Figure 4-5 shows that there has been a consistent increase in the employment levels since the 2013 monitoring. There is a growth of approximately 4% in the jobs from April 2013 to 2015. The source of the employment data presented in Figure 4-5 is Bureau of Labor Statistics for the Oakland-Hayward-Berkeley metropolitan area.

Figure 4-5 also presents a trend in freeway delay across Contra Costa County between 2013 and 2015. The freeway delay shown in this Figure is downloaded from PeMS[6] for a speed threshold of 35 mph. PeMS computes delay as the amount of extra time spent by all the vehicles over and above the time it takes to traverse a freeway at the threshold speed. This Figure shows a close correlation between the employment growth and the observed increase in the freeway delay.

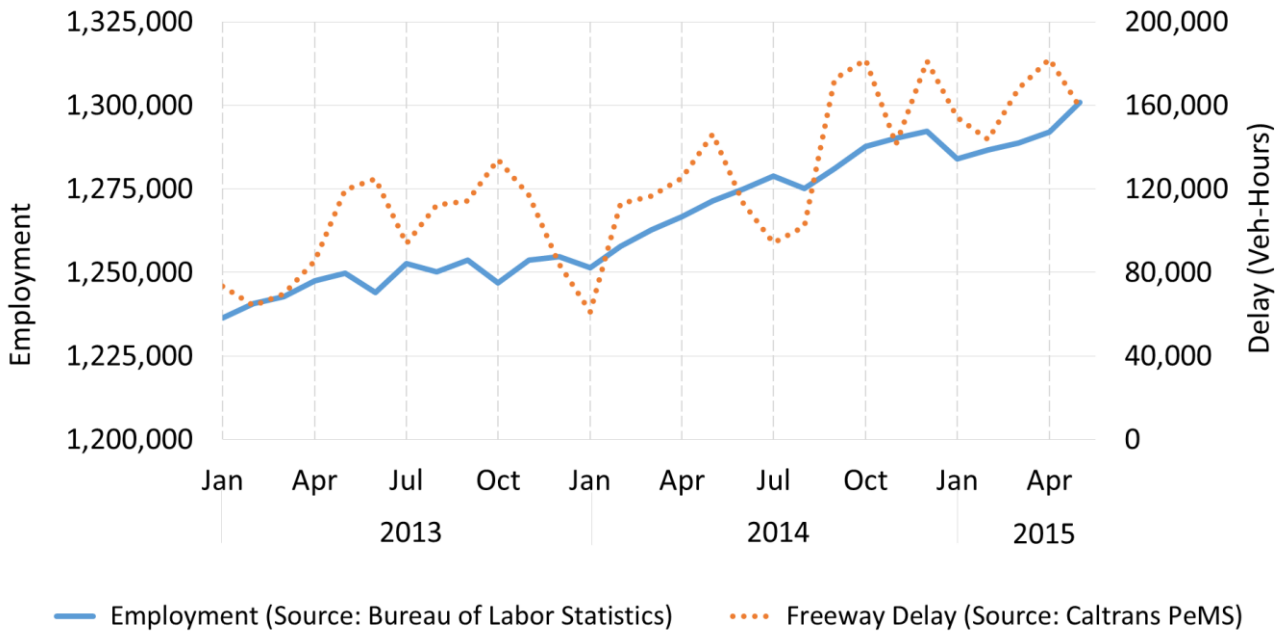



*Figure 4-5: Trends in Employment and Freeway Delay between 2013 to 2015*

The overall 2015 LOS performance trends presented in sections 4.1.1 and 4.1.2 resonate these employment and freeway delay trends. If the employment levels continue to rise, similar changes in performance results can be expected in the next monitoring cycle.

## 4.2 Current and Future Improvements and Projects

In this monitoring, it was ensured that any days impacted by construction activities during the peak hours were excluded from the monitoring days. For major construction activities, even if the lane closures do not happen during the peak hours, they still have secondary impact on the traffic flows through the friction caused by narrower lanes, presence of concrete barriers at

[6] http://pems.dot.ca.gov/

close proximity or gawking. Such major and other minor construction projects active during 2015 monitoring along the CMP Network are listed in Table 4-1.

*Table 4-1: Active Long-term Projects along the CMP Network during Spring 2015*

| Impacted Roads | Extents | Description of Work |
|---|---|---|
| SR-4 | Somersville Road to SR-160 interchange | Roadway widening and BART extension |
| I-680 Northbound | Walnut Creek to San Ramon | Express lanes |
| I-80 | San Francisco-Oakland Bay Bridge Toll Plaza to the Carquinez Bridge | Integrated Corridor Management (ICM) |

SR-4 widening and I-680 express lane construction projects anticipate to ease congestion and increase mobility along SR-4 and I-680 corridors, respectively. I-80 ICM project proposes to make the most efficient use of the existing infrastructure within the I-80 corridor by implementing system management strategies to reduce congestion, reduce travel time, and improve safety.

In addition to these improvements, the following planned projects are anticipated prior to the next CMP monitoring:

- I-80/ San Pablo Dam Road Reconstruction
- I-680 / SR-4 Interchange Improvement
- SR-4 / Balfour Widening
- Hercules Intermodal Transit Center
- I-680 Southbound HOV Gap Closure Between North Main and Livorna
- SR-4/SR-160 Direct Connector Ramps

Improved performance resulting from some of these completed projects are expected to have a positive impact on the freeway operations in the next monitoring cycle.

# 5 Recommendations for Future Monitoring

Significant changes have been made to the LOS monitoring in 2015, both in terms of the data collection techniques and LOS calculation methodology. These include:

- The use of commercial speed data for calculating freeway LOS; and
- The use of HCM methodology and Synchro software for calculating intersection LOS.

While these changes are significant improvements to the CMP methodology in this monitoring cycle, additional enhancements may be considered for further improvements and to expand the scope of the LOS monitoring. Possible enhancements are recommended below.

## 5.1 Intersection Monitoring Recommendations

In 2015, intersections were monitored for the first time in Synchro using HCM methodology. While significant work was performed to review and update the intersection timings plans for approximately 30% of the monitoring intersections and to conduct the analysis in HCM 2010, the following additional updates can be performed for the next monitoring cycle:

- Update timings for all of the remaining intersections using the latest signal timing plans available from the member agencies (see Appendix F for a summary of signal timing updates);
- For intersections that were not analyzed in HCM 2010, investigate and update the intersection details in Synchro so that the intersection results can be consistently reported in HCM 2010.
- Review and consider the following updates to CCTA *technical procedures*:
    - Where the right turn on red (RTOR) volume is heavy, use the estimated value based on HCM 2000 procedures rather than the current default value of zero;
    - Where there is a right turn overlap with heavy volume, use estimated capacity increase based on HCM 2000 procedures; apply as a RTOR volume reduction; and
    - If the intersection cannot be analyzed in HCM 2010, use HCM 2000.

## 5.2 Freeway Segment Monitoring Recommendations

Based on the validation task conducted in spring 2015, INRIX speed data was used for monitoring the freeway LOS in 2015. This sub-section provides additional recommendations on using commercial speed data for future monitoring:

- ***Incorporate advanced metrics:*** Speed and LOS were used as the primary metrics for reporting and comparisons in this monitoring, as these were the metrics available from the previous monitoring methodology. Should CCTA and its constituents desire, travel time – including travel time reliability – may be explored for future monitoring.
- ***Monitor arterial roadways:*** Due to the availability of data from INIRX on arterials, CCTA and its constituents could consider monitoring major arterial roadways for future monitoring cycles. CCTA may consider replacing the intersection analysis with an analysis along the length of the arterial.
- ***Increase monitoring periods:*** The current monitoring only considered weekday AM/PM peak hour speeds. To leverage the advantages of big data, it is recommended that monitoring scope be expanded to include separate analysis on weekends and additional off-peak times during the monitoring months.

In addition to freeways, ramp connectors can also be considered for monitoring in the future cycles. Currently the coverage of commercial data along these ramp connectors is not adequate. However, INRIX and other commercial providers periodically expand their TMC network. Therefore it is recommended that CCTA review the availability of INRIX data along the ramp connectors in the future and include them in the monitoring network.

## 5.3 Additional Recommendations on using Big Data

With emerging technologies and availability of richer transportation data sources, CMP monitoring around the nation has been radically transforming. Agencies are now able to expand beyond the traditional LOS roadway monitoring and reporting. Following are additional recommendations that CCTA may consider for future monitoring to continue adopting advanced data sources and newer performance reporting approaches:

- ***New Data Sources*****:** Numerous data sources, such as origin-destination (OD), bicycle/pedestrian and volume data are becoming increasingly available through commercial providers with the advent of crowd sourcing techniques. This creates major opportunities for agencies such as CCTA to get better insights on their transportation network performance. For instance, an OD analysis can be undertaken on the county's most congested segments to understand where the major trips are originating from, thus better targeting solutions. Companies such as Airsage and StreetLight Data

provide crowd sourced OD data. For bicycle data there are providers such as Strava Metro that aggregate crowd sourced bicycle and pedestrian activity into commercial data products. The data can be filtered by commute or recreational purpose, and can be used to perform monitoring such as bicycle travel times, bicycle route choice, and success of new multimodal infrastructure.

- ***Enhanced Visualization:*** Text has served as the core communication for congestion monitoring, largely in the form of tables and static graphics in reports. However, the core communication medium for Big Data is not text, it is visualization. GIS based maps and interactive graphics can be incorporated into the CMP report or CCTA website to show the performance of the network in a manner that is more understandable to CCTA constituents and public.

# 6 Appendices

Appendix A – Intersection Technical Procedures

Appendix B – INRIX Data Collection and Analysis Technical Details

Appendix C – INRIX Data Validation

Appendix D – Intersection LOS Analysis Supplementary Information

Appendix E – Freeway Segment LOS Analysis Supplementary Information

Appendix F – Summary of Signal Timing Updates

Appendix G – Recount Supplementary Information

# Appendix A

# Intersection Technical Procedures

## Appendix A: Intersection Technical Procedures

Most of the input parameters used for the Synchro analysis were based on the guidelines available in the CCTA *Technical Procedures* document. However, upon consulting with CCTA minor adjustments were suggested and incorporated for the 2015 LOS monitoring. This section documents the assumptions or core technical inputs used for this project:

*Traffic Characteristics*

- **Demand flow rate:** Used values calculated from count data (note: U-Turns were grouped with left-turns)
- **Right-turn-on-red flow rate:** Assumed a default value of 0 vehicles/hour (per the *Technical Procedures*), except where deemed appropriate in consultation with CCTA staff
- **Percent heavy vehicles:** Assumed a default value of 3% (per the *Technical Procedures*)
- **Intersection peak hour factor:** Used values calculated from count data
- **Platoon ratio**: Used default values per Table 2 of the *Technical Procedures*
- **Upstream filtering adjustment factor**: Used Synchro calculated values
- **Initial queue:** Assumed a default value of 0 vehicles
- **Base saturation flow rate:** Assumed a default value of 1,900 pc/h/ln (per the *Technical Procedures*)
- **Lane utilization adjustment factor:** Used Synchro calculated values
- **Pedestrian and bicycle flow rates:** Used values calculated from count data
- **On-street parking maneuver rate:** Used a default value of 0 (per the *Technical Procedures*)
- **Local bus stopping rate:** Used a value of 0 (per the *Technical Procedures*)

*Geometric Design*

The number of lanes, number of receiving lanes, and turn bay lengths were coded based on Google Maps imagery surveys, data collection videos and field surveys.

*Signal Control*

The project Team used signal timing and phasing information from the 2013 MTSO Synchro files and other Synchro files provided by CCTA, except for intersections missing from those files and for intersections deemed to have incorrect timing information. For intersections analyzed "as-is" using the files from CCTA, the Synchro default value for pedestrian clearance time was used. If the signal timing plans for a missing intersection were not available, then the default signal control values from the *Technical Procedures* were applied.

*Other*

- **Speed limit:** Used a value of 30 mph (per the *Technical Procedures*)
- **Stop line detector length and detector mode:** Used Synchro default values
- **Area type**: Was determined as either CBD or non-CBD based on intersection location

# Appendix B

# INRIX Data Collection and Analysis

# Technical details

## Appendix B: INRIX Data Collection and Analysis Technical Details

With the increasing availability of traffic data from various automated sources (sensors and vehicle probes), the role of private sector has been emerging in providing commercial traffic data. This has tremendously helped to close the gaps in data available from traditional methods like floating car surveys and infrastructure sensors.

The commercial speed data used for this study was obtained from INRIX. It was sourced by CCTA from INRIX, Inc. through an agreement with the Metropolitan Transportation Commission (MTC). INRIX reports traffic data using discrete roadway links that are termed as Traffic Message Channels (TMCs). Each TMC link is associated with a unique ID represented by a nine-digit code, where each individual number in the TMC code describes a portion of the geography including country, direction of travel and roadway segment.

INRIX's data inputs have different polling rates, GPS precision and update intervals. The individual readings are packaged by INRIX in a variety of products including real-time and historical speeds applied to a TMC. A consortium standardizes which roadway segments are TMC encoded. This assists with the uniformity of traffic data delivery to many types of automated devices. The TMC codes have defined lengths and locations. They do not cover all roadways particularly as the roadways get smaller and less traveled. There may be regionally significant roads that are not part of the TMC encoded network.

INRIX includes several metrics that accompany the data for interpretation. One of the metrics is called a score, which assigns one of three levels (10, 20 or 30) to the data. The score values mean the following:

- Score of 30: Data are exclusively generated from real-time sources.
- Score of 20: A mix of historical and real-time sources is used.
- Score of 10: Data are exclusively generated from historical data.

The INRIX data analysis for this monitoring effort could be broken down into four primary steps, which are described in detail below.

### Step 1: Develop GIS Network

In the first step, an extensive review of the CMP network was conducted using available sources, such as the 2013 report, sub-area Action Plans, list of 2015 CMP monitoring segments and GIS network files provided by CCTA. Through this review, the end points of the monitoring segments were identified upon consulting with CCTA. For the current project and INRIX methodology, it is important that the start and end points of each monitoring segment are accurately mapped and available in a shape file format. Thus, the preliminary step of this

sub-task was to verify segment limits and develop shape files per the segment descriptions. Below is a summary of the major changes to the GIS network shape files provided by CCTA:

- Updated end points of the segments to match the descriptions accurately. Note that this includes updates to exclude ramps from the freeway mainline. For example: the western end point of WB segment F4-1 between Cummings Skyway and I-80 is updated to the end of SR-4 freeway portion as shown in Figure B1.
- Updated the GIS line work to represent the roadway in each direction separately. –The GIS files provided by CCTA had one feature line representing both EB and WB segments of I-80. Through this sub-task, the GIS line work was updated to create separate feature lines representing the roadway in each direction.
- Updated the segment lengths per the above changes.

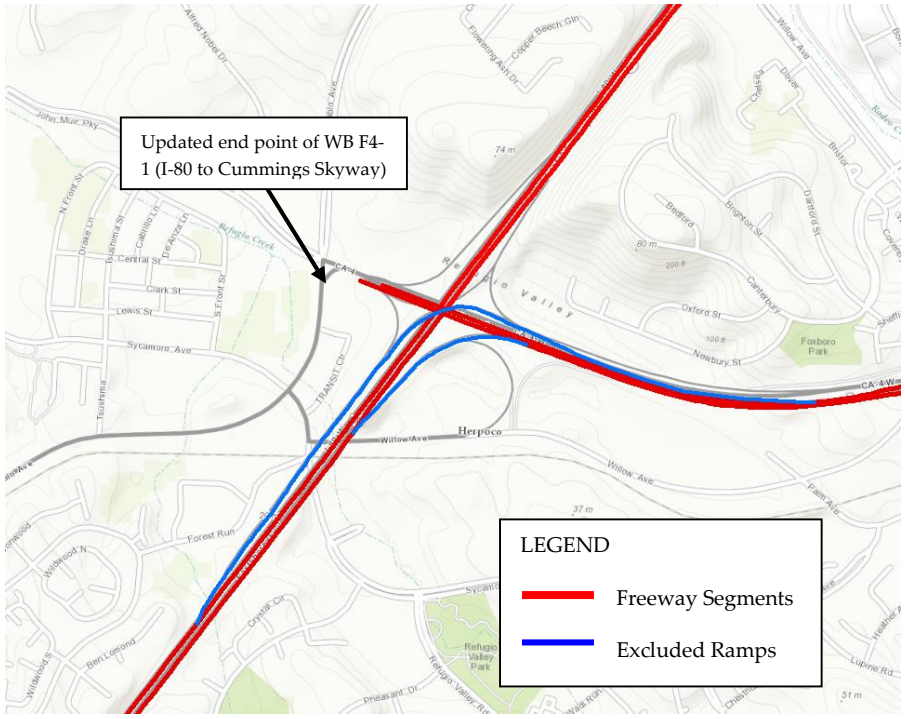



*Figure B1: Map showing the changes made to the GIS network at I-80 and SR-4 interchange*

The updated shape file resulting from this effort provided a more accurate representation of the CMP network that was used for this project.

## Step 2: Mapping

The commercial speed data is aggregated onto a link of roadway called a TMC link. These TMC links are typically shorter than CMP segments and the boundaries may or may not align

with the boundaries of the CMP. Thus, to obtain performance metrics for a CMP segment, it was necessary to create an index of TMC segments that belong within each CMP. Refer to the schematic example shown in Figure B2.

The example in Figure B2 shows a longer CMP segment, which is made up of two complete TMC links and a partial length of a third TMC link. The left end of the CMP segment aligns with the left end of the TMC link, however there is no alignment at the right end. Therefore, in this example only 65% of the length of the third TMC would be used in the mapping.

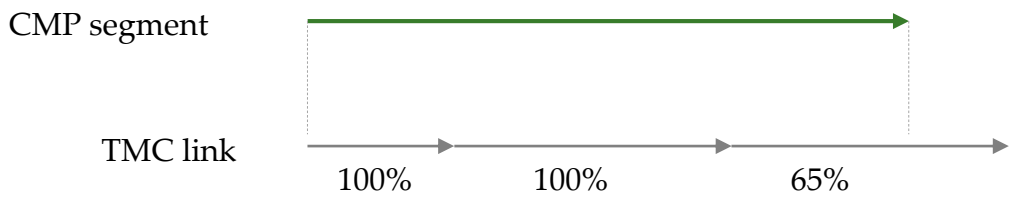



*Figure B2: Schematic diagram of CMP to TMC mapping*

Table B1 shows a sample of the mapping file produced for each CMP segment. The first half of the table provides information about the CMP segment including a name, length, direction and from/to description. The second half of the table includes a list of TMC codes and the associated length of that TMC link that lies within the boundaries of the CMP segment.

*Table B1: Example CMP to TMC Mapping Table*

| CMP | | | | TMC | | |
|---|---|---|---|---|---|---|
| CMP Segment Name | Length (miles) | Direction | From/ To | TMC ID | Direction | TMC length overlapping with CMP segment |
| Alhambra Ave | 4.77 | NB | Arch St to Taylor Blvd | 105+09504 | NB | 0.36 |
| | | | | 105P09504 | NB | 0.01 |
| | | | | 105+09431 | NB | 2.72 |
| | | | | 105+09432 | NB | 0.43 |
| | | | | 105P09432 | NB | 0.14 |
| | | | | 105+09433 | NB | 1.11 |
| | | | | Total | | 4.77 |
| | | | | Percentage Coverage | | 100% |

The GIS shape files created and confirmed in the earlier sub-task were used to map the TMC links onto the CMP network. The start and end points of the CMP segments were reviewed to

ensure that the correct length of TMC links were associated with the CMP segment. This mapping process was completed for each of the freeway and arterial roadway segments in the CMP network.

### Step 3: Filter Raw Data

In this step, INRIX data was filtered to remove:

- Times outside the agreed monitoring time period: INRIX data was filtered to include only the data points between 6:00 am to 10:00 am and 3:00 pm to 7:00 pm within the monitoring dates.
- Data points with lower data quality: Only raw speeds i.e., data points with score of 30, which were directly measured were used for computing the LOS of the CMP network. Thus data points with scores of 10 and 20 were removed. The quantity of remaining data points was tracked so the sample size of data points associated with score of 30 was known.
- Other filtering as described in in Methodology section of the main report.

### Step 4: Data Aggregation

This section discusses the methodology of aggregating the data both spatially and temporally. Note that Steps 3 and 4 were undertaken using the open source software R. This software is widely used in data analytics and statistics for managing large quantities of data (as was the case in this project). Datasets of this size would be difficult to manipulate in a spreadsheet program. Iteris developed an R script that performed the processes described in Steps 3 and 4. To validate the R script, Iteris extracted commercial speed data for a CMP segment and produced an internal spreadsheet to confirm the script results.

Table B2 displays two sample data points used in this step. The output from this step was the aggregated speed i.e., average speed, and sample size of each CMP segment. A sample of the output is included in Table B3.

*Table B2: Example CMP to TMC Mapping Table*

| TMC Code | Time Stamp | Speed | Score |
|---|---|---|---|
| 105-04890 | 03/05/2013 06:00 | 70 | 30 |
| 105+04891 | 03/05/2013 06:00 | 72 | 30 |

*Table B3: Sample output from Step 3 – Aggregated speed on CMP segment*

| CMP ID | Route | Length (mi) | Time Period | Sample Size | Average Speed (mph) |
|---|---|---|---|---|---|
| F80-1 | I-80 - EB: Carquinez Bridge to Cummings Skyway | 1.01 | AM | 2016 | 63.3 |
| | | | PM | 2248 | 61.6 |
| F4-1 | SR-4 – EB: I-80 to Cummings Skyway | 4.72 | AM | 894 | 57.2 |
| | | | PM | 1708 | 59.5 |

Two types of aggregation were required for the current analysis:

1. Spatial aggregation: Aggregation of data from a TMC link onto a CMP link; and
2. Temporal aggregation: Aggregation of multiple time periods of data to a single i.e., average data point.

The data was firstly spatially aggregated, and then temporally aggregated. The following sections describe spatial and temporal aggregation in further detail.

## Spatial Aggregation

Using the mapping table created in Step 2 and the filtered commercial speed data obtained from Step 3, the TMC data were spatially aggregated on the CMP segments using speed as a metric. Firstly, the travel time of each TMC was calculated according to the following formula. Note that the TMC length is updated according to the methodology from Step 1 i. e. it is not always the original TMC length when the TMC was not fully nested within the CMP segment.

$$TMC\ Travel\ time\ (hr) = \frac{TMC\ Length\ (mi)}{TMC\ Speed\ (mph)}$$

In cases where multiple TMC links span a single CMP segment, the CMP Travel Time was calculated by adding the travel time of each TMC associated with the CMP as follows:

$$CMP\ Travel\ Time\ (hr) = TMC_1 + TMC_2 + \cdots + TMC_n$$

Also, the CMP speed (time mean speed), for each timestamp, is calculated from the overlapping TMC length and CMP travel time as follows:

$$CMP\ Speed\ (mph) = \frac{TMC\ Length_1 +\ TMC\ Length_2 + \cdots +\ TMC\ Length_n}{CMP\ Travel\ Time\ (hr)} \times 60$$

### Temporal Aggregation

Temporal aggregation involved the translation of the CMP travel time or speed for each minute of data into space mean speed corresponding to each CMP segment, for the entire monitoring period. The following formulae were used for this:

$$Space\ Mean\ CMP\ Speed\ (mph) = \frac{\sum CMP\ Length\ (mi)}{\sum CMP\ Travel\ time\ \ (hr)}$$

This aggregated speed was computed for every one hour at 15 minute intervals. For example average speed was computed from 6:00 am to 7:00 am, 6:15 am to 7:15 am etc. The hour with the lowest average speeds is denoted as the peak hour. The peak hour is computed separately for each segment and the corresponding average hourly speed is used for this validation exercise.

Sample size information was retained to assess the confidence level in the computed statistics.

### Discussion about Sample Size

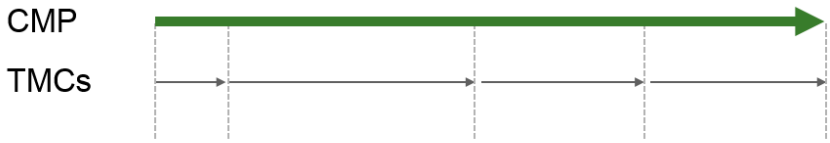
The sample size is the number of data points that contributed to the final calculation of average speed. The sample size varied on each TMC through removal of data points during the filtering process and through the processes discussed below.

Removal of TMC data points with scores of 20 and 10 (per Step 3 above) eliminated data for particular one-minute time periods from one or more of the TMCs that comprise certain CMP segments.

Refer to the schematic example in Figure B3 below for explanatory purposes. The example shows a longer CMP segment which is comprised of four TMCs. The table shows the data scores for each TMC for each one minute time period. In time periods 1, 2, and 7, one of the TMCs had a data score of 20 and therefore the record from that TMC was excluded for those minutes. In time period 6, two of the TMCs had data scores of 20 and similarly, these TMC records were also excluded for time period 6. The percentage of route covered indicates the ratio of the length of the CMP covered by the TMC links with real time scores.

The project team performed a check to ensure that any time periods that had too many TMCs removed were not included in the analysis. Where TMC data were available for less than 99% of the TMCs that were chosen for mapping, that one-minute time period was removed. To extend the above example further, if TMC 1 was less than 1% of the CMP segment length, then

it would still be possible to use the data in Time periods 1 and 2 (in addition to time periods 3, 4 and 5). This can be justified, because TMC 1 does not contribute significantly to the distance-based average speed calculation.




| Time period | TMC 1 | TMC 2 | TMC 3 | TMC 4 | % of route covered |
|---|---|---|---|---|---|
| 1 | ~~20~~ | 30 | 30 | 30 | 90% |
| 2 | ~~20~~ | 30 | 30 | 30 | 90% |
| 3 | 30 | 30 | 30 | 30 | 100% |
| 4 | 30 | 30 | 30 | 30 | 100% |
| 5 | 30 | 30 | 30 | 30 | 100% |
| 6 | ~~20~~ | 30 | ~~20~~ | 30 | 65% |
| 7 | 30 | 30 | ~~20~~ | 30 | 75% |

*Figure B3: Schematic example of CMP route covered by TMCs in each one minute time period*

For 2015 monitoring, for one CMP segment along SR-4 between Loveridge Road to State Route 160, using the 99% threshold resulted in removal of too many time periods and an inadequate sample size. In this case, the threshold was lowered to 95% to ensure that the sample size was adequate. To aid transparency, this is recorded in a foot note in the freeway results table in the main report.

Sample size information for each CMP segment is included in the results table in Appendix E. The sample size for 2015 LOS monitoring varied from approximately to 800 to 2,300 data points. The maximum possible sample size for each CMP segment is 2340 for 2015 LOS monitoring, which represents 60 minutes of data across 39 monitoring days in 2015. Thus, a sample size of 800 equates to 60 minutes of data across approximately 13 days.

# Appendix C

# INRIX Data Validation

## Appendix C: INRIX Data Validation

Prior to 2015 LOS monitoring, CCTA undertook a validation exercise to confirm that commercial speed data was equally acceptable as PeMS/floating car surveys. As a part of this exercise previously reported 2013 LOS monitoring results were compared and validated with that of the results obtained by analyzing the commercial data for the same period. This appendix summarizes the conclusions and recommendations from the validation task. Additional details can be found in the *Contra Costa Transportation Authority INRIX Data Validation Final Report*, which is available upon request from CCTA.

This validation exercise compared the 2012/2013 INRIX speed data to speed data from the following sources:

1. PeMS/Floating Car Surveys; and
2. Commercial Speed Data.

Overall, 21 CMP segments, 12 MTSO freeway segments and 18 MTSO arterial segments were validated to compare the PeMS/floating car surveys with the commercial speed data.

Of the validated segments, arterials showed a good alignment across both survey types while freeways segments in the CMP and MTSO network had varying results. For CMP Freeways, the network average speeds obtained from commercial data varied within 10% to 14% of the speeds reported in previous monitoring cycle. This difference in speeds is calculated to be between -0.4% and 9% for the MTSO freeways.

Given these validation results, the following four options are available for 2015 and 2017 CMP/MTSO:

1. Use commercial speed analysis for both CMP and MTSO monitoring with adjustments to the current INRIX analysis methodology i.e., use space mean speeds as opposed to the 85$^{th}$ percentile speeds.
2. Compare the 2015 and 2017 CMP/MTSO results back to the 2013 INRIX results obtained under this validation study instead of to the floating car/PeMS method.
3. Complete commercial speed analysis for validated segments and supplement it with PeMS data for the segments that showed a LOS difference of more than 2 units.
4. Complete commercial speed analysis only, however confirm any LOS F recommendations with supplementary floating car surveys (if needed). Floating car surveys could also be considered on CMP segments with LOS E, if desired.

Based on the performed investigations and the validation results of the MTSO and CMP network using space mean speed aggregation methods, option one is suggested for 2015/2017 monitoring analysis.

However, note that the segments that did not have adequate spatial coverage will have to be monitored through floating car runs. Additionally, some of the segments with low sample size may also be considered for floating car runs based on the sample size from 2015/2017 analysis. Based on this, following is a summary of the recommendations for each category:

**For CMP and MTSO Freeways:**

- It is recommended that commercial speed data be used for all CMP segments where there is adequate sample size and acceptable TMC coverage, independent of whether or not they are included for validation in this study.
- Floating car surveys are recommended only on those CMP segments that do not satisfy these conditions.

**For MTSO Arterials:**

- It is deemed appropriate to use commercial speed data on all arterial segments with adequate sample size and TMC coverage.
- Additionally, floating car surveys may be considered for those arterials that yield a LOS E or F with commercial speed data analysis, due to the significance these results bear on the conformity of CMP/MTSO and associated deficiency plans.

Additional recommendations on using commercial speed data in 2015 CMP and MTSO monitoring are summarized below:

- Review the mapping of any CMP segment without full TMC coverage. It is acknowledged that TMC link coverage is periodically expanded and therefore coverage may exist in 2015 or 2017 where it did not exist in 2013.
- Further, it will be necessary to confirm that TMC to CMP/MTSO mapping file before conducting 2015/2017 analysis.
- Speed in addition to LOS was used as the primary metric for aggregation and comparison in this validation exercise as these were the metrics available from the previous monitoring methodology. Should CCTA and its constituents desire, travel time may be explored for future monitoring.

# Appendix D

# Intersection LOS Analysis and Supplementary Information

## Appendix D: Intersection LOS Analysis and Supplementary Information

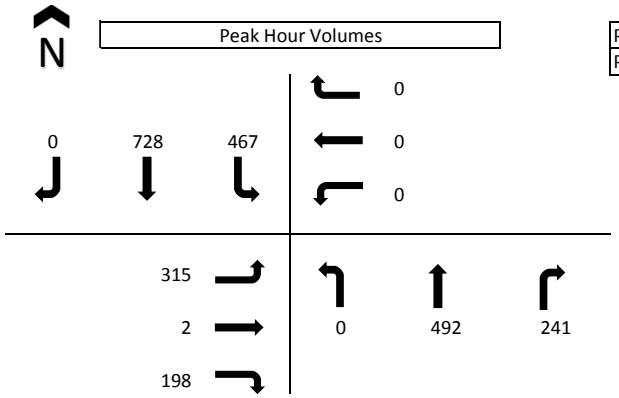
This Appendix provides the following information:

- Data Collection Count Sheets that contain peak period auto, pedestrian and bicycle counts for all the monitoring intersections
- Synchro LOS Analysis worksheets for all the monitoring intersections.

# Appendix D: Count Sheets - AM Peak Period

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: ALHAMBRA AVENUE
E/W: EASTBOUND RAMPS TO SR-4
ID: C1




| Peak Hour: | 7:30 AM to 8:30 AM |
|---|---|
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | ALHAMBRA AVENUE | | | | | | EASTBOUND RAMPS TO SR-4 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 78 | 42 | 93 | 140 | 0 | 47 | 0 | 52 | 0 | 0 | 0 | 452 | 2213 |
| 7:15 AM | 0 | 106 | 40 | 125 | 140 | 0 | 64 | 0 | 57 | 0 | 0 | 0 | 532 | 2412 |
| 7:30 AM | 0 | 90 | 45 | 156 | 200 | 0 | 65 | 0 | 54 | 0 | 0 | 0 | 610 | 2443 |
| 7:45 AM | 0 | 116 | 53 | 101 | 183 | 0 | 103 | 0 | 63 | 0 | 0 | 0 | 619 | 2340 |
| 8:00 AM | 0 | 170 | 75 | 104 | 191 | 0 | 69 | 0 | 42 | 0 | 0 | 0 | 651 | 2162 |
| 8:15 AM | 0 | 116 | 68 | 106 | 154 | 0 | 78 | 2 | 39 | 0 | 0 | 0 | 563 | |
| 8:30 AM | 0 | 78 | 56 | 120 | 162 | 0 | 60 | 2 | 29 | 0 | 0 | 0 | 507 | |
| 8:45 AM | 0 | 94 | 48 | 108 | 105 | 0 | 54 | 0 | 32 | 0 | 0 | 0 | 441 | |
| Peak Hour | 0 | 492 | 241 | 467 | 728 | 0 | 315 | 2 | 198 | 0 | 0 | 0 | | |

## BIKES

| Interval | ALHAMBRA AVENUE | | EASTBOUND RAMPS TO SR-4 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

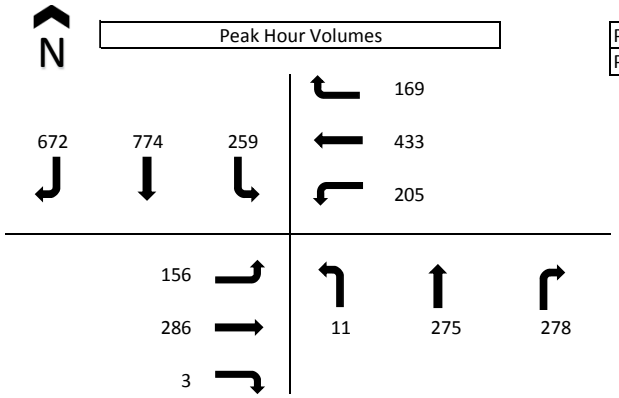
## PEDESTRIANS

| Interval | Crossing ALHAMBRA AVENUE | | Crossing EASTBOUND RAMPS TO SR-4 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 2 | 0 | 0 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: PLEASANT HILL ROAD
E/W: TAYLOR BOULEVARD
ID: C2




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | PLEASANT HILL ROAD | | | | | | TAYLOR BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 6 | 26 | 31 | 35 | 128 | 214 | 17 | 40 | 2 | 22 | 157 | 15 | 693 | 3392 |
| 7:15 AM | 2 | 44 | 67 | 51 | 166 | 201 | 37 | 64 | 0 | 50 | 142 | 24 | 848 | 3521 |
| 7:30 AM | 2 | 53 | 83 | 83 | 203 | 199 | 37 | 71 | 0 | 62 | 115 | 40 | 948 | 3398 |
| 7:45 AM | 5 | 81 | 76 | 69 | 195 | 151 | 42 | 86 | 2 | 51 | 94 | 51 | 903 | 3099 |
| 8:00 AM | 2 | 97 | 52 | 56 | 210 | 121 | 40 | 65 | 1 | 42 | 82 | 54 | 822 | 2827 |
| 8:15 AM | 3 | 73 | 42 | 58 | 180 | 118 | 39 | 51 | 1 | 34 | 77 | 49 | 725 | |
| 8:30 AM | 1 | 66 | 33 | 48 | 128 | 127 | 35 | 61 | 2 | 24 | 85 | 39 | 649 | |
| 8:45 AM | 1 | 69 | 47 | 45 | 107 | 108 | 31 | 78 | 9 | 23 | 67 | 46 | 631 | |
| Peak Hour | 11 | 275 | 278 | 259 | 774 | 672 | 156 | 286 | 3 | 205 | 433 | 169 | | |

## BIKES

| Interval | PLEASANT HILL ROAD | | TAYLOR BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 1 | 0 | 1 | 1 | 3 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 1 | 0 | | |

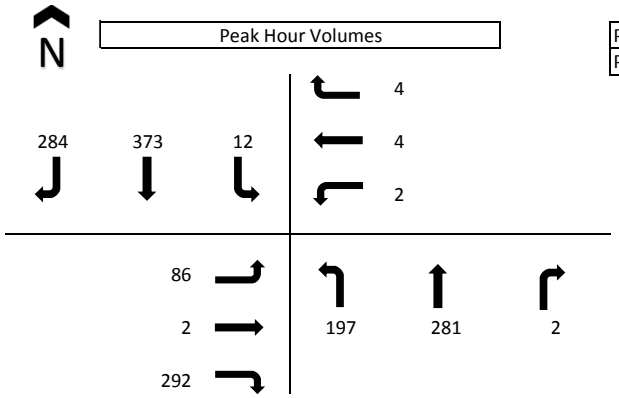
## PEDESTRIANS

| Interval | Crossing PLEASANT HILL ROAD | | Crossing TAYLOR BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 1 | 2 | 6 |
| 7:15 AM | 0 | 1 | 0 | 0 | 1 | 4 |
| 7:30 AM | 0 | 3 | 0 | 0 | 3 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 1 | 1 | 0 | 2 | |
| 8:45 AM | 0 | 0 | 4 | 0 | 4 | |
| Peak Hour | 0 | 4 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 22ND, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | PACHECO BOULEVARD |
| E/W: | MUIR ROAD |
| ID: | C3 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | PACHECO BOULEVARD | | | | | | MUIR ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 35 | 45 | 0 | 2 | 68 | 49 | 18 | 0 | 41 | 0 | 0 | 0 | 258 | 1400 |
| 7:15 AM | 31 | 59 | 2 | 0 | 100 | 87 | 27 | 1 | 81 | 0 | 0 | 0 | 388 | 1522 |
| 7:30 AM | 42 | 78 | 0 | 0 | 93 | 64 | 17 | 0 | 84 | 0 | 0 | 0 | 378 | 1510 |
| 7:45 AM | 39 | 82 | 0 | 3 | 88 | 77 | 21 | 1 | 65 | 0 | 0 | 0 | 376 | 1539 |
| 8:00 AM | 44 | 70 | 1 | 2 | 100 | 81 | 17 | 0 | 65 | 0 | 0 | 0 | 380 | 1472 |
| 8:15 AM | 52 | 58 | 0 | 6 | 91 | 61 | 25 | 1 | 78 | 1 | 0 | 3 | 376 | |
| 8:30 AM | 62 | 71 | 1 | 1 | 94 | 65 | 23 | 0 | 84 | 1 | 4 | 1 | 407 | |
| 8:45 AM | 46 | 47 | 0 | 1 | 71 | 56 | 19 | 0 | 65 | 0 | 0 | 4 | 309 | |
| Peak Hour | 197 | 281 | 2 | 12 | 373 | 284 | 86 | 2 | 292 | 2 | 4 | 4 | | |

## BIKES

| Interval | PACHECO BOULEVARD | | MUIR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 3 |
| 7:15 AM | 0 | 1 | 0 | 0 | 1 | 3 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 3 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 4 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 2 | 0 | 0 | 0 | 2 | |
| Peak Hour | 0 | 3 | 0 | 0 | | |

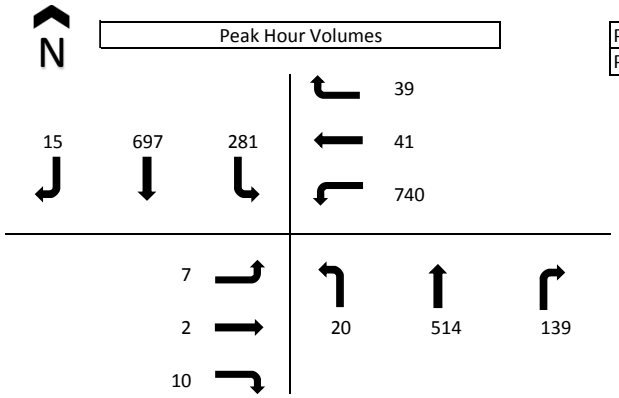
## PEDESTRIANS

| Interval | Crossing PACHECO BOULEVARD | | Crossing MUIR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:15 AM | 0 | 1 | 1 | 0 | 2 | |
| 8:30 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 1 | 2 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 22ND, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | CONTRA COSTA BOULEVARD |
| E/W: | SOUTHBOUND RAMPS TO 1-680 |
| ID: | C4 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | SOUTHBOUND RAMPS TO 1-680 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 2 | 101 | 31 | 70 | 138 | 0 | 1 | 2 | 1 | 165 | 7 | 6 | 524 | 2413 |
| 7:15 AM | 1 | 123 | 44 | 64 | 195 | 3 | 0 | 0 | 1 | 149 | 9 | 2 | 591 | 2505 |
| 7:30 AM | 3 | 135 | 31 | 82 | 192 | 1 | 2 | 0 | 3 | 192 | 7 | 4 | 652 | 2490 |
| 7:45 AM | 9 | 133 | 31 | 55 | 160 | 6 | 3 | 0 | 2 | 213 | 11 | 23 | 646 | 2380 |
| 8:00 AM | 7 | 123 | 33 | 80 | 150 | 5 | 2 | 2 | 4 | 186 | 14 | 10 | 616 | 2322 |
| 8:15 AM | 17 | 100 | 37 | 50 | 157 | 3 | 4 | 2 | 6 | 182 | 12 | 6 | 576 | |
| 8:30 AM | 12 | 97 | 24 | 68 | 157 | 2 | 10 | 2 | 5 | 150 | 7 | 8 | 542 | |
| 8:45 AM | 16 | 88 | 28 | 65 | 160 | 3 | 3 | 3 | 11 | 194 | 11 | 6 | 588 | |
| Peak Hour | 20 | 514 | 139 | 281 | 697 | 15 | 7 | 2 | 10 | 740 | 41 | 39 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | SOUTHBOUND RAMPS TO 1-680 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 1 | 2 | 0 | 0 | 3 | 9 |
| 7:15 AM | 0 | 4 | 0 | 0 | 4 | 8 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 5 |
| 7:45 AM | 0 | 2 | 0 | 0 | 2 | 6 |
| 8:00 AM | 0 | 2 | 0 | 0 | 2 | 5 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 0 | 8 | 0 | 0 | | |

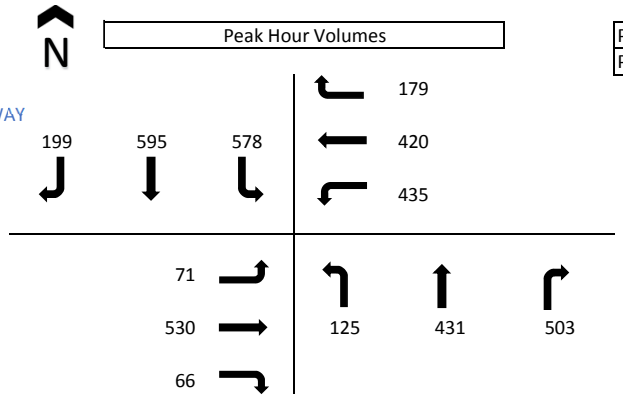
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing SOUTHBOUND RAMPS TO 1-680 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 3 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 1 | 1 | |
| Peak Hour | 0 | 0 | 0 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: CONTRA COSTA BOULEVARD
E/W: CONCORD/CHILPANCINGO PARKWAY
ID: C5




| Peak Hour: | 7:00 AM to 8:00 AM |
|---|---|
| Peak Hour Factor: | 0.87 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | CONCORD/CHILPANCINGO PARKWAY | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 24 | 99 | 145 | 130 | 128 | 35 | 18 | 124 | 16 | 73 | 47 | 39 | 878 | 4132 |
| 7:15 AM | 37 | 102 | 139 | 134 | 146 | 48 | 15 | 123 | 19 | 87 | 83 | 45 | 978 | 4085 |
| 7:30 AM | 38 | 140 | 128 | 149 | 184 | 54 | 26 | 125 | 12 | 135 | 149 | 48 | 1188 | 3966 |
| 7:45 AM | 26 | 90 | 91 | 165 | 137 | 62 | 12 | 158 | 19 | 140 | 141 | 47 | 1088 | 3618 |
| 8:00 AM | 15 | 71 | 56 | 149 | 124 | 32 | 16 | 110 | 11 | 92 | 98 | 57 | 831 | 3359 |
| 8:15 AM | 16 | 45 | 56 | 189 | 112 | 32 | 18 | 117 | 11 | 85 | 98 | 80 | 859 | |
| 8:30 AM | 13 | 55 | 61 | 130 | 145 | 40 | 10 | 123 | 14 | 78 | 93 | 78 | 840 | |
| 8:45 AM | 13 | 41 | 53 | 172 | 135 | 47 | 13 | 98 | 10 | 78 | 100 | 69 | 829 | |
| Peak Hour | 125 | 431 | 503 | 578 | 595 | 199 | 71 | 530 | 66 | 435 | 420 | 179 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | CONCORD/CHILPANCINGO PARKWAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 3 | 0 | 4 | 19 |
| 7:15 AM | 0 | 2 | 1 | 0 | 3 | 22 |
| 7:30 AM | 0 | 2 | 4 | 0 | 6 | 22 |
| 7:45 AM | 0 | 1 | 5 | 0 | 6 | 17 |
| 8:00 AM | 0 | 1 | 6 | 0 | 7 | 12 |
| 8:15 AM | 0 | 0 | 3 | 0 | 3 | |
| 8:30 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 6 | 13 | 0 | | |

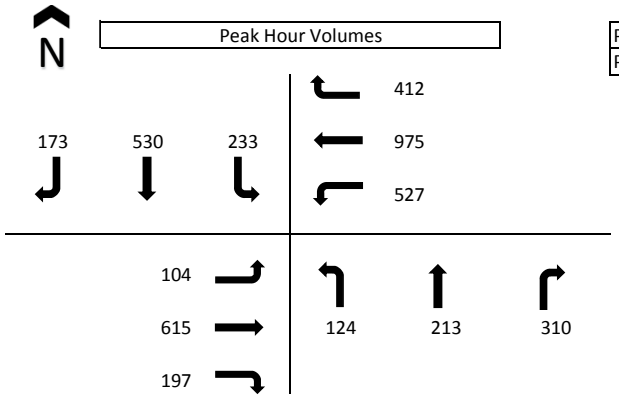
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing CONCORD/CHILPANCING | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 3 | 0 | 5 | 8 | 18 |
| 7:15 AM | 0 | 1 | 0 | 3 | 4 | 10 |
| 7:30 AM | 0 | 2 | 0 | 2 | 4 | 9 |
| 7:45 AM | 0 | 2 | 0 | 0 | 2 | 6 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 8 |
| 8:15 AM | 0 | 3 | 0 | 0 | 3 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 1 | 0 | 3 | 4 | |
| Peak Hour | 0 | 8 | 0 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 15TH, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | CONTRA COSTA BOULEVARD |
| E/W: | WILLOW PASS/TAYLOR |
| ID: | C6 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.89 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | WILLOW PASS/TAYLOR | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 25 | 44 | 55 | 32 | 102 | 31 | 6 | 84 | 26 | 80 | 169 | 81 | 735 | 4183 |
| 7:15 AM | 31 | 45 | 73 | 42 | 138 | 35 | 17 | 115 | 38 | 102 | 233 | 100 | 969 | 4413 |
| 7:30 AM | 44 | 67 | 96 | 65 | 137 | 53 | 30 | 170 | 69 | 109 | 259 | 146 | 1245 | 4229 |
| 7:45 AM | 24 | 41 | 74 | 78 | 133 | 45 | 32 | 214 | 60 | 157 | 272 | 104 | 1234 | 3754 |
| 8:00 AM | 25 | 60 | 67 | 48 | 122 | 40 | 25 | 116 | 30 | 159 | 211 | 62 | 965 | 3332 |
| 8:15 AM | 31 | 50 | 69 | 58 | 86 | 35 | 22 | 86 | 27 | 93 | 166 | 62 | 785 | |
| 8:30 AM | 34 | 76 | 59 | 27 | 91 | 32 | 10 | 97 | 25 | 82 | 154 | 83 | 770 | |
| 8:45 AM | 22 | 60 | 87 | 38 | 74 | 24 | 19 | 90 | 25 | 60 | 218 | 95 | 812 | |
| Peak Hour | 124 | 213 | 310 | 233 | 530 | 173 | 104 | 615 | 197 | 527 | 975 | 412 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | WILLOW PASS/TAYLOR | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 8 |
| 7:15 AM | 0 | 3 | 0 | 0 | 3 | 8 |
| 7:30 AM | 0 | 0 | 2 | 1 | 3 | 5 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 5 |
| 8:00 AM | 1 | 0 | 0 | 0 | 1 | 4 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 2 | 1 | 0 | 3 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 3 | 2 | 2 | | |

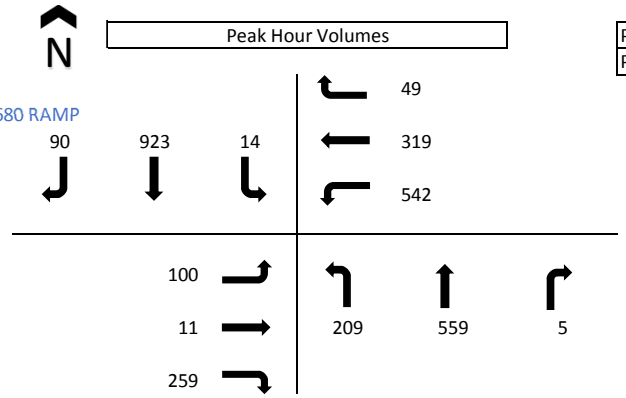
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing WILLOW PASS/TAYLOR | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 4 | 0 | 1 | 0 | 5 | 34 |
| 7:15 AM | 1 | 9 | 0 | 8 | 18 | 32 |
| 7:30 AM | 0 | 3 | 1 | 2 | 6 | 14 |
| 7:45 AM | 1 | 3 | 1 | 0 | 5 | 13 |
| 8:00 AM | 0 | 0 | 2 | 1 | 3 | 12 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 1 | 2 | 0 | 2 | 5 | |
| 8:45 AM | 1 | 1 | 0 | 2 | 4 | |
| Peak Hour | 2 | 15 | 4 | 11 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 15TH, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: CONTRA COSTA BOULEVARD
E/W: GREGORY LANE/SOUTHBOUND I-680 RAMP
ID: C7




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | GREGORY LANE/SOUTHBOUND I-680 RAMP | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 22 | 100 | 1 | 6 | 215 | 18 | 17 | 3 | 29 | 101 | 46 | 19 | 577 | 2880 |
| 7:15 AM | 37 | 132 | 0 | 8 | 223 | 25 | 11 | 1 | 45 | 129 | 80 | 13 | 704 | 3059 |
| 7:30 AM | 61 | 143 | 0 | 3 | 230 | 22 | 27 | 2 | 71 | 131 | 109 | 8 | 807 | 3080 |
| 7:45 AM | 61 | 148 | 2 | 3 | 234 | 20 | 25 | 4 | 67 | 128 | 86 | 14 | 792 | 2959 |
| 8:00 AM | 36 | 134 | 2 | 5 | 228 | 20 | 22 | 4 | 72 | 152 | 71 | 10 | 756 | 2864 |
| 8:15 AM | 51 | 134 | 1 | 3 | 231 | 28 | 26 | 1 | 49 | 131 | 53 | 17 | 725 | |
| 8:30 AM | 47 | 121 | 3 | 9 | 224 | 18 | 16 | 1 | 41 | 120 | 60 | 26 | 686 | |
| 8:45 AM | 50 | 151 | 0 | 3 | 175 | 20 | 18 | 4 | 44 | 118 | 80 | 34 | 697 | |
| Peak Hour | 209 | 559 | 5 | 14 | 923 | 90 | 100 | 11 | 259 | 542 | 319 | 49 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | GREGORY LANE/SOUTHBOUND I- | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 2 | 0 | 0 | 2 | 6 |
| 7:15 AM | 1 | 1 | 0 | 0 | 2 | 5 |
| 7:30 AM | 1 | 0 | 0 | 0 | 1 | 4 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 5 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 5 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 1 | 1 | 0 | 0 | 2 | |
| 8:45 AM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 1 | 3 | 0 | 0 | | |

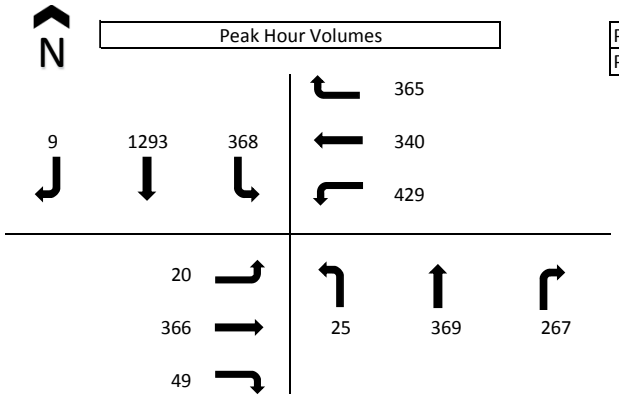
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing GREGORY LANE/SOUTHBOUND I- | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 9 |
| 7:15 AM | 0 | 0 | 0 | 3 | 3 | 12 |
| 7:30 AM | 0 | 1 | 0 | 1 | 2 | 11 |
| 7:45 AM | 0 | 0 | 0 | 4 | 4 | 13 |
| 8:00 AM | 0 | 0 | 0 | 3 | 3 | 13 |
| 8:15 AM | 0 | 0 | 0 | 2 | 2 | |
| 8:30 AM | 0 | 0 | 1 | 3 | 4 | |
| 8:45 AM | 0 | 2 | 0 | 2 | 4 | |
| Peak Hour | 0 | 1 | 0 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: CONTRA COSTA BOULEVARD
E/W: MONUMENT BOULEVARD
ID: C8




| Peak Hour: | 7:30 AM to 8:30 AM |
|---|---|
| Peak Hour Factor: | 0.87 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | MONUMENT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 13 | 54 | 38 | 52 | 198 | 2 | 3 | 48 | 4 | 60 | 27 | 42 | 541 | 3429 |
| 7:15 AM | 5 | 61 | 36 | 73 | 282 | 1 | 4 | 69 | 8 | 102 | 66 | 60 | 767 | 3851 |
| 7:30 AM | 5 | 93 | 63 | 82 | 318 | 0 | 7 | 115 | 12 | 107 | 110 | 89 | 1001 | 3900 |
| 7:45 AM | 5 | 98 | 78 | 96 | 348 | 4 | 3 | 110 | 21 | 124 | 118 | 115 | 1120 | 3535 |
| 8:00 AM | 8 | 92 | 72 | 92 | 327 | 2 | 5 | 80 | 14 | 116 | 70 | 85 | 963 | 3054 |
| 8:15 AM | 7 | 86 | 54 | 98 | 300 | 3 | 5 | 61 | 2 | 82 | 42 | 76 | 816 | |
| 8:30 AM | 13 | 92 | 44 | 73 | 196 | 1 | 2 | 35 | 7 | 61 | 21 | 91 | 636 | |
| 8:45 AM | 9 | 81 | 41 | 93 | 171 | 1 | 4 | 44 | 9 | 59 | 38 | 89 | 639 | |
| Peak Hour | 25 | 369 | 267 | 368 | 1293 | 9 | 20 | 366 | 49 | 429 | 340 | 365 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | MONUMENT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 1 | 1 | 4 | 0 | 6 | 8 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 5 |
| 7:45 AM | 0 | 1 | 1 | 0 | 2 | 9 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 10 |
| 8:15 AM | 0 | 1 | 1 | 0 | 2 | |
| 8:30 AM | 0 | 4 | 0 | 0 | 4 | |
| 8:45 AM | 0 | 3 | 0 | 0 | 3 | |
| Peak Hour | 0 | 3 | 2 | 0 | | |

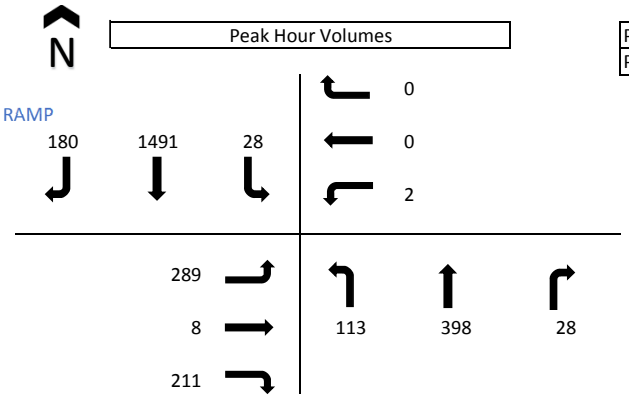
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing MONUMENT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 2 | 0 | 0 | 0 | 2 | 8 |
| 7:15 AM | 0 | 1 | 2 | 0 | 3 | 13 |
| 7:30 AM | 0 | 2 | 0 | 0 | 2 | 17 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 19 |
| 8:00 AM | 0 | 2 | 5 | 0 | 7 | 20 |
| 8:15 AM | 2 | 1 | 0 | 4 | 7 | |
| 8:30 AM | 0 | 2 | 0 | 2 | 4 | |
| 8:45 AM | 0 | 0 | 2 | 0 | 2 | |
| Peak Hour | 2 | 5 | 5 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: CONTRA COSTA BOULEVARD
E/W: BOYD ROAD/SOUTHBOUND I-680 RAMP
ID: C9




| Peak Hour: | 7:30 AM to 8:30 AM |
|---|---|
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | BOYD ROAD/SOUTHBOUND I-680 RAMP | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 20 | 59 | 2 | 0 | 236 | 33 | 37 | 0 | 39 | 0 | 0 | 0 | 426 | 2433 |
| 7:15 AM | 30 | 69 | 2 | 3 | 334 | 54 | 44 | 0 | 57 | 0 | 0 | 0 | 593 | 2708 |
| 7:30 AM | 25 | 106 | 7 | 1 | 392 | 67 | 65 | 2 | 47 | 0 | 0 | 0 | 712 | 2748 |
| 7:45 AM | 26 | 99 | 3 | 9 | 372 | 51 | 87 | 0 | 55 | 0 | 0 | 0 | 702 | 2529 |
| 8:00 AM | 32 | 86 | 11 | 10 | 391 | 34 | 84 | 3 | 50 | 0 | 0 | 0 | 701 | 2281 |
| 8:15 AM | 30 | 107 | 7 | 8 | 336 | 28 | 53 | 3 | 59 | 2 | 0 | 0 | 633 | |
| 8:30 AM | 23 | 111 | 10 | 3 | 232 | 27 | 35 | 2 | 47 | 1 | 0 | 2 | 493 | |
| 8:45 AM | 20 | 100 | 10 | 8 | 192 | 39 | 32 | 6 | 47 | 0 | 0 | 0 | 454 | |
| Peak Hour | 113 | 398 | 28 | 28 | 1491 | 180 | 289 | 8 | 211 | 2 | 0 | 0 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | BOYD ROAD/SOUTHBOUND | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 10 |
| 7:15 AM | 0 | 3 | 0 | 2 | 5 | 11 |
| 7:30 AM | 0 | 4 | 0 | 0 | 4 | 7 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 5 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 7 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 2 | 0 | 0 | 2 | |
| 8:45 AM | 0 | 3 | 0 | 0 | 3 | |
| Peak Hour | 0 | 7 | 0 | 0 | | |

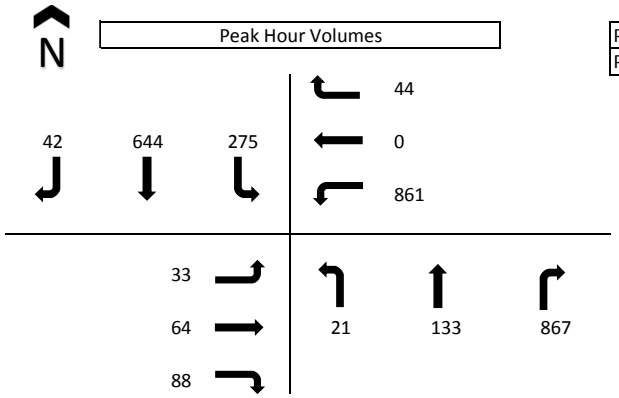
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing BOYD ROAD/SOUTHBOUND I- | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 5 |
| 7:15 AM | 1 | 0 | 0 | 3 | 4 | 12 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 13 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 13 |
| 8:00 AM | 2 | 0 | 0 | 5 | 7 | 18 |
| 8:15 AM | 0 | 0 | 0 | 5 | 5 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 0 | 5 | 6 | |
| Peak Hour | 2 | 0 | 0 | 11 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 PM |
| N/S: | N Main St |
| E/W: | HWY 80 WB Ramps/Sunnyvale Ave |
| ID: | C10 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | N Main St | | | | | | HWY 80 WB Ramps/Sunnyvale Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 5 | 22 | 276 | 48 | 127 | 3 | 4 | 8 | 24 | 188 | 0 | 5 | 710 | 3002 |
| 7:15 AM | 5 | 25 | 257 | 66 | 156 | 12 | 8 | 14 | 13 | 213 | 0 | 11 | 780 | 3072 |
| 7:30 AM | 3 | 33 | 247 | 64 | 164 | 15 | 14 | 19 | 21 | 227 | 0 | 9 | 816 | 3013 |
| 7:45 AM | 7 | 30 | 176 | 74 | 146 | 5 | 4 | 14 | 32 | 201 | 0 | 7 | 696 | 2930 |
| 8:00 AM | 6 | 45 | 187 | 71 | 178 | 10 | 7 | 17 | 22 | 220 | 0 | 17 | 780 | 2914 |
| 8:15 AM | 9 | 32 | 201 | 64 | 164 | 0 | 4 | 13 | 18 | 204 | 1 | 11 | 721 | |
| 8:30 AM | 8 | 50 | 217 | 58 | 139 | 8 | 2 | 9 | 15 | 203 | 0 | 24 | 733 | |
| 8:45 AM | 6 | 36 | 207 | 40 | 74 | 11 | 3 | 9 | 10 | 247 | 0 | 37 | 680 | |
| Peak Hour | 21 | 133 | 867 | 275 | 644 | 42 | 33 | 64 | 88 | 861 | 0 | 44 | | |

## BIKES

| Interval | N Main St | | HWY 80 WB Ramps/Sunnyvale | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

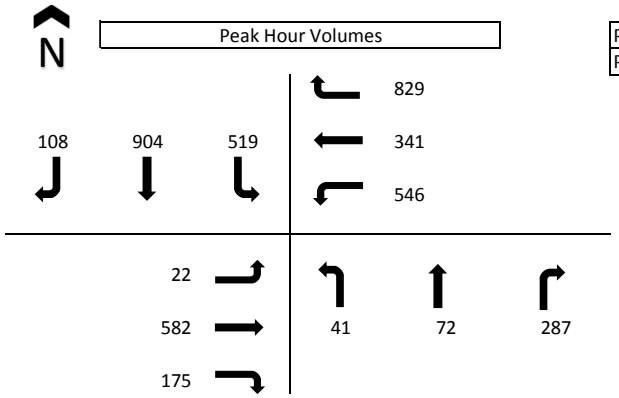
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing HWY 80 WB Ramps/Sunnyvale Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 7 | 0 | 5 | 12 | 43 |
| 7:15 AM | 0 | 8 | 0 | 3 | 11 | 37 |
| 7:30 AM | 0 | 6 | 0 | 2 | 8 | 29 |
| 7:45 AM | 0 | 7 | 0 | 5 | 12 | 23 |
| 8:00 AM | 0 | 6 | 0 | 0 | 6 | 13 |
| 8:15 AM | 0 | 3 | 0 | 0 | 3 | |
| 8:30 AM | 0 | 2 | 0 | 0 | 2 | |
| 8:45 AM | 0 | 2 | 0 | 0 | 2 | |
| Peak Hour | 0 | 27 | 0 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | N Main St |
| E/W: | Treat Blvd/Geary Rd |
| ID: | C11 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | N Main St | | | | | | Treat Blvd/Geary Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 10 | 12 | 61 | 119 | 199 | 16 | 3 | 85 | 26 | 129 | 89 | 271 | 1020 | 4326 |
| 7:15 AM | 7 | 14 | 59 | 118 | 235 | 29 | 4 | 92 | 38 | 139 | 54 | 244 | 1033 | 4386 |
| 7:30 AM | 9 | 17 | 83 | 149 | 234 | 20 | 4 | 141 | 47 | 159 | 91 | 228 | 1182 | 4426 |
| 7:45 AM | 10 | 15 | 78 | 120 | 238 | 28 | 8 | 172 | 38 | 111 | 81 | 192 | 1091 | 4274 |
| 8:00 AM | 11 | 22 | 72 | 126 | 240 | 29 | 6 | 122 | 37 | 144 | 83 | 188 | 1080 | 4201 |
| 8:15 AM | 11 | 18 | 54 | 124 | 192 | 31 | 4 | 147 | 53 | 132 | 86 | 221 | 1073 | |
| 8:30 AM | 10 | 26 | 48 | 152 | 188 | 31 | 6 | 128 | 21 | 117 | 77 | 226 | 1030 | |
| 8:45 AM | 13 | 24 | 60 | 125 | 123 | 44 | 6 | 133 | 35 | 142 | 109 | 204 | 1018 | |
| Peak Hour | 41 | 72 | 287 | 519 | 904 | 108 | 22 | 582 | 175 | 546 | 341 | 829 | | |

## BIKES

| Interval | N Main St | | Treat Blvd/Geary Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:30 AM | 0 | 1 | 0 | 0 | 1 | 5 |
| 7:45 AM | 0 | 1 | 2 | 0 | 3 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 2 | 3 | 0 | | |

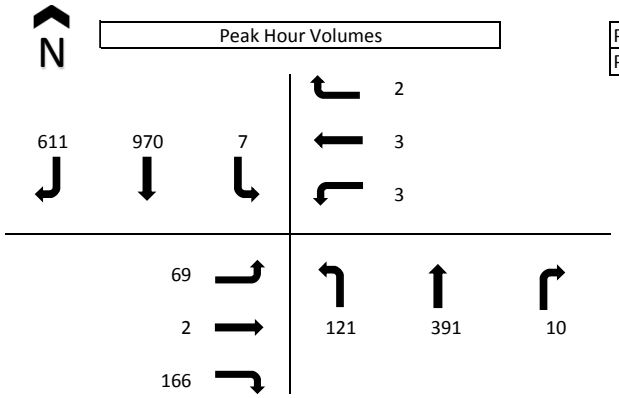
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing Treat Blvd/Geary Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 7 | 1 | 1 | 0 | 9 | 70 |
| 7:15 AM | 12 | 1 | 1 | 2 | 16 | 71 |
| 7:30 AM | 21 | 0 | 7 | 3 | 31 | 65 |
| 7:45 AM | 4 | 3 | 6 | 1 | 14 | 39 |
| 8:00 AM | 6 | 0 | 4 | 0 | 10 | 48 |
| 8:15 AM | 8 | 0 | 1 | 1 | 10 | |
| 8:30 AM | 3 | 1 | 1 | 0 | 5 | |
| 8:45 AM | 18 | 0 | 1 | 4 | 23 | |
| Peak Hour | 39 | 3 | 18 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/30/2015 |
| Count Period: | 7:00 AM to 9:00 PM |
| N/S: | N Main St |
| E/W: | San Luis Rd |
| ID: | C12 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.92 |

## AUTOMOBILES

| Interval | N Main St | | | | | | San Luis Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 27 | 42 | 2 | 0 | 124 | 151 | 7 | 0 | 17 | 2 | 3 | 0 | 375 | 2011 |
| 7:15 AM | 25 | 56 | 0 | 0 | 180 | 176 | 13 | 0 | 23 | 0 | 0 | 0 | 473 | 2212 |
| 7:30 AM | 23 | 67 | 1 | 1 | 217 | 157 | 13 | 0 | 39 | 0 | 1 | 1 | 520 | 2325 |
| 7:45 AM | 27 | 97 | 0 | 0 | 261 | 189 | 19 | 0 | 48 | 0 | 1 | 1 | 643 | 2355 |
| 8:00 AM | 26 | 91 | 2 | 1 | 242 | 151 | 16 | 0 | 47 | 0 | 0 | 0 | 576 | 2249 |
| 8:15 AM | 38 | 106 | 1 | 3 | 235 | 136 | 17 | 1 | 46 | 1 | 1 | 1 | 586 | |
| 8:30 AM | 30 | 97 | 7 | 3 | 232 | 135 | 17 | 1 | 25 | 2 | 1 | 0 | 550 | |
| 8:45 AM | 33 | 86 | 6 | 3 | 226 | 124 | 13 | 3 | 35 | 0 | 5 | 3 | 537 | |
| Peak Hour | 121 | 391 | 10 | 7 | 970 | 611 | 69 | 2 | 166 | 3 | 3 | 2 | | |

## BIKES

| Interval | N Main St | | San Luis Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

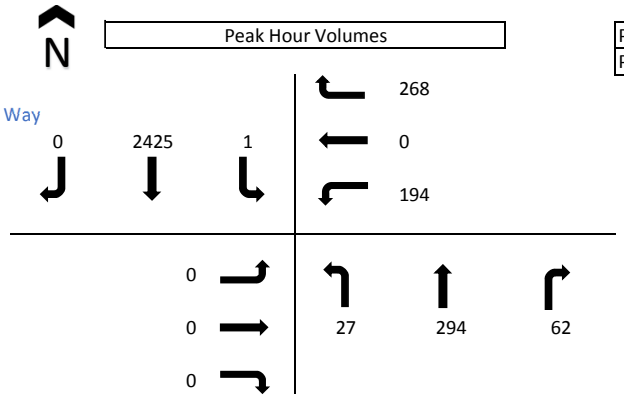
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing San Luis Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 5 | 0 | 6 | 14 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 11 |
| 7:30 AM | 1 | 0 | 3 | 0 | 4 | 10 |
| 7:45 AM | 3 | 0 | 0 | 0 | 3 | 8 |
| 8:00 AM | 1 | 0 | 2 | 0 | 3 | 6 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 1 | 1 | 2 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 4 | 0 | 3 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/14/2015
Count Period: 7:00 AM to 9:00 AM
N/S: N Main St
E/W: HWY 690 NB Off-Ramp/Penniman Way
ID: C13




| Peak Hour: | 8:00 AM to 9:00 AM |
|---|---|
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | N Main St | | | | | | HWY 690 NB Off-Ramp/Penniman Way | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 5 | 35 | 9 | 0 | 322 | 0 | 0 | 0 | 0 | 19 | 0 | 22 | 412 | 2182 |
| 7:15 AM | 3 | 35 | 12 | 0 | 355 | 0 | 0 | 0 | 0 | 31 | 0 | 41 | 477 | 2603 |
| 7:30 AM | 3 | 47 | 11 | 0 | 436 | 0 | 0 | 0 | 0 | 27 | 0 | 55 | 579 | 2999 |
| 7:45 AM | 2 | 67 | 15 | 0 | 531 | 0 | 0 | 0 | 0 | 41 | 0 | 58 | 714 | 3224 |
| 8:00 AM | 6 | 72 | 15 | 1 | 626 | 0 | 0 | 0 | 0 | 50 | 0 | 63 | 833 | 3271 |
| 8:15 AM | 8 | 80 | 14 | 0 | 643 | 0 | 0 | 0 | 0 | 49 | 0 | 79 | 873 | |
| 8:30 AM | 11 | 70 | 20 | 0 | 585 | 0 | 0 | 0 | 0 | 56 | 0 | 62 | 804 | |
| 8:45 AM | 2 | 72 | 13 | 0 | 571 | 0 | 0 | 0 | 0 | 39 | 0 | 64 | 761 | |
| Peak Hour | 27 | 294 | 62 | 1 | 2425 | 0 | 0 | 0 | 0 | 194 | 0 | 268 | | |

## BIKES

| Interval | N Main St | | HWY 690 NB Off-Ramp/Penniman Way | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

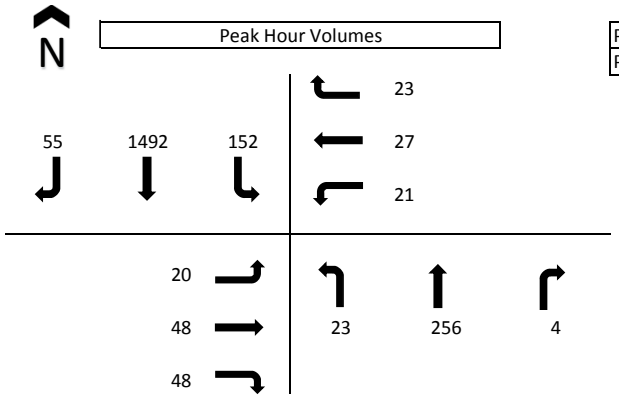
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing HWY 690 NB Off-Ramp/Penniman Way | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 1 | 0 | 2 | 8 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 7 |
| 7:30 AM | 0 | 1 | 3 | 0 | 4 | 11 |
| 7:45 AM | 0 | 0 | 1 | 0 | 1 | 7 |
| 8:00 AM | 0 | 0 | 1 | 0 | 1 | 7 |
| 8:15 AM | 0 | 0 | 5 | 0 | 5 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 0 | 7 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 15TH, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: TAYLOR BOULEVARD
E/W: WITHERS AVENUE
ID: C14




| Peak Hour: | 7:00 AM to 8:00 AM |
|---|---|
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | TAYLOR BOULEVARD | | | | | | WITHERS AVENUE | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 1 | 46 | 1 | 11 | 466 | 3 | 4 | 5 | 24 | 8 | 1 | 0 | 570 | 2169 |
| 7:15 AM | 4 | 55 | 1 | 24 | 434 | 11 | 2 | 14 | 16 | 8 | 9 | 7 | 585 | 2037 |
| 7:30 AM | 6 | 74 | 1 | 39 | 351 | 16 | 10 | 18 | 8 | 3 | 9 | 8 | 543 | 1857 |
| 7:45 AM | 12 | 81 | 1 | 78 | 241 | 25 | 4 | 11 | 0 | 2 | 8 | 8 | 471 | 1718 |
| 8:00 AM | 10 | 80 | 4 | 50 | 222 | 32 | 6 | 11 | 6 | 3 | 11 | 3 | 438 | 1632 |
| 8:15 AM | 19 | 76 | 2 | 36 | 214 | 21 | 4 | 9 | 6 | 1 | 9 | 8 | 405 | |
| 8:30 AM | 12 | 69 | 0 | 21 | 234 | 27 | 6 | 11 | 3 | 5 | 9 | 7 | 404 | |
| 8:45 AM | 8 | 58 | 2 | 15 | 233 | 11 | 15 | 16 | 8 | 4 | 11 | 4 | 385 | |
| Peak Hour | 23 | 256 | 4 | 152 | 1492 | 55 | 20 | 48 | 48 | 21 | 27 | 23 | | |

## BIKES

| Interval | TAYLOR BOULEVARD | | WITHERS AVENUE | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 0 | 1 | | |

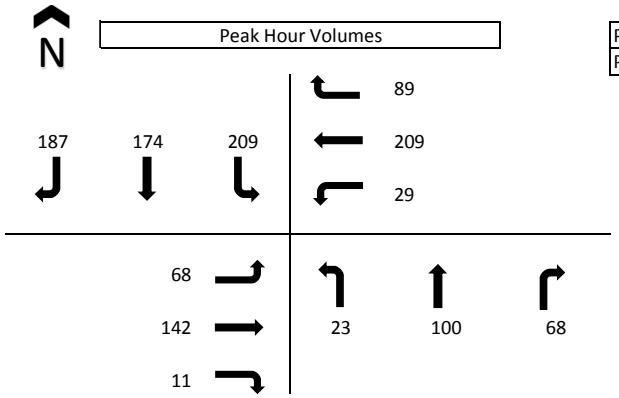
## PEDESTRIANS

| Interval | Crossing TAYLOR BOULEVARD | | Crossing WITHERS AVENUE | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY, MARCH 31ST, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | GEARY ROAD |
| E/W: | PLEASANT HILL ROAD |
| ID: | C15 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.89 |

## AUTOMOBILES

| Interval | GEARY ROAD | | | | | | PLEASANT HILL ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 9 | 11 | 11 | 25 | 15 | 47 | 10 | 13 | 2 | 7 | 66 | 6 | 222 | 1218 |
| 7:15 AM | 8 | 34 | 19 | 37 | 27 | 53 | 16 | 28 | 3 | 3 | 53 | 31 | 312 | 1309 |
| 7:30 AM | 3 | 30 | 15 | 50 | 45 | 43 | 19 | 31 | 1 | 7 | 47 | 26 | 317 | 1274 |
| 7:45 AM | 4 | 22 | 24 | 61 | 65 | 44 | 14 | 45 | 4 | 15 | 49 | 20 | 367 | 1270 |
| 8:00 AM | 8 | 14 | 10 | 61 | 37 | 47 | 19 | 38 | 3 | 4 | 60 | 12 | 313 | 1200 |
| 8:15 AM | 3 | 16 | 13 | 46 | 28 | 39 | 18 | 33 | 9 | 12 | 45 | 15 | 277 | |
| 8:30 AM | 7 | 11 | 21 | 46 | 29 | 40 | 20 | 57 | 3 | 6 | 50 | 23 | 313 | |
| 8:45 AM | 8 | 13 | 15 | 37 | 15 | 37 | 27 | 40 | 10 | 4 | 63 | 28 | 297 | |
| Peak Hour | 23 | 100 | 68 | 209 | 174 | 187 | 68 | 142 | 11 | 29 | 209 | 89 | | |

## BIKES

| Interval | GEARY ROAD | | PLEASANT HILL ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

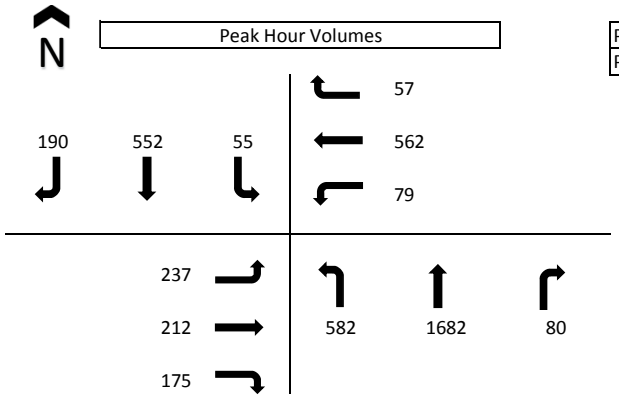
## PEDESTRIANS

| Interval | Crossing GEARY ROAD | | Crossing PLEASANT HILL ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 10 |
| 7:15 AM | 0 | 2 | 0 | 1 | 3 | 13 |
| 7:30 AM | 0 | 2 | 0 | 3 | 5 | 12 |
| 7:45 AM | 0 | 1 | 0 | 1 | 2 | 14 |
| 8:00 AM | 1 | 0 | 0 | 2 | 3 | 17 |
| 8:15 AM | 0 | 1 | 1 | 0 | 2 | |
| 8:30 AM | 1 | 1 | 1 | 4 | 7 | |
| 8:45 AM | 0 | 3 | 0 | 2 | 5 | |
| Peak Hour | 1 | 5 | 0 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY, APRIL 14TH, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | CLAYTON ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C16 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | CLAYTON ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 177 | 371 | 13 | 5 | 93 | 47 | 40 | 33 | 30 | 8 | 141 | 9 | 967 | 4290 |
| 7:15 AM | 169 | 413 | 17 | 6 | 103 | 44 | 39 | 25 | 30 | 8 | 167 | 8 | 1029 | 4463 |
| 7:30 AM | 148 | 448 | 20 | 9 | 119 | 46 | 54 | 47 | 49 | 12 | 137 | 20 | 1109 | 4412 |
| 7:45 AM | 130 | 437 | 23 | 17 | 176 | 47 | 82 | 68 | 45 | 26 | 120 | 14 | 1185 | 4199 |
| 8:00 AM | 135 | 384 | 20 | 23 | 154 | 53 | 62 | 72 | 51 | 33 | 138 | 15 | 1140 | 3870 |
| 8:15 AM | 128 | 334 | 7 | 8 | 128 | 47 | 49 | 43 | 55 | 32 | 124 | 23 | 978 | |
| 8:30 AM | 120 | 247 | 11 | 17 | 129 | 59 | 51 | 36 | 49 | 30 | 130 | 17 | 896 | |
| 8:45 AM | 135 | 249 | 15 | 9 | 139 | 48 | 44 | 29 | 54 | 18 | 103 | 13 | 856 | |
| Peak Hour | 582 | 1682 | 80 | 55 | 552 | 190 | 237 | 212 | 175 | 79 | 562 | 57 | | |

## BIKES

| Interval | CLAYTON ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 6 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 8 |
| 7:30 AM | 0 | 2 | 1 | 0 | 3 | 9 |
| 7:45 AM | 2 | 0 | 0 | 0 | 2 | 7 |
| 8:00 AM | 0 | 2 | 0 | 1 | 3 | 7 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 2 | 2 | |
| Peak Hour | 2 | 4 | 1 | 1 | | |

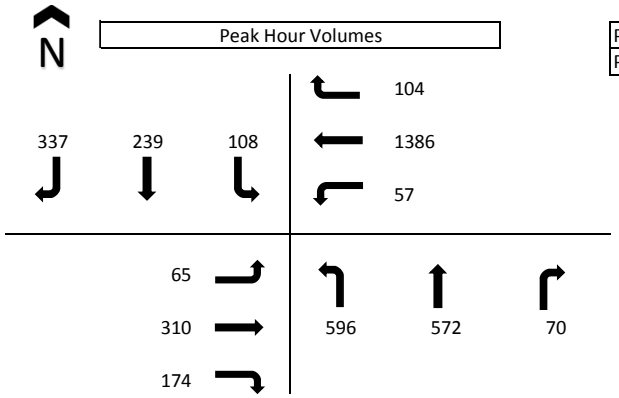
## PEDESTRIANS

| Interval | Crossing CLAYTON ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 4 | 1 | 2 | 7 | 20 |
| 7:15 AM | 0 | 1 | 0 | 0 | 1 | 17 |
| 7:30 AM | 0 | 6 | 1 | 1 | 8 | 22 |
| 7:45 AM | 0 | 2 | 0 | 2 | 4 | 15 |
| 8:00 AM | 0 | 1 | 1 | 2 | 4 | 13 |
| 8:15 AM | 0 | 3 | 1 | 2 | 6 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 1 | 0 | 1 | 2 | |
| Peak Hour | 0 | 10 | 2 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | COWELL ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C17 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 106 | 104 | 6 | 8 | 34 | 71 | 13 | 56 | 17 | 15 | 357 | 23 | 810 | 3873 |
| 7:15 AM | 159 | 126 | 9 | 22 | 47 | 80 | 18 | 44 | 30 | 9 | 392 | 22 | 958 | 4018 |
| 7:30 AM | 173 | 140 | 13 | 25 | 66 | 119 | 13 | 63 | 45 | 7 | 347 | 12 | 1023 | 3982 |
| 7:45 AM | 149 | 172 | 28 | 32 | 75 | 84 | 19 | 95 | 52 | 19 | 331 | 26 | 1082 | 3815 |
| 8:00 AM | 115 | 134 | 20 | 29 | 51 | 54 | 15 | 108 | 47 | 22 | 316 | 44 | 955 | 3595 |
| 8:15 AM | 144 | 122 | 22 | 33 | 62 | 56 | 23 | 79 | 50 | 29 | 263 | 39 | 922 | |
| 8:30 AM | 131 | 108 | 17 | 30 | 55 | 63 | 22 | 85 | 45 | 14 | 257 | 29 | 856 | |
| 8:45 AM | 129 | 101 | 21 | 24 | 44 | 53 | 32 | 90 | 41 | 18 | 270 | 39 | 862 | |
| Peak Hour | 596 | 572 | 70 | 108 | 239 | 337 | 65 | 310 | 174 | 57 | 1386 | 104 | | |

## BIKES

| Interval | COWELL ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 4 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 3 |
| 7:30 AM | 0 | 0 | 0 | 2 | 2 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:15 AM | 0 | 0 | 1 | 1 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 1 | 1 | 2 | |
| Peak Hour | 0 | 0 | 1 | 2 | | |

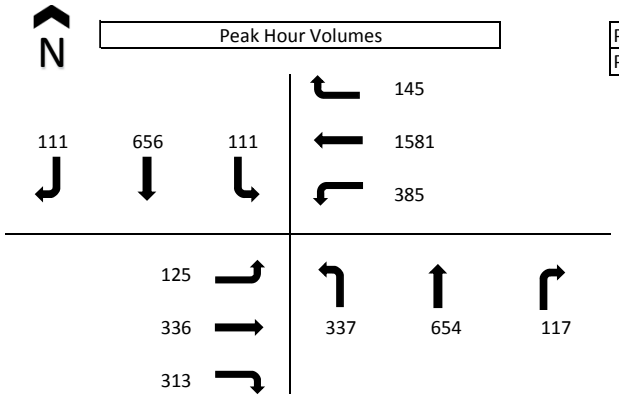
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 2 | 2 | 2 | 1 | 7 | 14 |
| 7:15 AM | 0 | 3 | 0 | 0 | 3 | 7 |
| 7:30 AM | 0 | 0 | 2 | 0 | 2 | 11 |
| 7:45 AM | 0 | 0 | 0 | 2 | 2 | 11 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 13 |
| 8:15 AM | 0 | 3 | 1 | 3 | 7 | |
| 8:30 AM | 0 | 2 | 0 | 0 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 4 | 4 | |
| Peak Hour | 0 | 3 | 2 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 19TH, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | OAK GROVE ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C18 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | OAK GROVE ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 65 | 71 | 7 | 24 | 105 | 26 | 21 | 78 | 25 | 73 | 466 | 40 | 1001 | 4495 |
| 7:15 AM | 65 | 101 | 16 | 27 | 153 | 37 | 29 | 54 | 38 | 67 | 451 | 39 | 1077 | 4747 |
| 7:30 AM | 74 | 173 | 20 | 32 | 161 | 46 | 29 | 81 | 78 | 72 | 412 | 27 | 1205 | 4871 |
| 7:45 AM | 90 | 147 | 26 | 24 | 174 | 21 | 49 | 72 | 85 | 94 | 396 | 34 | 1212 | 4800 |
| 8:00 AM | 89 | 183 | 37 | 26 | 158 | 23 | 24 | 99 | 76 | 107 | 388 | 43 | 1253 | 4578 |
| 8:15 AM | 84 | 151 | 34 | 29 | 163 | 21 | 23 | 84 | 74 | 112 | 385 | 41 | 1201 | |
| 8:30 AM | 96 | 135 | 20 | 29 | 121 | 26 | 47 | 106 | 69 | 88 | 355 | 42 | 1134 | |
| 8:45 AM | 76 | 108 | 14 | 12 | 137 | 32 | 33 | 102 | 63 | 69 | 303 | 41 | 990 | |
| Peak Hour | 337 | 654 | 117 | 111 | 656 | 111 | 125 | 336 | 313 | 385 | 1581 | 145 | | |

## BIKES

| Interval | OAK GROVE ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 1 | 0 | 2 | 12 |
| 7:15 AM | 1 | 0 | 1 | 0 | 2 | 11 |
| 7:30 AM | 0 | 2 | 0 | 0 | 2 | 12 |
| 7:45 AM | 3 | 2 | 0 | 1 | 6 | 12 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 11 |
| 8:15 AM | 0 | 3 | 0 | 0 | 3 | |
| 8:30 AM | 0 | 1 | 1 | 0 | 2 | |
| 8:45 AM | 1 | 3 | 0 | 1 | 5 | |
| Peak Hour | 3 | 8 | 0 | 1 | | |

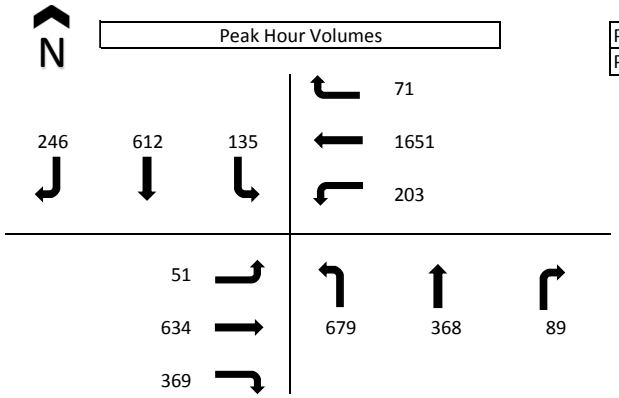
## PEDESTRIANS

| Interval | Crossing OAK GROVE ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 4 | 14 | 19 | 102 |
| 7:15 AM | 2 | 2 | 4 | 8 | 16 | 119 |
| 7:30 AM | 1 | 4 | 3 | 7 | 15 | 113 |
| 7:45 AM | 2 | 8 | 13 | 29 | 52 | 113 |
| 8:00 AM | 2 | 7 | 6 | 21 | 36 | 69 |
| 8:15 AM | 2 | 1 | 2 | 5 | 10 | |
| 8:30 AM | 3 | 4 | 4 | 4 | 15 | |
| 8:45 AM | 1 | 2 | 2 | 3 | 8 | |
| Peak Hour | 7 | 20 | 24 | 62 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | BANCROFT ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C19 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | BANCROFT ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 105 | 62 | 18 | 30 | 81 | 47 | 27 | 106 | 36 | 28 | 500 | 10 | 1050 | 4794 |
| 7:15 AM | 139 | 54 | 17 | 28 | 102 | 60 | 11 | 138 | 60 | 42 | 485 | 17 | 1153 | 5007 |
| 7:30 AM | 163 | 79 | 31 | 43 | 133 | 65 | 18 | 147 | 78 | 56 | 444 | 12 | 1269 | 5108 |
| 7:45 AM | 185 | 96 | 23 | 38 | 143 | 62 | 8 | 152 | 99 | 60 | 433 | 23 | 1322 | 5093 |
| 8:00 AM | 156 | 97 | 21 | 23 | 174 | 68 | 15 | 151 | 91 | 44 | 411 | 12 | 1263 | 5004 |
| 8:15 AM | 175 | 96 | 14 | 31 | 162 | 51 | 10 | 184 | 101 | 43 | 363 | 24 | 1254 | |
| 8:30 AM | 141 | 58 | 18 | 38 | 111 | 40 | 19 | 209 | 110 | 48 | 436 | 26 | 1254 | |
| 8:45 AM | 121 | 83 | 23 | 42 | 118 | 59 | 9 | 258 | 109 | 40 | 353 | 18 | 1233 | |
| Peak Hour | 679 | 368 | 89 | 135 | 612 | 246 | 51 | 634 | 369 | 203 | 1651 | 71 | | |

## BIKES

| Interval | BANCROFT ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

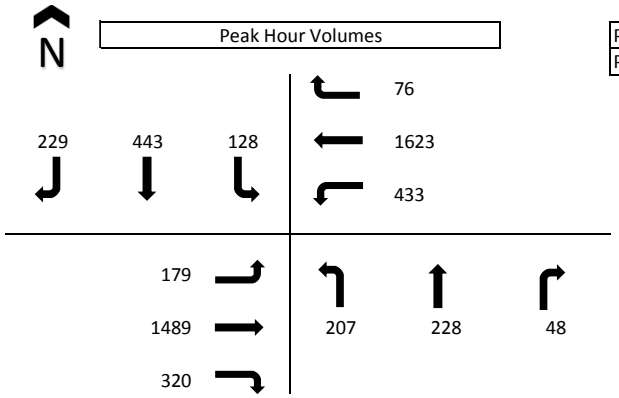
## PEDESTRIANS

| Interval | Crossing BANCROFT ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 7 |
| 7:15 AM | 0 | 0 | 0 | 2 | 2 | 10 |
| 7:30 AM | 0 | 2 | 0 | 0 | 2 | 9 |
| 7:45 AM | 2 | 1 | 0 | 0 | 3 | 13 |
| 8:00 AM | 1 | 1 | 0 | 1 | 3 | 12 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 1 | 5 | 0 | 0 | 6 | |
| 8:45 AM | 0 | 2 | 0 | 0 | 2 | |
| Peak Hour | 3 | 5 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Oak Rd |
| E/W: | Treat Blvd |
| ID: | C20 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | Oak Rd | | | | | | Treat Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 38 | 31 | 4 | 18 | 32 | 50 | 35 | 209 | 42 | 57 | 483 | 17 | 1016 | 4927 |
| 7:15 AM | 36 | 39 | 5 | 22 | 86 | 56 | 38 | 268 | 46 | 96 | 486 | 11 | 1189 | 5243 |
| 7:30 AM | 46 | 54 | 17 | 21 | 106 | 59 | 35 | 358 | 62 | 93 | 431 | 17 | 1299 | 5403 |
| 7:45 AM | 39 | 46 | 12 | 29 | 106 | 52 | 43 | 460 | 75 | 114 | 430 | 17 | 1423 | 5380 |
| 8:00 AM | 55 | 73 | 11 | 40 | 114 | 59 | 55 | 320 | 93 | 127 | 365 | 20 | 1332 | 5111 |
| 8:15 AM | 67 | 55 | 8 | 38 | 117 | 59 | 46 | 351 | 90 | 99 | 397 | 22 | 1349 | |
| 8:30 AM | 52 | 40 | 13 | 17 | 70 | 52 | 33 | 347 | 98 | 121 | 410 | 23 | 1276 | |
| 8:45 AM | 64 | 40 | 13 | 17 | 61 | 51 | 26 | 300 | 75 | 86 | 404 | 17 | 1154 | |
| Peak Hour | 207 | 228 | 48 | 128 | 443 | 229 | 179 | 1489 | 320 | 433 | 1623 | 76 | | |

## BIKES

| Interval | Oak Rd | | Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

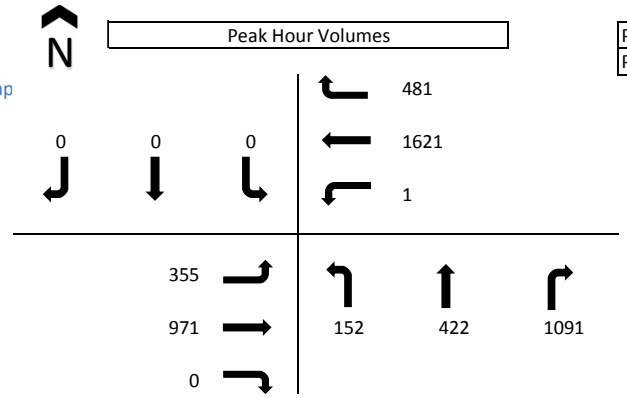
## PEDESTRIANS

| Interval | Crossing Oak Rd | | Crossing Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 5 | 2 | 16 | 5 | 28 | 144 |
| 7:15 AM | 3 | 7 | 25 | 4 | 39 | 156 |
| 7:30 AM | 2 | 5 | 20 | 11 | 38 | 159 |
| 7:45 AM | 4 | 6 | 25 | 4 | 39 | 146 |
| 8:00 AM | 0 | 8 | 23 | 9 | 40 | 128 |
| 8:15 AM | 0 | 3 | 31 | 8 | 42 | |
| 8:30 AM | 1 | 1 | 20 | 3 | 25 | |
| 8:45 AM | 0 | 3 | 16 | 2 | 21 | |
| Peak Hour | 6 | 22 | 99 | 32 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Buskirk Ave/HWY 680 NB Off-Ramp |
| E/W: | Treat Blvd |
| ID: | C21 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | Buskirk Ave/HWY 680 NB Off-Ramp | | | | | | Treat Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 27 | 53 | 135 | 0 | 0 | 0 | 81 | 136 | 0 | 0 | 473 | 94 | 999 | 4693 |
| 7:15 AM | 31 | 91 | 156 | 0 | 0 | 0 | 74 | 174 | 0 | 0 | 472 | 105 | 1103 | 4975 |
| 7:30 AM | 31 | 73 | 250 | 0 | 0 | 0 | 107 | 236 | 0 | 0 | 434 | 132 | 1263 | 5094 |
| 7:45 AM | 28 | 67 | 347 | 0 | 0 | 0 | 93 | 262 | 0 | 0 | 408 | 123 | 1328 | 5090 |
| 8:00 AM | 43 | 156 | 270 | 0 | 0 | 0 | 81 | 254 | 0 | 1 | 370 | 106 | 1281 | 4963 |
| 8:15 AM | 50 | 126 | 224 | 0 | 0 | 0 | 74 | 219 | 0 | 0 | 409 | 120 | 1222 | |
| 8:30 AM | 39 | 115 | 209 | 0 | 0 | 0 | 97 | 260 | 1 | 0 | 426 | 112 | 1259 | |
| 8:45 AM | 31 | 125 | 198 | 0 | 0 | 0 | 87 | 216 | 0 | 0 | 431 | 113 | 1201 | |
| Peak Hour | 152 | 422 | 1091 | 0 | 0 | 0 | 355 | 971 | 0 | 1 | 1621 | 481 | | |

## BIKES

| Interval | Buskirk Ave/HWY 680 NB Off-Ramp | | Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 1 | 0 | 1 | 0 | 2 | 8 |
| 7:15 AM | 1 | 0 | 1 | 0 | 2 | 6 |
| 7:30 AM | 0 | 0 | 2 | 0 | 2 | 4 |
| 7:45 AM | 1 | 0 | 0 | 1 | 2 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 2 | 1 | | |

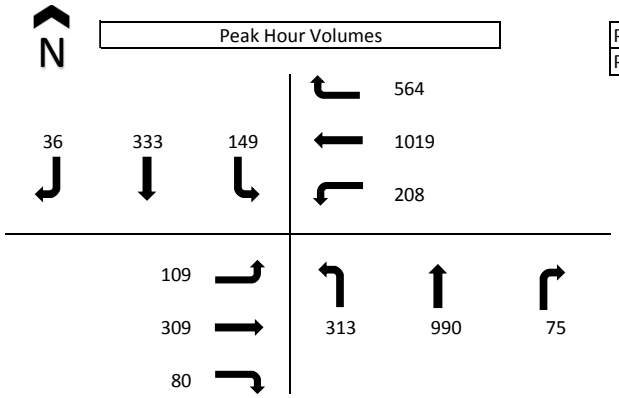
## PEDESTRIANS

| Interval | Crossing Buskirk Ave/HWY 680 NB Off- | | Crossing Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 20 | 0 | 0 | 0 | 20 | 77 |
| 7:15 AM | 13 | 0 | 0 | 0 | 13 | 74 |
| 7:30 AM | 27 | 0 | 0 | 0 | 27 | 70 |
| 7:45 AM | 17 | 0 | 0 | 0 | 17 | 57 |
| 8:00 AM | 15 | 1 | 1 | 0 | 17 | 55 |
| 8:15 AM | 9 | 0 | 0 | 0 | 9 | |
| 8:30 AM | 14 | 0 | 0 | 0 | 14 | |
| 8:45 AM | 15 | 0 | 0 | 0 | 15 | |
| Peak Hour | 68 | 1 | 1 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | CLAYTON ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C22 |




| | |
|---|---|
| Peak Hour: | 7:00 AM to 8:00 AM |
| Peak Hour Factor: | 0.89 |

## AUTOMOBILES

| Interval | CLAYTON ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 99 | 253 | 15 | 29 | 48 | 8 | 17 | 54 | 9 | 33 | 295 | 151 | 1011 | 4185 |
| 7:15 AM | 73 | 227 | 20 | 32 | 57 | 8 | 30 | 73 | 10 | 37 | 254 | 145 | 966 | 4108 |
| 7:30 AM | 66 | 244 | 16 | 38 | 103 | 7 | 22 | 71 | 23 | 61 | 233 | 149 | 1033 | 4046 |
| 7:45 AM | 75 | 266 | 24 | 50 | 125 | 13 | 40 | 111 | 38 | 77 | 237 | 119 | 1175 | 3887 |
| 8:00 AM | 89 | 203 | 24 | 27 | 97 | 13 | 36 | 76 | 40 | 58 | 177 | 94 | 934 | 3427 |
| 8:15 AM | 94 | 180 | 35 | 43 | 101 | 12 | 26 | 71 | 26 | 36 | 206 | 74 | 904 | |
| 8:30 AM | 107 | 170 | 23 | 40 | 63 | 10 | 24 | 58 | 29 | 44 | 230 | 76 | 874 | |
| 8:45 AM | 75 | 121 | 22 | 47 | 77 | 14 | 12 | 60 | 34 | 36 | 155 | 62 | 715 | |
| Peak Hour | 313 | 990 | 75 | 149 | 333 | 36 | 109 | 309 | 80 | 208 | 1019 | 564 | | |

## BIKES

| Interval | CLAYTON ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

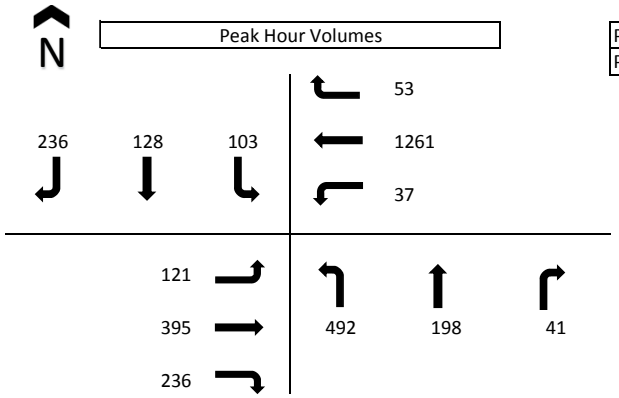
## PEDESTRIANS

| Interval | Crossing CLAYTON ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 9 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 17 |
| 7:30 AM | 0 | 0 | 6 | 0 | 6 | 18 |
| 7:45 AM | 0 | 0 | 1 | 1 | 2 | 12 |
| 8:00 AM | 1 | 2 | 4 | 2 | 9 | 12 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 1 | 0 | 2 | |
| Peak Hour | 1 | 0 | 7 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | YGNACIO VALLEY ROAD |
| E/W: | ALBERTA WAY |
| ID: | C23 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.86 |

## AUTOMOBILES

| Interval | YGNACIO VALLEY ROAD | | | | | | ALBERTA WAY | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 175 | 36 | 6 | 6 | 19 | 59 | 15 | 59 | 34 | 12 | 342 | 7 | 770 | 3278 |
| 7:15 AM | 125 | 32 | 14 | 2 | 5 | 54 | 26 | 73 | 41 | 4 | 367 | 7 | 750 | 3301 |
| 7:30 AM | 108 | 54 | 7 | 18 | 28 | 53 | 39 | 81 | 66 | 10 | 326 | 6 | 796 | 3236 |
| 7:45 AM | 111 | 81 | 13 | 53 | 51 | 70 | 42 | 133 | 74 | 15 | 284 | 35 | 962 | 3118 |
| 8:00 AM | 148 | 31 | 7 | 30 | 44 | 59 | 14 | 108 | 55 | 8 | 284 | 5 | 793 | 2740 |
| 8:15 AM | 116 | 30 | 12 | 4 | 27 | 17 | 12 | 103 | 27 | 11 | 323 | 3 | 685 | |
| 8:30 AM | 117 | 21 | 6 | 1 | 7 | 26 | 10 | 111 | 26 | 8 | 344 | 1 | 678 | |
| 8:45 AM | 81 | 20 | 6 | 4 | 13 | 23 | 10 | 95 | 25 | 11 | 296 | 0 | 584 | |
| Peak Hour | 492 | 198 | 41 | 103 | 128 | 236 | 121 | 395 | 236 | 37 | 1261 | 53 | | |

## BIKES

| Interval | YGNACIO VALLEY ROAD | | ALBERTA WAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 2 | 0 | 0 | 0 | 2 | 3 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

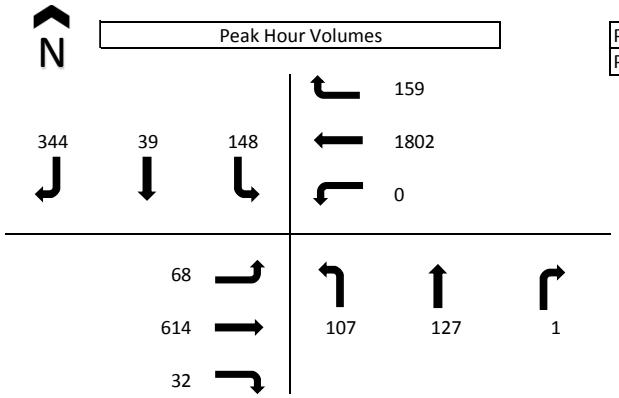
## PEDESTRIANS

| Interval | Crossing YGNACIO VALLEY ROAD | | Crossing ALBERTA WAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 30 |
| 7:15 AM | 0 | 0 | 7 | 1 | 8 | 30 |
| 7:30 AM | 0 | 0 | 9 | 0 | 9 | 22 |
| 7:45 AM | 0 | 0 | 9 | 3 | 12 | 14 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 3 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 1 | 25 | 4 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | AYERS RD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C24 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | AYERS RD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 18 | 10 | 0 | 11 | 2 | 98 | 11 | 92 | 1 | 0 | 506 | 10 | 759 | 3411 |
| 7:15 AM | 38 | 26 | 0 | 23 | 1 | 102 | 12 | 130 | 1 | 0 | 479 | 24 | 836 | 3441 |
| 7:30 AM | 34 | 51 | 0 | 53 | 17 | 88 | 19 | 168 | 7 | 0 | 424 | 30 | 891 | 3275 |
| 7:45 AM | 20 | 35 | 0 | 49 | 18 | 90 | 17 | 176 | 18 | 0 | 457 | 45 | 925 | 3090 |
| 8:00 AM | 15 | 15 | 1 | 23 | 3 | 64 | 20 | 140 | 6 | 0 | 442 | 60 | 789 | 2779 |
| 8:15 AM | 8 | 12 | 1 | 27 | 2 | 51 | 17 | 110 | 5 | 1 | 406 | 30 | 670 | |
| 8:30 AM | 6 | 3 | 1 | 12 | 3 | 72 | 22 | 123 | 4 | 1 | 437 | 22 | 706 | |
| 8:45 AM | 2 | 1 | 0 | 12 | 0 | 52 | 13 | 114 | 7 | 1 | 400 | 12 | 614 | |
| Peak Hour | 107 | 127 | 1 | 148 | 39 | 344 | 68 | 614 | 32 | 0 | 1802 | 159 | | |

## BIKES

| Interval | AYERS RD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

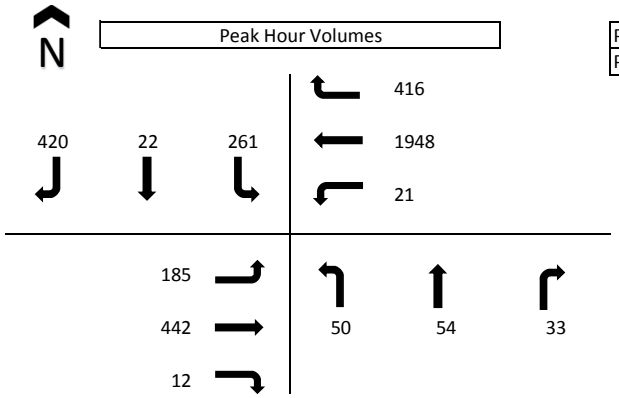
## PEDESTRIANS

| Interval | Crossing AYERS RD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | COWELL ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C25 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 14 | 7 | 5 | 28 | 4 | 84 | 15 | 78 | 2 | 2 | 558 | 88 | 885 | 3850 |
| 7:15 AM | 18 | 17 | 4 | 41 | 3 | 171 | 22 | 94 | 1 | 5 | 529 | 90 | 995 | 3864 |
| 7:30 AM | 15 | 14 | 13 | 74 | 4 | 118 | 35 | 121 | 3 | 0 | 513 | 98 | 1008 | 3666 |
| 7:45 AM | 12 | 11 | 14 | 77 | 9 | 82 | 69 | 111 | 2 | 5 | 460 | 110 | 962 | 3386 |
| 8:00 AM | 5 | 12 | 2 | 69 | 6 | 49 | 59 | 116 | 6 | 11 | 446 | 118 | 899 | 3121 |
| 8:15 AM | 7 | 7 | 3 | 47 | 7 | 31 | 31 | 105 | 7 | 6 | 407 | 139 | 797 | |
| 8:30 AM | 8 | 7 | 1 | 41 | 1 | 31 | 24 | 92 | 4 | 1 | 411 | 107 | 728 | |
| 8:45 AM | 5 | 4 | 2 | 40 | 7 | 41 | 22 | 86 | 2 | 3 | 387 | 98 | 697 | |
| Peak Hour | 50 | 54 | 33 | 261 | 22 | 420 | 185 | 442 | 12 | 21 | 1948 | 416 | | |

## BIKES

| Interval | COWELL ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

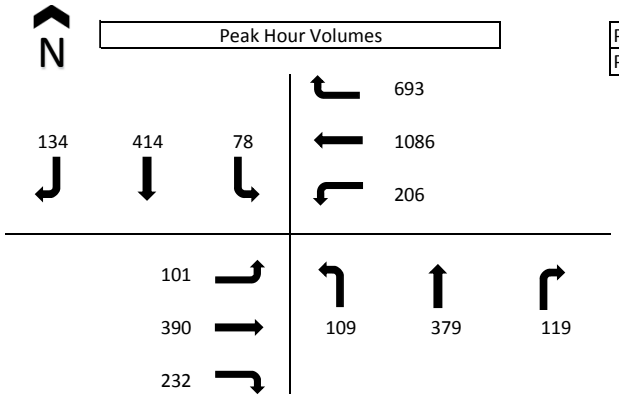
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 2 | 0 | 0 | 0 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | OAK GROVE ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C26 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | OAK GROVE ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 23 | 38 | 31 | 14 | 75 | 33 | 22 | 55 | 23 | 52 | 376 | 168 | 910 | 3810 |
| 7:15 AM | 34 | 50 | 21 | 11 | 103 | 23 | 23 | 60 | 30 | 63 | 310 | 186 | 914 | 3890 |
| 7:30 AM | 27 | 81 | 21 | 9 | 126 | 33 | 26 | 84 | 38 | 66 | 285 | 198 | 994 | 3941 |
| 7:45 AM | 34 | 103 | 33 | 24 | 112 | 28 | 18 | 104 | 68 | 69 | 240 | 159 | 992 | 3858 |
| 8:00 AM | 28 | 114 | 38 | 17 | 92 | 33 | 29 | 107 | 59 | 40 | 271 | 162 | 990 | 3684 |
| 8:15 AM | 20 | 81 | 27 | 28 | 84 | 40 | 28 | 95 | 67 | 31 | 290 | 174 | 965 | |
| 8:30 AM | 32 | 63 | 17 | 18 | 76 | 48 | 22 | 84 | 65 | 43 | 307 | 136 | 911 | |
| 8:45 AM | 25 | 44 | 12 | 16 | 56 | 47 | 43 | 82 | 78 | 22 | 279 | 114 | 818 | |
| Peak Hour | 109 | 379 | 119 | 78 | 414 | 134 | 101 | 390 | 232 | 206 | 1086 | 693 | | |

## BIKES

| Interval | OAK GROVE ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 1 | 1 | 0 | 0 | 2 | 3 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

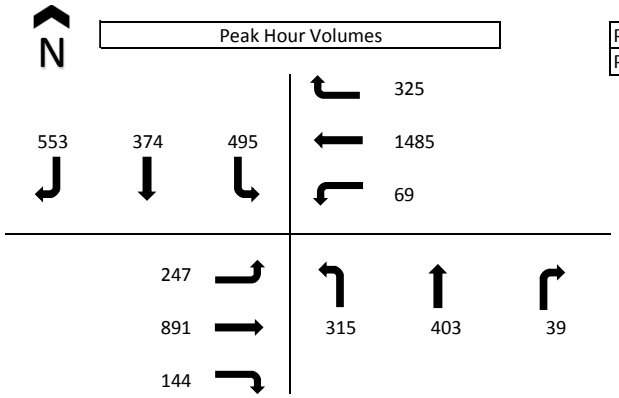
## PEDESTRIANS

| Interval | Crossing OAK GROVE ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:30 AM | 2 | 1 | 0 | 0 | 3 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 1 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | BANCROFT ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C27 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | BANCROFT ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 98 | 86 | 8 | 79 | 47 | 87 | 35 | 101 | 12 | 5 | 438 | 30 | 1026 | 4815 |
| 7:15 AM | 78 | 78 | 5 | 91 | 51 | 104 | 50 | 133 | 32 | 6 | 459 | 52 | 1139 | 5163 |
| 7:30 AM | 100 | 113 | 4 | 131 | 66 | 111 | 82 | 175 | 21 | 15 | 413 | 65 | 1296 | 5316 |
| 7:45 AM | 88 | 103 | 7 | 123 | 80 | 156 | 62 | 211 | 32 | 17 | 385 | 90 | 1354 | 5340 |
| 8:00 AM | 80 | 119 | 3 | 118 | 106 | 142 | 71 | 207 | 37 | 20 | 367 | 104 | 1374 | 5308 |
| 8:15 AM | 87 | 93 | 17 | 117 | 98 | 131 | 71 | 217 | 34 | 19 | 338 | 70 | 1292 | |
| 8:30 AM | 60 | 88 | 12 | 137 | 90 | 124 | 43 | 256 | 41 | 13 | 395 | 61 | 1320 | |
| 8:45 AM | 89 | 101 | 19 | 141 | 91 | 104 | 55 | 244 | 39 | 18 | 352 | 69 | 1322 | |
| Peak Hour | 315 | 403 | 39 | 495 | 374 | 553 | 247 | 891 | 144 | 69 | 1485 | 325 | | |

## BIKES

| Interval | BANCROFT ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 8 |
| 7:15 AM | 3 | 0 | 0 | 0 | 3 | 8 |
| 7:30 AM | 4 | 0 | 0 | 0 | 4 | 7 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 5 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 7 |
| 8:15 AM | 1 | 0 | 0 | 1 | 2 | |
| 8:30 AM | 2 | 0 | 0 | 0 | 2 | |
| 8:45 AM | 2 | 0 | 0 | 1 | 3 | |
| Peak Hour | 4 | 0 | 0 | 1 | | |

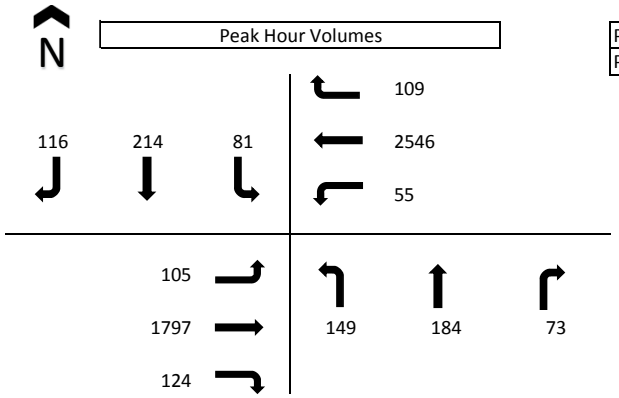
## PEDESTRIANS

| Interval | Crossing BANCROFT ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 1 | 2 | 15 |
| 7:15 AM | 6 | 0 | 2 | 0 | 8 | 13 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 7:45 AM | 0 | 2 | 3 | 0 | 5 | 7 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 0 | 4 | 3 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Walnut Blvd |
| E/W: | Ygnacio Valley Rd |
| ID: | C28 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | Walnut Blvd | | | | | | Ygnacio Valley Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 31 | 4 | 16 | 9 | 12 | 0 | 3 | 246 | 9 | 15 | 843 | 6 | 1194 | 5189 |
| 7:15 AM | 52 | 6 | 20 | 9 | 17 | 6 | 11 | 311 | 15 | 12 | 755 | 8 | 1222 | 5324 |
| 7:30 AM | 50 | 15 | 18 | 36 | 58 | 11 | 9 | 354 | 22 | 17 | 670 | 15 | 1275 | 5545 |
| 7:45 AM | 34 | 33 | 27 | 43 | 39 | 21 | 23 | 507 | 30 | 13 | 690 | 38 | 1498 | 5553 |
| 8:00 AM | 32 | 92 | 12 | 22 | 87 | 39 | 39 | 407 | 35 | 14 | 515 | 35 | 1329 | 5457 |
| 8:15 AM | 39 | 53 | 21 | 12 | 64 | 45 | 39 | 488 | 29 | 8 | 617 | 28 | 1443 | |
| 8:30 AM | 44 | 6 | 13 | 4 | 24 | 11 | 4 | 395 | 30 | 20 | 724 | 8 | 1283 | |
| 8:45 AM | 38 | 8 | 19 | 10 | 27 | 6 | 10 | 487 | 31 | 19 | 732 | 15 | 1402 | |
| Peak Hour | 149 | 184 | 73 | 81 | 214 | 116 | 105 | 1797 | 124 | 55 | 2546 | 109 | | |

## BIKES

| Interval | Walnut Blvd | | Ygnacio Valley Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

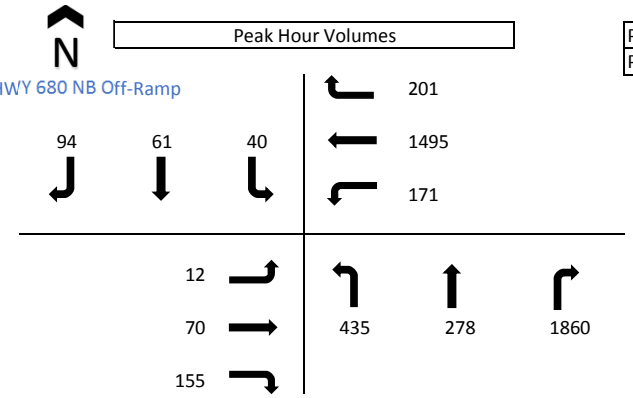
## PEDESTRIANS

| Interval | Crossing Walnut Blvd | | Crossing Ygnacio Valley Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 1 | 0 | 0 | 2 | 47 |
| 7:15 AM | 1 | 2 | 0 | 3 | 6 | 158 |
| 7:30 AM | 3 | 4 | 3 | 3 | 13 | 205 |
| 7:45 AM | 7 | 11 | 1 | 7 | 26 | 204 |
| 8:00 AM | 15 | 30 | 7 | 61 | 113 | 182 |
| 8:15 AM | 11 | 14 | 3 | 25 | 53 | |
| 8:30 AM | 3 | 5 | 0 | 4 | 12 | |
| 8:45 AM | 2 | 1 | 1 | 0 | 4 | |
| Peak Hour | 36 | 60 | 11 | 97 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/21/2015
Count Period: 7:00 AM to 9:00 AM
N/S: Bart Parking Lots/Okaland Blvd/HWY 680 NB Off-Ramp
E/W: Ygnacio Valley Blvd
ID: C29




| Peak Hour: | 7:30 AM to 8:30 AM |
|---|---|
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | Bart Parking Lots/Okaland Blvd/HWY 680 NB Off-Ramp | | | | | | Ygnacio Valley Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 96 | 94 | 245 | 6 | 4 | 14 | 2 | 7 | 8 | 3 | 528 | 52 | 1059 | 4742 |
| 7:15 AM | 145 | 127 | 325 | 2 | 7 | 21 | 2 | 11 | 22 | 33 | 437 | 50 | 1182 | 4868 |
| 7:30 AM | 95 | 85 | 435 | 10 | 7 | 18 | 4 | 15 | 32 | 42 | 445 | 56 | 1244 | 4872 |
| 7:45 AM | 118 | 69 | 511 | 13 | 34 | 23 | 5 | 11 | 54 | 47 | 331 | 41 | 1257 | 4764 |
| 8:00 AM | 109 | 55 | 449 | 3 | 13 | 27 | 2 | 22 | 42 | 41 | 373 | 49 | 1185 | 4618 |
| 8:15 AM | 113 | 69 | 465 | 14 | 7 | 26 | 1 | 22 | 27 | 41 | 346 | 55 | 1186 | |
| 8:30 AM | 99 | 62 | 453 | 0 | 10 | 19 | 1 | 20 | 32 | 46 | 353 | 41 | 1136 | |
| 8:45 AM | 82 | 40 | 462 | 8 | 6 | 19 | 1 | 9 | 27 | 32 | 393 | 32 | 1111 | |
| Peak Hour | 435 | 278 | 1860 | 40 | 61 | 94 | 12 | 70 | 155 | 171 | 1495 | 201 | | |

## BIKES

| Interval | Bart Parking Lots/Okaland | | Ygnacio Valley Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 2 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

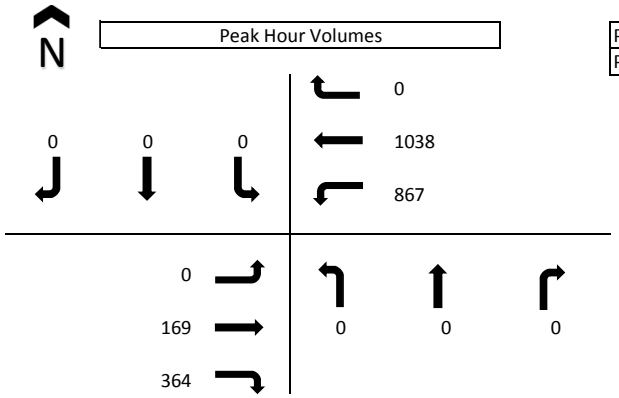
## PEDESTRIANS

| Interval | Crossing Bart Parking Lots/Okaland Blvd/HWY | | Crossing Ygnacio Valley Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 11 | 6 | 0 | 14 | 31 | 166 |
| 7:15 AM | 18 | 6 | 0 | 20 | 44 | 195 |
| 7:30 AM | 13 | 6 | 0 | 18 | 37 | 200 |
| 7:45 AM | 20 | 8 | 0 | 26 | 54 | 178 |
| 8:00 AM | 25 | 8 | 0 | 27 | 60 | 145 |
| 8:15 AM | 20 | 6 | 0 | 23 | 49 | |
| 8:30 AM | 5 | 2 | 0 | 8 | 15 | |
| 8:45 AM | 9 | 2 | 0 | 10 | 21 | |
| Peak Hour | 78 | 28 | 0 | 94 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: -
Count Period: 7:00 AM to 9:00 AM
N/S: HWY 680 SB On-Ramp
E/W: Ygnacio Valley Rd/Hillside Ave
ID: C30




| Peak Hour: | 7:00 AM to 8:00 AM |
|---|---|
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | HWY 680 SB On-Ramp | | | | | | Ygnacio Valley Rd/Hillside Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 65 | 266 | 291 | 0 | 639 | 2438 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 98 | 209 | 258 | 0 | 600 | 2329 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 98 | 229 | 264 | 0 | 635 | 2270 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 103 | 163 | 225 | 0 | 564 | 2134 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 53 | 187 | 238 | 0 | 530 | 2116 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 79 | 173 | 238 | 0 | 541 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 53 | 177 | 218 | 0 | 499 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 58 | 216 | 237 | 0 | 546 | |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 169 | 364 | 867 | 1038 | 0 | | |

## BIKES

| Interval | HWY 680 SB On-Ramp | | Ygnacio Valley Rd/Hillside Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 2 | 0 | | |

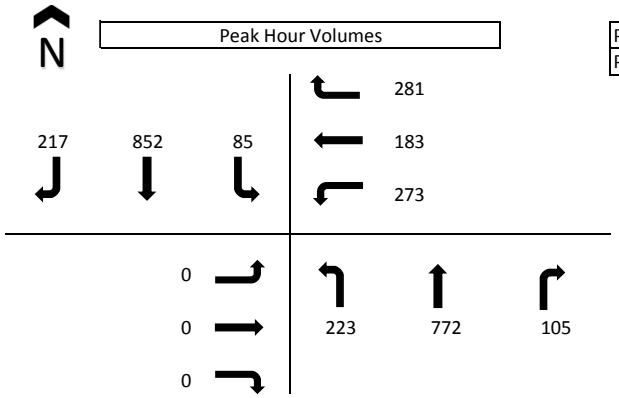
## PEDESTRIANS

| Interval | Crossing HWY 680 SB On-Ramp | | Crossing Ygnacio Valley Rd/Hillside Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | RAILROAD AVENUE |
| E/W: | WB SR-4 RAMPS |
| ID: | E1 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | RAILROAD AVENUE | | | | | | WB SR-4 RAMPS | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 70 | 139 | 14 | 9 | 163 | 77 | 0 | 0 | 0 | 51 | 62 | 52 | 637 | 2836 |
| 7:15 AM | 56 | 186 | 10 | 16 | 121 | 63 | 0 | 0 | 0 | 63 | 49 | 60 | 624 | 2939 |
| 7:30 AM | 60 | 204 | 28 | 15 | 216 | 61 | 0 | 0 | 0 | 77 | 50 | 72 | 783 | 2991 |
| 7:45 AM | 50 | 240 | 31 | 25 | 214 | 47 | 0 | 0 | 0 | 81 | 36 | 68 | 792 | 2804 |
| 8:00 AM | 42 | 168 | 22 | 22 | 251 | 50 | 0 | 0 | 0 | 67 | 42 | 76 | 740 | 2546 |
| 8:15 AM | 71 | 160 | 24 | 23 | 171 | 59 | 0 | 0 | 0 | 48 | 55 | 65 | 676 | |
| 8:30 AM | 86 | 149 | 23 | 11 | 138 | 52 | 0 | 0 | 0 | 43 | 44 | 50 | 596 | |
| 8:45 AM | 74 | 113 | 19 | 17 | 149 | 48 | 0 | 0 | 0 | 21 | 40 | 53 | 534 | |
| Peak Hour | 223 | 772 | 105 | 85 | 852 | 217 | 0 | 0 | 0 | 273 | 183 | 281 | | |

## BIKES

| Interval | RAILROAD AVENUE | | WB SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 6 |
| 7:15 AM | 1 | 1 | 0 | 0 | 2 | 6 |
| 7:30 AM | 0 | 1 | 0 | 0 | 1 | 4 |
| 7:45 AM | 1 | 0 | 0 | 1 | 2 | 3 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 1 | 0 | 2 | | |

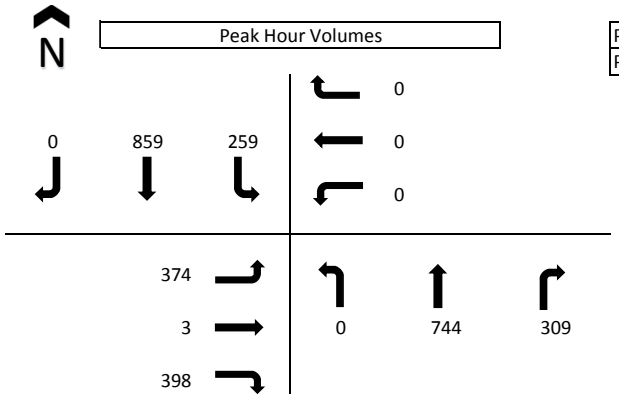
## PEDESTRIANS

| Interval | Crossing RAILROAD AVENUE | | Crossing WB SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 2 | 0 | 3 | 4 | 9 | 84 |
| 7:15 AM | 6 | 0 | 4 | 1 | 11 | 80 |
| 7:30 AM | 7 | 0 | 10 | 17 | 34 | 70 |
| 7:45 AM | 12 | 0 | 10 | 8 | 30 | 42 |
| 8:00 AM | 2 | 0 | 3 | 0 | 5 | 14 |
| 8:15 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:30 AM | 2 | 0 | 1 | 3 | 6 | |
| 8:45 AM | 0 | 0 | 2 | 0 | 2 | |
| Peak Hour | 21 | 0 | 24 | 25 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | RAILROAD AVENUE |
| E/W: | EASTBOUND SR-4 RAMPS |
| ID: | E2 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | RAILROAD AVENUE | | | | | | EASTBOUND SR-4 RAMPS | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 151 | 44 | 52 | 152 | 0 | 79 | 0 | 69 | 0 | 0 | 0 | 547 | 2685 |
| 7:15 AM | 0 | 187 | 50 | 60 | 167 | 0 | 66 | 0 | 73 | 0 | 0 | 0 | 603 | 2855 |
| 7:30 AM | 0 | 180 | 74 | 68 | 235 | 0 | 114 | 0 | 80 | 0 | 0 | 0 | 751 | 2946 |
| 7:45 AM | 0 | 205 | 91 | 60 | 212 | 0 | 112 | 1 | 103 | 0 | 0 | 0 | 784 | 2769 |
| 8:00 AM | 0 | 164 | 72 | 69 | 226 | 0 | 84 | 2 | 100 | 0 | 0 | 0 | 717 | 2532 |
| 8:15 AM | 0 | 195 | 72 | 62 | 186 | 0 | 64 | 0 | 115 | 0 | 0 | 0 | 694 | |
| 8:30 AM | 0 | 185 | 85 | 42 | 123 | 0 | 62 | 1 | 76 | 0 | 0 | 0 | 574 | |
| 8:45 AM | 0 | 140 | 74 | 63 | 117 | 0 | 61 | 1 | 91 | 0 | 0 | 0 | 547 | |
| Peak Hour | 0 | 744 | 309 | 259 | 859 | 0 | 374 | 3 | 398 | 0 | 0 | 0 | | |

## BIKES

| Interval | RAILROAD AVENUE | | EASTBOUND SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 1 | 0 | 1 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

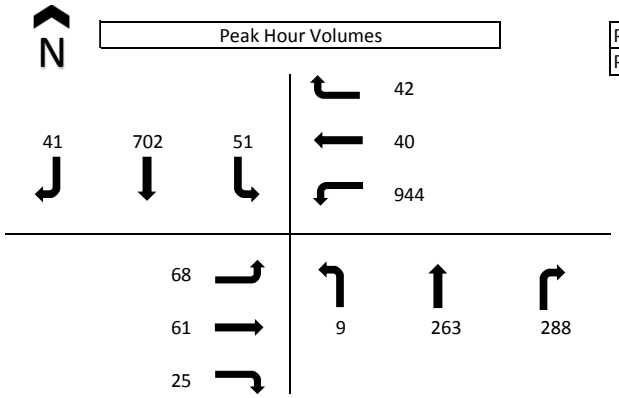
## PEDESTRIANS

| Interval | Crossing RAILROAD AVENUE | | Crossing EASTBOUND SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 1 | 2 | 11 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 10 |
| 7:30 AM | 0 | 5 | 3 | 0 | 8 | 11 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 6 |
| 8:15 AM | 0 | 2 | 0 | 0 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 2 | 2 | |
| Peak Hour | 0 | 8 | 3 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | RAILROAD AVENUE |
| E/W: | BUCHANAN ROAD |
| ID: | E3 |




| | |
|---|---|
| Peak Hour: | 7:00 AM to 8:00 AM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | RAILROAD AVENUE | | | | | | BUCHANAN ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 3 | 48 | 44 | 10 | 192 | 7 | 13 | 9 | 10 | 280 | 7 | 8 | 631 | 2534 |
| 7:15 AM | 1 | 66 | 72 | 9 | 199 | 11 | 16 | 12 | 6 | 240 | 9 | 11 | 652 | 2486 |
| 7:30 AM | 2 | 60 | 85 | 14 | 167 | 11 | 23 | 21 | 8 | 228 | 11 | 7 | 637 | 2366 |
| 7:45 AM | 3 | 89 | 87 | 18 | 144 | 12 | 16 | 19 | 1 | 196 | 13 | 16 | 614 | 2172 |
| 8:00 AM | 4 | 77 | 91 | 11 | 127 | 14 | 11 | 17 | 3 | 199 | 16 | 13 | 583 | 1947 |
| 8:15 AM | 2 | 72 | 84 | 20 | 105 | 10 | 17 | 11 | 8 | 168 | 22 | 13 | 532 | |
| 8:30 AM | 0 | 40 | 49 | 18 | 80 | 13 | 10 | 15 | 2 | 180 | 19 | 17 | 443 | |
| 8:45 AM | 0 | 53 | 72 | 12 | 51 | 8 | 9 | 12 | 3 | 144 | 9 | 16 | 389 | |
| Peak Hour | 9 | 263 | 288 | 51 | 702 | 41 | 68 | 61 | 25 | 944 | 40 | 42 | | |

## BIKES

| Interval | RAILROAD AVENUE | | BUCHANAN ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 1 | 0 | 0 | 1 | 3 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

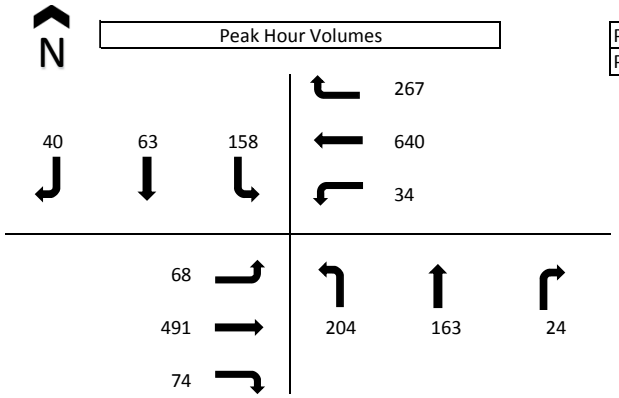
## PEDESTRIANS

| Interval | Crossing RAILROAD AVENUE | | Crossing BUCHANAN ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 2 | 2 | 8 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 10 |
| 7:30 AM | 0 | 0 | 0 | 2 | 2 | 16 |
| 7:45 AM | 0 | 0 | 1 | 3 | 4 | 14 |
| 8:00 AM | 3 | 0 | 0 | 1 | 4 | 13 |
| 8:15 AM | 5 | 0 | 0 | 1 | 6 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 1 | 1 | 3 | |
| Peak Hour | 0 | 0 | 1 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY, APRIL 28TH, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | NEROLY ROAD |
| E/W: | MAIN STREET |
| ID: | E4 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | NEROLY ROAD | | | | | | MAIN STREET | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 37 | 31 | 0 | 18 | 5 | 9 | 36 | 34 | 12 | 2 | 129 | 59 | 372 | 1950 |
| 7:15 AM | 37 | 34 | 1 | 23 | 4 | 8 | 21 | 82 | 22 | 1 | 158 | 61 | 452 | 2156 |
| 7:30 AM | 58 | 44 | 5 | 28 | 11 | 10 | 21 | 100 | 18 | 4 | 152 | 75 | 526 | 2226 |
| 7:45 AM | 55 | 38 | 4 | 48 | 11 | 8 | 14 | 165 | 20 | 12 | 158 | 67 | 600 | 2159 |
| 8:00 AM | 42 | 33 | 8 | 40 | 27 | 10 | 13 | 120 | 15 | 10 | 190 | 70 | 578 | 2008 |
| 8:15 AM | 49 | 48 | 7 | 42 | 14 | 12 | 20 | 106 | 21 | 8 | 140 | 55 | 522 | |
| 8:30 AM | 35 | 29 | 5 | 41 | 19 | 9 | 21 | 84 | 12 | 15 | 152 | 37 | 459 | |
| 8:45 AM | 45 | 30 | 7 | 22 | 21 | 7 | 15 | 97 | 17 | 11 | 138 | 39 | 449 | |
| Peak Hour | 204 | 163 | 24 | 158 | 63 | 40 | 68 | 491 | 74 | 34 | 640 | 267 | | |

## BIKES

| Interval | NEROLY ROAD | | MAIN STREET | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 0 | 0 | 2 | 0 | 2 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 2 | 0 | | |

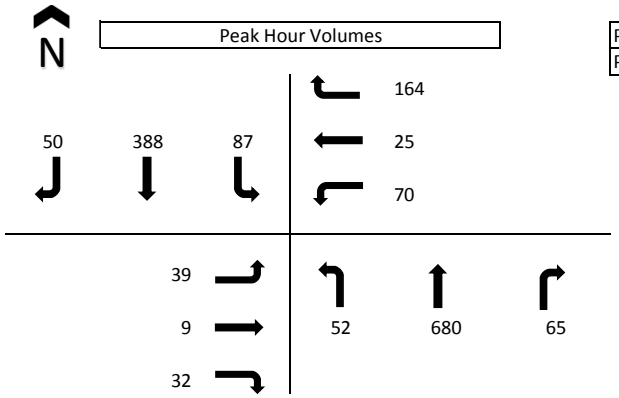
## PEDESTRIANS

| Interval | Crossing NEROLY ROAD | | Crossing MAIN STREET | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 4 |
| 7:45 AM | 0 | 2 | 1 | 0 | 3 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 2 | 2 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | MAIN STREET |
| E/W: | BIG BREAK ROAD |
| ID: | E5 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | MAIN STREET | | | | | | BIG BREAK ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 6 | 153 | 6 | 7 | 45 | 6 | 7 | 1 | 2 | 9 | 3 | 49 | 294 | 1438 |
| 7:15 AM | 4 | 165 | 4 | 12 | 74 | 9 | 7 | 4 | 2 | 9 | 5 | 41 | 336 | 1578 |
| 7:30 AM | 11 | 174 | 6 | 12 | 79 | 12 | 9 | 0 | 4 | 7 | 7 | 43 | 364 | 1655 |
| 7:45 AM | 8 | 195 | 18 | 15 | 111 | 11 | 4 | 4 | 7 | 18 | 7 | 46 | 444 | 1661 |
| 8:00 AM | 9 | 168 | 23 | 27 | 105 | 22 | 10 | 1 | 6 | 21 | 4 | 38 | 434 | 1557 |
| 8:15 AM | 10 | 173 | 15 | 20 | 92 | 10 | 12 | 3 | 6 | 16 | 7 | 49 | 413 | |
| 8:30 AM | 25 | 144 | 9 | 25 | 80 | 7 | 13 | 1 | 13 | 15 | 7 | 31 | 370 | |
| 8:45 AM | 18 | 131 | 7 | 17 | 84 | 9 | 7 | 8 | 5 | 16 | 14 | 24 | 340 | |
| Peak Hour | 52 | 680 | 65 | 87 | 388 | 50 | 39 | 9 | 32 | 70 | 25 | 164 | | |

## BIKES

| Interval | MAIN STREET | | BIG BREAK ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 1 | 0 | 1 | 3 |
| 7:15 AM | 0 | 1 | 1 | 0 | 2 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

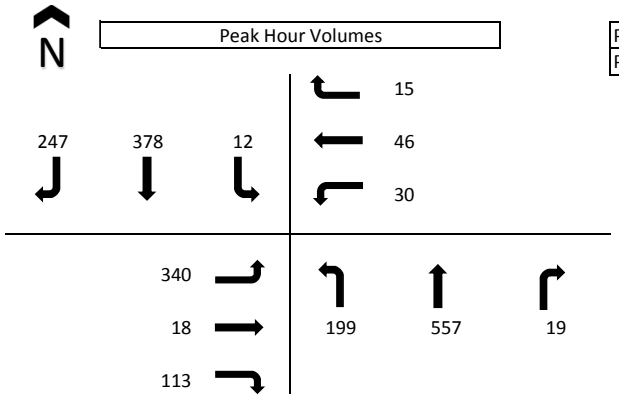
## PEDESTRIANS

| Interval | Crossing MAIN STREET | | Crossing BIG BREAK ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 7 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 7:30 AM | 0 | 3 | 1 | 1 | 5 | 6 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 29TH, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: MAIN STREET
E/W: OAKLEY ROAD/EMPIRE ROAD
ID: E6




| Peak Hour: | 7:45 AM to 8:45 AM |
|---|---|
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | MAIN STREET | | | | | | OAKLEY ROAD/EMPIRE ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 14 | 96 | 0 | 3 | 50 | 38 | 36 | 2 | 9 | 0 | 4 | 5 | 257 | 1464 |
| 7:15 AM | 11 | 126 | 0 | 1 | 66 | 43 | 49 | 5 | 10 | 5 | 7 | 3 | 326 | 1730 |
| 7:30 AM | 27 | 129 | 5 | 3 | 93 | 30 | 43 | 2 | 19 | 2 | 14 | 9 | 376 | 1919 |
| 7:45 AM | 52 | 139 | 4 | 3 | 106 | 66 | 75 | 2 | 27 | 7 | 20 | 4 | 505 | 1974 |
| 8:00 AM | 54 | 139 | 4 | 1 | 87 | 84 | 86 | 6 | 33 | 12 | 14 | 3 | 523 | 1847 |
| 8:15 AM | 52 | 149 | 6 | 6 | 92 | 49 | 102 | 7 | 35 | 7 | 4 | 6 | 515 | |
| 8:30 AM | 41 | 130 | 5 | 2 | 93 | 48 | 77 | 3 | 18 | 4 | 8 | 2 | 431 | |
| 8:45 AM | 31 | 125 | 3 | 5 | 93 | 39 | 47 | 2 | 24 | 1 | 5 | 3 | 378 | |
| Peak Hour | 199 | 557 | 19 | 12 | 378 | 247 | 340 | 18 | 113 | 30 | 46 | 15 | | |

## BIKES

| Interval | MAIN STREET | | OAKLEY ROAD/EMPIRE ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

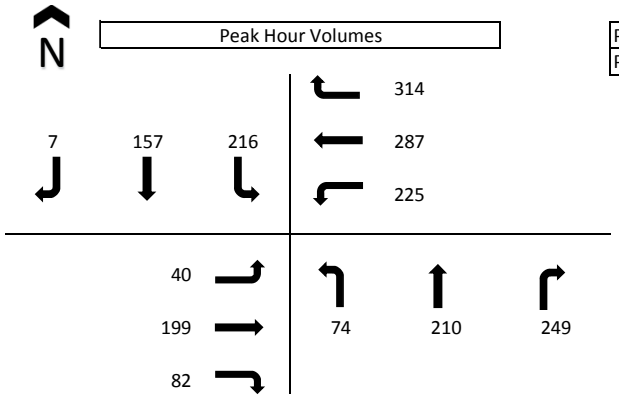
## PEDESTRIANS

| Interval | Crossing MAIN STREET | | Crossing OAKLEY ROAD/EMPIRE ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 5 |
| 7:15 AM | 0 | 0 | 1 | 1 | 2 | 6 |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 13 |
| 7:45 AM | 0 | 0 | 2 | 0 | 2 | 13 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 13 |
| 8:15 AM | 4 | 1 | 2 | 2 | 9 | |
| 8:30 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 1 | 1 | 0 | 2 | |
| Peak Hour | 5 | 2 | 4 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 29TH, 2015
Count Period: 7:00 AM TO 9:00 AM
N/S: MAIN STREET
E/W: CYPRESS ROAD
ID: E7




| Peak Hour: | 7:15 AM to 8:15 AM |
|---|---|
| Peak Hour Factor: | 0.76 |

## AUTOMOBILES

| Interval | MAIN STREET | | | | | | CYPRESS ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 8 | 37 | 21 | 23 | 26 | 0 | 6 | 25 | 8 | 35 | 29 | 46 | 264 | 1869 |
| 7:15 AM | 14 | 48 | 37 | 39 | 34 | 3 | 11 | 36 | 14 | 40 | 45 | 53 | 374 | 2060 |
| 7:30 AM | 17 | 48 | 71 | 73 | 43 | 1 | 8 | 56 | 23 | 53 | 75 | 85 | 553 | 2039 |
| 7:45 AM | 25 | 63 | 86 | 69 | 43 | 2 | 11 | 68 | 32 | 79 | 102 | 98 | 678 | 1824 |
| 8:00 AM | 18 | 51 | 55 | 35 | 37 | 1 | 10 | 39 | 13 | 53 | 65 | 78 | 455 | 1487 |
| 8:15 AM | 10 | 43 | 39 | 37 | 50 | 2 | 12 | 27 | 12 | 37 | 26 | 58 | 353 | |
| 8:30 AM | 11 | 43 | 30 | 38 | 44 | 2 | 12 | 28 | 12 | 39 | 26 | 53 | 338 | |
| 8:45 AM | 11 | 58 | 20 | 42 | 45 | 1 | 8 | 23 | 12 | 36 | 25 | 60 | 341 | |
| Peak Hour | 74 | 210 | 249 | 216 | 157 | 7 | 40 | 199 | 82 | 225 | 287 | 314 | | |

## BIKES

| Interval | MAIN STREET | | CYPRESS ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 4 |
| 7:15 AM | 0 | 3 | 0 | 0 | 3 | 3 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 3 | 0 | 0 | | |

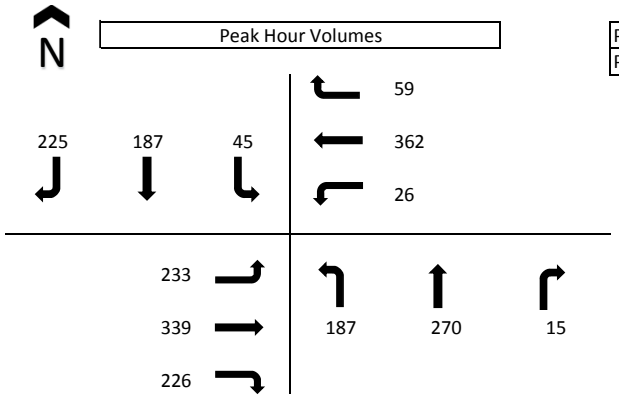
## PEDESTRIANS

| Interval | Crossing MAIN STREET | | Crossing CYPRESS ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 1 | 1 | 3 | 6 | 33 |
| 7:15 AM | 0 | 0 | 2 | 3 | 5 | 31 |
| 7:30 AM | 0 | 0 | 5 | 9 | 14 | 26 |
| 7:45 AM | 1 | 0 | 2 | 5 | 8 | 12 |
| 8:00 AM | 0 | 0 | 0 | 4 | 4 | 5 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 1 | 1 | |
| Peak Hour | 1 | 0 | 9 | 21 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 29TH, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | BRENTWOOD BOULEVARD |
| E/W: | BALFOUR ROAD |
| ID: | E8 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.90 |

## AUTOMOBILES

| Interval | BRENTWOOD BOULEVARD | | | | | | BALFOUR ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 32 | 34 | 2 | 3 | 35 | 15 | 15 | 30 | 37 | 8 | 72 | 6 | 289 | 1618 |
| 7:15 AM | 35 | 43 | 1 | 7 | 38 | 18 | 27 | 48 | 43 | 6 | 64 | 7 | 337 | 1935 |
| 7:30 AM | 33 | 63 | 2 | 7 | 41 | 28 | 37 | 61 | 49 | 11 | 72 | 11 | 415 | 2137 |
| 7:45 AM | 51 | 93 | 5 | 7 | 43 | 49 | 63 | 89 | 59 | 7 | 100 | 11 | 577 | 2174 |
| 8:00 AM | 37 | 69 | 1 | 14 | 47 | 75 | 77 | 104 | 62 | 6 | 101 | 13 | 606 | 2030 |
| 8:15 AM | 47 | 48 | 2 | 15 | 54 | 71 | 48 | 86 | 58 | 4 | 83 | 23 | 539 | |
| 8:30 AM | 52 | 60 | 7 | 9 | 43 | 30 | 45 | 60 | 47 | 9 | 78 | 12 | 452 | |
| 8:45 AM | 76 | 58 | 8 | 10 | 38 | 29 | 31 | 47 | 48 | 9 | 63 | 16 | 433 | |
| Peak Hour | 187 | 270 | 15 | 45 | 187 | 225 | 233 | 339 | 226 | 26 | 362 | 59 | | |

## BIKES

| Interval | BRENTWOOD BOULEVARD | | BALFOUR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 8 |
| 7:15 AM | 0 | 0 | 0 | 2 | 2 | 7 |
| 7:30 AM | 0 | 0 | 0 | 2 | 2 | 5 |
| 7:45 AM | 0 | 3 | 0 | 0 | 3 | 7 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 4 | 0 | 0 | 4 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 7 | 0 | 0 | | |

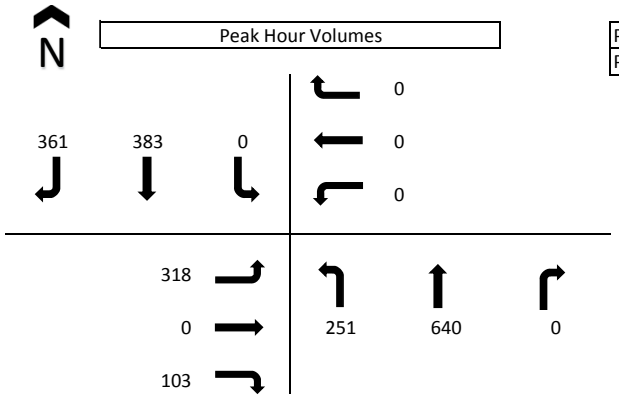
## PEDESTRIANS

| Interval | Crossing BRENTWOOD BOULEVARD | | Crossing BALFOUR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 1 | 2 | 39 |
| 7:15 AM | 4 | 3 | 0 | 2 | 9 | 47 |
| 7:30 AM | 3 | 0 | 0 | 7 | 10 | 52 |
| 7:45 AM | 9 | 6 | 1 | 2 | 18 | 42 |
| 8:00 AM | 6 | 0 | 0 | 4 | 10 | 25 |
| 8:15 AM | 3 | 8 | 3 | 0 | 14 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 18 | 14 | 4 | 6 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY JUNE 3, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | STATE ROUTE 4 |
| E/W: | BYRON HIGHWAY |
| ID: | E9 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.88 |

## AUTOMOBILES

| Interval | STATE ROUTE 4 | | | | | | BYRON HIGHWAY | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 78 | 125 | 0 | 0 | 73 | 120 | 63 | 0 | 5 | 0 | 0 | 0 | 464 | 2041 |
| 7:15 AM | 63 | 146 | 0 | 0 | 97 | 100 | 63 | 0 | 10 | 0 | 0 | 0 | 479 | 2056 |
| 7:30 AM | 64 | 159 | 0 | 0 | 83 | 99 | 92 | 0 | 20 | 0 | 0 | 0 | 517 | 2019 |
| 7:45 AM | 65 | 193 | 0 | 0 | 94 | 90 | 94 | 0 | 45 | 0 | 0 | 0 | 581 | 1957 |
| 8:00 AM | 59 | 142 | 0 | 0 | 109 | 72 | 69 | 0 | 28 | 0 | 0 | 0 | 479 | 1781 |
| 8:15 AM | 50 | 131 | 0 | 0 | 123 | 76 | 37 | 0 | 25 | 0 | 0 | 0 | 442 | |
| 8:30 AM | 68 | 135 | 0 | 0 | 118 | 72 | 44 | 0 | 18 | 0 | 0 | 0 | 455 | |
| 8:45 AM | 70 | 132 | 0 | 0 | 88 | 49 | 48 | 0 | 18 | 0 | 0 | 0 | 405 | |
| Peak Hour | 251 | 640 | 0 | 0 | 383 | 361 | 318 | 0 | 103 | 0 | 0 | 0 | | |

## BIKES

| Interval | STATE ROUTE 4 | | BYRON HIGHWAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

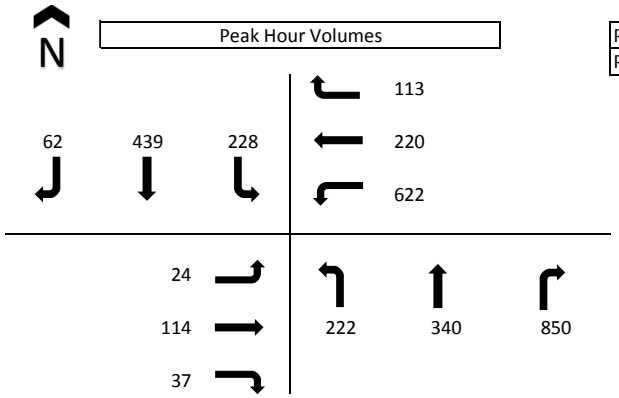
## PEDESTRIANS

| Interval | Crossing STATE ROUTE 4 | | Crossing BYRON HIGHWAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 1 | 0 | 0 | 1 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/30/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | John Muir Pkwy |
| ID: | W1 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | John Muir Pkwy | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 22 | 50 | 206 | 40 | 73 | 2 | 0 | 21 | 5 | 138 | 27 | 11 | 595 | 2900 |
| 7:15 AM | 33 | 62 | 207 | 50 | 60 | 1 | 3 | 21 | 5 | 169 | 49 | 20 | 680 | 3153 |
| 7:30 AM | 47 | 69 | 231 | 53 | 87 | 2 | 10 | 22 | 7 | 165 | 48 | 25 | 766 | 3271 |
| 7:45 AM | 59 | 105 | 192 | 35 | 150 | 14 | 9 | 25 | 7 | 186 | 39 | 38 | 859 | 3250 |
| 8:00 AM | 60 | 72 | 217 | 82 | 112 | 38 | 4 | 38 | 16 | 132 | 57 | 20 | 848 | 3136 |
| 8:15 AM | 56 | 94 | 210 | 58 | 90 | 8 | 1 | 29 | 7 | 139 | 76 | 30 | 798 | |
| 8:30 AM | 58 | 102 | 228 | 29 | 57 | 5 | 1 | 20 | 8 | 156 | 64 | 17 | 745 | |
| 8:45 AM | 95 | 68 | 200 | 32 | 69 | 10 | 1 | 29 | 8 | 129 | 90 | 14 | 745 | |
| Peak Hour | 222 | 340 | 850 | 228 | 439 | 62 | 24 | 114 | 37 | 622 | 220 | 113 | | |

## BIKES

| Interval | San Pablo Ave | | John Muir Pkwy | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 1 | 0 | 0 | 1 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

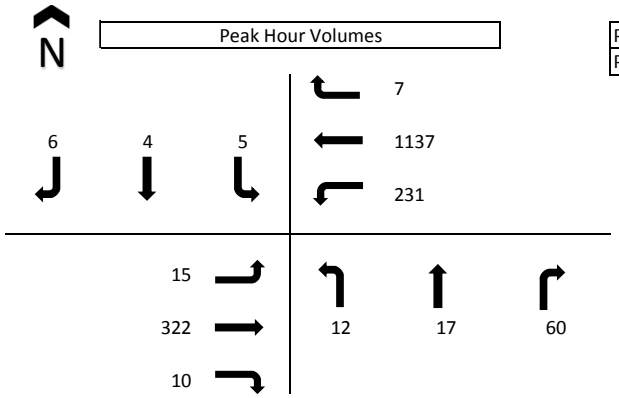
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing John Muir Pkwy | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 8 |
| 8:15 AM | 0 | 1 | 0 | 1 | 2 | |
| 8:30 AM | 0 | 2 | 0 | 1 | 3 | |
| 8:45 AM | 0 | 1 | 0 | 1 | 2 | |
| Peak Hour | 0 | 1 | 0 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Pinole Valley Rd |
| E/W: | San Pablo Ave |
| ID: | W2 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.90 |

## AUTOMOBILES

| Interval | Pinole Valley Rd | | | | | | San Pablo Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 3 | 0 | 14 | 0 | 1 | 0 | 2 | 60 | 0 | 49 | 269 | 1 | 399 | 1805 |
| 7:15 AM | 2 | 1 | 16 | 2 | 2 | 2 | 2 | 50 | 0 | 62 | 275 | 1 | 415 | 1826 |
| 7:30 AM | 4 | 0 | 12 | 0 | 0 | 1 | 5 | 86 | 3 | 53 | 346 | 0 | 510 | 1816 |
| 7:45 AM | 2 | 6 | 13 | 1 | 2 | 2 | 4 | 100 | 2 | 58 | 288 | 3 | 481 | 1675 |
| 8:00 AM | 4 | 10 | 19 | 2 | 0 | 1 | 4 | 86 | 5 | 58 | 228 | 3 | 420 | 1509 |
| 8:15 AM | 4 | 18 | 18 | 1 | 0 | 1 | 11 | 113 | 11 | 29 | 198 | 1 | 405 | |
| 8:30 AM | 1 | 8 | 32 | 1 | 0 | 4 | 4 | 56 | 5 | 46 | 210 | 2 | 369 | |
| 8:45 AM | 2 | 7 | 18 | 0 | 0 | 1 | 3 | 89 | 1 | 46 | 147 | 1 | 315 | |
| Peak Hour | 12 | 17 | 60 | 5 | 4 | 6 | 15 | 322 | 10 | 231 | 1137 | 7 | | |

## BIKES

| Interval | Pinole Valley Rd | | San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

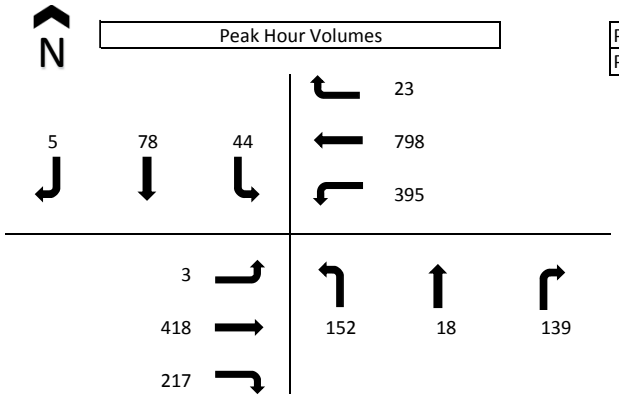
## PEDESTRIANS

| Interval | Crossing Pinole Valley Rd | | Crossing San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 2 | 0 | 1 | 3 | 17 |
| 7:15 AM | 4 | 0 | 0 | 0 | 4 | 19 |
| 7:30 AM | 1 | 3 | 2 | 0 | 6 | 24 |
| 7:45 AM | 2 | 1 | 1 | 0 | 4 | 27 |
| 8:00 AM | 0 | 1 | 2 | 2 | 5 | 26 |
| 8:15 AM | 1 | 1 | 4 | 3 | 9 | |
| 8:30 AM | 4 | 1 | 2 | 2 | 9 | |
| 8:45 AM | 0 | 0 | 1 | 2 | 3 | |
| Peak Hour | 7 | 5 | 5 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Pinon Ave/Appian Way |
| E/W: | San Pablo Ave |
| ID: | W3 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.90 |

## AUTOMOBILES

| Interval | Pinon Ave/Appian Way | | | | | | San Pablo Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 23 | 2 | 11 | 2 | 18 | 3 | 1 | 62 | 50 | 59 | 192 | 1 | 424 | 2131 |
| 7:15 AM | 25 | 1 | 22 | 5 | 10 | 1 | 1 | 56 | 42 | 97 | 239 | 5 | 504 | 2269 |
| 7:30 AM | 25 | 0 | 19 | 7 | 17 | 0 | 0 | 98 | 51 | 109 | 237 | 3 | 566 | 2290 |
| 7:45 AM | 34 | 2 | 32 | 13 | 28 | 0 | 1 | 137 | 58 | 118 | 209 | 5 | 637 | 2203 |
| 8:00 AM | 46 | 11 | 37 | 9 | 12 | 2 | 1 | 92 | 54 | 92 | 198 | 8 | 562 | 1963 |
| 8:15 AM | 47 | 5 | 51 | 15 | 21 | 3 | 1 | 91 | 54 | 76 | 154 | 7 | 525 | |
| 8:30 AM | 41 | 4 | 36 | 4 | 13 | 2 | 2 | 60 | 45 | 90 | 166 | 16 | 479 | |
| 8:45 AM | 53 | 6 | 28 | 6 | 13 | 2 | 2 | 70 | 43 | 48 | 121 | 5 | 397 | |
| Peak Hour | 152 | 18 | 139 | 44 | 78 | 5 | 3 | 418 | 217 | 395 | 798 | 23 | | |

## BIKES

| Interval | Pinon Ave/Appian Way | | San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 1 | 0 | | |

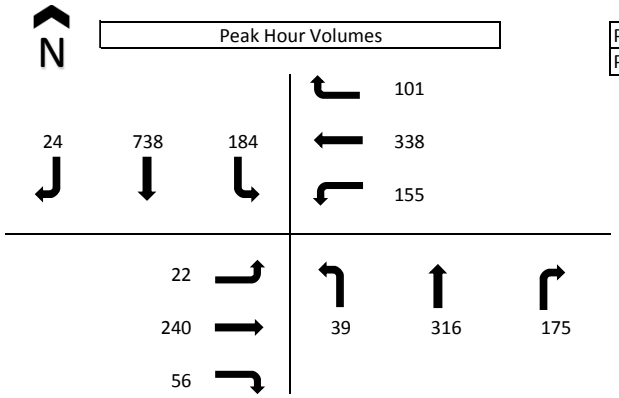
## PEDESTRIANS

| Interval | Crossing Pinon Ave/Appian Way | | Crossing San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 1 | 0 | 1 | 6 |
| 7:15 AM | 0 | 1 | 1 | 0 | 2 | 8 |
| 7:30 AM | 0 | 2 | 0 | 0 | 2 | 11 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 11 |
| 8:00 AM | 0 | 3 | 0 | 0 | 3 | 12 |
| 8:15 AM | 2 | 2 | 1 | 0 | 5 | |
| 8:30 AM | 1 | 0 | 0 | 1 | 2 | |
| 8:45 AM | 0 | 2 | 0 | 0 | 2 | |
| Peak Hour | 2 | 8 | 1 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Hilltop Dr |
| ID: | W4 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.87 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Hilltop Dr | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 4 | 35 | 8 | 35 | 137 | 11 | 0 | 38 | 5 | 8 | 45 | 9 | 335 | 1958 |
| 7:15 AM | 7 | 23 | 20 | 41 | 188 | 2 | 1 | 46 | 13 | 10 | 43 | 3 | 397 | 2221 |
| 7:30 AM | 6 | 59 | 54 | 39 | 195 | 3 | 5 | 53 | 18 | 35 | 58 | 16 | 541 | 2388 |
| 7:45 AM | 8 | 77 | 56 | 48 | 200 | 6 | 3 | 82 | 14 | 48 | 120 | 23 | 685 | 2321 |
| 8:00 AM | 10 | 95 | 36 | 46 | 165 | 11 | 6 | 53 | 15 | 47 | 82 | 32 | 598 | 1999 |
| 8:15 AM | 15 | 85 | 29 | 51 | 178 | 4 | 8 | 52 | 9 | 25 | 78 | 30 | 564 | |
| 8:30 AM | 12 | 61 | 7 | 63 | 156 | 5 | 6 | 48 | 6 | 21 | 78 | 11 | 474 | |
| 8:45 AM | 11 | 66 | 11 | 42 | 107 | 7 | 2 | 39 | 6 | 9 | 52 | 11 | 363 | |
| Peak Hour | 39 | 316 | 175 | 184 | 738 | 24 | 22 | 240 | 56 | 155 | 338 | 101 | | |

## BIKES

| Interval | San Pablo Ave | | Hilltop Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 1 | 0 | 0 | 0 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

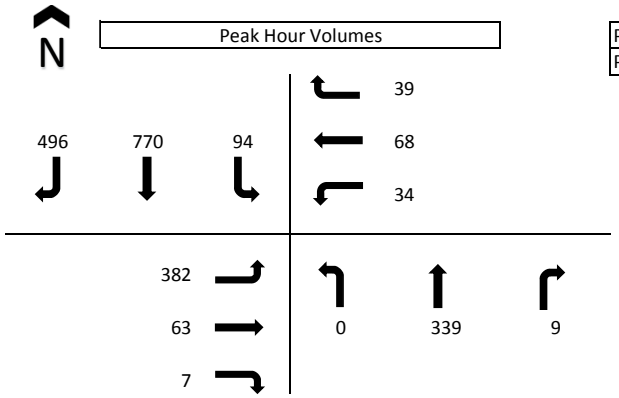
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Hilltop Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 5 | 1 | 0 | 1 | 7 | 12 |
| 7:15 AM | 2 | 0 | 0 | 0 | 2 | 7 |
| 7:30 AM | 1 | 0 | 0 | 0 | 1 | 12 |
| 7:45 AM | 2 | 0 | 0 | 0 | 2 | 15 |
| 8:00 AM | 2 | 0 | 0 | 0 | 2 | 13 |
| 8:15 AM | 5 | 1 | 0 | 1 | 7 | |
| 8:30 AM | 3 | 0 | 0 | 1 | 4 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 10 | 1 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | College Ln/Rumrill Blvd |
| ID: | W5 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.88 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | College Ln/Rumrill Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 40 | 1 | 9 | 151 | 89 | 42 | 5 | 0 | 7 | 3 | 0 | 347 | 1965 |
| 7:15 AM | 0 | 56 | 0 | 10 | 191 | 105 | 53 | 1 | 2 | 6 | 6 | 0 | 430 | 2254 |
| 7:30 AM | 0 | 61 | 3 | 14 | 209 | 112 | 97 | 13 | 1 | 11 | 13 | 1 | 535 | 2301 |
| 7:45 AM | 0 | 95 | 1 | 25 | 212 | 145 | 118 | 13 | 4 | 7 | 22 | 11 | 653 | 2235 |
| 8:00 AM | 0 | 93 | 2 | 32 | 201 | 133 | 93 | 26 | 2 | 10 | 23 | 21 | 636 | 2055 |
| 8:15 AM | 0 | 90 | 3 | 23 | 148 | 106 | 74 | 11 | 0 | 6 | 10 | 6 | 477 | |
| 8:30 AM | 0 | 89 | 8 | 22 | 148 | 80 | 78 | 16 | 4 | 9 | 8 | 7 | 469 | |
| 8:45 AM | 0 | 86 | 6 | 29 | 149 | 80 | 75 | 16 | 4 | 8 | 8 | 12 | 473 | |
| Peak Hour | 0 | 339 | 9 | 94 | 770 | 496 | 382 | 63 | 7 | 34 | 68 | 39 | | |

## BIKES

| Interval | San Pablo Ave | | College Ln/Rumrill Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 5 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 7 |
| 8:00 AM | 1 | 0 | 3 | 0 | 4 | 6 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 3 | 0 | 3 | 0 | | |

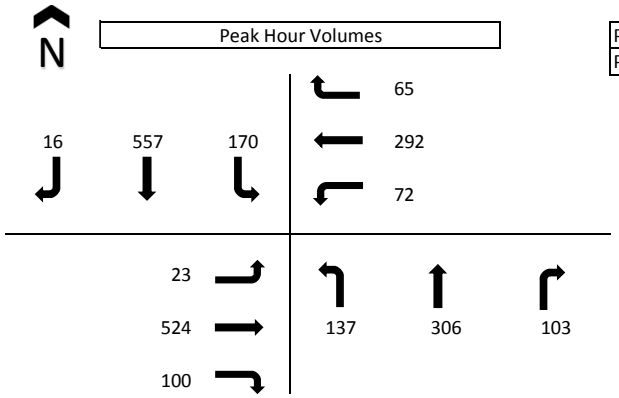
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing College Ln/Rumrill Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 7 |
| 7:15 AM | 0 | 5 | 1 | 0 | 6 | 18 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 14 |
| 7:45 AM | 0 | 1 | 0 | 0 | 1 | 25 |
| 8:00 AM | 0 | 1 | 2 | 8 | 11 | 39 |
| 8:15 AM | 0 | 0 | 2 | 0 | 2 | |
| 8:30 AM | 1 | 2 | 6 | 2 | 11 | |
| 8:45 AM | 0 | 5 | 6 | 4 | 15 | |
| Peak Hour | 0 | 2 | 4 | 8 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave/ |
| E/W: | El Portal Dr/Broadway Ave |
| ID: | W6 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.92 |

## AUTOMOBILES

| Interval | San Pablo Ave/ | | | | | | El Portal Dr/Broadway Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 12 | 36 | 8 | 30 | 127 | 4 | 3 | 66 | 16 | 5 | 33 | 6 | 346 | 1897 |
| 7:15 AM | 16 | 48 | 17 | 31 | 159 | 0 | 8 | 81 | 26 | 7 | 44 | 4 | 441 | 2192 |
| 7:30 AM | 23 | 61 | 14 | 28 | 185 | 1 | 2 | 118 | 31 | 7 | 42 | 8 | 520 | 2356 |
| 7:45 AM | 28 | 79 | 26 | 43 | 172 | 6 | 7 | 125 | 21 | 14 | 58 | 11 | 590 | 2365 |
| 8:00 AM | 41 | 75 | 28 | 52 | 163 | 6 | 8 | 130 | 23 | 23 | 72 | 20 | 641 | 2272 |
| 8:15 AM | 38 | 68 | 22 | 32 | 105 | 4 | 3 | 166 | 27 | 23 | 97 | 20 | 605 | |
| 8:30 AM | 30 | 84 | 27 | 43 | 117 | 0 | 5 | 103 | 29 | 12 | 65 | 14 | 529 | |
| 8:45 AM | 29 | 74 | 20 | 29 | 124 | 5 | 5 | 95 | 27 | 16 | 56 | 17 | 497 | |
| Peak Hour | 137 | 306 | 103 | 170 | 557 | 16 | 23 | 524 | 100 | 72 | 292 | 65 | | |

## BIKES

| Interval | San Pablo Ave/ | | El Portal Dr/Broadway Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 1 | 0 | | |

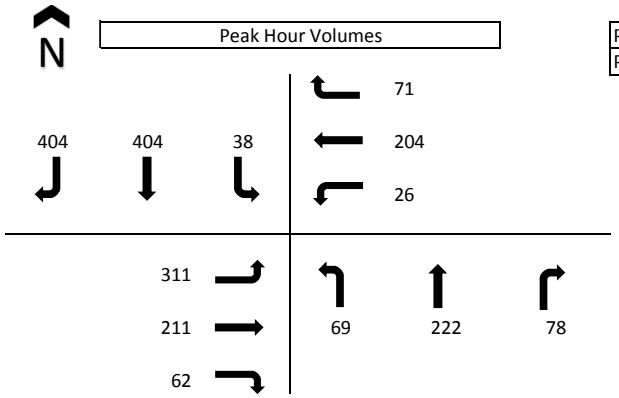
## PEDESTRIANS

| Interval | Crossing San Pablo Ave/ | | Crossing El Portal Dr/Broadway Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 2 | 2 | 2 | 7 | 58 |
| 7:15 AM | 3 | 5 | 2 | 3 | 13 | 68 |
| 7:30 AM | 3 | 10 | 2 | 2 | 17 | 75 |
| 7:45 AM | 3 | 11 | 7 | 0 | 21 | 69 |
| 8:00 AM | 3 | 6 | 7 | 1 | 17 | 63 |
| 8:15 AM | 3 | 9 | 4 | 4 | 20 | |
| 8:30 AM | 0 | 3 | 5 | 3 | 11 | |
| 8:45 AM | 2 | 3 | 6 | 4 | 15 | |
| Peak Hour | 9 | 29 | 23 | 8 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | Road 20/23rd St |
| ID: | W7 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.89 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Road 20/23rd St | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 10 | 31 | 6 | 4 | 86 | 65 | 36 | 9 | 9 | 2 | 11 | 6 | 275 | 1498 |
| 7:15 AM | 11 | 38 | 4 | 6 | 116 | 78 | 37 | 12 | 16 | 8 | 9 | 8 | 343 | 1813 |
| 7:30 AM | 7 | 40 | 15 | 5 | 124 | 90 | 54 | 30 | 18 | 3 | 20 | 8 | 414 | 2051 |
| 7:45 AM | 12 | 52 | 8 | 7 | 95 | 98 | 78 | 37 | 13 | 7 | 48 | 11 | 466 | 2100 |
| 8:00 AM | 17 | 61 | 22 | 12 | 123 | 116 | 69 | 75 | 17 | 5 | 45 | 28 | 590 | 2019 |
| 8:15 AM | 23 | 50 | 32 | 18 | 85 | 97 | 81 | 74 | 13 | 10 | 79 | 19 | 581 | |
| 8:30 AM | 17 | 59 | 16 | 1 | 101 | 93 | 83 | 25 | 19 | 4 | 32 | 13 | 463 | |
| 8:45 AM | 19 | 48 | 6 | 0 | 67 | 99 | 80 | 23 | 10 | 1 | 13 | 19 | 385 | |
| Peak Hour | 69 | 222 | 78 | 38 | 404 | 404 | 311 | 211 | 62 | 26 | 204 | 71 | | |

## BIKES

| Interval | San Pablo Ave | | Road 20/23rd St | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 1 | 0 | 0 | 0 | 1 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

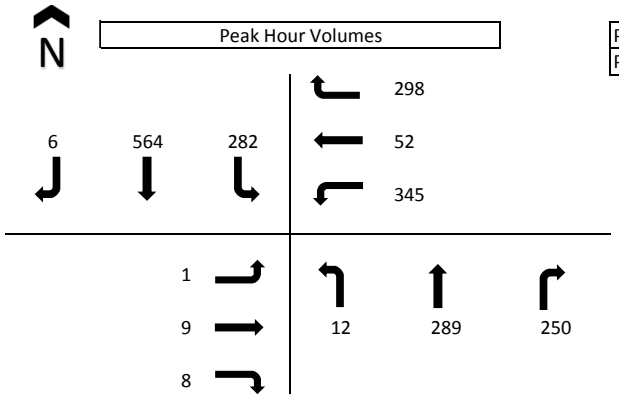
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Road 20/23rd St | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 53 |
| 7:15 AM | 0 | 4 | 1 | 2 | 7 | 93 |
| 7:30 AM | 0 | 9 | 0 | 5 | 14 | 102 |
| 7:45 AM | 0 | 25 | 1 | 5 | 31 | 100 |
| 8:00 AM | 0 | 27 | 6 | 8 | 41 | 90 |
| 8:15 AM | 0 | 12 | 2 | 2 | 16 | |
| 8:30 AM | 0 | 7 | 1 | 4 | 12 | |
| 8:45 AM | 4 | 6 | 9 | 2 | 21 | |
| Peak Hour | 0 | 71 | 10 | 19 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | San Pablo Dam Rd/Driveway |
| ID: | W8 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | San Pablo Dam Rd/Driveway | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 2 | 41 | 58 | 68 | 103 | 1 | 0 | 3 | 1 | 68 | 12 | 40 | 397 | 1879 |
| 7:15 AM | 1 | 51 | 54 | 66 | 118 | 1 | 0 | 0 | 0 | 69 | 6 | 62 | 428 | 2048 |
| 7:30 AM | 2 | 42 | 75 | 81 | 159 | 1 | 1 | 2 | 2 | 67 | 15 | 80 | 527 | 2116 |
| 7:45 AM | 3 | 81 | 71 | 78 | 120 | 1 | 0 | 3 | 2 | 89 | 11 | 68 | 527 | 2108 |
| 8:00 AM | 5 | 97 | 63 | 70 | 142 | 2 | 0 | 1 | 3 | 102 | 12 | 69 | 566 | 2094 |
| 8:15 AM | 2 | 69 | 41 | 53 | 143 | 2 | 0 | 3 | 1 | 87 | 14 | 81 | 496 | |
| 8:30 AM | 4 | 85 | 56 | 70 | 121 | 3 | 0 | 3 | 1 | 104 | 15 | 57 | 519 | |
| 8:45 AM | 4 | 87 | 51 | 57 | 110 | 2 | 1 | 2 | 3 | 96 | 21 | 79 | 513 | |
| Peak Hour | 12 | 289 | 250 | 282 | 564 | 6 | 1 | 9 | 8 | 345 | 52 | 298 | | |

## BIKES

| Interval | San Pablo Ave | | San Pablo Dam Rd/Driveway | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:15 AM | 1 | 0 | 0 | 0 | 1 | 3 |
| 7:30 AM | 1 | 0 | 0 | 0 | 1 | 3 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 0 | 0 | 1 | | |

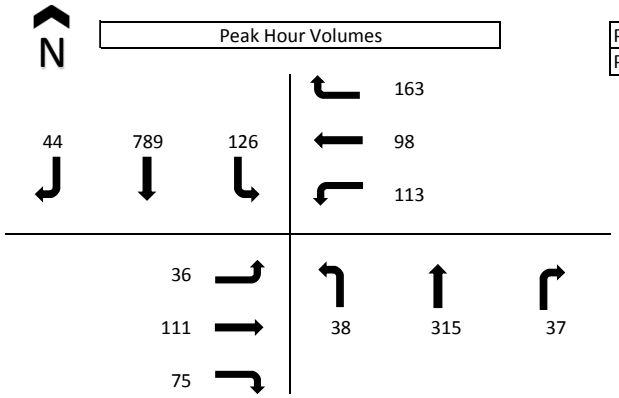
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing San Pablo Dam Rd/Driveway | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 32 |
| 7:15 AM | 0 | 4 | 3 | 5 | 12 | 38 |
| 7:30 AM | 0 | 5 | 3 | 3 | 11 | 40 |
| 7:45 AM | 0 | 4 | 1 | 3 | 8 | 41 |
| 8:00 AM | 1 | 5 | 1 | 0 | 7 | 44 |
| 8:15 AM | 0 | 2 | 7 | 5 | 14 | |
| 8:30 AM | 0 | 3 | 4 | 5 | 12 | |
| 8:45 AM | 0 | 2 | 3 | 6 | 11 | |
| Peak Hour | 1 | 16 | 12 | 11 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | McBryde Ave |
| ID: | W9 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | McBryde Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 1 | 34 | 10 | 10 | 153 | 4 | 1 | 15 | 22 | 12 | 8 | 17 | 287 | 1638 |
| 7:15 AM | 4 | 60 | 5 | 13 | 190 | 6 | 4 | 22 | 20 | 22 | 9 | 16 | 371 | 1808 |
| 7:30 AM | 7 | 80 | 4 | 39 | 191 | 7 | 12 | 25 | 15 | 32 | 22 | 25 | 459 | 1945 |
| 7:45 AM | 4 | 80 | 8 | 41 | 218 | 15 | 6 | 28 | 23 | 27 | 26 | 45 | 521 | 1931 |
| 8:00 AM | 16 | 86 | 6 | 22 | 172 | 10 | 9 | 24 | 18 | 24 | 21 | 49 | 457 | 1846 |
| 8:15 AM | 11 | 69 | 19 | 24 | 208 | 12 | 9 | 34 | 19 | 30 | 29 | 44 | 508 | |
| 8:30 AM | 8 | 96 | 9 | 20 | 133 | 14 | 13 | 20 | 23 | 42 | 29 | 38 | 445 | |
| 8:45 AM | 8 | 98 | 9 | 16 | 156 | 5 | 7 | 17 | 18 | 37 | 32 | 33 | 436 | |
| Peak Hour | 38 | 315 | 37 | 126 | 789 | 44 | 36 | 111 | 75 | 113 | 98 | 163 | | |

## BIKES

| Interval | San Pablo Ave | | McBryde Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:15 AM | 1 | 0 | 0 | 0 | 1 | 4 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 1 | 0 | 1 | 2 | 3 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 2 | | |

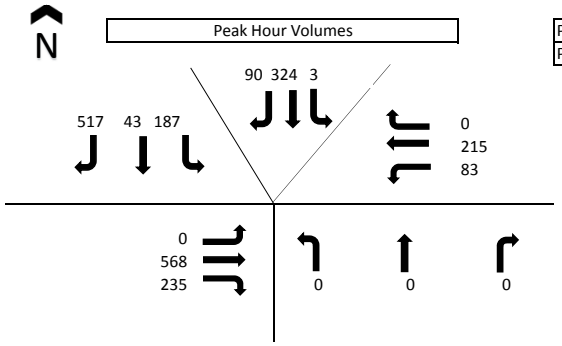
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing McBryde Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 19 |
| 7:15 AM | 1 | 2 | 1 | 1 | 5 | 19 |
| 7:30 AM | 0 | 5 | 2 | 0 | 7 | 18 |
| 7:45 AM | 0 | 1 | 3 | 2 | 6 | 18 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 23 |
| 8:15 AM | 1 | 0 | 3 | 0 | 4 | |
| 8:30 AM | 1 | 0 | 2 | 4 | 7 | |
| 8:45 AM | 1 | 4 | 4 | 2 | 11 | |
| Peak Hour | 1 | 7 | 8 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | AM |
| N/S: | I-80 WB Ramps |
| E/W: | Barrett Ave |
| ID: | W10 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | Hwy 80 Off-Ramp | | | Barrett Ave | | | | | | Swans Way | | | Hwy 80 On-Ramp | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBT | SBR | NBL | NBT | NBR | Interval | Hourly |
| 7:00 AM | 36 | 1 | 86 | 0 | 71 | 52 | 19 | 18 | 0 | 0 | 80 | 12 | 0 | 0 | 0 | 375 | 1935 |
| 7:15 AM | 25 | 1 | 82 | 0 | 95 | 76 | 23 | 20 | 0 | 1 | 92 | 14 | 0 | 0 | 0 | 429 | 2137 |
| 7:30 AM | 36 | 26 | 92 | 0 | 127 | 78 | 20 | 27 | 0 | 1 | 115 | 12 | 0 | 0 | 0 | 534 | 2259 |
| 7:45 AM | 37 | 27 | 107 | 0 | 144 | 81 | 25 | 42 | 0 | 0 | 109 | 25 | 0 | 0 | 0 | 597 | 2265 |
| 8:00 AM | 57 | 13 | 139 | 0 | 145 | 46 | 21 | 53 | 0 | 1 | 82 | 20 | 0 | 0 | 0 | 577 | 2143 |
| 8:15 AM | 39 | 1 | 135 | 0 | 153 | 50 | 20 | 58 | 0 | 2 | 72 | 21 | 0 | 0 | 0 | 551 | |
| 8:30 AM | 54 | 2 | 136 | 0 | 126 | 58 | 17 | 62 | 0 | 0 | 61 | 24 | 0 | 0 | 0 | 540 | |
| 8:45 AM | 58 | 12 | 145 | 0 | 97 | 29 | 14 | 46 | 0 | 1 | 56 | 17 | 0 | 0 | 0 | 475 | |
| Peak Hour | 187 | 43 | 517 | 0 | 568 | 235 | 83 | 215 | 0 | 3 | 324 | 90 | 0 | 0 | 0 | | |

## BIKES

| Interval | Hwy 80 Off-Ramp | | Barrett Ave | | Swans Way | Totals | |
|---|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | SB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 7:30 AM | 0 | 0 | 1 | 0 | 0 | 1 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 0 | 1 | 1 | 0 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 1 | 2 | 0 | | |

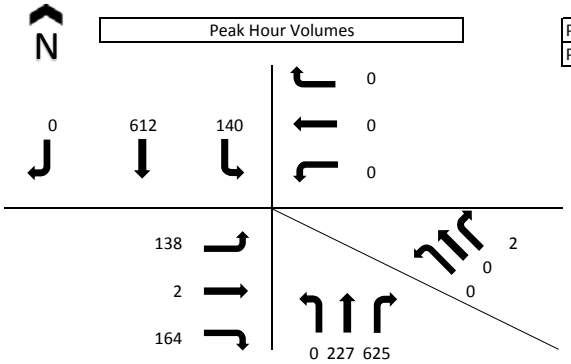
## PEDESTRIANS

| Interval Start | Crossing Hwy 80 Ramps | | Crossing Barrett Ave | | Crossing Swans Way | Totals | |
|---|---|---|---|---|---|---|---|
| | North Leg | South Leg | East Leg | West Leg | NE Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 2 | 11 |
| 7:15 AM | 1 | 1 | 0 | 2 | 0 | 4 | 12 |
| 7:30 AM | 3 | 0 | 0 | 0 | 2 | 5 | 10 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 8:00 AM | 1 | 0 | 0 | 0 | 2 | 3 | 10 |
| 8:15 AM | 0 | 0 | 0 | 0 | 2 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 4 | 0 | 0 | 1 | 5 | |
| Peak Hour | 1 | 0 | 0 | 0 | 4 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | Hwy 80 EB Ramps |
| ID: | W11 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Hwy 80 EB Off-Ramp | | | Hwy 80 EB On-Ramp | | | Roosevelt Ave | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | NWBL | NWBT | NWBR | Interval | Hourly |
| 7:00 AM | 0 | 27 | 91 | 20 | 96 | 0 | 17 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 268 | 1522 |
| 7:15 AM | 0 | 42 | 105 | 15 | 113 | 0 | 21 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 313 | 1724 |
| 7:30 AM | 0 | 52 | 146 | 28 | 163 | 0 | 33 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 1 | 450 | 1908 |
| 7:45 AM | 0 | 52 | 165 | 39 | 174 | 0 | 27 | 2 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 491 | 1890 |
| 8:00 AM | 0 | 67 | 159 | 37 | 123 | 0 | 35 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 1 | 470 | 1791 |
| 8:15 AM | 0 | 56 | 155 | 36 | 152 | 0 | 43 | 0 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 497 | |
| 8:30 AM | 0 | 84 | 141 | 21 | 113 | 0 | 29 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 432 | |
| 8:45 AM | 0 | 72 | 129 | 18 | 111 | 0 | 34 | 1 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 392 | |
| Peak Hour | 0 | 227 | 625 | 140 | 612 | 0 | 138 | 2 | 164 | 0 | 0 | 0 | 0 | 0 | 2 | | |

## BIKES

| Interval | San Pablo Ave | | Hwy 80 Ramps | | Roosevelt Ave | Totals | |
|---|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | NWB | Interval | Hourly |
| 7:00 AM | 0 | 2 | 0 | 0 | 0 | 2 | 9 |
| 7:15 AM | 1 | 0 | 0 | 0 | 0 | 1 | 10 |
| 7:30 AM | 0 | 2 | 0 | 0 | 0 | 2 | 11 |
| 7:45 AM | 1 | 2 | 0 | 1 | 0 | 4 | 11 |
| 8:00 AM | 2 | 1 | 0 | 0 | 0 | 3 | 7 |
| 8:15 AM | 1 | 1 | 0 | 0 | 0 | 2 | |
| 8:30 AM | 1 | 1 | 0 | 0 | 0 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 4 | 6 | 0 | 1 | 0 | | |

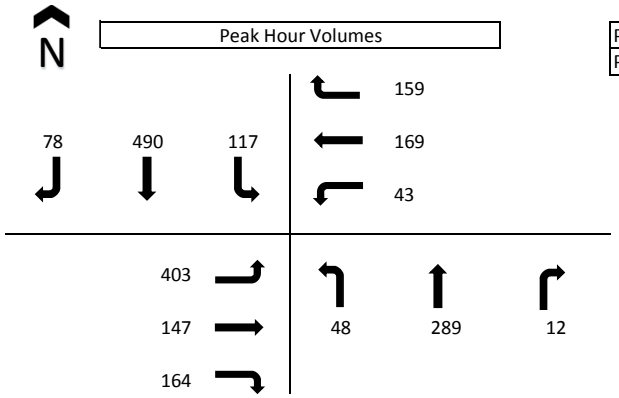
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Hwy 80 EB Ramps | | Crossing Roosevelt Ave | Totals | |
|---|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | SE Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 0 | 1 | 18 |
| 7:15 AM | 1 | 0 | 3 | 0 | 2 | 6 | 22 |
| 7:30 AM | 0 | 3 | 3 | 0 | 1 | 7 | 21 |
| 7:45 AM | 0 | 0 | 0 | 3 | 1 | 4 | 22 |
| 8:00 AM | 0 | 0 | 4 | 1 | 0 | 5 | 30 |
| 8:15 AM | 0 | 0 | 2 | 2 | 1 | 5 | |
| 8:30 AM | 0 | 0 | 4 | 1 | 3 | 8 | |
| 8:45 AM | 0 | 0 | 5 | 6 | 1 | 12 | |
| Peak Hour | 0 | 3 | 9 | 6 | 3 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | Barrett Ave |
| ID: | W12 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.92 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Barrett Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 6 | 41 | 1 | 10 | 86 | 6 | 46 | 9 | 37 | 5 | 29 | 28 | 304 | 1627 |
| 7:15 AM | 4 | 54 | 0 | 16 | 90 | 6 | 69 | 20 | 34 | 5 | 26 | 20 | 344 | 1846 |
| 7:30 AM | 4 | 68 | 2 | 31 | 120 | 10 | 94 | 28 | 41 | 2 | 33 | 37 | 470 | 2075 |
| 7:45 AM | 11 | 64 | 2 | 23 | 139 | 20 | 106 | 27 | 36 | 11 | 28 | 42 | 509 | 2119 |
| 8:00 AM | 17 | 81 | 5 | 34 | 109 | 18 | 99 | 35 | 44 | 4 | 47 | 30 | 523 | 2088 |
| 8:15 AM | 7 | 61 | 4 | 38 | 144 | 20 | 104 | 55 | 33 | 17 | 48 | 42 | 573 | |
| 8:30 AM | 13 | 83 | 1 | 22 | 98 | 20 | 94 | 30 | 51 | 11 | 46 | 45 | 514 | |
| 8:45 AM | 11 | 110 | 4 | 12 | 105 | 19 | 65 | 27 | 51 | 10 | 31 | 33 | 478 | |
| Peak Hour | 48 | 289 | 12 | 117 | 490 | 78 | 403 | 147 | 164 | 43 | 169 | 159 | | |

## BIKES

| Interval | San Pablo Ave | | Barrett Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 4 |
| 7:30 AM | 0 | 1 | 1 | 0 | 2 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 1 | 0 | 0 | 0 | 1 | 3 |
| 8:15 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 1 | 1 | | |

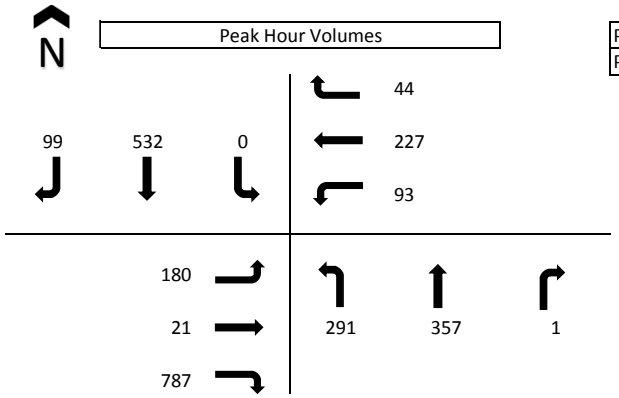
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Barrett Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 8 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 8 |
| 7:30 AM | 0 | 0 | 1 | 1 | 2 | 11 |
| 7:45 AM | 0 | 1 | 1 | 3 | 5 | 15 |
| 8:00 AM | 0 | 0 | 1 | 0 | 1 | 20 |
| 8:15 AM | 0 | 0 | 0 | 3 | 3 | |
| 8:30 AM | 0 | 0 | 4 | 2 | 6 | |
| 8:45 AM | 0 | 0 | 6 | 4 | 10 | |
| Peak Hour | 0 | 1 | 6 | 8 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | Cutting Blvd |
| ID: | W13 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 47 | 44 | 0 | 0 | 88 | 12 | 40 | 6 | 216 | 13 | 43 | 14 | 523 | 2395 |
| 7:15 AM | 60 | 46 | 0 | 0 | 125 | 17 | 41 | 6 | 197 | 23 | 56 | 13 | 584 | 2558 |
| 7:30 AM | 59 | 46 | 0 | 0 | 145 | 18 | 26 | 4 | 209 | 18 | 55 | 9 | 589 | 2603 |
| 7:45 AM | 81 | 83 | 0 | 0 | 161 | 18 | 43 | 6 | 209 | 28 | 59 | 11 | 699 | 2632 |
| 8:00 AM | 77 | 88 | 0 | 0 | 113 | 23 | 59 | 8 | 226 | 18 | 64 | 10 | 686 | 2547 |
| 8:15 AM | 72 | 88 | 1 | 0 | 139 | 25 | 30 | 4 | 184 | 20 | 58 | 8 | 629 | |
| 8:30 AM | 61 | 98 | 0 | 0 | 119 | 33 | 48 | 3 | 168 | 27 | 46 | 15 | 618 | |
| 8:45 AM | 73 | 110 | 0 | 0 | 133 | 32 | 36 | 3 | 169 | 17 | 34 | 7 | 614 | |
| Peak Hour | 291 | 357 | 1 | 0 | 532 | 99 | 180 | 21 | 787 | 93 | 227 | 44 | | |

## BIKES

| Interval | San Pablo Ave | | Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 7:15 AM | 2 | 1 | 0 | 0 | 3 | 6 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 1 | 1 | 0 | 1 | 3 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 2 | 0 | 1 | | |

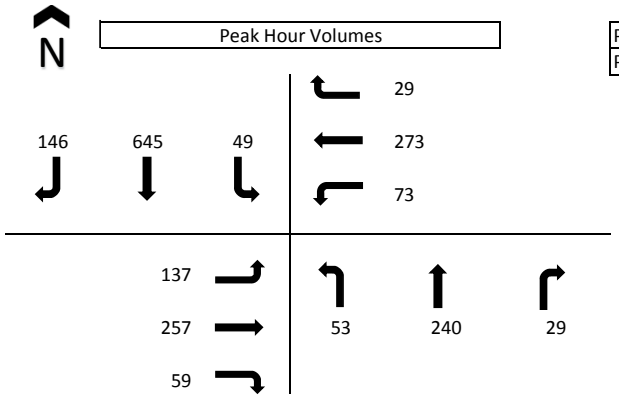
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 7 | 1 | 2 | 2 | 12 | 100 |
| 7:15 AM | 20 | 0 | 5 | 5 | 30 | 125 |
| 7:30 AM | 14 | 0 | 1 | 5 | 20 | 112 |
| 7:45 AM | 27 | 0 | 5 | 6 | 38 | 125 |
| 8:00 AM | 17 | 0 | 5 | 15 | 37 | 102 |
| 8:15 AM | 10 | 0 | 6 | 1 | 17 | |
| 8:30 AM | 21 | 0 | 4 | 8 | 33 | |
| 8:45 AM | 9 | 0 | 3 | 3 | 15 | |
| Peak Hour | 75 | 0 | 20 | 30 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Ave |
| E/W: | Central Ave |
| ID: | W14 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Central Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 7 | 31 | 4 | 8 | 97 | 16 | 12 | 29 | 9 | 5 | 33 | 5 | 256 | 1550 |
| 7:15 AM | 11 | 27 | 5 | 8 | 124 | 25 | 24 | 63 | 5 | 8 | 52 | 6 | 358 | 1786 |
| 7:30 AM | 5 | 36 | 6 | 13 | 181 | 31 | 32 | 56 | 10 | 11 | 59 | 3 | 443 | 1914 |
| 7:45 AM | 13 | 50 | 5 | 21 | 176 | 31 | 31 | 76 | 15 | 18 | 54 | 3 | 493 | 1990 |
| 8:00 AM | 14 | 39 | 7 | 9 | 151 | 34 | 45 | 58 | 14 | 25 | 87 | 9 | 492 | 1980 |
| 8:15 AM | 15 | 66 | 7 | 11 | 145 | 37 | 36 | 69 | 17 | 13 | 65 | 5 | 486 | |
| 8:30 AM | 11 | 85 | 10 | 8 | 173 | 44 | 25 | 54 | 13 | 17 | 67 | 12 | 519 | |
| 8:45 AM | 13 | 57 | 6 | 13 | 165 | 25 | 46 | 62 | 26 | 17 | 47 | 6 | 483 | |
| Peak Hour | 53 | 240 | 29 | 49 | 645 | 146 | 137 | 257 | 59 | 73 | 273 | 29 | | |

## BIKES

| Interval | San Pablo Ave | | Central Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 1 | 2 | 5 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 9 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 9 |
| 7:45 AM | 1 | 0 | 1 | 0 | 2 | 11 |
| 8:00 AM | 0 | 4 | 2 | 0 | 6 | 13 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 1 | 1 | 2 | |
| 8:45 AM | 0 | 0 | 3 | 1 | 4 | |
| Peak Hour | 1 | 5 | 4 | 1 | | |

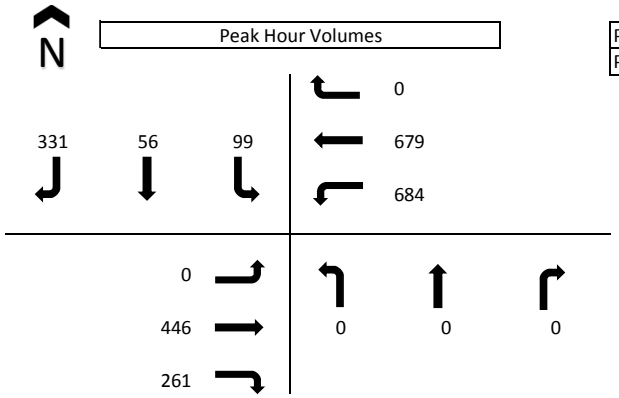
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Central Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 5 | 3 | 1 | 1 | 10 | 87 |
| 7:15 AM | 6 | 7 | 0 | 9 | 22 | 94 |
| 7:30 AM | 6 | 10 | 2 | 2 | 20 | 96 |
| 7:45 AM | 18 | 9 | 6 | 2 | 35 | 99 |
| 8:00 AM | 8 | 8 | 0 | 1 | 17 | 90 |
| 8:15 AM | 8 | 12 | 1 | 3 | 24 | |
| 8:30 AM | 10 | 7 | 5 | 1 | 23 | |
| 8:45 AM | 6 | 14 | 5 | 1 | 26 | |
| Peak Hour | 44 | 36 | 12 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | HWY 80 WB Ramps |
| E/W: | San Pablo Dam Rd |
| ID: | W15 |




| | |
|---|---|
| Peak Hour: | 7:30 AM to 8:30 AM |
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | HWY 80 WB Ramps | | | | | | San Pablo Dam Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 16 | 2 | 78 | 0 | 89 | 60 | 185 | 96 | 0 | 526 | 2389 |
| 7:15 AM | 0 | 0 | 0 | 19 | 18 | 66 | 0 | 106 | 71 | 179 | 120 | 0 | 579 | 2504 |
| 7:30 AM | 0 | 0 | 0 | 22 | 16 | 64 | 0 | 114 | 76 | 191 | 162 | 0 | 645 | 2556 |
| 7:45 AM | 0 | 0 | 0 | 13 | 11 | 78 | 0 | 132 | 68 | 174 | 163 | 0 | 639 | 2541 |
| 8:00 AM | 0 | 0 | 0 | 25 | 15 | 103 | 0 | 110 | 61 | 156 | 171 | 0 | 641 | 2510 |
| 8:15 AM | 0 | 0 | 0 | 39 | 14 | 86 | 0 | 90 | 56 | 163 | 183 | 0 | 631 | |
| 8:30 AM | 0 | 0 | 0 | 21 | 9 | 98 | 0 | 114 | 48 | 180 | 160 | 0 | 630 | |
| 8:45 AM | 0 | 0 | 0 | 18 | 10 | 110 | 0 | 86 | 58 | 167 | 159 | 0 | 608 | |
| Peak Hour | 0 | 0 | 0 | 99 | 56 | 331 | 0 | 446 | 261 | 684 | 679 | 0 | | |

## BIKES

| Interval | HWY 80 WB Ramps | | San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 2 | | |

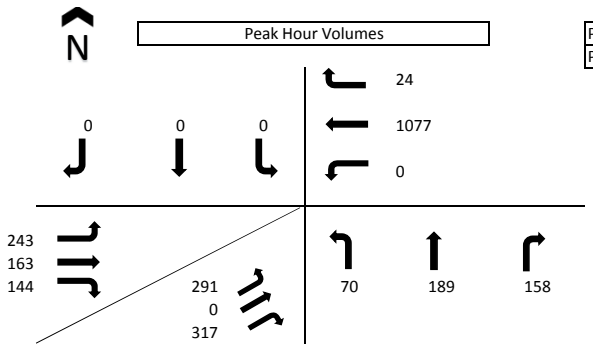
## PEDESTRIANS

| Interval | Crossing HWY 80 WB Ramps | | Crossing San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 7 |
| 7:15 AM | 0 | 3 | 0 | 0 | 3 | 8 |
| 7:30 AM | 0 | 1 | 0 | 0 | 1 | 6 |
| 7:45 AM | 0 | 3 | 0 | 0 | 3 | 9 |
| 8:00 AM | 0 | 1 | 0 | 0 | 1 | 8 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 4 | 0 | 0 | 4 | |
| 8:45 AM | 0 | 2 | 0 | 0 | 2 | |
| Peak Hour | 0 | 6 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/30/2015 |
| Count Period: | AM |
| N/S: | Amador Street |
| E/W: | San Pablo Dam Road |
| ID: | W16 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | Amador Street | | | | | | San Pablo Dam Road | | | | | | 80 WB Off-Ramp | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | NEL | NET | NER | Interval | Hourly |
| 7:00 AM | 5 | 17 | 23 | 0 | 0 | 0 | 60 | 32 | 11 | 0 | 214 | 9 | 25 | 1 | 59 | 456 | 2261 |
| 7:15 AM | 3 | 26 | 28 | 0 | 0 | 0 | 53 | 31 | 18 | 0 | 242 | 5 | 54 | 0 | 63 | 523 | 2484 |
| 7:30 AM | 6 | 34 | 28 | 0 | 0 | 0 | 79 | 29 | 16 | 0 | 303 | 9 | 56 | 0 | 48 | 608 | 2617 |
| 7:45 AM | 9 | 49 | 41 | 0 | 0 | 0 | 87 | 43 | 23 | 0 | 272 | 1 | 83 | 0 | 66 | 674 | 2676 |
| 8:00 AM | 15 | 58 | 41 | 0 | 0 | 0 | 69 | 40 | 34 | 0 | 265 | 5 | 66 | 0 | 86 | 679 | 2563 |
| 8:15 AM | 25 | 52 | 35 | 0 | 0 | 0 | 47 | 44 | 54 | 0 | 249 | 6 | 68 | 0 | 76 | 656 | |
| 8:30 AM | 21 | 30 | 41 | 0 | 0 | 0 | 40 | 36 | 33 | 0 | 291 | 12 | 74 | 0 | 89 | 667 | |
| 8:45 AM | 12 | 37 | 23 | 0 | 0 | 1 | 47 | 42 | 18 | 1 | 213 | 7 | 89 | 0 | 71 | 561 | |
| Peak Hour | 70 | 189 | 158 | 0 | 0 | 0 | 243 | 163 | 144 | 0 | 1077 | 24 | 291 | 0 | 317 | | |

## BIKES

| Interval | Amador Street | | San Pablo Dam Road | | Crossing 80 WB Off-Ramp | Totals | |
|---|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | NEB | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 0 | 1 | 4 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 2 | 0 | 1 | 0 | 0 | 3 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 0 | 0 | 0 | 1 | |
| Peak Hour | 2 | 0 | 1 | 0 | 0 | | |

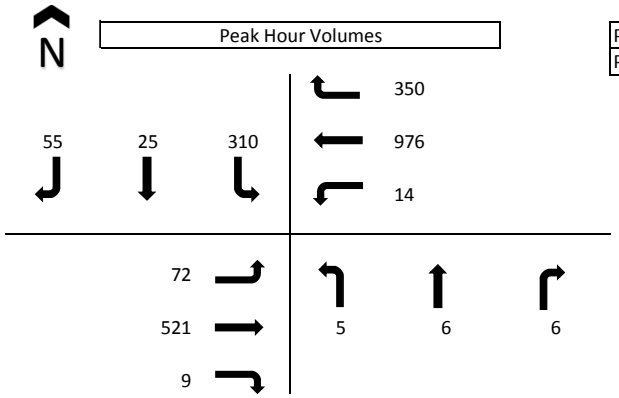
## PEDESTRIANS

| Interval | Crossing Amador Street | | Crossing San Pablo Dam Road | | Crossing 80 WB Off-Ramp | Totals | |
|---|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | SW Leg | Interval | Hourly |
| 7:00 AM | 1 | 1 | 0 | 0 | 0 | 2 | 20 |
| 7:15 AM | 1 | 2 | 0 | 0 | 1 | 4 | 19 |
| 7:30 AM | 0 | 4 | 0 | 0 | 1 | 5 | 15 |
| 7:45 AM | 1 | 4 | 0 | 0 | 4 | 9 | 10 |
| 8:00 AM | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 4 | 0 | 0 | 4 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 PM |
| N/S: | El Portal Dr |
| E/W: | San Pablo Dam Rd |
| ID: | W17 |




| | |
|---|---|
| Peak Hour: | 8:00 AM to 9:00 AM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | El Portal Dr | | | | | | San Pablo Dam Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 2 | 2 | 56 | 1 | 3 | 7 | 96 | 2 | 0 | 216 | 32 | 417 | 2019 |
| 7:15 AM | 0 | 0 | 0 | 76 | 1 | 18 | 9 | 97 | 3 | 1 | 271 | 51 | 527 | 2205 |
| 7:30 AM | 1 | 2 | 0 | 76 | 2 | 11 | 12 | 90 | 1 | 2 | 291 | 66 | 554 | 2276 |
| 7:45 AM | 0 | 0 | 1 | 75 | 0 | 17 | 11 | 101 | 1 | 0 | 238 | 77 | 521 | 2313 |
| 8:00 AM | 1 | 1 | 1 | 94 | 5 | 6 | 19 | 153 | 0 | 3 | 246 | 74 | 603 | 2349 |
| 8:15 AM | 1 | 0 | 2 | 83 | 6 | 14 | 13 | 129 | 2 | 5 | 256 | 87 | 598 | |
| 8:30 AM | 1 | 1 | 0 | 88 | 9 | 21 | 18 | 120 | 4 | 3 | 230 | 96 | 591 | |
| 8:45 AM | 2 | 4 | 3 | 45 | 5 | 14 | 22 | 119 | 3 | 3 | 244 | 93 | 557 | |
| Peak Hour | 5 | 6 | 6 | 310 | 25 | 55 | 72 | 521 | 9 | 14 | 976 | 350 | | |

## BIKES

| Interval | El Portal Dr | | San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 2 | 1 | 3 | 9 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 6 |
| 7:30 AM | 0 | 1 | 1 | 2 | 4 | 6 |
| 7:45 AM | 0 | 0 | 0 | 1 | 1 | 5 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 0 | 1 | 0 | 2 | 3 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 3 | | |

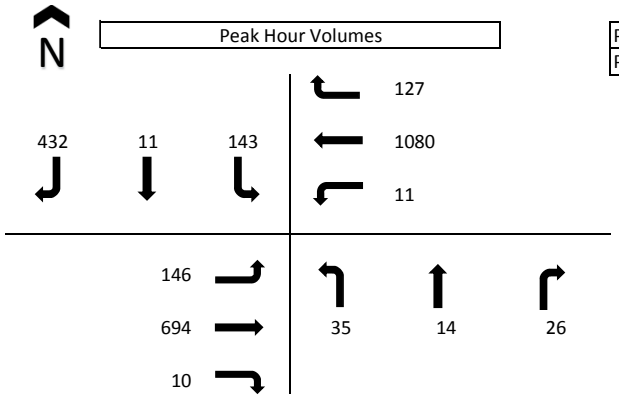
## PEDESTRIANS

| Interval | Crossing El Portal Dr | | Crossing San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 1 | 0 | 2 | 10 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 9 |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 10 |
| 7:45 AM | 1 | 2 | 4 | 0 | 7 | 10 |
| 8:00 AM | 1 | 0 | 0 | 0 | 1 | 8 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:45 AM | 3 | 2 | 0 | 0 | 5 | |
| Peak Hour | 6 | 2 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 PM |
| N/S: | Appian Way/La Colina Rd |
| E/W: | San Pablo Dam Rd |
| ID: | W18 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.88 |

## AUTOMOBILES

| Interval | Appian Way/La Colina Rd | | | | | | San Pablo Dam Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 4 | 1 | 3 | 15 | 1 | 78 | 19 | 124 | 4 | 2 | 162 | 18 | 431 | 2227 |
| 7:15 AM | 10 | 3 | 2 | 30 | 3 | 114 | 22 | 132 | 3 | 1 | 223 | 15 | 558 | 2442 |
| 7:30 AM | 15 | 5 | 6 | 20 | 1 | 112 | 34 | 118 | 4 | 1 | 274 | 26 | 616 | 2660 |
| 7:45 AM | 12 | 3 | 4 | 23 | 4 | 112 | 35 | 145 | 1 | 2 | 246 | 35 | 622 | 2729 |
| 8:00 AM | 3 | 1 | 10 | 30 | 1 | 107 | 34 | 188 | 4 | 0 | 245 | 23 | 646 | 2642 |
| 8:15 AM | 10 | 7 | 8 | 55 | 2 | 101 | 33 | 203 | 2 | 3 | 313 | 39 | 776 | |
| 8:30 AM | 10 | 3 | 4 | 35 | 4 | 112 | 44 | 158 | 3 | 6 | 276 | 30 | 685 | |
| 8:45 AM | 4 | 4 | 2 | 31 | 2 | 107 | 39 | 137 | 6 | 3 | 179 | 21 | 535 | |
| Peak Hour | 35 | 14 | 26 | 143 | 11 | 432 | 146 | 694 | 10 | 11 | 1080 | 127 | | |

## BIKES

| Interval | Appian Way/La Colina Rd | | San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 2 | 0 | 3 | 6 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:30 AM | 0 | 1 | 1 | 0 | 2 | 4 |
| 7:45 AM | 0 | 0 | 1 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 1 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 0 | 1 | 1 | 0 | | |

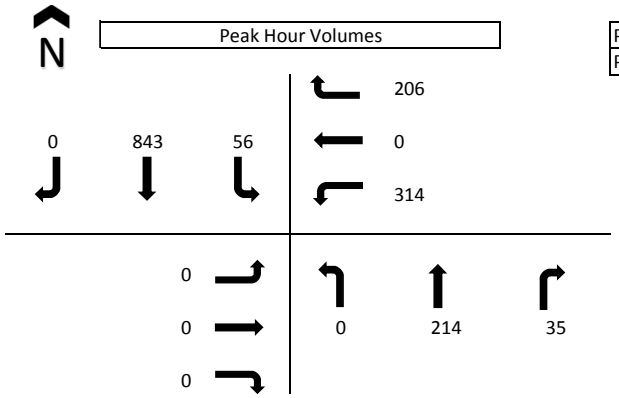
## PEDESTRIANS

| Interval | Crossing Appian Way/La Colina Rd | | Crossing San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 17 |
| 7:15 AM | 1 | 2 | 1 | 1 | 5 | 24 |
| 7:30 AM | 1 | 1 | 1 | 0 | 3 | 26 |
| 7:45 AM | 1 | 2 | 2 | 3 | 8 | 25 |
| 8:00 AM | 4 | 1 | 2 | 1 | 8 | 21 |
| 8:15 AM | 0 | 4 | 2 | 1 | 7 | |
| 8:30 AM | 1 | 1 | 0 | 0 | 2 | |
| 8:45 AM | 1 | 2 | 0 | 1 | 4 | |
| Peak Hour | 6 | 8 | 6 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Dam Rd |
| E/W: | Castro Ranch Rd |
| ID: | W19 |




| | |
|---|---|
| Peak Hour: | 7:00 AM to 8:00 AM |
| Peak Hour Factor: | 0.86 |

## AUTOMOBILES

| Interval | San Pablo Dam Rd | | | | | | Castro Ranch Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 28 | 4 | 6 | 264 | 0 | 0 | 0 | 0 | 125 | 0 | 36 | 463 | 1668 |
| 7:15 AM | 0 | 61 | 13 | 9 | 272 | 0 | 0 | 0 | 0 | 76 | 0 | 52 | 483 | 1544 |
| 7:30 AM | 0 | 60 | 6 | 13 | 192 | 0 | 0 | 0 | 0 | 65 | 0 | 65 | 401 | 1435 |
| 7:45 AM | 0 | 65 | 12 | 28 | 115 | 0 | 0 | 0 | 0 | 48 | 0 | 53 | 321 | 1464 |
| 8:00 AM | 0 | 67 | 10 | 17 | 141 | 0 | 0 | 0 | 0 | 47 | 0 | 57 | 339 | 1457 |
| 8:15 AM | 0 | 74 | 13 | 23 | 149 | 0 | 0 | 0 | 0 | 72 | 0 | 43 | 374 | |
| 8:30 AM | 0 | 71 | 13 | 34 | 173 | 0 | 0 | 0 | 0 | 92 | 0 | 47 | 430 | |
| 8:45 AM | 0 | 56 | 13 | 17 | 158 | 0 | 0 | 0 | 0 | 47 | 0 | 23 | 314 | |
| Peak Hour | 0 | 214 | 35 | 56 | 843 | 0 | 0 | 0 | 0 | 314 | 0 | 206 | | |

## BIKES

| Interval | San Pablo Dam Rd | | Castro Ranch Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 1 | 0 | 0 | 1 | 2 | 3 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

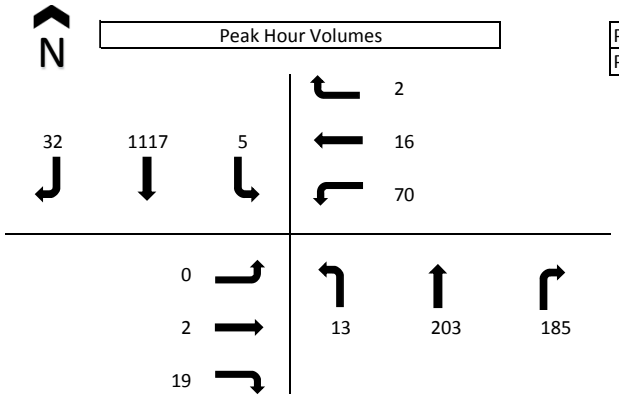
## PEDESTRIANS

| Interval | Crossing San Pablo Dam Rd | | Crossing Castro Ranch Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 2 | 0 | 0 | 0 | 2 | 3 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | San Pablo Dam Rd/Camino Pablo |
| E/W: | Wildcat Canyon Rd/Bear Creek Rd |
| ID: | W20 |




| | |
|---|---|
| Peak Hour: | 7:00 AM to 8:00 AM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | San Pablo Dam Rd/Camino Pablo | | | | | | Wildcat Canyon Rd/Bear Creek Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 1 | 39 | 9 | 0 | 304 | 8 | 0 | 0 | 6 | 9 | 1 | 1 | 378 | 1664 |
| 7:15 AM | 2 | 52 | 18 | 1 | 326 | 9 | 0 | 1 | 4 | 8 | 3 | 1 | 425 | 1583 |
| 7:30 AM | 6 | 57 | 49 | 2 | 281 | 8 | 0 | 0 | 4 | 25 | 6 | 0 | 438 | 1519 |
| 7:45 AM | 4 | 55 | 109 | 2 | 206 | 7 | 0 | 1 | 5 | 28 | 6 | 0 | 423 | 1469 |
| 8:00 AM | 9 | 61 | 23 | 4 | 145 | 5 | 2 | 1 | 3 | 36 | 8 | 0 | 297 | 1415 |
| 8:15 AM | 10 | 78 | 10 | 0 | 209 | 5 | 1 | 0 | 4 | 33 | 10 | 1 | 361 | |
| 8:30 AM | 4 | 65 | 49 | 4 | 231 | 7 | 1 | 0 | 2 | 18 | 7 | 0 | 388 | |
| 8:45 AM | 11 | 66 | 31 | 1 | 220 | 22 | 0 | 2 | 6 | 4 | 5 | 1 | 369 | |
| Peak Hour | 13 | 203 | 185 | 5 | 1117 | 32 | 0 | 2 | 19 | 70 | 16 | 2 | | |

## BIKES

| Interval | San Pablo Dam Rd/Camino Pablo | | Wildcat Canyon Rd/Bear Creek Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 2 | 0 | 2 | 4 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 7:30 AM | 0 | 1 | 0 | 0 | 1 | 7 |
| 7:45 AM | 0 | 0 | 1 | 0 | 1 | 6 |
| 8:00 AM | 2 | 0 | 1 | 1 | 4 | 6 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 1 | 3 | 0 | | |

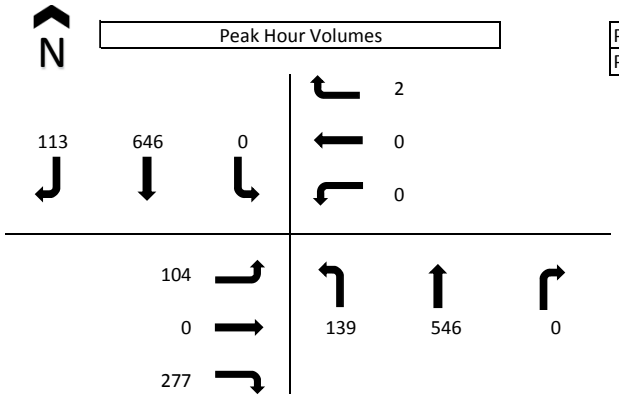
## PEDESTRIANS

| Interval | Crossing San Pablo Dam Rd/Camino Pablo | | Crossing Wildcat Canyon Rd/Bear Creek Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | El Portal Dr |
| E/W: | Driveway/Road 20 |
| ID: | W21 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.83 |

## AUTOMOBILES

| Interval | El Portal Dr | | | | | | Driveway/Road 20 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 16 | 49 | 0 | 0 | 116 | 7 | 1 | 0 | 49 | 0 | 0 | 0 | 238 | 1200 |
| 7:15 AM | 18 | 58 | 0 | 0 | 128 | 5 | 3 | 0 | 35 | 0 | 0 | 0 | 247 | 1434 |
| 7:30 AM | 34 | 88 | 0 | 0 | 143 | 13 | 1 | 0 | 59 | 0 | 0 | 1 | 339 | 1736 |
| 7:45 AM | 24 | 107 | 0 | 0 | 163 | 19 | 9 | 0 | 53 | 0 | 0 | 1 | 376 | 1827 |
| 8:00 AM | 36 | 133 | 0 | 0 | 155 | 37 | 38 | 0 | 73 | 0 | 0 | 0 | 472 | 1777 |
| 8:15 AM | 41 | 164 | 0 | 0 | 163 | 38 | 47 | 0 | 96 | 0 | 0 | 0 | 549 | |
| 8:30 AM | 38 | 142 | 0 | 0 | 165 | 19 | 10 | 0 | 55 | 0 | 0 | 1 | 430 | |
| 8:45 AM | 31 | 137 | 0 | 0 | 106 | 10 | 10 | 0 | 30 | 0 | 0 | 2 | 326 | |
| Peak Hour | 139 | 546 | 0 | 0 | 646 | 113 | 104 | 0 | 277 | 0 | 0 | 2 | | |

## BIKES

| Interval | El Portal Dr | | Driveway/Road 20 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 1 | 0 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 1 | 0 | | |

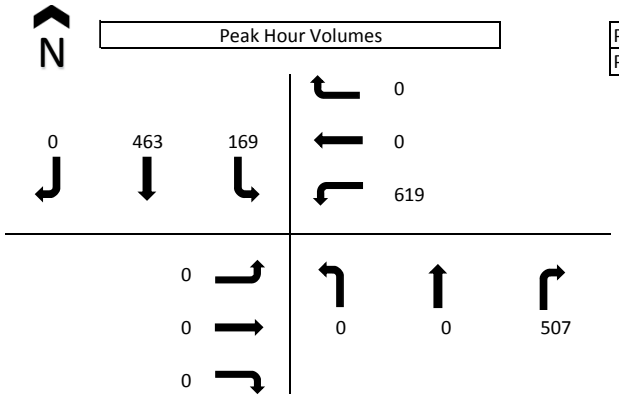
## PEDESTRIANS

| Interval | Crossing El Portal Dr | | Crossing Driveway/Road 20 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 23 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 27 |
| 7:30 AM | 0 | 3 | 0 | 5 | 8 | 30 |
| 7:45 AM | 0 | 5 | 0 | 10 | 15 | 28 |
| 8:00 AM | 0 | 3 | 0 | 1 | 4 | 28 |
| 8:15 AM | 0 | 2 | 0 | 1 | 3 | |
| 8:30 AM | 0 | 1 | 0 | 5 | 6 | |
| 8:45 AM | 1 | 4 | 0 | 10 | 15 | |
| Peak Hour | 0 | 11 | 0 | 17 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | El Portal/ HWY 80 WB Off-Ramp |
| E/W: | El Portal Dr |
| ID: | W22 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.92 |

## AUTOMOBILES

| Interval | El Portal/ HWY 80 WB Off-Ramp | | | | | | El Portal Dr | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 0 | 0 | 80 | 22 | 84 | 0 | 0 | 0 | 0 | 69 | 0 | 0 | 255 | 1434 |
| 7:15 AM | 0 | 0 | 93 | 36 | 105 | 0 | 0 | 0 | 0 | 84 | 0 | 0 | 318 | 1658 |
| 7:30 AM | 0 | 0 | 122 | 31 | 141 | 0 | 0 | 0 | 0 | 104 | 0 | 0 | 398 | 1754 |
| 7:45 AM | 0 | 0 | 147 | 41 | 132 | 0 | 0 | 0 | 0 | 143 | 0 | 0 | 463 | 1758 |
| 8:00 AM | 0 | 0 | 161 | 30 | 126 | 0 | 0 | 0 | 0 | 162 | 0 | 0 | 479 | 1692 |
| 8:15 AM | 0 | 0 | 99 | 51 | 107 | 0 | 0 | 0 | 0 | 157 | 0 | 0 | 414 | |
| 8:30 AM | 0 | 0 | 100 | 47 | 98 | 0 | 0 | 0 | 0 | 157 | 0 | 0 | 402 | |
| 8:45 AM | 0 | 0 | 89 | 43 | 94 | 0 | 0 | 0 | 0 | 171 | 0 | 0 | 397 | |
| Peak Hour | 0 | 0 | 507 | 169 | 463 | 0 | 0 | 0 | 0 | 619 | 0 | 0 | | |

## BIKES

| Interval | El Portal/ HWY 80 WB Off-Ramp | | El Portal Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

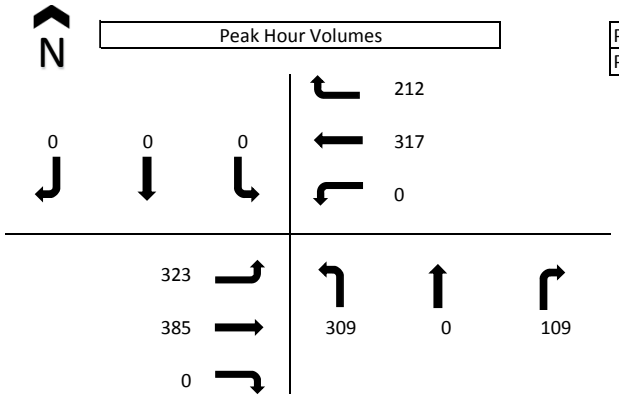
## PEDESTRIANS

| Interval | Crossing El Portal/ HWY 80 WB Off-Ramp | | Crossing El Portal Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 3 | 0 | 0 | 0 | 3 | |
| 8:45 AM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 3 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | HWY 80 EB Ramps |
| E/W: | El Portal Dr |
| ID: | W23 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.88 |

## AUTOMOBILES

| Interval | HWY 80 EB Ramps | | | | | | El Portal Dr | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 35 | 0 | 19 | 0 | 0 | 0 | 48 | 53 | 0 | 0 | 37 | 20 | 212 | 1198 |
| 7:15 AM | 36 | 0 | 22 | 0 | 0 | 0 | 49 | 81 | 0 | 0 | 52 | 32 | 272 | 1454 |
| 7:30 AM | 36 | 0 | 11 | 0 | 0 | 0 | 70 | 81 | 0 | 0 | 67 | 46 | 311 | 1577 |
| 7:45 AM | 69 | 0 | 23 | 0 | 0 | 0 | 89 | 97 | 0 | 0 | 76 | 49 | 403 | 1655 |
| 8:00 AM | 92 | 0 | 28 | 0 | 0 | 0 | 100 | 108 | 0 | 0 | 73 | 67 | 468 | 1647 |
| 8:15 AM | 69 | 0 | 37 | 0 | 0 | 0 | 64 | 89 | 0 | 0 | 89 | 47 | 395 | |
| 8:30 AM | 79 | 0 | 21 | 0 | 0 | 0 | 70 | 91 | 0 | 0 | 79 | 49 | 389 | |
| 8:45 AM | 75 | 1 | 13 | 0 | 0 | 0 | 64 | 79 | 0 | 0 | 95 | 68 | 395 | |
| Peak Hour | 309 | 0 | 109 | 0 | 0 | 0 | 323 | 385 | 0 | 0 | 317 | 212 | | |

## BIKES

| Interval | HWY 80 EB Ramps | | El Portal Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 1 | 1 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

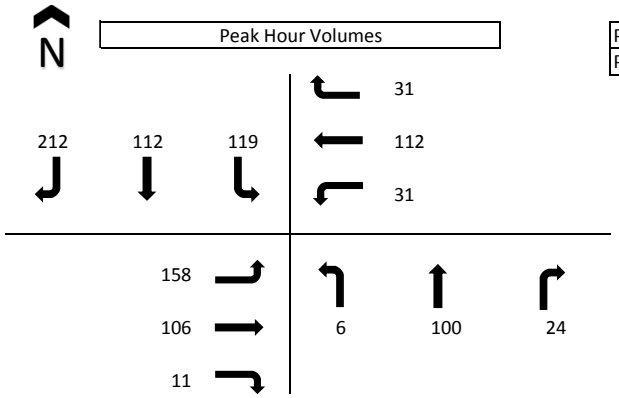
## PEDESTRIANS

| Interval | Crossing HWY 80 EB Ramps | | Crossing El Portal Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 1 | 0 | 0 | 0 | 1 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 1 | 0 | 0 | 0 | 1 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 2 | 0 | 0 | 0 | 2 | |
| 8:30 AM | 1 | 0 | 0 | 0 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 4 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Canal Blvd |
| E/W: | W Cutting Blvd |
| ID: | W24 |




| | |
|---|---|
| Peak Hour: | 8:00 AM to 9:00 AM |
| Peak Hour Factor: | 0.92 |

## AUTOMOBILES

| Interval | Canal Blvd | | | | | | W Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 1 | 32 | 8 | 26 | 28 | 13 | 29 | 9 | 1 | 2 | 9 | 7 | 165 | 811 |
| 7:15 AM | 1 | 19 | 5 | 31 | 26 | 21 | 38 | 18 | 6 | 4 | 10 | 3 | 182 | 894 |
| 7:30 AM | 1 | 25 | 4 | 33 | 36 | 30 | 37 | 15 | 3 | 9 | 13 | 5 | 211 | 991 |
| 7:45 AM | 1 | 35 | 9 | 45 | 48 | 37 | 41 | 9 | 6 | 2 | 14 | 6 | 253 | 1007 |
| 8:00 AM | 2 | 21 | 6 | 23 | 30 | 49 | 44 | 21 | 3 | 8 | 34 | 7 | 248 | 1022 |
| 8:15 AM | 0 | 22 | 5 | 31 | 14 | 70 | 51 | 36 | 0 | 1 | 40 | 9 | 279 | |
| 8:30 AM | 1 | 32 | 5 | 33 | 18 | 39 | 28 | 24 | 5 | 11 | 21 | 10 | 227 | |
| 8:45 AM | 3 | 25 | 8 | 32 | 50 | 54 | 35 | 25 | 3 | 11 | 17 | 5 | 268 | |
| Peak Hour | 6 | 100 | 24 | 119 | 112 | 212 | 158 | 106 | 11 | 31 | 112 | 31 | | |

## BIKES

| Interval | Canal Blvd | | W Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 1 | 0 | 1 | 7 |
| 7:15 AM | 0 | 0 | 0 | 2 | 2 | 10 |
| 7:30 AM | 0 | 0 | 3 | 0 | 3 | 9 |
| 7:45 AM | 0 | 0 | 1 | 0 | 1 | 7 |
| 8:00 AM | 0 | 1 | 1 | 2 | 4 | 7 |
| 8:15 AM | 0 | 0 | 1 | 0 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 1 | 3 | 3 | | |

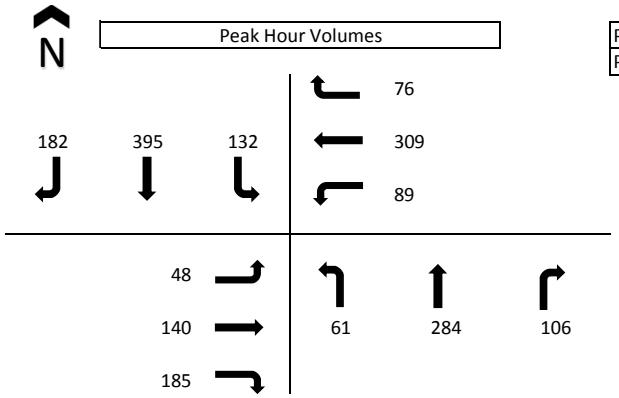
## PEDESTRIANS

| Interval | Crossing Canal Blvd | | Crossing W Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:15 AM | 2 | 0 | 0 | 0 | 2 | 3 |
| 7:30 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Harbour Way S |
| E/W: | Cutting Blvd |
| ID: | W25 |




| | |
|---|---|
| Peak Hour: | 7:15 AM to 8:15 AM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | Harbour Way S | | | | | | Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 7 | 55 | 25 | 27 | 87 | 51 | 7 | 21 | 30 | 25 | 74 | 15 | 424 | 1914 |
| 7:15 AM | 10 | 56 | 24 | 23 | 119 | 69 | 5 | 26 | 52 | 29 | 99 | 16 | 528 | 2007 |
| 7:30 AM | 19 | 74 | 27 | 31 | 112 | 43 | 16 | 36 | 32 | 19 | 68 | 13 | 490 | 2001 |
| 7:45 AM | 15 | 73 | 25 | 35 | 76 | 43 | 14 | 37 | 45 | 21 | 64 | 24 | 472 | 1998 |
| 8:00 AM | 17 | 81 | 30 | 43 | 88 | 27 | 13 | 41 | 56 | 20 | 78 | 23 | 517 | 1930 |
| 8:15 AM | 16 | 85 | 27 | 38 | 90 | 23 | 14 | 57 | 46 | 18 | 77 | 31 | 522 | |
| 8:30 AM | 17 | 60 | 32 | 31 | 88 | 32 | 13 | 51 | 41 | 22 | 71 | 29 | 487 | |
| 8:45 AM | 13 | 71 | 23 | 29 | 56 | 18 | 9 | 35 | 56 | 17 | 55 | 22 | 404 | |
| Peak Hour | 61 | 284 | 106 | 132 | 395 | 182 | 48 | 140 | 185 | 89 | 309 | 76 | | |

## BIKES

| Interval | Harbour Way S | | Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 1 | 0 | 1 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:30 AM | 1 | 0 | 0 | 1 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 1 | 0 | | |

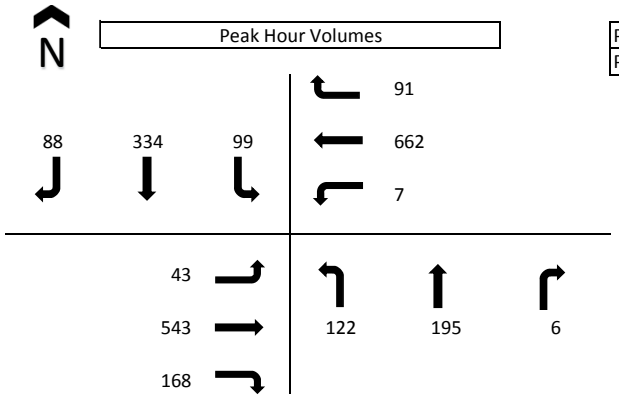
## PEDESTRIANS

| Interval | Crossing Harbour Way S | | Crossing Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 3 | 2 | 3 | 0 | 8 | 18 |
| 7:15 AM | 0 | 0 | 1 | 0 | 1 | 13 |
| 7:30 AM | 4 | 0 | 2 | 0 | 6 | 14 |
| 7:45 AM | 1 | 0 | 2 | 0 | 3 | 8 |
| 8:00 AM | 1 | 0 | 2 | 0 | 3 | 7 |
| 8:15 AM | 1 | 0 | 1 | 0 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 1 | 1 | 0 | 2 | |
| Peak Hour | 6 | 0 | 7 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 7:00 AM to 9:00 AM |
| N/S: | Carlson Blvd |
| E/W: | Cutting Blvd |
| ID: | W26 |




| | |
|---|---|
| Peak Hour: | 7:45 AM to 8:45 AM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | Carlson Blvd | | | | | | Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 8 | 18 | 0 | 9 | 47 | 46 | 4 | 67 | 19 | 0 | 143 | 5 | 366 | 1833 |
| 7:15 AM | 9 | 23 | 2 | 3 | 82 | 29 | 4 | 66 | 14 | 4 | 141 | 6 | 383 | 2038 |
| 7:30 AM | 10 | 22 | 1 | 7 | 116 | 35 | 9 | 99 | 38 | 1 | 129 | 10 | 477 | 2269 |
| 7:45 AM | 23 | 43 | 2 | 10 | 150 | 16 | 14 | 144 | 42 | 3 | 144 | 16 | 607 | 2358 |
| 8:00 AM | 26 | 56 | 2 | 28 | 79 | 19 | 10 | 133 | 39 | 1 | 160 | 18 | 571 | 2198 |
| 8:15 AM | 36 | 47 | 1 | 37 | 47 | 23 | 10 | 148 | 59 | 1 | 176 | 29 | 614 | |
| 8:30 AM | 37 | 49 | 1 | 24 | 58 | 30 | 9 | 118 | 28 | 2 | 182 | 28 | 566 | |
| 8:45 AM | 13 | 31 | 2 | 10 | 64 | 26 | 15 | 97 | 19 | 3 | 149 | 18 | 447 | |
| Peak Hour | 122 | 195 | 6 | 99 | 334 | 88 | 43 | 543 | 168 | 7 | 662 | 91 | | |

## BIKES

| Interval | Carlson Blvd | | Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 0 | 1 | 4 |
| 7:15 AM | 1 | 0 | 0 | 0 | 1 | 4 |
| 7:30 AM | 0 | 0 | 1 | 1 | 2 | 6 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 6 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 6 |
| 8:15 AM | 0 | 1 | 0 | 2 | 3 | |
| 8:30 AM | 0 | 1 | 0 | 1 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 2 | 0 | 4 | | |

## PEDESTRIANS

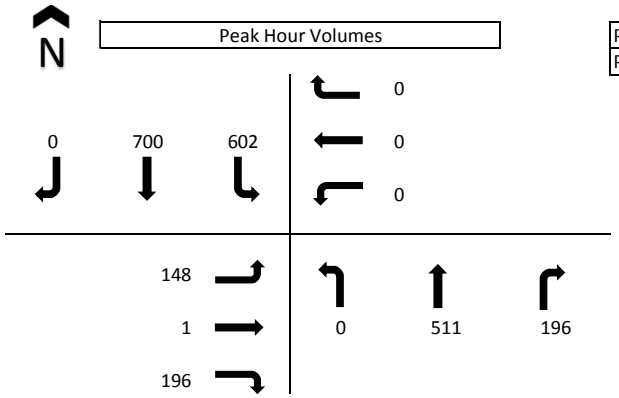
| Interval | Crossing Carlson Blvd | | Crossing Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 2 | 1 | 0 | 1 | 4 | 29 |
| 7:15 AM | 4 | 2 | 1 | 0 | 7 | 33 |
| 7:30 AM | 6 | 2 | 0 | 0 | 8 | 42 |
| 7:45 AM | 6 | 4 | 0 | 0 | 10 | 40 |
| 8:00 AM | 5 | 2 | 1 | 0 | 8 | 34 |
| 8:15 AM | 4 | 10 | 2 | 0 | 16 | |
| 8:30 AM | 3 | 3 | 0 | 0 | 6 | |
| 8:45 AM | 0 | 3 | 1 | 0 | 4 | |
| Peak Hour | 18 | 19 | 3 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Appendix D: Count Sheets - PM Peak Period

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY, APRIL 28TH, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | ALHAMBRA AVENUE |
| E/W: | EASTBOUND RAMPS TO SR-4 |
| ID: | C1 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | ALHAMBRA AVENUE | | | | | | EASTBOUND RAMPS TO SR-4 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 110 | 58 | 156 | 133 | 0 | 37 | 1 | 31 | 0 | 0 | 0 | 526 | 2258 |
| 4:15 PM | 0 | 125 | 68 | 166 | 148 | 0 | 35 | 1 | 28 | 0 | 0 | 0 | 571 | 2339 |
| 4:30 PM | 0 | 126 | 47 | 167 | 182 | 0 | 36 | 0 | 44 | 0 | 0 | 0 | 602 | 2354 |
| 4:45 PM | 0 | 127 | 40 | 147 | 162 | 0 | 43 | 0 | 40 | 0 | 0 | 0 | 559 | 2326 |
| 5:00 PM | 0 | 126 | 51 | 166 | 181 | 0 | 32 | 0 | 51 | 0 | 0 | 0 | 607 | 2347 |
| 5:15 PM | 0 | 132 | 58 | 122 | 175 | 0 | 37 | 1 | 61 | 0 | 0 | 0 | 586 | |
| 5:30 PM | 0 | 146 | 65 | 106 | 146 | 0 | 50 | 2 | 59 | 0 | 0 | 0 | 574 | |
| 5:45 PM | 0 | 156 | 75 | 114 | 151 | 0 | 38 | 0 | 46 | 0 | 0 | 0 | 580 | |
| Peak Hour | 0 | 511 | 196 | 602 | 700 | 0 | 148 | 1 | 196 | 0 | 0 | 0 | | |

## BIKES

| Interval | ALHAMBRA AVENUE | | EASTBOUND RAMPS TO SR-4 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 6 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 4 |
| 4:30 PM | 0 | 1 | 0 | 0 | 1 | 4 |
| 4:45 PM | 1 | 0 | 0 | 0 | 1 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 1 | 3 | 0 | 0 | | |

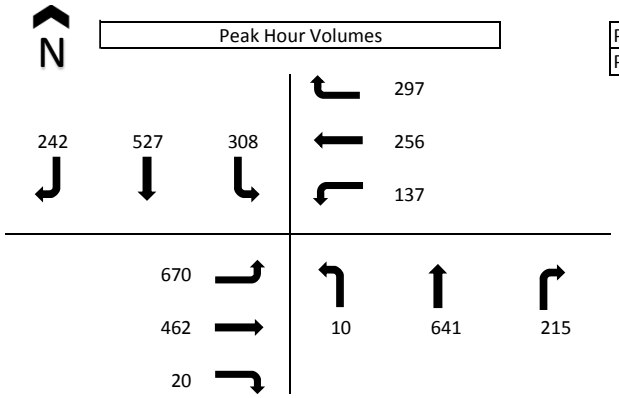
## PEDESTRIANS

| Interval | Crossing ALHAMBRA AVENUE | | Crossing EASTBOUND RAMPS TO SR-4 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: PLEASANT HILL ROAD
E/W: TAYLOR BOULEVARD
ID: C2




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | PLEASANT HILL ROAD | | | | | | TAYLOR BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 2 | 123 | 49 | 40 | 101 | 63 | 127 | 95 | 1 | 29 | 66 | 68 | 764 | 3269 |
| 4:15 PM | 1 | 105 | 52 | 40 | 100 | 71 | 146 | 113 | 2 | 30 | 53 | 60 | 773 | 3407 |
| 4:30 PM | 0 | 136 | 46 | 63 | 109 | 50 | 173 | 124 | 11 | 29 | 61 | 67 | 869 | 3625 |
| 4:45 PM | 1 | 147 | 57 | 71 | 126 | 65 | 155 | 103 | 8 | 22 | 46 | 62 | 863 | 3714 |
| 5:00 PM | 0 | 165 | 47 | 86 | 106 | 49 | 154 | 94 | 4 | 40 | 81 | 76 | 902 | 3785 |
| 5:15 PM | 5 | 144 | 55 | 82 | 158 | 69 | 175 | 114 | 3 | 40 | 66 | 80 | 991 | |
| 5:30 PM | 3 | 176 | 59 | 76 | 129 | 64 | 150 | 131 | 9 | 31 | 54 | 76 | 958 | |
| 5:45 PM | 2 | 156 | 54 | 64 | 134 | 60 | 191 | 123 | 4 | 26 | 55 | 65 | 934 | |
| Peak Hour | 10 | 641 | 215 | 308 | 527 | 242 | 670 | 462 | 20 | 137 | 256 | 297 | | |

## BIKES

| Interval | PLEASANT HILL ROAD | | TAYLOR BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 2 | 2 | 0 | 4 | 9 |
| 4:15 PM | 2 | 0 | 1 | 0 | 3 | 5 |
| 4:30 PM | 0 | 2 | 0 | 0 | 2 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:15 PM | 3 | 0 | 0 | 0 | 3 | |
| 5:30 PM | 3 | 1 | 0 | 0 | 4 | |
| 5:45 PM | 0 | 1 | 1 | 0 | 2 | |
| Peak Hour | 6 | 2 | 1 | 0 | | |

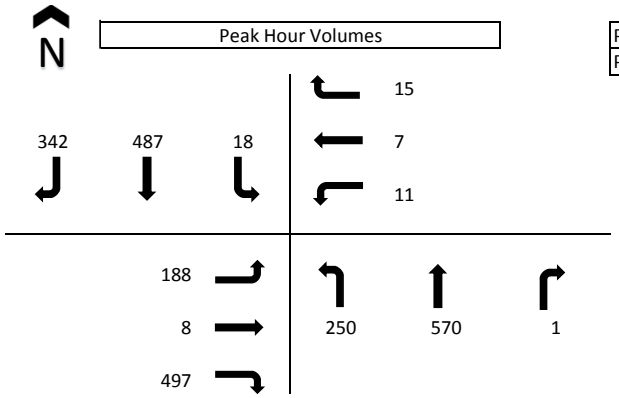
## PEDESTRIANS

| Interval | Crossing PLEASANT HILL ROAD | | Crossing TAYLOR BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 1 | 1 | 3 | 6 |
| 4:15 PM | 1 | 0 | 2 | 0 | 3 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 1 | 1 | 0 | 2 | |
| 5:45 PM | 0 | 1 | 2 | 0 | 3 | |
| Peak Hour | 0 | 2 | 3 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 22ND, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | PACHECO BOULEVARD |
| E/W: | MUIR ROAD |
| ID: | C3 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | PACHECO BOULEVARD | | | | | | MUIR ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 79 | 127 | 1 | 10 | 107 | 90 | 33 | 1 | 72 | 2 | 2 | 4 | 528 | 2146 |
| 4:15 PM | 56 | 125 | 1 | 7 | 111 | 76 | 33 | 4 | 89 | 1 | 2 | 1 | 506 | 2247 |
| 4:30 PM | 60 | 116 | 0 | 4 | 113 | 99 | 42 | 1 | 103 | 2 | 4 | 4 | 548 | 2338 |
| 4:45 PM | 56 | 130 | 0 | 3 | 137 | 76 | 47 | 1 | 110 | 0 | 1 | 3 | 564 | 2394 |
| 5:00 PM | 66 | 153 | 0 | 4 | 113 | 107 | 51 | 1 | 128 | 2 | 0 | 4 | 629 | 2343 |
| 5:15 PM | 53 | 155 | 1 | 7 | 119 | 77 | 54 | 1 | 119 | 6 | 2 | 3 | 597 | |
| 5:30 PM | 75 | 132 | 0 | 4 | 118 | 82 | 36 | 5 | 140 | 3 | 4 | 5 | 604 | |
| 5:45 PM | 38 | 127 | 0 | 1 | 100 | 54 | 46 | 2 | 132 | 1 | 3 | 9 | 513 | |
| Peak Hour | 250 | 570 | 1 | 18 | 487 | 342 | 188 | 8 | 497 | 11 | 7 | 15 | | |

## BIKES

| Interval | PACHECO BOULEVARD | | MUIR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 1 | 1 | 0 | 2 | 4 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 6 |
| 5:00 PM | 1 | 1 | 0 | 0 | 2 | 7 |
| 5:15 PM | 2 | 1 | 0 | 0 | 3 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 2 | 0 | 0 | 0 | 2 | |
| Peak Hour | 3 | 3 | 0 | 0 | | |

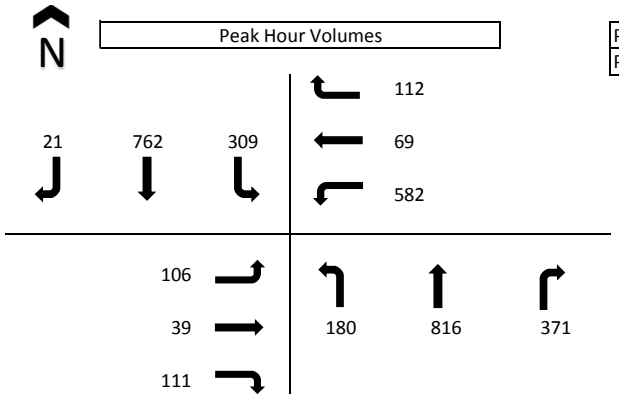
## PEDESTRIANS

| Interval | Crossing PACHECO BOULEVARD | | Crossing MUIR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 1 | 1 | 11 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 12 |
| 4:45 PM | 0 | 1 | 2 | 1 | 4 | 12 |
| 5:00 PM | 0 | 3 | 3 | 0 | 6 | 8 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 6 | 5 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 22ND, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | CONTRA COSTA BOULEVARD |
| E/W: | SOUTHBOUND RAMPS TO 1-680 |
| ID: | C4 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | SOUTHBOUND RAMPS TO 1-680 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 33 | 190 | 69 | 64 | 156 | 9 | 19 | 9 | 16 | 146 | 14 | 13 | 738 | 3135 |
| 4:15 PM | 39 | 172 | 83 | 66 | 173 | 7 | 28 | 5 | 28 | 149 | 10 | 17 | 777 | 3301 |
| 4:30 PM | 50 | 182 | 79 | 49 | 170 | 5 | 22 | 12 | 24 | 140 | 10 | 13 | 756 | 3377 |
| 4:45 PM | 44 | 208 | 82 | 82 | 193 | 6 | 19 | 5 | 27 | 145 | 18 | 35 | 864 | 3478 |
| 5:00 PM | 49 | 217 | 113 | 74 | 188 | 4 | 27 | 10 | 33 | 142 | 16 | 31 | 904 | 3414 |
| 5:15 PM | 43 | 201 | 92 | 77 | 188 | 7 | 31 | 14 | 31 | 135 | 13 | 21 | 853 | |
| 5:30 PM | 44 | 190 | 84 | 76 | 193 | 4 | 29 | 10 | 20 | 160 | 22 | 25 | 857 | |
| 5:45 PM | 35 | 186 | 83 | 59 | 180 | 8 | 26 | 13 | 28 | 143 | 18 | 21 | 800 | |
| Peak Hour | 180 | 816 | 371 | 309 | 762 | 21 | 106 | 39 | 111 | 582 | 69 | 112 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | SOUTHBOUND RAMPS TO 1-680 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 1 | 0 | 0 | 2 | 9 |
| 4:15 PM | 0 | 3 | 0 | 0 | 3 | 10 |
| 4:30 PM | 1 | 2 | 0 | 0 | 3 | 12 |
| 4:45 PM | 1 | 0 | 0 | 0 | 1 | 11 |
| 5:00 PM | 0 | 3 | 0 | 0 | 3 | 12 |
| 5:15 PM | 1 | 4 | 0 | 0 | 5 | |
| 5:30 PM | 1 | 1 | 0 | 0 | 2 | |
| 5:45 PM | 1 | 1 | 0 | 0 | 2 | |
| Peak Hour | 3 | 8 | 0 | 0 | | |

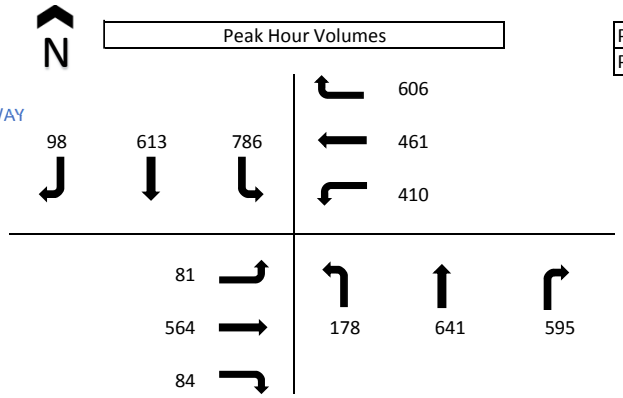
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing SOUTHBOUND RAMPS TO 1-680 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 3 | 3 | 7 |
| 4:15 PM | 0 | 0 | 0 | 3 | 3 | 4 |
| 4:30 PM | 0 | 0 | 0 | 1 | 1 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: CONTRA COSTA BOULEVARD
E/W: CONCORD/CHILPANCINGO PARKWAY
ID: C5




| Peak Hour: | 4:45 PM to 5:45 PM |
|---|---|
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | CONCORD/CHILPANCINGO PARKWAY | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 27 | 113 | 156 | 160 | 133 | 28 | 20 | 128 | 16 | 104 | 93 | 145 | 1123 | 4618 |
| 4:15 PM | 35 | 136 | 133 | 158 | 120 | 25 | 22 | 119 | 20 | 99 | 118 | 135 | 1120 | 4818 |
| 4:30 PM | 36 | 141 | 136 | 192 | 148 | 29 | 25 | 126 | 10 | 76 | 74 | 140 | 1133 | 5025 |
| 4:45 PM | 40 | 151 | 130 | 169 | 145 | 24 | 18 | 156 | 20 | 118 | 114 | 157 | 1242 | 5117 |
| 5:00 PM | 50 | 168 | 167 | 207 | 162 | 26 | 26 | 137 | 18 | 100 | 108 | 154 | 1323 | 5061 |
| 5:15 PM | 46 | 165 | 140 | 223 | 143 | 25 | 21 | 143 | 26 | 114 | 129 | 152 | 1327 | |
| 5:30 PM | 42 | 157 | 158 | 187 | 163 | 23 | 16 | 128 | 20 | 78 | 110 | 143 | 1225 | |
| 5:45 PM | 31 | 148 | 130 | 190 | 139 | 20 | 15 | 114 | 21 | 99 | 149 | 130 | 1186 | |
| Peak Hour | 178 | 641 | 595 | 786 | 613 | 98 | 81 | 564 | 84 | 410 | 461 | 606 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | CONCORD/CHILPANCINGO PARKWAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 2 | 3 | 0 | 5 | 18 |
| 4:15 PM | 0 | 2 | 2 | 0 | 4 | 15 |
| 4:30 PM | 0 | 2 | 4 | 0 | 6 | 18 |
| 4:45 PM | 0 | 1 | 2 | 0 | 3 | 21 |
| 5:00 PM | 0 | 0 | 2 | 0 | 2 | 22 |
| 5:15 PM | 0 | 0 | 7 | 0 | 7 | |
| 5:30 PM | 0 | 4 | 5 | 0 | 9 | |
| 5:45 PM | 0 | 2 | 2 | 0 | 4 | |
| Peak Hour | 0 | 5 | 16 | 0 | | |

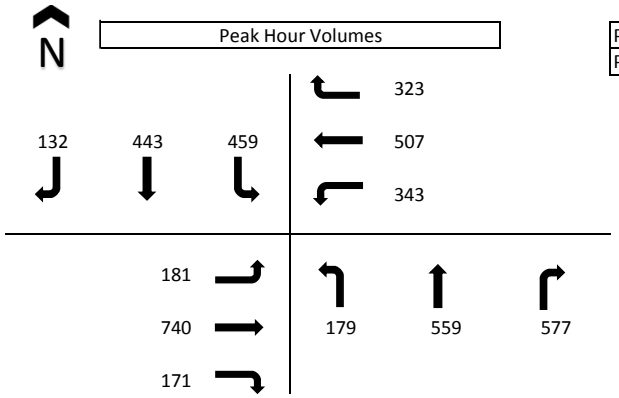
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing CONCORD/CHILPANCING | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 3 | 0 | 1 | 4 | 14 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 11 |
| 4:30 PM | 0 | 1 | 0 | 2 | 3 | 13 |
| 4:45 PM | 0 | 1 | 0 | 6 | 7 | 25 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 22 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 8 | 0 | 7 | 15 | |
| 5:45 PM | 0 | 2 | 0 | 2 | 4 | |
| Peak Hour | 0 | 12 | 0 | 13 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 15TH, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | CONTRA COSTA BOULEVARD |
| E/W: | WILLOW PASS/TAYLOR |
| ID: | C6 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.91 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | WILLOW PASS/TAYLOR | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 38 | 109 | 125 | 88 | 82 | 35 | 40 | 181 | 56 | 92 | 116 | 81 | 1043 | 4261 |
| 4:15 PM | 39 | 122 | 103 | 117 | 108 | 32 | 32 | 183 | 33 | 77 | 112 | 72 | 1030 | 4491 |
| 4:30 PM | 47 | 135 | 141 | 100 | 103 | 36 | 54 | 144 | 42 | 96 | 129 | 84 | 1111 | 4614 |
| 4:45 PM | 34 | 125 | 131 | 133 | 121 | 31 | 34 | 164 | 46 | 80 | 99 | 79 | 1077 | 4594 |
| 5:00 PM | 44 | 161 | 182 | 119 | 114 | 28 | 45 | 227 | 46 | 87 | 147 | 73 | 1273 | 4519 |
| 5:15 PM | 54 | 138 | 123 | 107 | 105 | 37 | 48 | 205 | 37 | 80 | 132 | 87 | 1153 | |
| 5:30 PM | 38 | 128 | 126 | 110 | 109 | 28 | 44 | 158 | 41 | 97 | 122 | 90 | 1091 | |
| 5:45 PM | 47 | 107 | 141 | 88 | 103 | 23 | 32 | 162 | 39 | 74 | 100 | 86 | 1002 | |
| Peak Hour | 179 | 559 | 577 | 459 | 443 | 132 | 181 | 740 | 171 | 343 | 507 | 323 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | WILLOW PASS/TAYLOR | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 1 | 0 | 0 | 2 | 12 |
| 4:15 PM | 0 | 1 | 1 | 0 | 2 | 15 |
| 4:30 PM | 2 | 0 | 1 | 0 | 3 | 14 |
| 4:45 PM | 1 | 3 | 1 | 0 | 5 | 13 |
| 5:00 PM | 1 | 3 | 0 | 1 | 5 | 10 |
| 5:15 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 1 | 0 | 1 | 0 | 2 | |
| 5:45 PM | 0 | 1 | 1 | 0 | 2 | |
| Peak Hour | 5 | 6 | 2 | 1 | | |

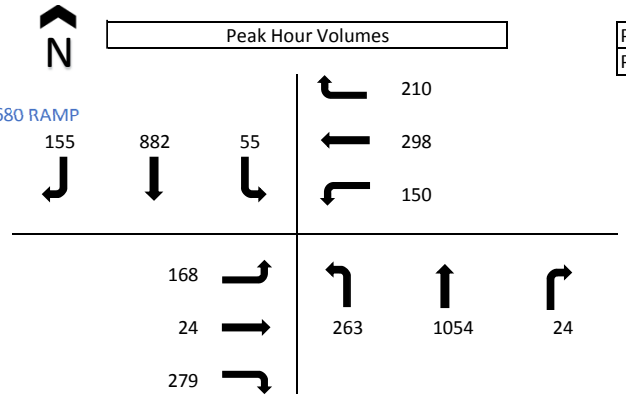
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing WILLOW PASS/TAYLOR | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 1 | 4 | 1 | 2 | 8 | 17 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 19 |
| 4:30 PM | 3 | 0 | 1 | 1 | 5 | 24 |
| 4:45 PM | 1 | 0 | 3 | 0 | 4 | 21 |
| 5:00 PM | 2 | 2 | 2 | 4 | 10 | 17 |
| 5:15 PM | 0 | 2 | 0 | 3 | 5 | |
| 5:30 PM | 0 | 0 | 2 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 6 | 4 | 6 | 8 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 15TH, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: CONTRA COSTA BOULEVARD
E/W: GREGORY LANE/SOUTHBOUND I-680 RAMP
ID: C7




| Peak Hour: | 4:45 PM to 5:45 PM |
|---|---|
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | GREGORY LANE/SOUTHBOUND I-680 RAMP | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 46 | 235 | 3 | 19 | 213 | 37 | 46 | 9 | 60 | 26 | 60 | 47 | 801 | 3412 |
| 4:15 PM | 47 | 271 | 4 | 10 | 198 | 41 | 47 | 11 | 69 | 36 | 78 | 57 | 869 | 3499 |
| 4:30 PM | 72 | 242 | 3 | 10 | 202 | 60 | 31 | 8 | 59 | 44 | 79 | 48 | 858 | 3536 |
| 4:45 PM | 62 | 257 | 4 | 12 | 247 | 44 | 43 | 7 | 65 | 34 | 70 | 39 | 884 | 3562 |
| 5:00 PM | 85 | 247 | 8 | 16 | 207 | 42 | 46 | 5 | 76 | 37 | 57 | 62 | 888 | 3514 |
| 5:15 PM | 58 | 278 | 7 | 10 | 214 | 35 | 38 | 5 | 70 | 43 | 90 | 58 | 906 | |
| 5:30 PM | 58 | 272 | 5 | 17 | 214 | 34 | 41 | 7 | 68 | 36 | 81 | 51 | 884 | |
| 5:45 PM | 74 | 277 | 2 | 8 | 197 | 25 | 53 | 11 | 50 | 30 | 67 | 42 | 836 | |
| Peak Hour | 263 | 1054 | 24 | 55 | 882 | 155 | 168 | 24 | 279 | 150 | 298 | 210 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | GREGORY LANE/SOUTHBOUND I- | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 2 | 1 | 1 | 4 | 14 |
| 4:15 PM | 1 | 0 | 0 | 0 | 1 | 16 |
| 4:30 PM | 2 | 1 | 0 | 0 | 3 | 17 |
| 4:45 PM | 4 | 0 | 1 | 1 | 6 | 15 |
| 5:00 PM | 3 | 1 | 0 | 2 | 6 | 11 |
| 5:15 PM | 0 | 1 | 1 | 0 | 2 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 1 | 1 | 0 | 2 | |
| Peak Hour | 7 | 3 | 2 | 3 | | |

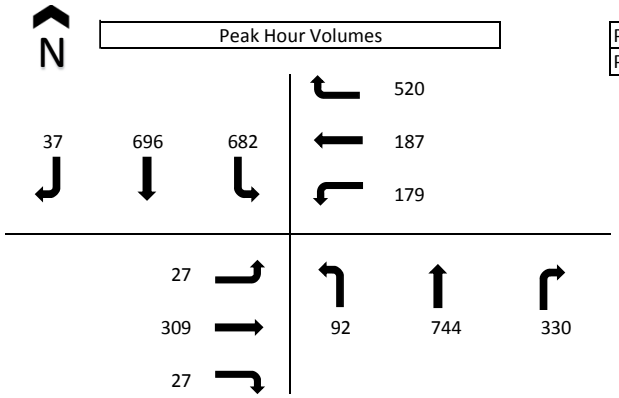
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing GREGORY LANE/SOUTHBOUND I- | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 4 | 0 | 6 | 3 | 13 | 60 |
| 4:15 PM | 3 | 5 | 3 | 3 | 14 | 55 |
| 4:30 PM | 7 | 8 | 3 | -3 | 15 | 53 |
| 4:45 PM | 1 | 2 | 7 | 8 | 18 | 47 |
| 5:00 PM | 2 | 0 | 5 | 1 | 8 | 42 |
| 5:15 PM | 0 | 4 | 7 | 1 | 12 | |
| 5:30 PM | 0 | 2 | 6 | 1 | 9 | |
| 5:45 PM | 5 | 0 | 2 | 6 | 13 | |
| Peak Hour | 3 | 8 | 25 | 11 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: CONTRA COSTA BOULEVARD
E/W: MONUMENT BOULEVARD
ID: C8




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | MONUMENT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 14 | 144 | 69 | 159 | 155 | 7 | 6 | 66 | 11 | 38 | 55 | 138 | 862 | 3505 |
| 4:15 PM | 11 | 164 | 62 | 166 | 165 | 5 | 3 | 68 | 4 | 58 | 43 | 134 | 883 | 3604 |
| 4:30 PM | 19 | 162 | 61 | 171 | 176 | 11 | 12 | 69 | 11 | 49 | 51 | 107 | 899 | 3717 |
| 4:45 PM | 14 | 168 | 72 | 161 | 137 | 10 | 7 | 52 | 5 | 43 | 51 | 141 | 861 | 3762 |
| 5:00 PM | 29 | 193 | 73 | 180 | 192 | 11 | 8 | 77 | 5 | 41 | 30 | 122 | 961 | 3830 |
| 5:15 PM | 15 | 197 | 84 | 177 | 162 | 9 | 6 | 104 | 6 | 54 | 30 | 152 | 996 | |
| 5:30 PM | 18 | 174 | 97 | 165 | 193 | 7 | 10 | 57 | 8 | 31 | 72 | 112 | 944 | |
| 5:45 PM | 30 | 180 | 76 | 160 | 149 | 10 | 3 | 71 | 8 | 53 | 55 | 134 | 929 | |
| Peak Hour | 92 | 744 | 330 | 682 | 696 | 37 | 27 | 309 | 27 | 179 | 187 | 520 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | MONUMENT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 3 | 0 | 0 | 4 | 18 |
| 4:15 PM | 0 | 4 | 0 | 0 | 4 | 16 |
| 4:30 PM | 1 | 5 | 1 | 1 | 8 | 13 |
| 4:45 PM | 0 | 1 | 0 | 1 | 2 | 13 |
| 5:00 PM | 0 | 1 | 1 | 0 | 2 | 14 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 1 | 3 | 2 | 2 | 8 | |
| 5:45 PM | 1 | 1 | 0 | 1 | 3 | |
| Peak Hour | 2 | 6 | 3 | 3 | | |

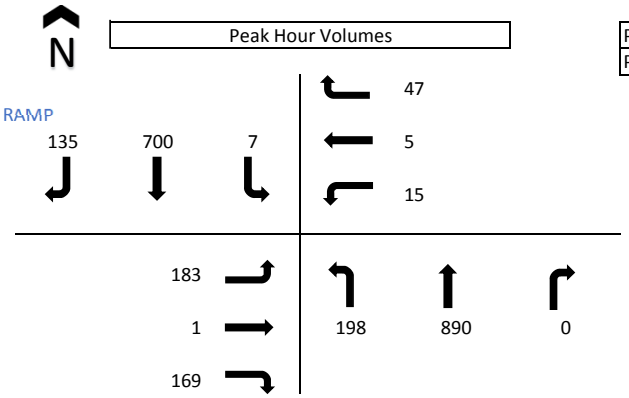
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing MONUMENT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 3 | 4 | 39 |
| 4:15 PM | 4 | 1 | 2 | 0 | 7 | 38 |
| 4:30 PM | 4 | 2 | 6 | 7 | 19 | 33 |
| 4:45 PM | 2 | 2 | 4 | 1 | 9 | 19 |
| 5:00 PM | 0 | 1 | 0 | 2 | 3 | 14 |
| 5:15 PM | 0 | 1 | 1 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 1 | 4 | 5 | |
| 5:45 PM | 1 | 0 | 1 | 2 | 4 | |
| Peak Hour | 1 | 2 | 3 | 8 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 22ND, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: CONTRA COSTA BOULEVARD
E/W: BOYD ROAD/SOUTHBOUND I-680 RAMP
ID: C9




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | CONTRA COSTA BOULEVARD | | | | | | BOYD ROAD/SOUTHBOUND I-680 RAMP | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 40 | 170 | 1 | 1 | 175 | 28 | 45 | 0 | 43 | 2 | 0 | 9 | 514 | 2066 |
| 4:15 PM | 48 | 188 | 1 | 0 | 165 | 29 | 39 | 1 | 26 | 2 | 0 | 5 | 504 | 2135 |
| 4:30 PM | 43 | 175 | 1 | 2 | 175 | 34 | 40 | 0 | 42 | 6 | 0 | 5 | 523 | 2225 |
| 4:45 PM | 38 | 194 | 1 | 0 | 168 | 29 | 41 | 0 | 42 | 3 | 0 | 9 | 525 | 2293 |
| 5:00 PM | 44 | 215 | 0 | 1 | 180 | 36 | 43 | 0 | 39 | 3 | 0 | 22 | 583 | 2350 |
| 5:15 PM | 45 | 234 | 0 | 4 | 171 | 36 | 51 | 0 | 44 | 1 | 0 | 8 | 594 | |
| 5:30 PM | 63 | 212 | 0 | 1 | 178 | 28 | 47 | 1 | 40 | 6 | 4 | 11 | 591 | |
| 5:45 PM | 46 | 229 | 0 | 1 | 171 | 35 | 42 | 0 | 46 | 5 | 1 | 6 | 582 | |
| Peak Hour | 198 | 890 | 0 | 7 | 700 | 135 | 183 | 1 | 169 | 15 | 5 | 47 | | |

## BIKES

| Interval | CONTRA COSTA BOULEVARD | | BOYD ROAD/SOUTHBOUND | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 3 | 0 | 0 | 3 | 8 |
| 4:15 PM | 0 | 1 | 0 | 1 | 2 | 6 |
| 4:30 PM | 0 | 3 | 0 | 0 | 3 | 4 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 6 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 3 | 0 | 0 | 3 | |
| 5:45 PM | 0 | 2 | 0 | 0 | 2 | |
| Peak Hour | 0 | 6 | 0 | 0 | | |

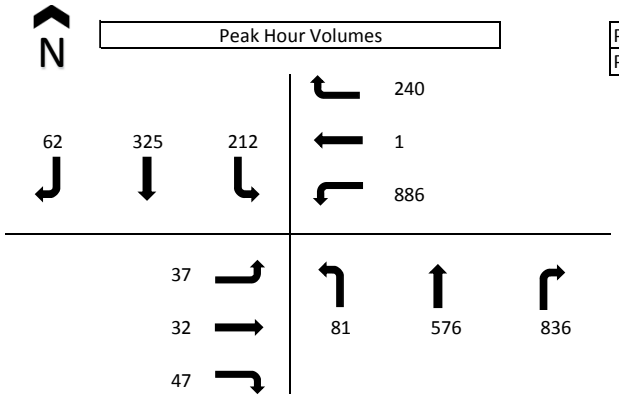
## PEDESTRIANS

| Interval | Crossing CONTRA COSTA BOULEVARD | | Crossing BOYD ROAD/SOUTHBOUND I- | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 3 | 3 | 21 |
| 4:15 PM | 2 | 0 | 0 | 6 | 8 | 23 |
| 4:30 PM | 0 | 0 | 0 | 7 | 7 | 18 |
| 4:45 PM | 0 | 0 | 0 | 3 | 3 | 14 |
| 5:00 PM | 1 | 0 | 0 | 4 | 5 | 12 |
| 5:15 PM | 1 | 0 | 0 | 2 | 3 | |
| 5:30 PM | 0 | 0 | 0 | 3 | 3 | |
| 5:45 PM | 0 | 0 | 0 | 1 | 1 | |
| Peak Hour | 2 | 0 | 0 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/14/2015
Count Period: 7:00 PM to 9:00 PM
N/S: N Main St
E/W: HWY 80 WB Ramps/Sunnyvale Ave
ID: C10




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | N Main St | | | | | | HWY 80 WB Ramps/Sunnyvale Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 28 | 123 | 170 | 51 | 87 | 9 | 12 | 4 | 11 | 214 | 0 | 39 | 748 | 3071 |
| 4:15 PM | 21 | 108 | 201 | 42 | 81 | 11 | 7 | 5 | 15 | 225 | 0 | 52 | 768 | 3180 |
| 4:30 PM | 20 | 127 | 196 | 62 | 85 | 16 | 4 | 7 | 21 | 186 | 0 | 46 | 770 | 3290 |
| 4:45 PM | 26 | 127 | 198 | 54 | 74 | 17 | 12 | 3 | 6 | 209 | 1 | 58 | 785 | 3327 |
| 5:00 PM | 17 | 125 | 204 | 54 | 94 | 14 | 21 | 14 | 18 | 234 | 1 | 61 | 857 | 3335 |
| 5:15 PM | 22 | 150 | 238 | 47 | 74 | 25 | 7 | 7 | 8 | 226 | 0 | 74 | 878 | |
| 5:30 PM | 11 | 131 | 222 | 62 | 73 | 12 | 4 | 7 | 14 | 219 | 0 | 52 | 807 | |
| 5:45 PM | 31 | 170 | 172 | 49 | 84 | 11 | 5 | 4 | 7 | 207 | 0 | 53 | 793 | |
| Peak Hour | 81 | 576 | 836 | 212 | 325 | 62 | 37 | 32 | 47 | 886 | 1 | 240 | | |

## BIKES

| Interval | N Main St | | HWY 80 WB Ramps/Sunnyvale | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 1 | 0 | 0 | 1 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 2 | 0 | 0 | | |

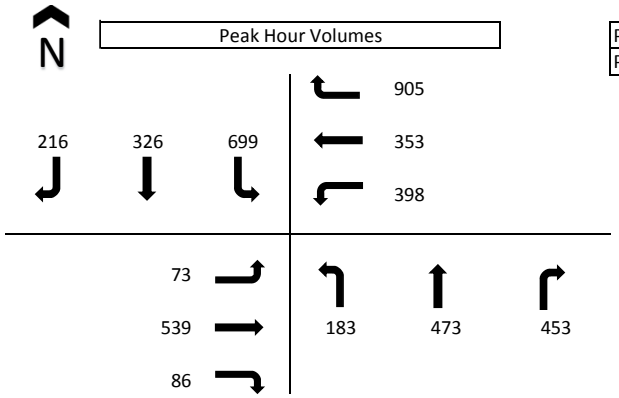
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing HWY 80 WB Ramps/Sunnyvale Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 3 | 4 | 28 |
| 4:15 PM | 0 | 4 | 0 | 8 | 12 | 27 |
| 4:30 PM | 0 | 3 | 0 | 2 | 5 | 21 |
| 4:45 PM | 0 | 5 | 0 | 2 | 7 | 23 |
| 5:00 PM | 0 | 1 | 0 | 2 | 3 | 26 |
| 5:15 PM | 0 | 4 | 0 | 2 | 6 | |
| 5:30 PM | 0 | 3 | 0 | 4 | 7 | |
| 5:45 PM | 0 | 7 | 0 | 3 | 10 | |
| Peak Hour | 0 | 15 | 0 | 11 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | N Main St |
| E/W: | Treat Blvd/Geary Rd |
| ID: | C11 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | N Main St | | | | | | Treat Blvd/Geary Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 35 | 85 | 122 | 165 | 109 | 45 | 19 | 117 | 14 | 73 | 62 | 203 | 1049 | 4386 |
| 4:15 PM | 30 | 83 | 98 | 184 | 79 | 39 | 16 | 126 | 21 | 98 | 100 | 215 | 1089 | 4474 |
| 4:30 PM | 35 | 102 | 126 | 181 | 59 | 51 | 19 | 113 | 24 | 87 | 82 | 236 | 1115 | 4561 |
| 4:45 PM | 32 | 101 | 110 | 173 | 75 | 56 | 16 | 143 | 24 | 82 | 104 | 217 | 1133 | 4655 |
| 5:00 PM | 53 | 126 | 102 | 175 | 84 | 58 | 13 | 131 | 18 | 93 | 86 | 198 | 1137 | 4704 |
| 5:15 PM | 46 | 85 | 130 | 166 | 86 | 58 | 19 | 146 | 21 | 93 | 85 | 241 | 1176 | |
| 5:30 PM | 44 | 130 | 110 | 171 | 69 | 59 | 14 | 147 | 34 | 100 | 85 | 246 | 1209 | |
| 5:45 PM | 40 | 132 | 111 | 187 | 87 | 41 | 27 | 115 | 13 | 112 | 97 | 220 | 1182 | |
| Peak Hour | 183 | 473 | 453 | 699 | 326 | 216 | 73 | 539 | 86 | 398 | 353 | 905 | | |

## BIKES

| Interval | N Main St | | Treat Blvd/Geary Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 0 | 1 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 1 | 1 | 0 | | |

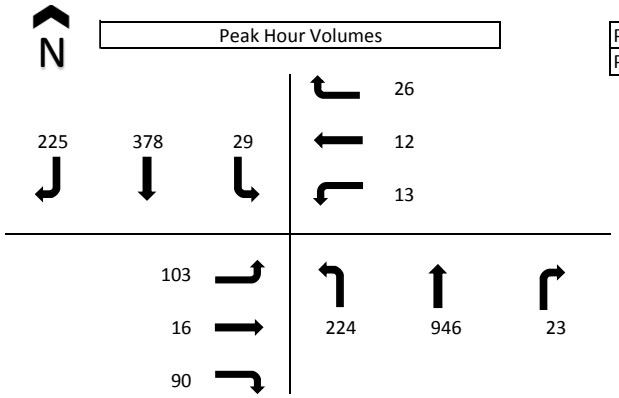
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing Treat Blvd/Geary Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 3 | 2 | 7 | 2 | 14 | 69 |
| 4:15 PM | 10 | 3 | 7 | 5 | 25 | 77 |
| 4:30 PM | 5 | 1 | 4 | 4 | 14 | 73 |
| 4:45 PM | 8 | 2 | 3 | 3 | 16 | 71 |
| 5:00 PM | 8 | 3 | 8 | 3 | 22 | 68 |
| 5:15 PM | 15 | 2 | 2 | 2 | 21 | |
| 5:30 PM | 5 | 2 | 0 | 5 | 12 | |
| 5:45 PM | 12 | 0 | 1 | 0 | 13 | |
| Peak Hour | 40 | 7 | 11 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/30/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | N Main St |
| E/W: | San Luis Rd |
| ID: | C12 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | N Main St | | | | | | San Luis Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 43 | 204 | 4 | 4 | 95 | 66 | 29 | 5 | 23 | 5 | 7 | 6 | 491 | 1965 |
| 4:15 PM | 48 | 217 | 10 | 4 | 103 | 45 | 27 | 2 | 20 | 2 | 5 | 7 | 490 | 2022 |
| 4:30 PM | 56 | 177 | 7 | 5 | 78 | 60 | 36 | 3 | 27 | 6 | 11 | 2 | 468 | 2055 |
| 4:45 PM | 55 | 241 | 6 | 8 | 104 | 46 | 16 | 5 | 27 | 2 | 0 | 6 | 516 | 2085 |
| 5:00 PM | 58 | 253 | 7 | 6 | 103 | 61 | 23 | 6 | 17 | 2 | 5 | 7 | 548 | 2014 |
| 5:15 PM | 67 | 234 | 5 | 10 | 82 | 50 | 38 | 3 | 20 | 6 | 3 | 5 | 523 | |
| 5:30 PM | 44 | 218 | 5 | 5 | 89 | 68 | 26 | 2 | 26 | 3 | 4 | 8 | 498 | |
| 5:45 PM | 46 | 210 | 3 | 7 | 72 | 56 | 16 | 2 | 19 | 4 | 5 | 5 | 445 | |
| Peak Hour | 224 | 946 | 23 | 29 | 378 | 225 | 103 | 16 | 90 | 13 | 12 | 26 | | |

## BIKES

| Interval | N Main St | | San Luis Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

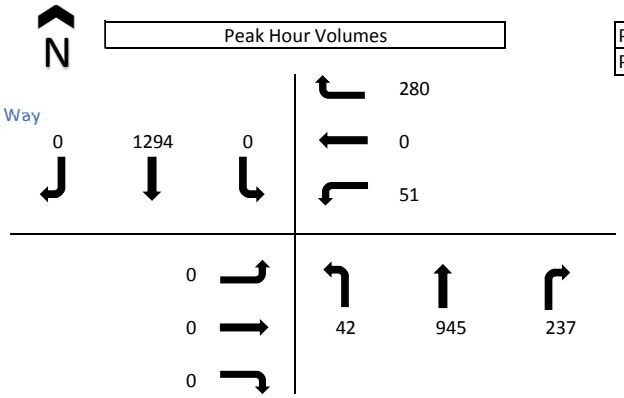
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing San Luis Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 8 |
| 4:15 PM | 0 | 0 | 2 | 0 | 2 | 10 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 9 |
| 4:45 PM | 0 | 2 | 2 | 1 | 5 | 8 |
| 5:00 PM | 1 | 0 | 0 | 1 | 2 | 4 |
| 5:15 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 2 | 2 | 2 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/15/2015
Count Period: 4:00 PM to 6:00 PM
N/S: N Main St
E/W: HWY 680 NB Off-Ramp/Penniman Way
ID: C13




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | N Main St | | | | | | HWY 680 NB Off-Ramp/Penniman Way | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 13 | 141 | 23 | 0 | 289 | 0 | 0 | 0 | 0 | 19 | 0 | 56 | 541 | 2483 |
| 4:15 PM | 10 | 209 | 31 | 0 | 334 | 0 | 0 | 0 | 0 | 17 | 0 | 44 | 645 | 2661 |
| 4:30 PM | 4 | 207 | 41 | 0 | 303 | 0 | 0 | 0 | 0 | 18 | 0 | 60 | 633 | 2776 |
| 4:45 PM | 5 | 219 | 32 | 0 | 346 | 0 | 0 | 0 | 0 | 19 | 0 | 43 | 664 | 2839 |
| 5:00 PM | 13 | 258 | 57 | 0 | 317 | 0 | 0 | 0 | 0 | 12 | 0 | 62 | 719 | 2849 |
| 5:15 PM | 8 | 245 | 76 | 0 | 353 | 0 | 0 | 0 | 0 | 11 | 0 | 67 | 760 | |
| 5:30 PM | 7 | 208 | 62 | 0 | 331 | 0 | 0 | 0 | 0 | 12 | 0 | 76 | 696 | |
| 5:45 PM | 14 | 234 | 42 | 0 | 293 | 0 | 0 | 0 | 0 | 16 | 0 | 75 | 674 | |
| Peak Hour | 42 | 945 | 237 | 0 | 1294 | 0 | 0 | 0 | 0 | 51 | 0 | 280 | | |

## BIKES

| Interval | N Main St | | HWY 680 NB Off-Ramp/Penniman Way | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

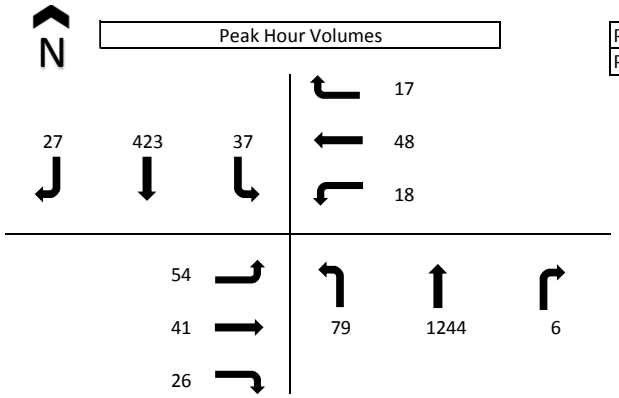
## PEDESTRIANS

| Interval | Crossing N Main St | | Crossing HWY 680 NB Off-Ramp/Penniman Way | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 2 | 4 | 0 | 6 | 15 |
| 4:15 PM | 0 | 2 | 3 | 0 | 5 | 9 |
| 4:30 PM | 0 | 0 | 2 | 0 | 2 | 4 |
| 4:45 PM | 0 | 0 | 2 | 0 | 2 | 10 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 8 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 5 | 3 | 0 | 8 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 5 | 3 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 15TH, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: TAYLOR BOULEVARD
E/W: WITHERS AVENUE
ID: C14




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | TAYLOR BOULEVARD | | | | | | WITHERS AVENUE | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 14 | 282 | 3 | 6 | 99 | 3 | 14 | 6 | 5 | 3 | 20 | 3 | 458 | 1876 |
| 4:15 PM | 26 | 262 | 0 | 3 | 107 | 8 | 14 | 5 | 4 | 1 | 8 | 4 | 442 | 1884 |
| 4:30 PM | 20 | 276 | 4 | 8 | 114 | 7 | 6 | 12 | 7 | 5 | 14 | 3 | 476 | 1934 |
| 4:45 PM | 25 | 293 | 1 | 14 | 122 | 6 | 14 | 5 | 2 | 4 | 11 | 3 | 500 | 1984 |
| 5:00 PM | 10 | 286 | 2 | 7 | 102 | 8 | 16 | 9 | 10 | 5 | 7 | 4 | 466 | 2020 |
| 5:15 PM | 22 | 297 | 0 | 9 | 103 | 7 | 13 | 8 | 3 | 10 | 12 | 8 | 492 | |
| 5:30 PM | 23 | 326 | 1 | 9 | 100 | 5 | 17 | 14 | 9 | 1 | 16 | 5 | 526 | |
| 5:45 PM | 24 | 335 | 3 | 12 | 118 | 7 | 8 | 10 | 4 | 2 | 13 | 0 | 536 | |
| Peak Hour | 79 | 1244 | 6 | 37 | 423 | 27 | 54 | 41 | 26 | 18 | 48 | 17 | | |

## BIKES

| Interval | TAYLOR BOULEVARD | | WITHERS AVENUE | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 1 | 1 | 5 |
| 4:30 PM | 2 | 0 | 1 | 0 | 3 | 5 |
| 4:45 PM | 1 | 0 | 0 | 0 | 1 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

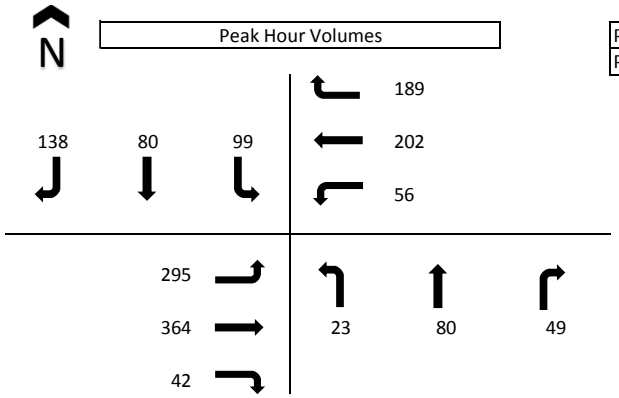
## PEDESTRIANS

| Interval | Crossing TAYLOR BOULEVARD | | Crossing WITHERS AVENUE | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 1 | 1 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY, MARCH 31ST, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | GEARY ROAD |
| E/W: | PLEASANT HILL ROAD |
| ID: | C15 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.91 |

## AUTOMOBILES

| Interval | GEARY ROAD | | | | | | PLEASANT HILL ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 4 | 24 | 15 | 22 | 14 | 33 | 69 | 91 | 16 | 16 | 37 | 38 | 379 | 1327 |
| 4:15 PM | 5 | 16 | 13 | 19 | 14 | 28 | 59 | 69 | 14 | 12 | 46 | 39 | 334 | 1329 |
| 4:30 PM | 5 | 15 | 8 | 17 | 8 | 24 | 40 | 71 | 6 | 7 | 29 | 20 | 250 | 1417 |
| 4:45 PM | 1 | 10 | 10 | 16 | 15 | 40 | 76 | 91 | 7 | 16 | 37 | 45 | 364 | 1610 |
| 5:00 PM | 8 | 15 | 12 | 19 | 13 | 39 | 75 | 86 | 7 | 14 | 50 | 43 | 381 | 1617 |
| 5:15 PM | 6 | 17 | 9 | 27 | 23 | 36 | 70 | 104 | 13 | 11 | 58 | 48 | 422 | |
| 5:30 PM | 2 | 20 | 15 | 32 | 28 | 40 | 81 | 92 | 11 | 19 | 52 | 51 | 443 | |
| 5:45 PM | 7 | 28 | 13 | 21 | 16 | 23 | 69 | 82 | 11 | 12 | 42 | 47 | 371 | |
| Peak Hour | 23 | 80 | 49 | 99 | 80 | 138 | 295 | 364 | 42 | 56 | 202 | 189 | | |

## BIKES

| Interval | GEARY ROAD | | PLEASANT HILL ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 1 | 1 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:45 PM | 1 | 1 | 0 | 0 | 2 | 5 |
| 5:00 PM | 0 | 1 | 0 | 1 | 2 | 3 |
| 5:15 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 1 | 1 | | |

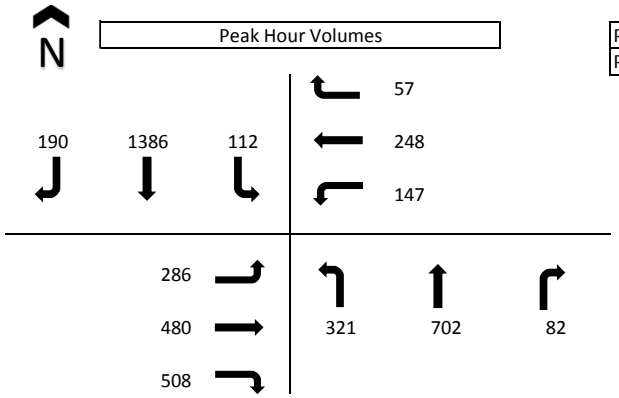
## PEDESTRIANS

| Interval | Crossing GEARY ROAD | | Crossing PLEASANT HILL ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 1 | 0 | 2 | 7 |
| 4:15 PM | 0 | 1 | 0 | 2 | 3 | 10 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 7 |
| 4:45 PM | 0 | 2 | 0 | 0 | 2 | 15 |
| 5:00 PM | 0 | 2 | 1 | 2 | 5 | 18 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 4 | 1 | 3 | 8 | |
| 5:45 PM | 1 | 4 | 0 | 0 | 5 | |
| Peak Hour | 1 | 10 | 2 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | CLAYTON ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C16 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | CLAYTON ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 92 | 176 | 16 | 30 | 296 | 45 | 68 | 86 | 97 | 47 | 52 | 12 | 1017 | 4206 |
| 4:15 PM | 89 | 164 | 14 | 26 | 307 | 40 | 66 | 114 | 117 | 32 | 69 | 12 | 1050 | 4287 |
| 4:30 PM | 85 | 146 | 18 | 29 | 320 | 42 | 65 | 100 | 126 | 34 | 65 | 11 | 1041 | 4394 |
| 4:45 PM | 84 | 191 | 23 | 19 | 326 | 49 | 80 | 119 | 113 | 30 | 55 | 9 | 1098 | 4519 |
| 5:00 PM | 71 | 152 | 10 | 32 | 321 | 64 | 66 | 127 | 126 | 42 | 69 | 18 | 1098 | 4387 |
| 5:15 PM | 84 | 194 | 20 | 31 | 367 | 39 | 75 | 107 | 134 | 34 | 57 | 15 | 1157 | |
| 5:30 PM | 82 | 165 | 29 | 30 | 372 | 38 | 65 | 127 | 135 | 41 | 67 | 15 | 1166 | |
| 5:45 PM | 75 | 148 | 14 | 21 | 249 | 51 | 68 | 108 | 123 | 27 | 73 | 9 | 966 | |
| Peak Hour | 321 | 702 | 82 | 112 | 1386 | 190 | 286 | 480 | 508 | 147 | 248 | 57 | | |

## BIKES

| Interval | CLAYTON ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 5 | 1 | 2 | 0 | 8 | 20 |
| 4:15 PM | 1 | 0 | 1 | 2 | 4 | 16 |
| 4:30 PM | 1 | 3 | 0 | 0 | 4 | 14 |
| 4:45 PM | 0 | 4 | 0 | 0 | 4 | 11 |
| 5:00 PM | 1 | 2 | 0 | 1 | 4 | 10 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:45 PM | 1 | 1 | 0 | 1 | 3 | |
| Peak Hour | 1 | 8 | 1 | 1 | | |

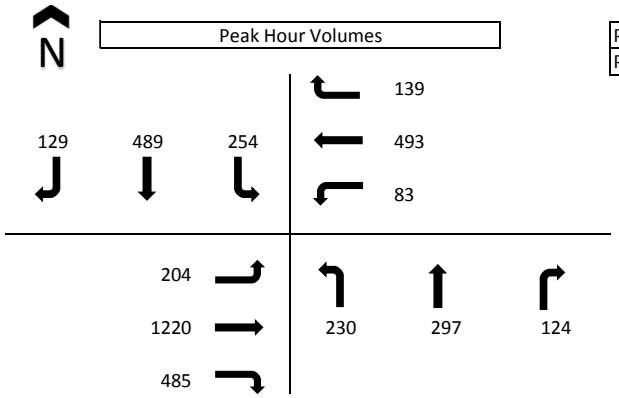
## PEDESTRIANS

| Interval | Crossing CLAYTON ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 1 | 1 | 2 | 2 | 6 | 36 |
| 4:15 PM | 0 | 2 | 1 | 0 | 3 | 37 |
| 4:30 PM | 1 | 3 | 3 | 7 | 14 | 35 |
| 4:45 PM | 0 | 4 | 3 | 6 | 13 | 24 |
| 5:00 PM | 1 | 6 | 0 | 0 | 7 | 15 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 0 | 3 | 0 | 0 | 3 | |
| 5:45 PM | 0 | 0 | 2 | 2 | 4 | |
| Peak Hour | 1 | 13 | 3 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | COWELL ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C17 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 61 | 71 | 36 | 64 | 98 | 28 | 48 | 226 | 79 | 27 | 121 | 31 | 890 | 3822 |
| 4:15 PM | 62 | 61 | 29 | 55 | 93 | 42 | 56 | 295 | 110 | 29 | 132 | 31 | 995 | 3978 |
| 4:30 PM | 55 | 71 | 24 | 78 | 106 | 23 | 48 | 261 | 111 | 24 | 112 | 28 | 941 | 4033 |
| 4:45 PM | 57 | 75 | 38 | 58 | 102 | 35 | 45 | 289 | 116 | 23 | 118 | 40 | 996 | 4147 |
| 5:00 PM | 64 | 68 | 29 | 66 | 116 | 25 | 52 | 321 | 123 | 21 | 136 | 25 | 1046 | 4083 |
| 5:15 PM | 60 | 83 | 20 | 66 | 146 | 34 | 55 | 301 | 122 | 22 | 107 | 34 | 1050 | |
| 5:30 PM | 49 | 71 | 37 | 64 | 125 | 35 | 52 | 309 | 124 | 17 | 132 | 40 | 1055 | |
| 5:45 PM | 32 | 73 | 31 | 60 | 127 | 28 | 40 | 297 | 95 | 16 | 102 | 31 | 932 | |
| Peak Hour | 230 | 297 | 124 | 254 | 489 | 129 | 204 | 1220 | 485 | 83 | 493 | 139 | | |

## BIKES

| Interval | COWELL ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 1 | 0 | 1 | 7 |
| 4:30 PM | 0 | 0 | 1 | 1 | 2 | 9 |
| 4:45 PM | 0 | 1 | 1 | 0 | 2 | 8 |
| 5:00 PM | 1 | 0 | 1 | 0 | 2 | 7 |
| 5:15 PM | 1 | 0 | 2 | 0 | 3 | |
| 5:30 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 2 | 1 | 5 | 0 | | |

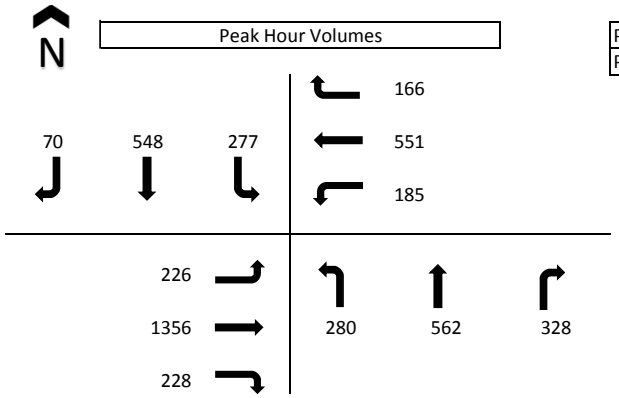
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 2 | 2 | 1 | 7 | 14 |
| 4:15 PM | 0 | 3 | 0 | 0 | 3 | 7 |
| 4:30 PM | 0 | 0 | 2 | 0 | 2 | 11 |
| 4:45 PM | 0 | 0 | 0 | 2 | 2 | 11 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 13 |
| 5:15 PM | 0 | 3 | 1 | 3 | 7 | |
| 5:30 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 4 | 4 | |
| Peak Hour | 0 | 5 | 1 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | OAK GROVE ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C18 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | OAK GROVE ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 66 | 129 | 60 | 49 | 127 | 15 | 54 | 281 | 63 | 35 | 122 | 35 | 1036 | 4497 |
| 4:15 PM | 48 | 118 | 52 | 52 | 105 | 27 | 68 | 331 | 68 | 52 | 150 | 45 | 1116 | 4720 |
| 4:30 PM | 76 | 144 | 59 | 73 | 138 | 15 | 52 | 324 | 65 | 43 | 109 | 30 | 1128 | 4772 |
| 4:45 PM | 56 | 124 | 74 | 68 | 127 | 18 | 68 | 367 | 67 | 46 | 162 | 40 | 1217 | 4777 |
| 5:00 PM | 78 | 153 | 92 | 85 | 149 | 18 | 52 | 344 | 53 | 38 | 152 | 45 | 1259 | 4587 |
| 5:15 PM | 68 | 158 | 88 | 42 | 143 | 22 | 56 | 329 | 51 | 58 | 121 | 32 | 1168 | |
| 5:30 PM | 78 | 127 | 74 | 82 | 129 | 12 | 50 | 316 | 57 | 43 | 116 | 49 | 1133 | |
| 5:45 PM | 35 | 106 | 72 | 68 | 113 | 25 | 50 | 321 | 45 | 37 | 112 | 43 | 1027 | |
| Peak Hour | 280 | 562 | 328 | 277 | 548 | 70 | 226 | 1356 | 228 | 185 | 551 | 166 | | |

## BIKES

| Interval | OAK GROVE ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 0 | 1 | 13 |
| 4:15 PM | 1 | 1 | 0 | 1 | 3 | 14 |
| 4:30 PM | 0 | 3 | 0 | 1 | 4 | 12 |
| 4:45 PM | 2 | 2 | 0 | 1 | 5 | 12 |
| 5:00 PM | 0 | 2 | 0 | 0 | 2 | 8 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 1 | 1 | 2 | 4 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 2 | 6 | 1 | 3 | | |

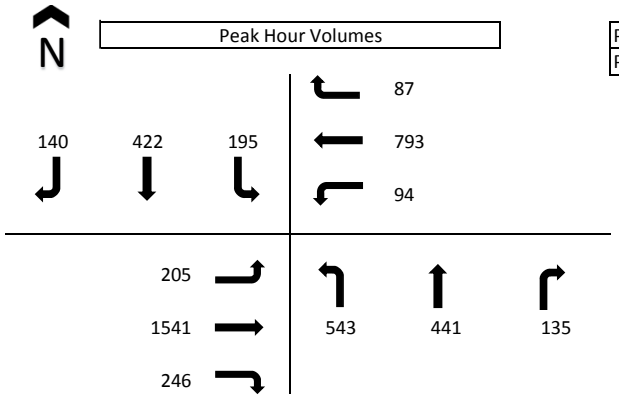
## PEDESTRIANS

| Interval | Crossing OAK GROVE ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 4 | 5 | 4 | 13 | 71 |
| 4:15 PM | 5 | 6 | 8 | 9 | 28 | 76 |
| 4:30 PM | 4 | 5 | 1 | 10 | 20 | 77 |
| 4:45 PM | 3 | 2 | 4 | 1 | 10 | 76 |
| 5:00 PM | 2 | 3 | 4 | 9 | 18 | 99 |
| 5:15 PM | 1 | 12 | 5 | 11 | 29 | |
| 5:30 PM | 0 | 6 | 9 | 4 | 19 | |
| 5:45 PM | 3 | 8 | 7 | 15 | 33 | |
| Peak Hour | 6 | 23 | 22 | 25 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | 3/31/15 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | BANCROFT ROAD |
| E/W: | TREAT BOULEVARD |
| ID: | C19 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | BANCROFT ROAD | | | | | | TREAT BOULEVARD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 160 | 112 | 37 | 38 | 88 | 44 | 34 | 286 | 67 | 21 | 175 | 20 | 1082 | 4535 |
| 4:15 PM | 123 | 104 | 28 | 32 | 64 | 31 | 52 | 350 | 56 | 38 | 193 | 36 | 1107 | 4640 |
| 4:30 PM | 164 | 128 | 31 | 48 | 98 | 40 | 34 | 349 | 43 | 28 | 208 | 9 | 1180 | 4770 |
| 4:45 PM | 141 | 115 | 23 | 30 | 91 | 26 | 50 | 396 | 61 | 29 | 192 | 12 | 1166 | 4817 |
| 5:00 PM | 140 | 101 | 26 | 49 | 103 | 38 | 44 | 373 | 80 | 23 | 195 | 15 | 1187 | 4842 |
| 5:15 PM | 147 | 146 | 26 | 42 | 114 | 27 | 47 | 363 | 52 | 31 | 217 | 25 | 1237 | |
| 5:30 PM | 130 | 105 | 43 | 59 | 98 | 46 | 49 | 418 | 38 | 24 | 200 | 17 | 1227 | |
| 5:45 PM | 126 | 89 | 40 | 45 | 107 | 29 | 65 | 387 | 76 | 16 | 181 | 30 | 1191 | |
| Peak Hour | 543 | 441 | 135 | 195 | 422 | 140 | 205 | 1541 | 246 | 94 | 793 | 87 | | |

## BIKES

| Interval | BANCROFT ROAD | | TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 2 | 0 | 0 | 3 | 7 |
| 4:15 PM | 0 | 0 | 0 | 1 | 1 | 5 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:45 PM | 0 | 1 | 0 | 1 | 2 | 3 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 4 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 2 | 0 | 0 | 3 | |
| Peak Hour | 1 | 3 | 0 | 0 | | |

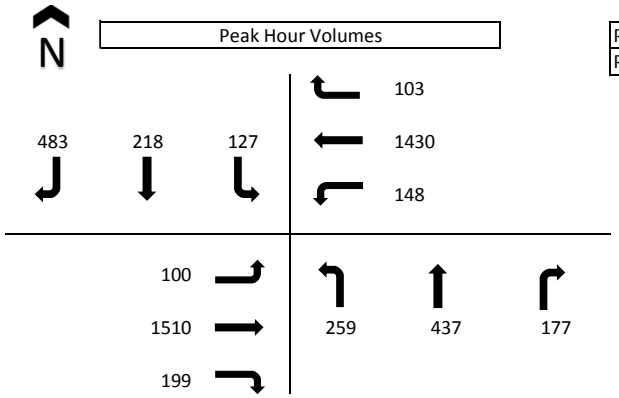
## PEDESTRIANS

| Interval | Crossing BANCROFT ROAD | | Crossing TREAT BOULEVARD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 2 | 2 | 1 | 7 | 14 |
| 4:15 PM | 0 | 3 | 0 | 0 | 3 | 7 |
| 4:30 PM | 0 | 0 | 2 | 0 | 2 | 11 |
| 4:45 PM | 0 | 0 | 0 | 2 | 2 | 11 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 13 |
| 5:15 PM | 0 | 3 | 1 | 3 | 7 | |
| 5:30 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 4 | 4 | |
| Peak Hour | 0 | 5 | 1 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Oak Rd |
| E/W: | Treat Blvd |
| ID: | C20 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | Oak Rd | | | | | | Treat Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 53 | 63 | 33 | 20 | 35 | 78 | 34 | 402 | 44 | 28 | 331 | 22 | 1143 | 4791 |
| 4:15 PM | 86 | 78 | 32 | 25 | 38 | 93 | 24 | 387 | 42 | 22 | 328 | 24 | 1179 | 4898 |
| 4:30 PM | 72 | 95 | 28 | 44 | 53 | 104 | 13 | 344 | 33 | 41 | 331 | 22 | 1180 | 5083 |
| 4:45 PM | 63 | 82 | 34 | 20 | 50 | 97 | 14 | 421 | 50 | 28 | 397 | 33 | 1289 | 5191 |
| 5:00 PM | 63 | 116 | 47 | 39 | 59 | 134 | 19 | 342 | 52 | 37 | 318 | 24 | 1250 | 5188 |
| 5:15 PM | 77 | 128 | 51 | 33 | 48 | 131 | 29 | 409 | 47 | 48 | 342 | 21 | 1364 | |
| 5:30 PM | 56 | 111 | 45 | 35 | 61 | 121 | 38 | 338 | 50 | 35 | 373 | 25 | 1288 | |
| 5:45 PM | 56 | 98 | 33 | 31 | 66 | 125 | 36 | 374 | 43 | 52 | 348 | 24 | 1286 | |
| Peak Hour | 259 | 437 | 177 | 127 | 218 | 483 | 100 | 1510 | 199 | 148 | 1430 | 103 | | |

## BIKES

| Interval | Oak Rd | | Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

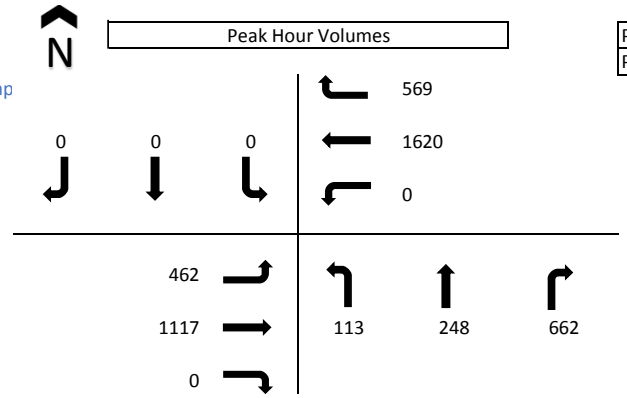
## PEDESTRIANS

| Interval | Crossing Oak Rd | | Crossing Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Buskirk Ave/HWY 680 NB Off-Ramp |
| E/W: | Treat Blvd |
| ID: | C21 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | Buskirk Ave/HWY 680 NB Off-Ramp | | | | | | Treat Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 32 | 52 | 218 | 0 | 0 | 0 | 108 | 268 | 0 | 0 | 311 | 174 | 1163 | 4725 |
| 4:15 PM | 36 | 77 | 198 | 0 | 0 | 0 | 125 | 269 | 0 | 0 | 352 | 141 | 1198 | 4774 |
| 4:30 PM | 41 | 55 | 181 | 0 | 0 | 0 | 112 | 276 | 0 | 0 | 372 | 161 | 1198 | 4776 |
| 4:45 PM | 36 | 57 | 186 | 0 | 0 | 0 | 106 | 261 | 0 | 0 | 370 | 150 | 1166 | 4791 |
| 5:00 PM | 23 | 70 | 159 | 0 | 0 | 0 | 103 | 308 | 0 | 0 | 400 | 149 | 1212 | 4788 |
| 5:15 PM | 30 | 69 | 164 | 0 | 0 | 0 | 116 | 270 | 0 | 0 | 429 | 122 | 1200 | |
| 5:30 PM | 24 | 52 | 153 | 0 | 0 | 0 | 137 | 278 | 0 | 0 | 421 | 148 | 1213 | |
| 5:45 PM | 43 | 59 | 134 | 0 | 0 | 0 | 113 | 287 | 0 | 0 | 383 | 144 | 1163 | |
| Peak Hour | 113 | 248 | 662 | 0 | 0 | 0 | 462 | 1117 | 0 | 0 | 1620 | 569 | | |

## BIKES

| Interval | Buskirk Ave/HWY 680 NB Off-Ramp | | Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 1 | 1 | |
| Peak Hour | 1 | 0 | 0 | 1 | | |

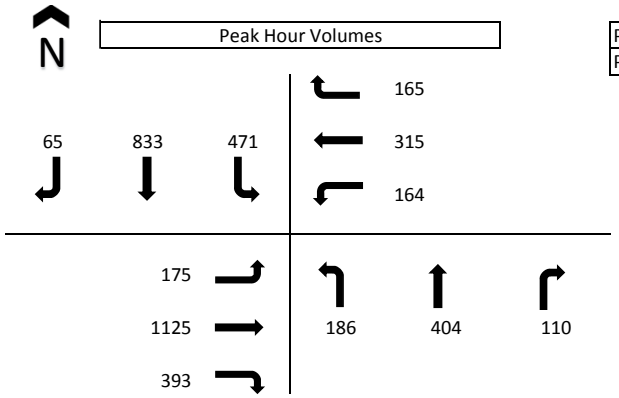
## PEDESTRIANS

| Interval | Crossing Buskirk Ave/HWY 680 NB Off- | | Crossing Treat Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 15 | 0 | 1 | 0 | 16 | 66 |
| 4:15 PM | 16 | 0 | 1 | 0 | 17 | 72 |
| 4:30 PM | 20 | 0 | 1 | 0 | 21 | 63 |
| 4:45 PM | 12 | 0 | 0 | 0 | 12 | 53 |
| 5:00 PM | 22 | 0 | 0 | 0 | 22 | 58 |
| 5:15 PM | 8 | 0 | 0 | 0 | 8 | |
| 5:30 PM | 11 | 0 | 0 | 0 | 11 | |
| 5:45 PM | 17 | 0 | 0 | 0 | 17 | |
| Peak Hour | 53 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | YGNACIO VALLEY ROAD |
| E/W: | CLAYTON ROAD |
| ID: | C22 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | YGNACIO VALLEY ROAD | | | | | | CLAYTON ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 41 | 92 | 19 | 103 | 181 | 16 | 44 | 250 | 88 | 45 | 78 | 35 | 992 | 4200 |
| 4:15 PM | 50 | 85 | 31 | 109 | 193 | 11 | 44 | 278 | 109 | 44 | 71 | 48 | 1073 | 4330 |
| 4:30 PM | 52 | 105 | 26 | 100 | 182 | 17 | 45 | 277 | 91 | 33 | 66 | 48 | 1042 | 4329 |
| 4:45 PM | 46 | 97 | 21 | 110 | 199 | 17 | 44 | 276 | 106 | 59 | 75 | 43 | 1093 | 4406 |
| 5:00 PM | 55 | 110 | 35 | 120 | 204 | 21 | 59 | 269 | 93 | 45 | 78 | 33 | 1122 | 4391 |
| 5:15 PM | 41 | 93 | 25 | 118 | 228 | 16 | 32 | 280 | 84 | 29 | 89 | 37 | 1072 | |
| 5:30 PM | 44 | 104 | 29 | 123 | 202 | 11 | 40 | 300 | 110 | 31 | 73 | 52 | 1119 | |
| 5:45 PM | 44 | 98 | 23 | 103 | 215 | 14 | 44 | 268 | 82 | 45 | 86 | 56 | 1078 | |
| Peak Hour | 186 | 404 | 110 | 471 | 833 | 65 | 175 | 1125 | 393 | 164 | 315 | 165 | | |

## BIKES

| Interval | YGNACIO VALLEY ROAD | | CLAYTON ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 7 |
| 4:15 PM | 0 | 4 | 0 | 1 | 5 | 6 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 1 | 1 | 0 | | |

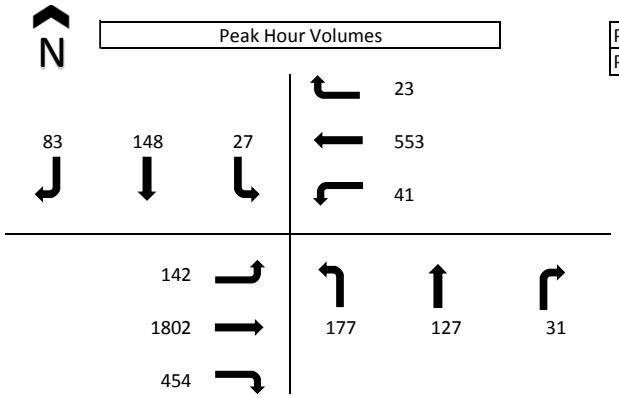
## PEDESTRIANS

| Interval | Crossing YGNACIO VALLEY ROAD | | Crossing CLAYTON ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 0 | 0 | 9 | 11 | 38 |
| 4:15 PM | 1 | 1 | 3 | 4 | 9 | 36 |
| 4:30 PM | 1 | 2 | 2 | 9 | 14 | 31 |
| 4:45 PM | 1 | 0 | 1 | 2 | 4 | 20 |
| 5:00 PM | 1 | 0 | 4 | 4 | 9 | 24 |
| 5:15 PM | 0 | 2 | 1 | 1 | 4 | |
| 5:30 PM | 1 | 1 | 1 | 0 | 3 | |
| 5:45 PM | 1 | 1 | 2 | 4 | 8 | |
| Peak Hour | 3 | 3 | 7 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | YGNACIO VALLEY ROAD |
| E/W: | ALBERTA WAY |
| ID: | C23 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | YGNACIO VALLEY ROAD | | | | | | ALBERTA WAY | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 53 | 29 | 6 | 10 | 26 | 19 | 34 | 407 | 115 | 9 | 137 | 4 | 849 | 3459 |
| 4:15 PM | 39 | 24 | 11 | 10 | 22 | 20 | 35 | 434 | 118 | 11 | 149 | 3 | 876 | 3524 |
| 4:30 PM | 58 | 31 | 8 | 11 | 35 | 33 | 24 | 407 | 109 | 9 | 123 | 4 | 852 | 3570 |
| 4:45 PM | 44 | 21 | 3 | 7 | 33 | 18 | 40 | 443 | 121 | 8 | 137 | 7 | 882 | 3608 |
| 5:00 PM | 45 | 28 | 5 | 5 | 34 | 22 | 35 | 468 | 113 | 11 | 143 | 5 | 914 | 3597 |
| 5:15 PM | 48 | 40 | 17 | 8 | 42 | 18 | 28 | 437 | 118 | 13 | 145 | 8 | 922 | |
| 5:30 PM | 40 | 38 | 6 | 7 | 39 | 25 | 39 | 454 | 102 | 9 | 128 | 3 | 890 | |
| 5:45 PM | 33 | 55 | 6 | 7 | 36 | 22 | 28 | 418 | 117 | 9 | 139 | 1 | 871 | |
| Peak Hour | 177 | 127 | 31 | 27 | 148 | 83 | 142 | 1802 | 454 | 41 | 553 | 23 | | |

## BIKES

| Interval | YGNACIO VALLEY ROAD | | ALBERTA WAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 1 | 2 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:00 PM | 0 | 3 | 0 | 0 | 3 | 9 |
| 5:15 PM | 0 | 3 | 0 | 0 | 3 | |
| 5:30 PM | 2 | 0 | 0 | 1 | 3 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 6 | 0 | 1 | | |

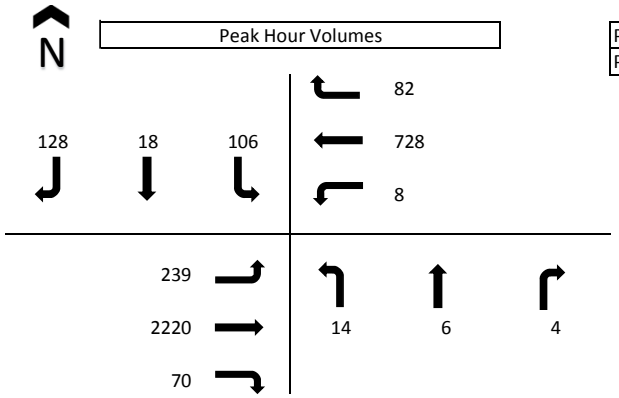
## PEDESTRIANS

| Interval | Crossing YGNACIO VALLEY ROAD | | Crossing ALBERTA WAY | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:45 PM | 0 | 0 | 1 | 1 | 2 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 0 | 2 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | AYERS RD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C24 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | AYERS RD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 11 | 2 | 5 | 12 | 3 | 40 | 66 | 510 | 6 | 0 | 206 | 22 | 883 | 3527 |
| 4:15 PM | 15 | 4 | 1 | 24 | 2 | 26 | 45 | 548 | 11 | 2 | 177 | 21 | 876 | 3546 |
| 4:30 PM | 4 | 0 | 0 | 14 | 1 | 23 | 76 | 526 | 8 | 1 | 182 | 25 | 860 | 3591 |
| 4:45 PM | 6 | 0 | 1 | 21 | 0 | 35 | 69 | 556 | 13 | 3 | 180 | 24 | 908 | 3599 |
| 5:00 PM | 4 | 2 | 0 | 24 | 6 | 30 | 61 | 574 | 10 | 0 | 173 | 18 | 902 | 3623 |
| 5:15 PM | 4 | 0 | 0 | 20 | 3 | 40 | 54 | 568 | 14 | 0 | 199 | 19 | 921 | |
| 5:30 PM | 3 | 3 | 0 | 27 | 2 | 30 | 55 | 536 | 21 | 2 | 168 | 21 | 868 | |
| 5:45 PM | 3 | 1 | 4 | 35 | 7 | 28 | 69 | 542 | 25 | 6 | 188 | 24 | 932 | |
| Peak Hour | 14 | 6 | 4 | 106 | 18 | 128 | 239 | 2220 | 70 | 8 | 728 | 82 | | |

## BIKES

| Interval | AYERS RD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 2 | 2 | |
| Peak Hour | 0 | 0 | 0 | 2 | | |

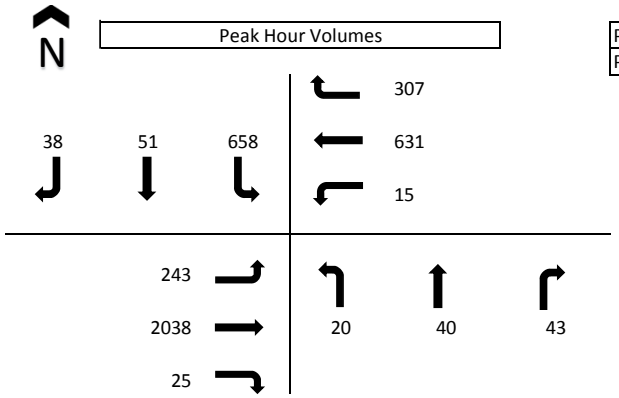
## PEDESTRIANS

| Interval | Crossing AYERS RD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 1 | 2 | 5 |
| 4:15 PM | 0 | 0 | 0 | 3 | 3 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | COWELL ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C25 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 7 | 5 | 2 | 133 | 8 | 10 | 46 | 393 | 9 | 2 | 163 | 64 | 842 | 3674 |
| 4:15 PM | 4 | 8 | 4 | 124 | 13 | 17 | 67 | 401 | 6 | 5 | 170 | 76 | 895 | 3825 |
| 4:30 PM | 6 | 8 | 8 | 154 | 11 | 11 | 50 | 460 | 4 | 8 | 166 | 85 | 971 | 4038 |
| 4:45 PM | 2 | 11 | 4 | 136 | 6 | 13 | 48 | 509 | 8 | 7 | 159 | 63 | 966 | 4084 |
| 5:00 PM | 3 | 9 | 1 | 169 | 12 | 10 | 61 | 497 | 4 | 2 | 142 | 83 | 993 | 4109 |
| 5:15 PM | 9 | 3 | 8 | 188 | 17 | 8 | 48 | 537 | 8 | 8 | 188 | 86 | 1108 | |
| 5:30 PM | 4 | 9 | 30 | 155 | 11 | 10 | 67 | 506 | 10 | 3 | 141 | 71 | 1017 | |
| 5:45 PM | 4 | 19 | 4 | 146 | 11 | 10 | 67 | 498 | 3 | 2 | 160 | 67 | 991 | |
| Peak Hour | 20 | 40 | 43 | 658 | 51 | 38 | 243 | 2038 | 25 | 15 | 631 | 307 | | |

## BIKES

| Interval | COWELL ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 2 | 1 | 3 | 4 |
| 4:15 PM | 0 | 0 | 0 | 1 | 1 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 1 | 0 | | |

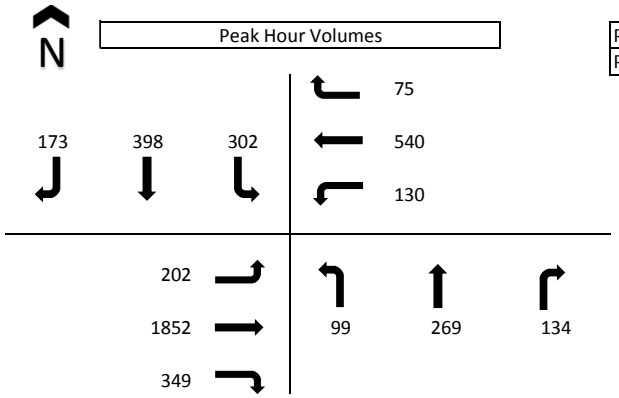
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 1 | 2 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | 4/15/15 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | OAK GROVE ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C26 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | OAK GROVE ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 25 | 50 | 33 | 76 | 103 | 40 | 54 | 353 | 74 | 20 | 160 | 17 | 1005 | 4370 |
| 4:15 PM | 19 | 49 | 27 | 68 | 87 | 41 | 66 | 395 | 98 | 29 | 159 | 27 | 1065 | 4504 |
| 4:30 PM | 24 | 79 | 38 | 88 | 103 | 35 | 47 | 429 | 92 | 33 | 143 | 18 | 1129 | 4523 |
| 4:45 PM | 24 | 67 | 34 | 72 | 93 | 53 | 54 | 502 | 93 | 31 | 133 | 15 | 1171 | 4415 |
| 5:00 PM | 21 | 78 | 31 | 74 | 109 | 43 | 53 | 470 | 90 | 30 | 121 | 19 | 1139 | 4349 |
| 5:15 PM | 30 | 45 | 31 | 68 | 93 | 42 | 48 | 451 | 74 | 36 | 143 | 23 | 1084 | |
| 5:30 PM | 18 | 47 | 21 | 81 | 93 | 26 | 31 | 440 | 89 | 42 | 114 | 19 | 1021 | |
| 5:45 PM | 21 | 61 | 20 | 72 | 98 | 35 | 59 | 458 | 93 | 34 | 138 | 16 | 1105 | |
| Peak Hour | 99 | 269 | 134 | 302 | 398 | 173 | 202 | 1852 | 349 | 130 | 540 | 75 | | |

## BIKES

| Interval | OAK GROVE ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 2 | 0 | 1 | 0 | 3 | 5 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 2 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 4 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 2 | 0 | 0 | 3 | |
| Peak Hour | 0 | 1 | 1 | 0 | | |

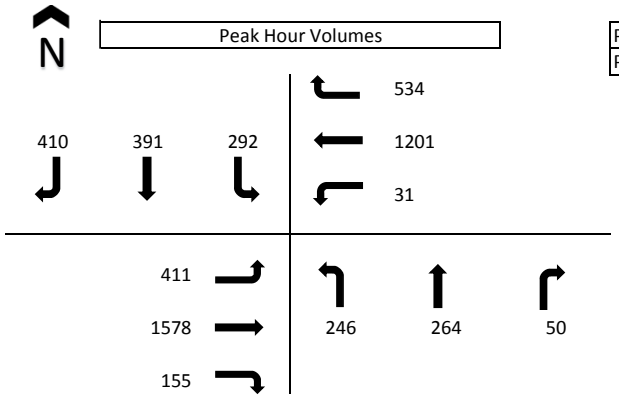
## PEDESTRIANS

| Interval | Crossing OAK GROVE ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 2 | 2 | 1 | 7 | 14 |
| 4:15 PM | 0 | 3 | 0 | 0 | 3 | 7 |
| 4:30 PM | 0 | 0 | 2 | 0 | 2 | 11 |
| 4:45 PM | 0 | 0 | 0 | 2 | 2 | 11 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 13 |
| 5:15 PM | 0 | 3 | 1 | 3 | 7 | |
| 5:30 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 4 | 4 | |
| Peak Hour | 0 | 3 | 3 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | THURSDAY MAY 7, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | BANCROFT ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C27 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | BANCROFT ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 59 | 53 | 12 | 66 | 77 | 95 | 120 | 443 | 44 | 12 | 307 | 121 | 1409 | 5399 |
| 4:15 PM | 56 | 52 | 9 | 71 | 95 | 85 | 102 | 371 | 35 | 19 | 283 | 121 | 1299 | 5383 |
| 4:30 PM | 80 | 55 | 10 | 72 | 74 | 84 | 104 | 386 | 43 | 11 | 292 | 114 | 1325 | 5551 |
| 4:45 PM | 58 | 64 | 10 | 64 | 86 | 100 | 92 | 402 | 43 | 5 | 305 | 137 | 1366 | 5563 |
| 5:00 PM | 63 | 65 | 10 | 74 | 101 | 103 | 105 | 390 | 39 | 9 | 308 | 126 | 1393 | 5506 |
| 5:15 PM | 65 | 74 | 12 | 83 | 103 | 102 | 104 | 405 | 33 | 9 | 328 | 149 | 1467 | |
| 5:30 PM | 60 | 61 | 18 | 71 | 101 | 105 | 110 | 381 | 40 | 8 | 260 | 122 | 1337 | |
| 5:45 PM | 53 | 72 | 6 | 56 | 105 | 86 | 117 | 396 | 29 | 12 | 274 | 103 | 1309 | |
| Peak Hour | 246 | 264 | 50 | 292 | 391 | 410 | 411 | 1578 | 155 | 31 | 1201 | 534 | | |

## BIKES

| Interval | BANCROFT ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 2 | 0 | 1 | 3 | 10 |
| 4:15 PM | 2 | 0 | 0 | 0 | 2 | 11 |
| 4:30 PM | 1 | 2 | 0 | 0 | 3 | 12 |
| 4:45 PM | 0 | 2 | 0 | 0 | 2 | 11 |
| 5:00 PM | 2 | 2 | 0 | 0 | 4 | 15 |
| 5:15 PM | 0 | 2 | 1 | 0 | 3 | |
| 5:30 PM | 1 | 0 | 1 | 0 | 2 | |
| 5:45 PM | 2 | 3 | 0 | 1 | 6 | |
| Peak Hour | 3 | 6 | 2 | 0 | | |

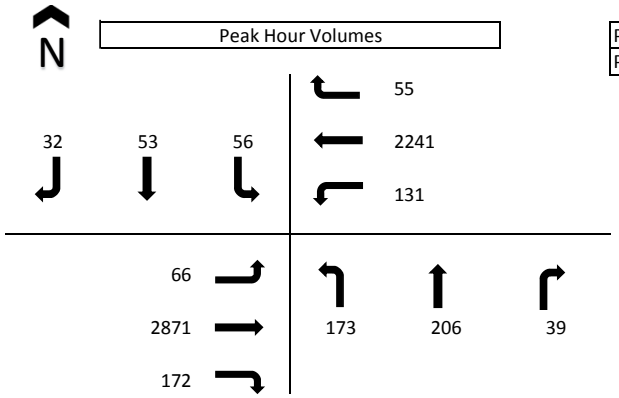
## PEDESTRIANS

| Interval | Crossing BANCROFT ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 1 | 0 | 0 | 3 | 18 |
| 4:15 PM | 3 | 3 | 3 | 0 | 9 | 17 |
| 4:30 PM | 0 | 3 | 2 | 0 | 5 | 13 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 11 |
| 5:00 PM | 0 | 0 | 2 | 0 | 2 | 11 |
| 5:15 PM | 1 | 0 | 4 | 0 | 5 | |
| 5:30 PM | 1 | 2 | 0 | 0 | 3 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 2 | 2 | 7 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Walnut Blvd |
| E/W: | Ygnacio Valley Rd |
| ID: | C28 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | Walnut Blvd | | | | | | Ygnacio Valley Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 31 | 29 | 5 | 21 | 17 | 14 | 14 | 707 | 34 | 26 | 532 | 17 | 1447 | 5972 |
| 4:15 PM | 29 | 32 | 5 | 22 | 13 | 7 | 21 | 737 | 32 | 36 | 527 | 18 | 1479 | 6031 |
| 4:30 PM | 34 | 44 | 6 | 11 | 13 | 10 | 19 | 726 | 39 | 36 | 587 | 12 | 1537 | 6095 |
| 4:45 PM | 43 | 50 | 11 | 12 | 16 | 11 | 15 | 724 | 45 | 35 | 529 | 18 | 1509 | 5966 |
| 5:00 PM | 37 | 51 | 15 | 18 | 14 | 4 | 21 | 719 | 45 | 27 | 542 | 13 | 1506 | 5915 |
| 5:15 PM | 59 | 61 | 7 | 15 | 10 | 7 | 11 | 702 | 43 | 33 | 583 | 12 | 1543 | |
| 5:30 PM | 46 | 60 | 6 | 12 | 10 | 9 | 19 | 693 | 44 | 32 | 467 | 10 | 1408 | |
| 5:45 PM | 32 | 55 | 18 | 13 | 14 | 2 | 16 | 701 | 48 | 33 | 521 | 5 | 1458 | |
| Peak Hour | 173 | 206 | 39 | 56 | 53 | 32 | 66 | 2871 | 172 | 131 | 2241 | 55 | | |

## BIKES

| Interval | Walnut Blvd | | Ygnacio Valley Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

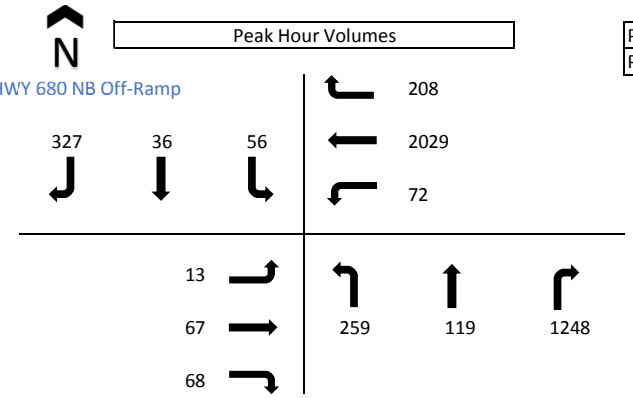
## PEDESTRIANS

| Interval | Crossing Walnut Blvd | | Crossing Ygnacio Valley Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 4 | 0 | 1 | 7 | 31 |
| 4:15 PM | 1 | 4 | 2 | 3 | 10 | 33 |
| 4:30 PM | 1 | 2 | 0 | 5 | 8 | 39 |
| 4:45 PM | 1 | 3 | 0 | 2 | 6 | 44 |
| 5:00 PM | 1 | 6 | 2 | 0 | 9 | 52 |
| 5:15 PM | 0 | 12 | 1 | 3 | 16 | |
| 5:30 PM | 2 | 4 | 4 | 3 | 13 | |
| 5:45 PM | 1 | 9 | 1 | 3 | 14 | |
| Peak Hour | 3 | 23 | 3 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/21/2015
Count Period: 4:00 PM to 6:00 PM
N/S: Bart Parking Lots/Oakland Blvd/HWY 680 NB Off-Ramp
E/W: Ygnacio Valley Rd
ID: C29




| Peak Hour: | 4:45 PM to 5:45 PM |
|---|---|
| Peak Hour Factor: | 0.99 |

## AUTOMOBILES

| Interval | Bart Parking Lots/Oakland Blvd/HWY 680 NB Off-Ramp | | | | | | Ygnacio Valley Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 44 | 16 | 355 | 14 | 6 | 43 | 2 | 23 | 7 | 24 | 421 | 41 | 996 | 4268 |
| 4:15 PM | 63 | 25 | 337 | 10 | 11 | 60 | 1 | 14 | 9 | 27 | 498 | 39 | 1094 | 4396 |
| 4:30 PM | 44 | 23 | 332 | 17 | 4 | 62 | 3 | 19 | 18 | 20 | 462 | 35 | 1039 | 4444 |
| 4:45 PM | 69 | 25 | 358 | 16 | 11 | 66 | 2 | 19 | 15 | 23 | 469 | 66 | 1139 | 4502 |
| 5:00 PM | 56 | 25 | 286 | 12 | 7 | 82 | 3 | 18 | 17 | 19 | 559 | 40 | 1124 | 4463 |
| 5:15 PM | 72 | 32 | 324 | 10 | 9 | 77 | 3 | 11 | 20 | 15 | 526 | 43 | 1142 | |
| 5:30 PM | 62 | 37 | 280 | 18 | 9 | 102 | 5 | 19 | 16 | 15 | 475 | 59 | 1097 | |
| 5:45 PM | 64 | 38 | 292 | 15 | 4 | 109 | 4 | 18 | 14 | 23 | 464 | 55 | 1100 | |
| Peak Hour | 259 | 119 | 1248 | 56 | 36 | 327 | 13 | 67 | 68 | 72 | 2029 | 208 | | |

## BIKES

| Interval | Bart Parking Lots/Oakland | | Ygnacio Valley Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 3 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 3 | 0 | 0 | | |

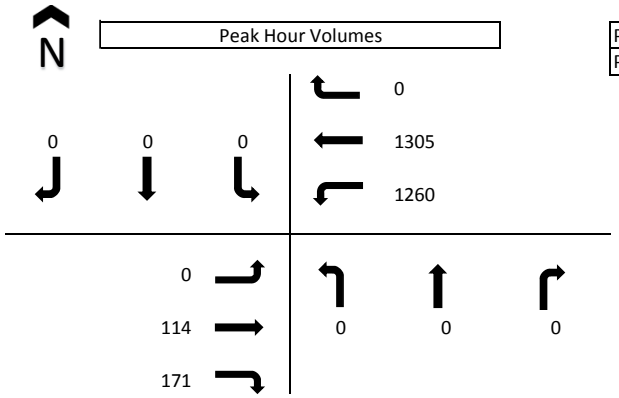
## PEDESTRIANS

| Interval | Crossing Bart Parking Lots/Oakland Blvd/HWY | | Crossing Ygnacio Valley Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 3 | 5 | 0 | 5 | 13 | 49 |
| 4:15 PM | 4 | 4 | 0 | 5 | 13 | 66 |
| 4:30 PM | 0 | 1 | 0 | 4 | 5 | 91 |
| 4:45 PM | 6 | 2 | 0 | 10 | 18 | 111 |
| 5:00 PM | 11 | 4 | 0 | 15 | 30 | 117 |
| 5:15 PM | 8 | 10 | 0 | 20 | 38 | |
| 5:30 PM | 7 | 6 | 0 | 12 | 25 | |
| 5:45 PM | 6 | 6 | 0 | 12 | 24 | |
| Peak Hour | 32 | 22 | 0 | 57 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/21/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | HWY 680 SB On-Ramp |
| E/W: | Ygnacio Valley Blvd/Hillside Ave |
| ID: | C30 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | HWY 680 SB On-Ramp | | | | | | Ygnacio Valley Blvd/Hillside Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 44 | 252 | 233 | 0 | 552 | 2488 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 37 | 281 | 330 | 0 | 669 | 2671 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 35 | 280 | 278 | 0 | 626 | 2733 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 23 | 41 | 272 | 304 | 0 | 641 | 2806 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 44 | 344 | 323 | 0 | 735 | 2850 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 47 | 295 | 360 | 0 | 731 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 40 | 320 | 307 | 0 | 699 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 40 | 301 | 315 | 0 | 685 | |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 | 171 | 1260 | 1305 | 0 | | |

## BIKES

| Interval | HWY 680 SB On-Ramp | | Ygnacio Valley Blvd/Hillside Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

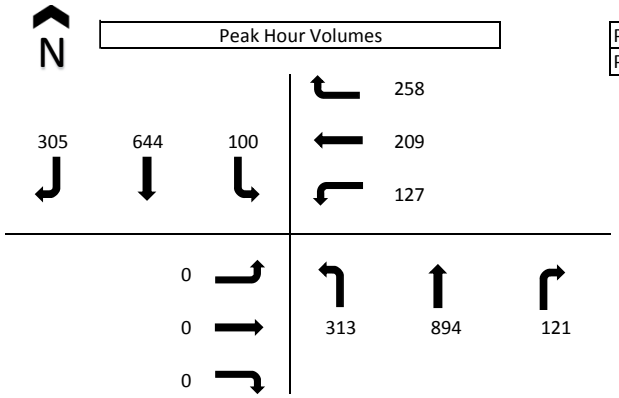
## PEDESTRIANS

| Interval | Crossing HWY 680 SB On-Ramp | | Crossing Ygnacio Valley Blvd/Hillside Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | RAILROAD AVENUE |
| E/W: | WB SR-4 RAMPS |
| ID: | E1 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | RAILROAD AVENUE | | | | | | WB SR-4 RAMPS | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 73 | 177 | 46 | 29 | 129 | 67 | 0 | 0 | 0 | 50 | 47 | 67 | 685 | 2838 |
| 4:15 PM | 82 | 201 | 33 | 30 | 146 | 64 | 0 | 0 | 0 | 39 | 43 | 65 | 703 | 2894 |
| 4:30 PM | 91 | 207 | 36 | 22 | 155 | 92 | 0 | 0 | 0 | 35 | 48 | 58 | 744 | 2971 |
| 4:45 PM | 88 | 233 | 27 | 22 | 150 | 57 | 0 | 0 | 0 | 31 | 41 | 57 | 706 | 2951 |
| 5:00 PM | 62 | 211 | 28 | 28 | 173 | 73 | 0 | 0 | 0 | 37 | 57 | 72 | 741 | 2963 |
| 5:15 PM | 72 | 243 | 30 | 28 | 166 | 83 | 0 | 0 | 0 | 24 | 63 | 71 | 780 | |
| 5:30 PM | 58 | 221 | 47 | 30 | 152 | 55 | 0 | 0 | 0 | 60 | 52 | 49 | 724 | |
| 5:45 PM | 74 | 222 | 41 | 23 | 150 | 62 | 0 | 0 | 0 | 43 | 41 | 62 | 718 | |
| Peak Hour | 313 | 894 | 121 | 100 | 644 | 305 | 0 | 0 | 0 | 127 | 209 | 258 | | |

## BIKES

| Interval | RAILROAD AVENUE | | WB SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:30 PM | 0 | 0 | 0 | 1 | 1 | 11 |
| 4:45 PM | 0 | 2 | 0 | 0 | 2 | 14 |
| 5:00 PM | 1 | 0 | 0 | 1 | 2 | 14 |
| 5:15 PM | 5 | 0 | 0 | 1 | 6 | |
| 5:30 PM | 2 | 1 | 0 | 1 | 4 | |
| 5:45 PM | 0 | 2 | 0 | 0 | 2 | |
| Peak Hour | 6 | 2 | 0 | 3 | | |

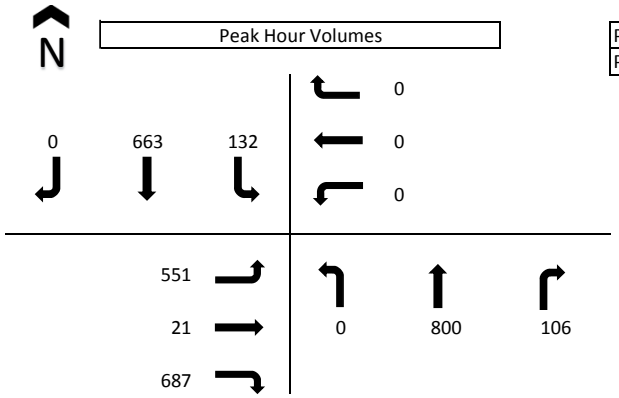
## PEDESTRIANS

| Interval | Crossing RAILROAD AVENUE | | Crossing WB SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 0 | 6 | 2 | 10 | 34 |
| 4:15 PM | 6 | 0 | 0 | 1 | 7 | 29 |
| 4:30 PM | 1 | 0 | 5 | 6 | 12 | 32 |
| 4:45 PM | 0 | 0 | 1 | 4 | 5 | 21 |
| 5:00 PM | 2 | 0 | 1 | 2 | 5 | 21 |
| 5:15 PM | 3 | 0 | 5 | 2 | 10 | |
| 5:30 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:45 PM | 4 | 0 | 1 | 0 | 5 | |
| Peak Hour | 6 | 0 | 12 | 14 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: TUESDAY APRIL 28, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: RAILROAD AVENUE
E/W: EASTBOUND SR-4 RAMPS
ID: E2




| Peak Hour: | 4:45 PM to 5:45 PM |
|---|---|
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | RAILROAD AVENUE | | | | | | EASTBOUND SR-4 RAMPS | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 171 | 30 | 37 | 130 | 0 | 114 | 2 | 198 | 0 | 0 | 0 | 682 | 2836 |
| 4:15 PM | 0 | 198 | 40 | 36 | 158 | 0 | 100 | 1 | 160 | 0 | 0 | 0 | 693 | 2858 |
| 4:30 PM | 0 | 203 | 21 | 27 | 149 | 0 | 130 | 0 | 180 | 0 | 0 | 0 | 710 | 2916 |
| 4:45 PM | 0 | 228 | 44 | 26 | 170 | 0 | 133 | 0 | 150 | 0 | 0 | 0 | 751 | 2960 |
| 5:00 PM | 0 | 198 | 17 | 44 | 156 | 0 | 121 | 0 | 168 | 0 | 0 | 0 | 704 | 2944 |
| 5:15 PM | 0 | 189 | 24 | 32 | 171 | 0 | 148 | 19 | 168 | 0 | 0 | 0 | 751 | |
| 5:30 PM | 0 | 185 | 21 | 30 | 166 | 0 | 149 | 2 | 201 | 0 | 0 | 0 | 754 | |
| 5:45 PM | 0 | 183 | 26 | 38 | 166 | 0 | 142 | 2 | 178 | 0 | 0 | 0 | 735 | |
| Peak Hour | 0 | 800 | 106 | 132 | 663 | 0 | 551 | 21 | 687 | 0 | 0 | 0 | | |

## BIKES

| Interval | RAILROAD AVENUE | | EASTBOUND SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:45 PM | 0 | 0 | 2 | 0 | 2 | 5 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 3 | 2 | 0 | | |

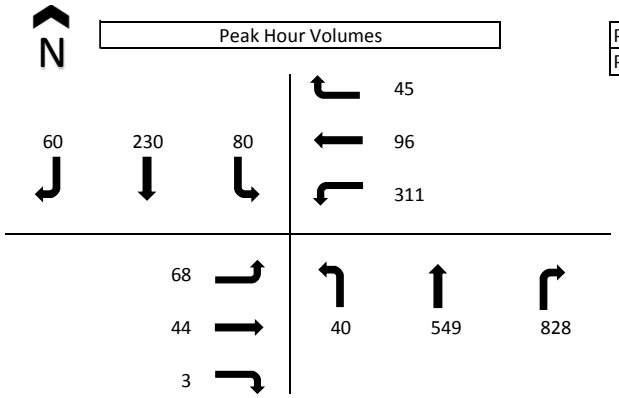
## PEDESTRIANS

| Interval | Crossing RAILROAD AVENUE | | Crossing EASTBOUND SR-4 RAMPS | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 15 |
| 4:15 PM | 0 | 1 | 0 | 5 | 6 | 17 |
| 4:30 PM | 0 | 2 | 0 | 3 | 5 | 12 |
| 4:45 PM | 0 | 0 | 0 | 4 | 4 | 11 |
| 5:00 PM | 0 | 1 | 0 | 1 | 2 | 10 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 4 | 4 | |
| 5:45 PM | 0 | 0 | 0 | 3 | 3 | |
| Peak Hour | 0 | 1 | 0 | 10 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | RAILROAD AVENUE |
| E/W: | BUCHANAN ROAD |
| ID: | E3 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | RAILROAD AVENUE | | | | | | BUCHANAN ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 7 | 101 | 173 | 20 | 48 | 19 | 10 | 15 | 1 | 97 | 26 | 12 | 529 | 2196 |
| 4:15 PM | 7 | 101 | 190 | 14 | 58 | 16 | 8 | 11 | 4 | 78 | 20 | 24 | 531 | 2226 |
| 4:30 PM | 6 | 140 | 203 | 26 | 37 | 15 | 11 | 14 | 1 | 83 | 23 | 14 | 573 | 2281 |
| 4:45 PM | 9 | 148 | 203 | 12 | 41 | 9 | 14 | 11 | 2 | 86 | 17 | 11 | 563 | 2341 |
| 5:00 PM | 5 | 105 | 198 | 25 | 54 | 18 | 13 | 12 | 1 | 98 | 19 | 11 | 559 | 2354 |
| 5:15 PM | 9 | 148 | 206 | 22 | 58 | 14 | 21 | 10 | 0 | 67 | 19 | 12 | 586 | |
| 5:30 PM | 15 | 162 | 224 | 19 | 49 | 14 | 19 | 13 | 0 | 74 | 30 | 14 | 633 | |
| 5:45 PM | 11 | 134 | 200 | 14 | 69 | 14 | 15 | 9 | 2 | 72 | 28 | 8 | 576 | |
| Peak Hour | 40 | 549 | 828 | 80 | 230 | 60 | 68 | 44 | 3 | 311 | 96 | 45 | | |

## BIKES

| Interval | RAILROAD AVENUE | | BUCHANAN ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 1 | 1 | 2 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 4 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 2 | 2 | |
| Peak Hour | 0 | 0 | 0 | 4 | | |

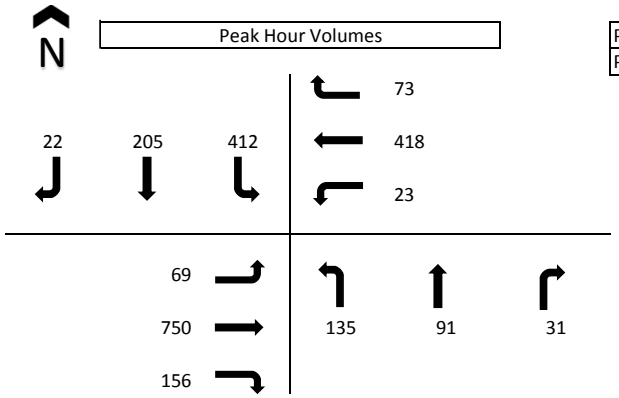
## PEDESTRIANS

| Interval | Crossing RAILROAD AVENUE | | Crossing BUCHANAN ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 2 | 2 | 13 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 13 |
| 4:30 PM | 4 | 0 | 1 | 4 | 9 | 13 |
| 4:45 PM | 0 | 0 | 1 | 1 | 2 | 10 |
| 5:00 PM | 1 | 0 | 1 | 0 | 2 | 10 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 2 | 0 | 2 | 2 | 6 | |
| 5:45 PM | 1 | 0 | 0 | 1 | 2 | |
| Peak Hour | 4 | 0 | 3 | 3 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: TUESDAY, APRIL 28TH, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: NEROLY ROAD
E/W: MAIN STREET
ID: E4




| Peak Hour: | 4:30 PM to 5:30 PM |
|---|---|
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | NEROLY ROAD | | | | | | MAIN STREET | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 25 | 25 | 13 | 74 | 44 | 2 | 11 | 165 | 30 | 7 | 119 | 31 | 546 | 2211 |
| 4:15 PM | 29 | 19 | 8 | 83 | 39 | 3 | 10 | 177 | 40 | 11 | 103 | 22 | 544 | 2303 |
| 4:30 PM | 22 | 27 | 15 | 89 | 42 | 5 | 13 | 185 | 24 | 8 | 110 | 21 | 561 | 2385 |
| 4:45 PM | 38 | 20 | 5 | 87 | 47 | 6 | 22 | 178 | 42 | 5 | 100 | 10 | 560 | 2364 |
| 5:00 PM | 41 | 23 | 8 | 112 | 57 | 6 | 17 | 200 | 42 | 7 | 106 | 19 | 638 | 2382 |
| 5:15 PM | 34 | 21 | 3 | 124 | 59 | 5 | 17 | 187 | 48 | 3 | 102 | 23 | 626 | |
| 5:30 PM | 25 | 18 | 7 | 77 | 34 | 3 | 20 | 162 | 45 | 12 | 111 | 26 | 540 | |
| 5:45 PM | 21 | 25 | 5 | 74 | 39 | 7 | 24 | 192 | 41 | 9 | 117 | 24 | 578 | |
| Peak Hour | 135 | 91 | 31 | 412 | 205 | 22 | 69 | 750 | 156 | 23 | 418 | 73 | | |

## BIKES

| Interval | NEROLY ROAD | | MAIN STREET | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 3 | 0 | 3 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:15 PM | 2 | 0 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 2 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 0 | 3 | 0 | | |

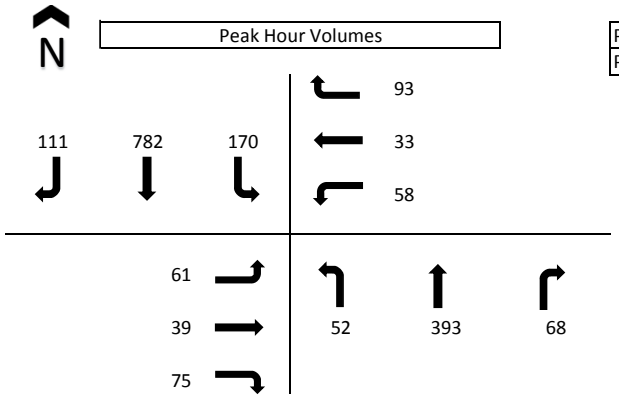
## PEDESTRIANS

| Interval | Crossing NEROLY ROAD | | Crossing MAIN STREET | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:30 PM | 0 | 0 | 3 | 0 | 3 | 5 |
| 4:45 PM | 0 | 0 | 2 | 0 | 2 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 5 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY APRIL 28, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | MAIN STREET |
| E/W: | BIG BREAK ROAD |
| ID: | E5 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | MAIN STREET | | | | | | BIG BREAK ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 16 | 107 | 17 | 49 | 150 | 32 | 13 | 5 | 30 | 10 | 3 | 16 | 448 | 1848 |
| 4:15 PM | 12 | 104 | 13 | 46 | 186 | 28 | 20 | 11 | 20 | 17 | 5 | 20 | 482 | 1921 |
| 4:30 PM | 13 | 93 | 17 | 29 | 197 | 38 | 10 | 6 | 10 | 10 | 3 | 14 | 440 | 1924 |
| 4:45 PM | 12 | 108 | 10 | 51 | 185 | 23 | 15 | 11 | 19 | 18 | 11 | 15 | 478 | 1935 |
| 5:00 PM | 17 | 92 | 22 | 53 | 212 | 32 | 15 | 12 | 16 | 17 | 10 | 23 | 521 | 1927 |
| 5:15 PM | 15 | 89 | 14 | 37 | 213 | 29 | 20 | 7 | 18 | 9 | 6 | 28 | 485 | |
| 5:30 PM | 8 | 104 | 22 | 29 | 172 | 27 | 11 | 9 | 22 | 14 | 6 | 27 | 451 | |
| 5:45 PM | 10 | 121 | 18 | 41 | 175 | 27 | 12 | 10 | 17 | 14 | 7 | 18 | 470 | |
| Peak Hour | 52 | 393 | 68 | 170 | 782 | 111 | 61 | 39 | 75 | 58 | 33 | 93 | | |

## BIKES

| Interval | MAIN STREET | | BIG BREAK ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 3 | 0 | 0 | 0 | 3 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 1 | 0 | 0 | 0 | 1 | 6 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 5:00 PM | 0 | 1 | 1 | 0 | 2 | 6 |
| 5:15 PM | 0 | 2 | 1 | 0 | 3 | |
| 5:30 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 3 | 3 | 0 | | |

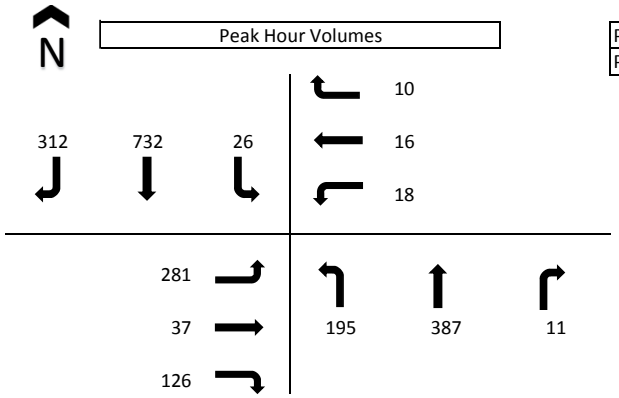
## PEDESTRIANS

| Interval | Crossing MAIN STREET | | Crossing BIG BREAK ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 5 |
| 4:30 PM | 0 | 1 | 0 | 0 | 1 | 5 |
| 4:45 PM | 0 | 0 | 0 | 1 | 1 | 5 |
| 5:00 PM | 1 | 1 | 0 | 0 | 2 | 4 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 2 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: WILTEC
Date: WEDNESDAY, APRIL 29TH, 2015
Count Period: 4:00 PM TO 6:00 PM
N/S: MAIN STREET
E/W: OAKLEY ROAD/EMPIRE ROAD
ID: E6




| Peak Hour: | 5:00 PM to 6:00 PM |
|---|---|
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | MAIN STREET | | | | | | OAKLEY ROAD/EMPIRE ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 43 | 116 | 6 | 6 | 163 | 73 | 70 | 9 | 32 | 3 | 6 | 1 | 528 | 2101 |
| 4:15 PM | 44 | 100 | 2 | 2 | 156 | 77 | 57 | 9 | 44 | 7 | 15 | 7 | 520 | 2087 |
| 4:30 PM | 46 | 116 | 7 | 4 | 180 | 78 | 61 | 5 | 31 | 5 | 7 | 1 | 541 | 2084 |
| 4:45 PM | 48 | 90 | 3 | 3 | 186 | 67 | 77 | 7 | 25 | 1 | 3 | 2 | 512 | 2087 |
| 5:00 PM | 49 | 94 | 2 | 7 | 161 | 80 | 61 | 15 | 35 | 6 | 1 | 3 | 514 | 2151 |
| 5:15 PM | 34 | 104 | 1 | 4 | 189 | 71 | 70 | 6 | 24 | 5 | 6 | 3 | 517 | |
| 5:30 PM | 52 | 90 | 0 | 7 | 202 | 67 | 78 | 7 | 31 | 3 | 5 | 2 | 544 | |
| 5:45 PM | 60 | 99 | 8 | 8 | 180 | 94 | 72 | 9 | 36 | 4 | 4 | 2 | 576 | |
| Peak Hour | 195 | 387 | 11 | 26 | 732 | 312 | 281 | 37 | 126 | 18 | 16 | 10 | | |

## BIKES

| Interval | MAIN STREET | | OAKLEY ROAD/EMPIRE ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 0 | 1 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 1 | 0 | 0 | 0 | 1 | 9 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 10 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 9 |
| 5:15 PM | 0 | 5 | 1 | 0 | 6 | |
| 5:30 PM | 0 | 1 | 1 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 6 | 2 | 1 | | |

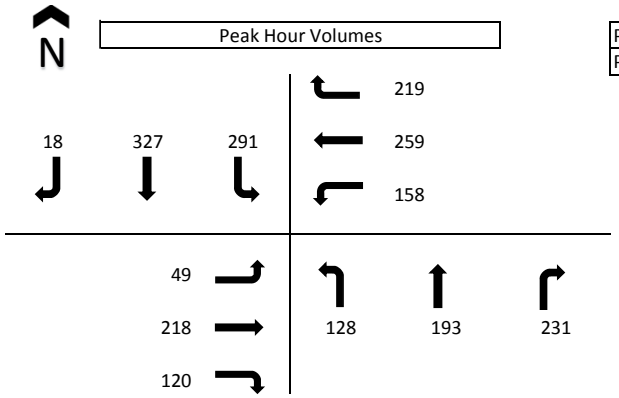
## PEDESTRIANS

| Interval | Crossing MAIN STREET | | Crossing OAKLEY ROAD/EMPIRE ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 3 | 1 | 0 | 1 | 5 | 23 |
| 4:15 PM | 5 | 3 | 0 | 0 | 8 | 21 |
| 4:30 PM | 1 | 1 | 0 | 3 | 5 | 17 |
| 4:45 PM | 2 | 1 | 0 | 2 | 5 | 16 |
| 5:00 PM | 0 | 1 | 0 | 2 | 3 | 11 |
| 5:15 PM | 2 | 1 | 0 | 1 | 4 | |
| 5:30 PM | 2 | 0 | 0 | 2 | 4 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 4 | 2 | 0 | 5 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 29TH, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | MAIN STREET |
| E/W: | CYPRESS ROAD |
| ID: | E7 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | MAIN STREET | | | | | | CYPRESS ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 17 | 71 | 48 | 80 | 74 | 2 | 5 | 42 | 9 | 40 | 44 | 64 | 496 | 1929 |
| 4:15 PM | 15 | 61 | 40 | 62 | 78 | 0 | 4 | 46 | 9 | 46 | 44 | 62 | 467 | 1992 |
| 4:30 PM | 22 | 53 | 58 | 77 | 70 | 4 | 6 | 48 | 14 | 37 | 48 | 50 | 487 | 2108 |
| 4:45 PM | 20 | 34 | 51 | 70 | 79 | 6 | 6 | 46 | 14 | 44 | 45 | 64 | 479 | 2178 |
| 5:00 PM | 25 | 49 | 66 | 73 | 83 | 5 | 18 | 53 | 28 | 30 | 59 | 70 | 559 | 2211 |
| 5:15 PM | 42 | 39 | 64 | 65 | 85 | 7 | 10 | 66 | 21 | 49 | 84 | 51 | 583 | |
| 5:30 PM | 31 | 48 | 57 | 89 | 78 | 4 | 12 | 54 | 29 | 46 | 61 | 48 | 557 | |
| 5:45 PM | 30 | 57 | 44 | 64 | 81 | 2 | 9 | 45 | 42 | 33 | 55 | 50 | 512 | |
| Peak Hour | 128 | 193 | 231 | 291 | 327 | 18 | 49 | 218 | 120 | 158 | 259 | 219 | | |

## BIKES

| Interval | MAIN STREET | | CYPRESS ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 3 |
| 4:30 PM | 0 | 1 | 0 | 0 | 1 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

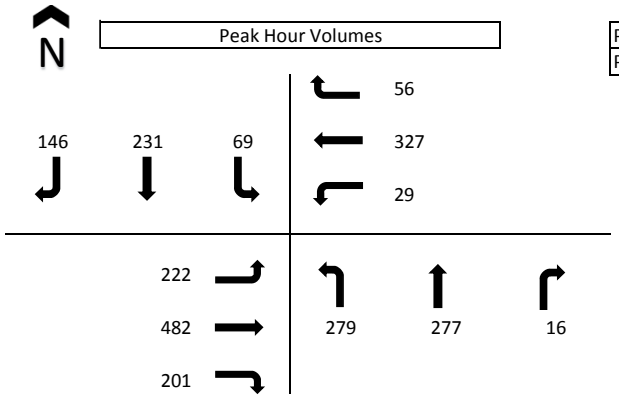
## PEDESTRIANS

| Interval | Crossing MAIN STREET | | Crossing CYPRESS ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 1 | 1 | 9 |
| 4:15 PM | 0 | 2 | 0 | 2 | 4 | 8 |
| 4:30 PM | 0 | 0 | 0 | 3 | 3 | 16 |
| 4:45 PM | 0 | 0 | 0 | 1 | 1 | 17 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 16 |
| 5:15 PM | 0 | 1 | 3 | 8 | 12 | |
| 5:30 PM | 1 | 2 | 0 | 1 | 4 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 3 | 3 | 9 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY, APRIL 29TH, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | BRENTWOOD BOULEVARD |
| E/W: | BALFOUR ROAD |
| ID: | E8 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | BRENTWOOD BOULEVARD | | | | | | BALFOUR ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 80 | 58 | 3 | 17 | 50 | 40 | 50 | 91 | 64 | 2 | 76 | 12 | 543 | 2206 |
| 4:15 PM | 57 | 59 | 9 | 13 | 67 | 34 | 47 | 96 | 72 | 6 | 77 | 14 | 551 | 2270 |
| 4:30 PM | 87 | 86 | 9 | 12 | 62 | 34 | 52 | 86 | 67 | 6 | 63 | 14 | 578 | 2265 |
| 4:45 PM | 71 | 69 | 9 | 13 | 51 | 37 | 46 | 92 | 56 | 7 | 76 | 7 | 534 | 2275 |
| 5:00 PM | 87 | 80 | 5 | 17 | 64 | 46 | 46 | 103 | 47 | 3 | 94 | 15 | 607 | 2335 |
| 5:15 PM | 71 | 60 | 4 | 17 | 54 | 39 | 46 | 119 | 49 | 8 | 71 | 8 | 546 | |
| 5:30 PM | 59 | 79 | 4 | 15 | 57 | 37 | 52 | 130 | 50 | 14 | 77 | 14 | 588 | |
| 5:45 PM | 62 | 58 | 3 | 20 | 56 | 24 | 78 | 130 | 55 | 4 | 85 | 19 | 594 | |
| Peak Hour | 279 | 277 | 16 | 69 | 231 | 146 | 222 | 482 | 201 | 29 | 327 | 56 | | |

## BIKES

| Interval | BRENTWOOD BOULEVARD | | BALFOUR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 1 | 2 | 8 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 12 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 12 |
| 4:45 PM | 0 | 3 | 0 | 3 | 6 | 20 |
| 5:00 PM | 0 | 0 | 1 | 5 | 6 | 15 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 4 | 1 | 3 | 8 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 4 | 3 | 8 | | |

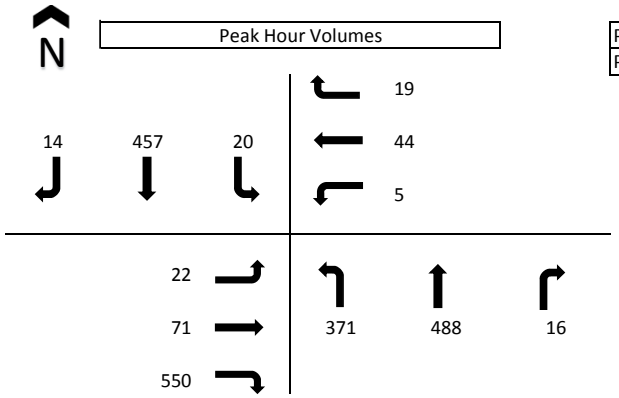
## PEDESTRIANS

| Interval | Crossing BRENTWOOD BOULEVARD | | Crossing BALFOUR ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 4 | 1 | 0 | 4 | 9 | 16 |
| 4:15 PM | 1 | 0 | 0 | 0 | 1 | 15 |
| 4:30 PM | 0 | 1 | 1 | 0 | 2 | 16 |
| 4:45 PM | 0 | 2 | 2 | 0 | 4 | 18 |
| 5:00 PM | 5 | 0 | 3 | 0 | 8 | 19 |
| 5:15 PM | 0 | 0 | 2 | 0 | 2 | |
| 5:30 PM | 1 | 2 | 0 | 1 | 4 | |
| 5:45 PM | 0 | 2 | 3 | 0 | 5 | |
| Peak Hour | 6 | 4 | 8 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY JUNE 3, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | BYRON HIGHWAY |
| E/W: | STATE ROUTE 4 |
| ID: | E9 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | BYRON HIGHWAY | | | | | | STATE ROUTE 4 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 82 | 120 | 5 | 6 | 106 | 2 | 8 | 14 | 154 | 1 | 5 | 2 | 505 | 2005 |
| 4:15 PM | 70 | 89 | 4 | 3 | 109 | 1 | 12 | 28 | 156 | 0 | 5 | 7 | 484 | 2054 |
| 4:30 PM | 88 | 112 | 6 | 8 | 110 | 8 | 3 | 16 | 143 | 1 | 10 | 6 | 511 | 2077 |
| 4:45 PM | 91 | 114 | 4 | 5 | 113 | 3 | 10 | 25 | 123 | 2 | 10 | 5 | 505 | 2066 |
| 5:00 PM | 110 | 135 | 4 | 3 | 124 | 2 | 3 | 12 | 146 | 0 | 8 | 7 | 554 | 1996 |
| 5:15 PM | 82 | 127 | 2 | 4 | 110 | 1 | 6 | 18 | 138 | 2 | 16 | 1 | 507 | |
| 5:30 PM | 108 | 112 | 0 | 6 | 100 | 1 | 9 | 20 | 129 | 0 | 12 | 3 | 500 | |
| 5:45 PM | 71 | 121 | 0 | 2 | 99 | 3 | 4 | 10 | 116 | 1 | 5 | 3 | 435 | |
| Peak Hour | 371 | 488 | 16 | 20 | 457 | 14 | 22 | 71 | 550 | 5 | 44 | 19 | | |

## BIKES

| Interval | BYRON HIGHWAY | | STATE ROUTE 4 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:45 PM | 1 | 0 | 0 | 0 | 1 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 1 | 1 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 1 | 1 | 0 | | |

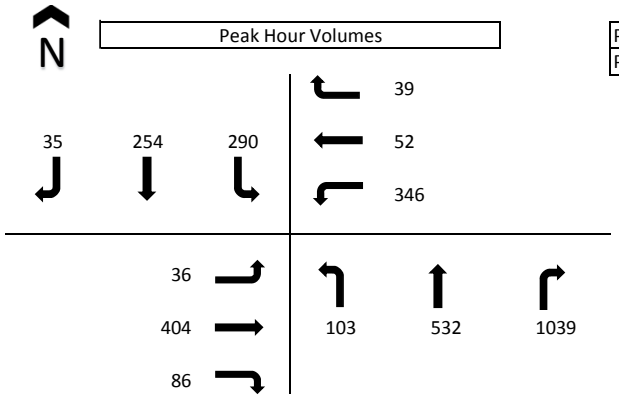
## PEDESTRIANS

| Interval | Crossing BYRON HIGHWAY | | Crossing STATE ROUTE 4 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/30/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | John Muir Pkwy |
| ID: | W1 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.91 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | John Muir Pkwy | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 20 | 77 | 209 | 56 | 55 | 9 | 5 | 68 | 9 | 61 | 4 | 7 | 580 | 2782 |
| 4:15 PM | 20 | 103 | 237 | 58 | 64 | 2 | 3 | 61 | 13 | 82 | 13 | 3 | 659 | 3085 |
| 4:30 PM | 13 | 128 | 242 | 89 | 66 | 7 | 5 | 108 | 23 | 76 | 21 | 9 | 787 | 3199 |
| 4:45 PM | 30 | 131 | 252 | 54 | 70 | 7 | 7 | 78 | 19 | 83 | 13 | 12 | 756 | 3216 |
| 5:00 PM | 27 | 108 | 257 | 115 | 84 | 8 | 10 | 145 | 28 | 85 | 7 | 9 | 883 | 3201 |
| 5:15 PM | 22 | 120 | 260 | 64 | 51 | 9 | 5 | 92 | 20 | 96 | 21 | 13 | 773 | |
| 5:30 PM | 24 | 173 | 270 | 57 | 49 | 11 | 14 | 89 | 19 | 82 | 11 | 5 | 804 | |
| 5:45 PM | 34 | 124 | 240 | 48 | 53 | 6 | 7 | 85 | 21 | 99 | 13 | 11 | 741 | |
| Peak Hour | 103 | 532 | 1039 | 290 | 254 | 35 | 36 | 404 | 86 | 346 | 52 | 39 | | |

## BIKES

| Interval | San Pablo Ave | | John Muir Pkwy | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

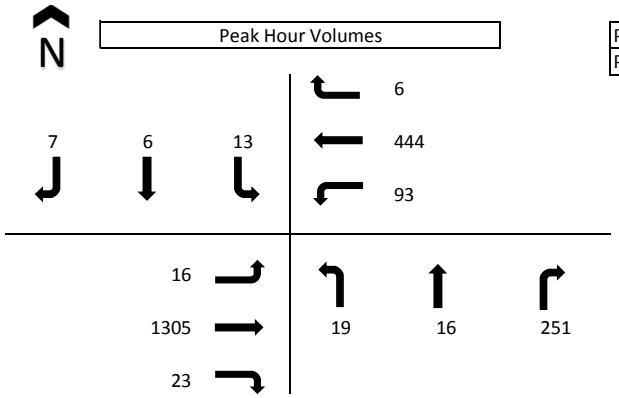
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing John Muir Pkwy | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 2 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Pinole Valley Rd |
| E/W: | San Pablo Ave |
| ID: | W2 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | Pinole Valley Rd | | | | | | San Pablo Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 7 | 1 | 46 | 1 | 1 | 3 | 5 | 223 | 6 | 13 | 85 | 1 | 392 | 1889 |
| 4:15 PM | 4 | 1 | 65 | 0 | 1 | 2 | 2 | 268 | 8 | 17 | 97 | 0 | 465 | 2051 |
| 4:30 PM | 1 | 1 | 59 | 0 | 0 | 6 | 5 | 323 | 4 | 17 | 88 | 3 | 507 | 2138 |
| 4:45 PM | 8 | 2 | 60 | 3 | 0 | 1 | 2 | 320 | 8 | 24 | 96 | 1 | 525 | 2199 |
| 5:00 PM | 2 | 1 | 67 | 5 | 1 | 2 | 4 | 333 | 2 | 21 | 114 | 2 | 554 | 2162 |
| 5:15 PM | 4 | 8 | 64 | 3 | 1 | 1 | 8 | 324 | 5 | 20 | 111 | 3 | 552 | |
| 5:30 PM | 5 | 5 | 60 | 2 | 4 | 3 | 2 | 328 | 8 | 28 | 123 | 0 | 568 | |
| 5:45 PM | 2 | 2 | 51 | 0 | 0 | 1 | 4 | 291 | 3 | 32 | 101 | 1 | 488 | |
| Peak Hour | 19 | 16 | 251 | 13 | 6 | 7 | 16 | 1305 | 23 | 93 | 444 | 6 | | |

## BIKES

| Interval | Pinole Valley Rd | | San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:30 PM | 0 | 0 | 0 | 2 | 2 | 4 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 1 | 1 | 2 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 2 | 0 | 1 | 0 | 3 | |
| Peak Hour | 0 | 0 | 1 | 1 | | |

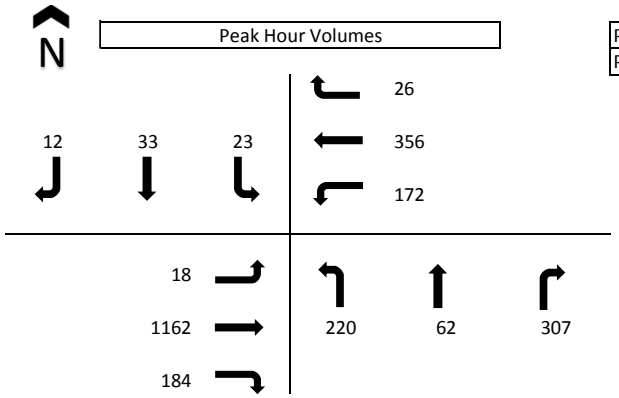
## PEDESTRIANS

| Interval | Crossing Pinole Valley Rd | | Crossing San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 5 | 0 | 0 | 5 | 26 |
| 4:15 PM | 1 | 2 | 0 | 1 | 4 | 32 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 35 |
| 4:45 PM | 4 | 6 | 3 | 3 | 16 | 42 |
| 5:00 PM | 3 | 2 | 4 | 2 | 11 | 35 |
| 5:15 PM | 1 | 5 | 1 | 0 | 7 | |
| 5:30 PM | 1 | 5 | 0 | 2 | 8 | |
| 5:45 PM | 0 | 3 | 4 | 2 | 9 | |
| Peak Hour | 9 | 18 | 8 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | - |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Pinon Ave/Appian Way |
| E/W: | San Pablo Ave |
| ID: | W3 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | Pinon Ave/Appian Way | | | | | | San Pablo Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 52 | 15 | 56 | 8 | 10 | 2 | 4 | 206 | 40 | 39 | 79 | 8 | 519 | 2320 |
| 4:15 PM | 56 | 14 | 83 | 11 | 7 | 4 | 3 | 210 | 35 | 39 | 81 | 8 | 551 | 2470 |
| 4:30 PM | 50 | 15 | 77 | 9 | 12 | 2 | 1 | 274 | 44 | 63 | 70 | 5 | 622 | 2571 |
| 4:45 PM | 60 | 16 | 60 | 2 | 11 | 3 | 3 | 297 | 38 | 44 | 89 | 5 | 628 | 2575 |
| 5:00 PM | 47 | 13 | 90 | 6 | 9 | 6 | 3 | 283 | 49 | 49 | 106 | 8 | 669 | 2553 |
| 5:15 PM | 42 | 18 | 86 | 9 | 7 | 3 | 4 | 313 | 55 | 43 | 65 | 7 | 652 | |
| 5:30 PM | 71 | 15 | 71 | 6 | 6 | 0 | 8 | 269 | 42 | 36 | 96 | 6 | 626 | |
| 5:45 PM | 63 | 22 | 63 | 2 | 12 | 5 | 3 | 262 | 39 | 53 | 79 | 3 | 606 | |
| Peak Hour | 220 | 62 | 307 | 23 | 33 | 12 | 18 | 1162 | 184 | 172 | 356 | 26 | | |

## BIKES

| Interval | Pinon Ave/Appian Way | | San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 1 | 0 | 0 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 1 | 0 | 0 | 0 | | |

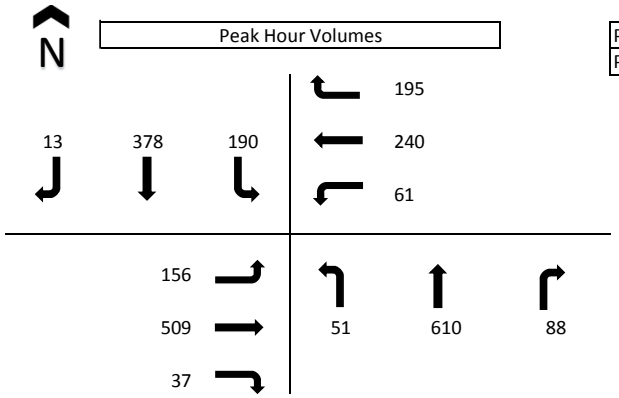
## PEDESTRIANS

| Interval | Crossing Pinon Ave/Appian Way | | Crossing San Pablo Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 13 |
| 4:15 PM | 0 | 1 | 0 | 2 | 3 | 15 |
| 4:30 PM | 0 | 4 | 0 | 1 | 5 | 16 |
| 4:45 PM | 0 | 2 | 0 | 2 | 4 | 13 |
| 5:00 PM | 0 | 3 | 0 | 0 | 3 | 10 |
| 5:15 PM | 1 | 1 | 1 | 1 | 4 | |
| 5:30 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 1 | 8 | 1 | 3 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Hilltop Dr |
| ID: | W4 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Hilltop Dr | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 6 | 120 | 22 | 52 | 91 | 4 | 24 | 91 | 13 | 20 | 54 | 36 | 533 | 2346 |
| 4:15 PM | 19 | 114 | 17 | 30 | 70 | 5 | 32 | 115 | 7 | 11 | 60 | 51 | 531 | 2421 |
| 4:30 PM | 11 | 138 | 25 | 48 | 77 | 3 | 67 | 140 | 14 | 19 | 53 | 50 | 645 | 2528 |
| 4:45 PM | 7 | 149 | 25 | 47 | 107 | 3 | 37 | 136 | 13 | 13 | 56 | 44 | 637 | 2494 |
| 5:00 PM | 11 | 154 | 15 | 47 | 89 | 2 | 30 | 110 | 6 | 17 | 77 | 50 | 608 | 2470 |
| 5:15 PM | 22 | 169 | 23 | 48 | 105 | 5 | 22 | 123 | 4 | 12 | 54 | 51 | 638 | |
| 5:30 PM | 12 | 167 | 17 | 43 | 95 | 3 | 18 | 116 | 9 | 13 | 70 | 48 | 611 | |
| 5:45 PM | 23 | 160 | 21 | 42 | 118 | 6 | 20 | 93 | 5 | 15 | 61 | 49 | 613 | |
| Peak Hour | 51 | 610 | 88 | 190 | 378 | 13 | 156 | 509 | 37 | 61 | 240 | 195 | | |

## BIKES

| Interval | San Pablo Ave | | Hilltop Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 0 | 0 | 2 | 0 | | |

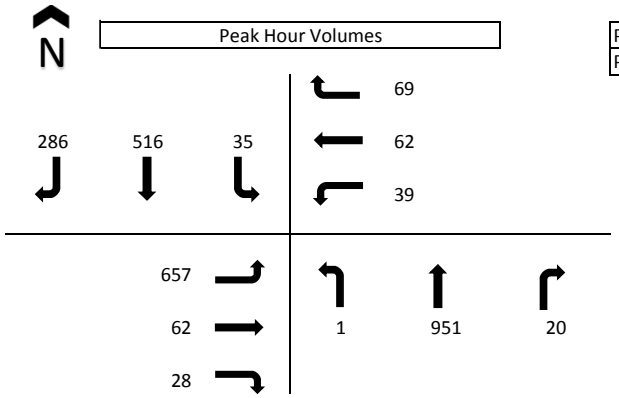
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Hilltop Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 3 | 0 | 0 | 4 | 7 | 9 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 1 | 0 | 0 | 1 | 2 | 8 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 10 |
| 5:15 PM | 6 | 0 | 0 | 0 | 6 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 2 | 0 | 0 | 1 | 3 | |
| Peak Hour | 7 | 0 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | College Ln/Rumrill Blvd |
| ID: | W5 |




| | |
|---|---|
| Peak Hour: | 4:45 PM to 5:45 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | College Ln/Rumrill Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 150 | 2 | 13 | 115 | 64 | 133 | 14 | 8 | 4 | 15 | 23 | 541 | 2532 |
| 4:15 PM | 1 | 187 | 9 | 6 | 214 | 71 | 126 | 11 | 10 | 6 | 17 | 10 | 668 | 2658 |
| 4:30 PM | 0 | 143 | 1 | 9 | 167 | 83 | 164 | 13 | 7 | 3 | 12 | 10 | 612 | 2664 |
| 4:45 PM | 0 | 215 | 3 | 5 | 152 | 77 | 193 | 19 | 8 | 8 | 22 | 9 | 711 | 2726 |
| 5:00 PM | 1 | 246 | 6 | 10 | 112 | 51 | 159 | 21 | 6 | 11 | 12 | 32 | 667 | 2725 |
| 5:15 PM | 0 | 233 | 6 | 10 | 119 | 74 | 168 | 9 | 8 | 12 | 21 | 14 | 674 | |
| 5:30 PM | 0 | 257 | 5 | 10 | 133 | 84 | 137 | 13 | 6 | 8 | 7 | 14 | 674 | |
| 5:45 PM | 0 | 226 | 7 | 12 | 124 | 81 | 198 | 15 | 12 | 5 | 18 | 12 | 710 | |
| Peak Hour | 1 | 951 | 20 | 35 | 516 | 286 | 657 | 62 | 28 | 39 | 62 | 69 | | |

## BIKES

| Interval | San Pablo Ave | | College Ln/Rumrill Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 1 | 2 | 1 | 5 | 6 |
| 4:15 PM | 1 | 0 | 0 | 0 | 1 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 1 | 0 | 1 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

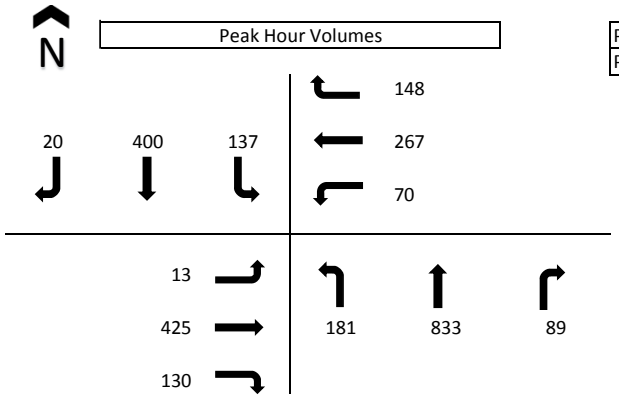
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing College Ln/Rumrill Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 3 | 2 | 1 | 6 | 40 |
| 4:15 PM | 0 | 2 | 4 | 1 | 7 | 39 |
| 4:30 PM | 0 | 4 | 7 | 3 | 14 | 40 |
| 4:45 PM | 0 | 3 | 9 | 1 | 13 | 31 |
| 5:00 PM | 1 | 1 | 0 | 3 | 5 | 25 |
| 5:15 PM | 0 | 1 | 1 | 6 | 8 | |
| 5:30 PM | 0 | 2 | 0 | 3 | 5 | |
| 5:45 PM | 0 | 1 | 4 | 2 | 7 | |
| Peak Hour | 1 | 7 | 10 | 13 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | El Portal Dr/Broadway Ave |
| ID: | W6 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | El Portal Dr/Broadway Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 34 | 129 | 17 | 29 | 79 | 6 | 3 | 96 | 28 | 18 | 60 | 26 | 525 | 2252 |
| 4:15 PM | 50 | 163 | 17 | 43 | 99 | 6 | 4 | 91 | 27 | 11 | 58 | 43 | 612 | 2380 |
| 4:30 PM | 36 | 132 | 21 | 29 | 89 | 3 | 2 | 82 | 29 | 14 | 41 | 29 | 507 | 2427 |
| 4:45 PM | 44 | 183 | 16 | 42 | 67 | 3 | 3 | 94 | 36 | 21 | 62 | 37 | 608 | 2639 |
| 5:00 PM | 35 | 197 | 13 | 26 | 90 | 3 | 1 | 100 | 39 | 20 | 77 | 52 | 653 | 2713 |
| 5:15 PM | 49 | 207 | 18 | 31 | 101 | 3 | 4 | 104 | 30 | 17 | 61 | 34 | 659 | |
| 5:30 PM | 48 | 236 | 24 | 37 | 117 | 8 | 3 | 112 | 32 | 16 | 62 | 24 | 719 | |
| 5:45 PM | 49 | 193 | 34 | 43 | 92 | 6 | 5 | 109 | 29 | 17 | 67 | 38 | 682 | |
| Peak Hour | 181 | 833 | 89 | 137 | 400 | 20 | 13 | 425 | 130 | 70 | 267 | 148 | | |

## BIKES

| Interval | San Pablo Ave | | El Portal Dr/Broadway Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 1 | 0 | 0 | 0 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 1 | 1 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 1 | 0 | | |

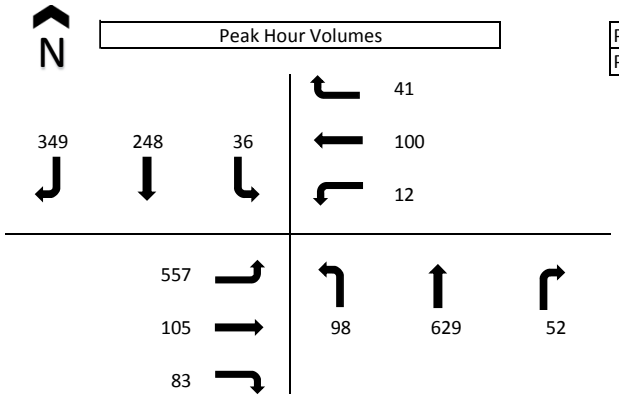
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing El Portal Dr/Broadway Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 4 | 13 | 1 | 4 | 22 | 71 |
| 4:15 PM | 2 | 4 | 4 | 2 | 12 | 61 |
| 4:30 PM | 0 | 16 | 9 | 1 | 26 | 71 |
| 4:45 PM | 0 | 6 | 4 | 1 | 11 | 60 |
| 5:00 PM | 1 | 6 | 1 | 4 | 12 | 62 |
| 5:15 PM | 0 | 15 | 3 | 4 | 22 | |
| 5:30 PM | 0 | 5 | 3 | 7 | 15 | |
| 5:45 PM | 1 | 5 | 6 | 1 | 13 | |
| Peak Hour | 2 | 31 | 13 | 16 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Road 20/23rd St |
| ID: | W7 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.91 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Road 20/23rd St | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 31 | 109 | 12 | 6 | 74 | 86 | 118 | 32 | 25 | 8 | 25 | 11 | 537 | 2081 |
| 4:15 PM | 38 | 142 | 8 | 7 | 64 | 98 | 89 | 15 | 24 | 5 | 22 | 10 | 522 | 2079 |
| 4:30 PM | 24 | 131 | 8 | 7 | 64 | 83 | 107 | 23 | 16 | 2 | 24 | 9 | 498 | 2134 |
| 4:45 PM | 26 | 152 | 6 | 4 | 75 | 89 | 105 | 16 | 24 | 2 | 18 | 7 | 524 | 2269 |
| 5:00 PM | 20 | 155 | 9 | 5 | 62 | 71 | 137 | 23 | 24 | 3 | 16 | 10 | 535 | 2310 |
| 5:15 PM | 20 | 156 | 12 | 9 | 63 | 92 | 146 | 19 | 16 | 1 | 33 | 10 | 577 | |
| 5:30 PM | 36 | 168 | 18 | 13 | 70 | 110 | 132 | 30 | 19 | 6 | 19 | 12 | 633 | |
| 5:45 PM | 22 | 150 | 13 | 9 | 53 | 76 | 142 | 33 | 24 | 2 | 32 | 9 | 565 | |
| Peak Hour | 98 | 629 | 52 | 36 | 248 | 349 | 557 | 105 | 83 | 12 | 100 | 41 | | |

## BIKES

| Interval | San Pablo Ave | | Road 20/23rd St | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 2 | 0 | 2 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 1 | 1 | 4 |
| 5:00 PM | 1 | 0 | 0 | 0 | 1 | 4 |
| 5:15 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 4 | 0 | 0 | 0 | | |

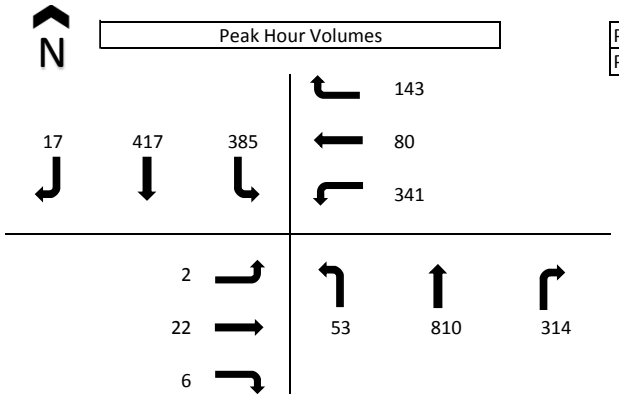
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Road 20/23rd St | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 1 | 19 | 10 | 4 | 34 | 98 |
| 4:15 PM | 0 | 10 | 10 | 5 | 25 | 85 |
| 4:30 PM | 0 | 9 | 9 | 7 | 25 | 76 |
| 4:45 PM | 0 | 3 | 5 | 6 | 14 | 61 |
| 5:00 PM | 0 | 6 | 10 | 5 | 21 | 74 |
| 5:15 PM | 0 | 3 | 6 | 7 | 16 | |
| 5:30 PM | 0 | 1 | 8 | 1 | 10 | |
| 5:45 PM | 0 | 5 | 15 | 7 | 27 | |
| Peak Hour | 0 | 15 | 39 | 20 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | - |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | San Pablo Dam Rd/Driveway |
| ID: | W8 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | San Pablo Dam Rd/Driveway | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 10 | 148 | 90 | 108 | 110 | 4 | 1 | 8 | 1 | 63 | 19 | 33 | 595 | 2449 |
| 4:15 PM | 5 | 162 | 82 | 102 | 91 | 6 | 0 | 5 | 3 | 79 | 25 | 33 | 593 | 2512 |
| 4:30 PM | 12 | 199 | 76 | 103 | 83 | 9 | 1 | 7 | 3 | 84 | 14 | 26 | 617 | 2590 |
| 4:45 PM | 16 | 204 | 80 | 94 | 109 | 3 | 0 | 2 | 3 | 75 | 20 | 38 | 644 | 2563 |
| 5:00 PM | 14 | 187 | 76 | 97 | 113 | 2 | 1 | 6 | 0 | 94 | 25 | 43 | 658 | 2588 |
| 5:15 PM | 11 | 220 | 82 | 91 | 112 | 3 | 0 | 7 | 0 | 88 | 21 | 36 | 671 | |
| 5:30 PM | 20 | 191 | 80 | 74 | 85 | 1 | 1 | 4 | 4 | 62 | 31 | 37 | 590 | |
| 5:45 PM | 10 | 198 | 66 | 125 | 100 | 8 | 0 | 4 | 1 | 97 | 16 | 44 | 669 | |
| Peak Hour | 53 | 810 | 314 | 385 | 417 | 17 | 2 | 22 | 6 | 341 | 80 | 143 | | |

## BIKES

| Interval | San Pablo Ave | | San Pablo Dam Rd/Driveway | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 0 | 1 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:30 PM | 0 | 0 | 0 | 1 | 1 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:00 PM | 3 | 0 | 0 | 0 | 3 | 5 |
| 5:15 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 3 | 1 | 0 | 1 | | |

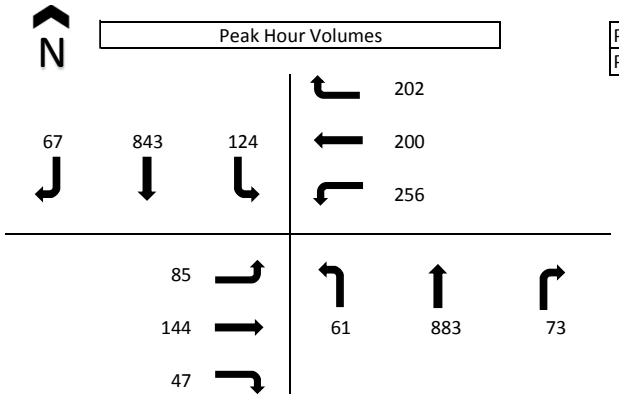
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing San Pablo Dam Rd/Driveway | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 1 | 12 | 5 | 11 | 29 | 89 |
| 4:15 PM | 0 | 9 | 6 | 5 | 20 | 71 |
| 4:30 PM | 0 | 11 | 3 | 8 | 22 | 63 |
| 4:45 PM | 1 | 5 | 5 | 7 | 18 | 59 |
| 5:00 PM | 0 | 6 | 1 | 4 | 11 | 59 |
| 5:15 PM | 0 | 7 | 2 | 3 | 12 | |
| 5:30 PM | 0 | 9 | 5 | 4 | 18 | |
| 5:45 PM | 2 | 7 | 5 | 4 | 18 | |
| Peak Hour | 1 | 29 | 11 | 22 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | McBryde Ave |
| ID: | W9 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.89 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | McBryde Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 11 | 172 | 15 | 14 | 129 | 6 | 14 | 21 | 16 | 78 | 40 | 49 | 565 | 2567 |
| 4:15 PM | 11 | 200 | 9 | 24 | 154 | 19 | 19 | 21 | 12 | 64 | 40 | 50 | 623 | 2740 |
| 4:30 PM | 14 | 189 | 6 | 17 | 197 | 13 | 17 | 31 | 14 | 65 | 36 | 55 | 654 | 2810 |
| 4:45 PM | 20 | 198 | 12 | 39 | 199 | 16 | 19 | 34 | 17 | 77 | 43 | 51 | 725 | 2868 |
| 5:00 PM | 12 | 235 | 19 | 31 | 210 | 21 | 22 | 28 | 14 | 55 | 45 | 46 | 738 | 2985 |
| 5:15 PM | 17 | 202 | 22 | 29 | 181 | 16 | 13 | 41 | 7 | 70 | 46 | 49 | 693 | |
| 5:30 PM | 16 | 213 | 16 | 27 | 207 | 10 | 22 | 34 | 12 | 67 | 46 | 42 | 712 | |
| 5:45 PM | 16 | 233 | 16 | 37 | 245 | 20 | 28 | 41 | 14 | 64 | 63 | 65 | 842 | |
| Peak Hour | 61 | 883 | 73 | 124 | 843 | 67 | 85 | 144 | 47 | 256 | 200 | 202 | | |

## BIKES

| Interval | San Pablo Ave | | McBryde Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 7 |
| 4:15 PM | 0 | 0 | 0 | 1 | 1 | 7 |
| 4:30 PM | 2 | 2 | 0 | 0 | 4 | 8 |
| 4:45 PM | 1 | 0 | 0 | 0 | 1 | 5 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 4 |
| 5:15 PM | 0 | 2 | 0 | 0 | 2 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 1 | 2 | 0 | 1 | | |

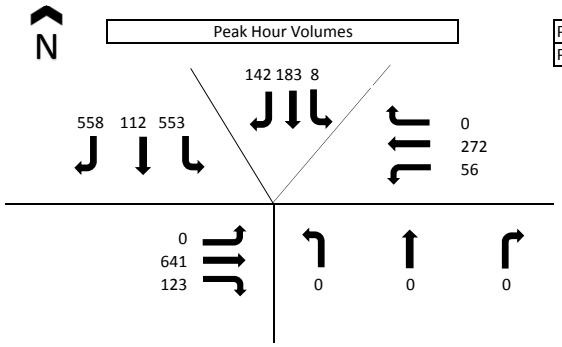
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing McBryde Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 2 | 1 | 2 | 5 | 27 |
| 4:15 PM | 1 | 1 | 1 | 3 | 6 | 30 |
| 4:30 PM | 0 | 5 | 0 | 3 | 8 | 25 |
| 4:45 PM | 0 | 4 | 0 | 4 | 8 | 28 |
| 5:00 PM | 3 | 1 | 0 | 4 | 8 | 36 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 1 | 1 | 0 | 9 | 11 | |
| 5:45 PM | 2 | 7 | 0 | 7 | 16 | |
| Peak Hour | 6 | 9 | 0 | 21 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/15/2015
Count Period: PM
N/S: I-80 WB Ramps
E/W: Barrett Ave
ID: W10




| | |
|---|---|
| Peak Hour: | 4:00 PM to 5:00 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | Hwy 80 Off-Ramp | | | Barrett Ave | | | | | | Swans Way | | | Hwy 80 On-Ramp | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBT | SBR | NBL | NBT | NBR | Interval | Hourly |
| 4:00 PM | 138 | 32 | 118 | 0 | 168 | 40 | 14 | 55 | 0 | 2 | 49 | 47 | 0 | 0 | 0 | 663 | 2648 |
| 4:15 PM | 143 | 23 | 155 | 0 | 186 | 42 | 17 | 85 | 0 | 1 | 42 | 22 | 0 | 0 | 0 | 716 | 2623 |
| 4:30 PM | 127 | 21 | 143 | 0 | 156 | 26 | 15 | 53 | 0 | 1 | 38 | 31 | 0 | 0 | 0 | 611 | 2511 |
| 4:45 PM | 145 | 36 | 142 | 0 | 131 | 15 | 10 | 79 | 0 | 4 | 54 | 42 | 0 | 0 | 0 | 658 | 2463 |
| 5:00 PM | 133 | 34 | 114 | 0 | 125 | 21 | 12 | 84 | 0 | 3 | 58 | 54 | 0 | 0 | 0 | 638 | 2465 |
| 5:15 PM | 145 | 27 | 116 | 0 | 116 | 12 | 13 | 71 | 0 | 2 | 53 | 49 | 0 | 0 | 0 | 604 | |
| 5:30 PM | 122 | 26 | 117 | 1 | 83 | 17 | 10 | 81 | 0 | 3 | 45 | 58 | 0 | 0 | 0 | 563 | |
| 5:45 PM | 126 | 26 | 132 | 0 | 106 | 17 | 12 | 97 | 0 | 7 | 81 | 56 | 0 | 0 | 0 | 660 | |
| Peak Hour | 553 | 112 | 558 | 0 | 641 | 123 | 56 | 272 | 0 | 8 | 183 | 142 | 0 | 0 | 0 | | |

## BIKES

| Interval | Hwy 80 Off-Ramp | | Barrett Ave | | Swans Way | Totals | |
|---|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | SB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 1 | 0 | 1 | 5 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:15 PM | 0 | 0 | 1 | 1 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 2 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 2 | 0 | | |

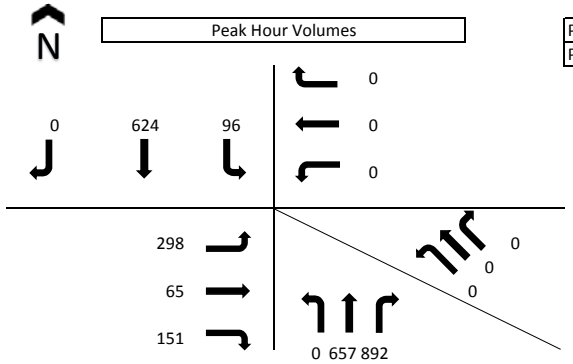
## PEDESTRIANS

| Interval | Crossing Hwy 80 Ramps | | Crossing Barrett Ave | | Crossing Swans Way | Totals | |
|---|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | NE Leg | Interval | Hourly |
| 4:00 PM | 2 | 1 | 0 | 1 | 2 | 6 | 17 |
| 4:15 PM | 1 | 5 | 0 | 0 | 1 | 7 | 13 |
| 4:30 PM | 0 | 1 | 0 | 0 | 0 | 1 | 12 |
| 4:45 PM | 1 | 1 | 0 | 0 | 1 | 3 | 15 |
| 5:00 PM | 0 | 1 | 0 | 1 | 0 | 2 | 13 |
| 5:15 PM | 1 | 3 | 0 | 0 | 2 | 6 | |
| 5:30 PM | 1 | 2 | 0 | 0 | 1 | 4 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 4 | 8 | 0 | 1 | 4 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Hwy 80 EB Ramps |
| ID: | W11 |




| | |
|---|---|
| Peak Hour: | 4:00 PM to 5:00 PM |
| Peak Hour Factor: | 0.98 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Hwy 80 EB Off-Ramp | | | Hwy 80 EB On-Ramp | | | Roosevelt Ave | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | NWBL | NWBT | NWBR | Interval | Hourly |
| 4:00 PM | 0 | 140 | 231 | 20 | 152 | 0 | 85 | 31 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 701 | 2783 |
| 4:15 PM | 0 | 181 | 231 | 10 | 138 | 0 | 85 | 19 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 707 | 2772 |
| 4:30 PM | 0 | 175 | 204 | 26 | 175 | 0 | 71 | 10 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 694 | 2730 |
| 4:45 PM | 0 | 161 | 226 | 40 | 159 | 0 | 57 | 5 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 681 | 2757 |
| 5:00 PM | 0 | 156 | 194 | 42 | 183 | 0 | 75 | 5 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 690 | 2775 |
| 5:15 PM | 0 | 154 | 209 | 34 | 113 | 0 | 94 | 18 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 665 | |
| 5:30 PM | 0 | 176 | 200 | 30 | 138 | 0 | 106 | 20 | 51 | 0 | 0 | 0 | 1 | 0 | 0 | 721 | |
| 5:45 PM | 0 | 145 | 191 | 27 | 150 | 0 | 113 | 25 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 699 | |
| Peak Hour | 0 | 657 | 892 | 96 | 624 | 0 | 298 | 65 | 151 | 0 | 0 | 0 | 0 | 0 | 0 | | |

## BIKES

| Interval | San Pablo Ave | | Hwy 80 Ramps | | Roosevelt Ave | Totals | |
|---|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | NWB | Interval | Hourly |
| 4:00 PM | 2 | 1 | 0 | 0 | 1 | 4 | 8 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 2 | 5 |
| 4:30 PM | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| 4:45 PM | 1 | 0 | 0 | 0 | 0 | 1 | 3 |
| 5:00 PM | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 0 | 1 | |
| Peak Hour | 4 | 2 | 0 | 1 | 1 | | |

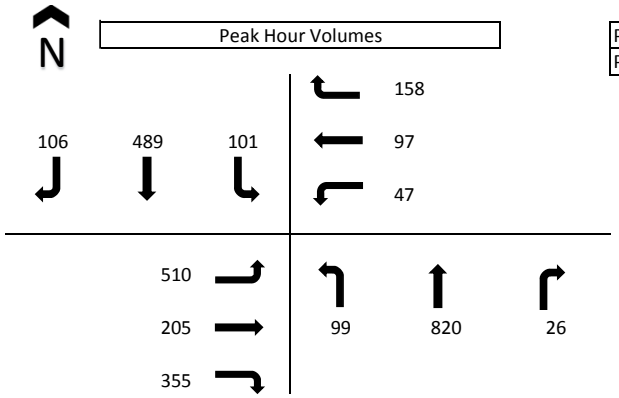
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Hwy 80 EB Ramps | | Crossing Roosevelt Ave | Totals | |
|---|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | SE Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 2 | 3 | 2 | 8 | 28 |
| 4:15 PM | 0 | 0 | 0 | 4 | 0 | 4 | 28 |
| 4:30 PM | 0 | 0 | 3 | 8 | 1 | 12 | 27 |
| 4:45 PM | 0 | 0 | 1 | 0 | 3 | 4 | 24 |
| 5:00 PM | 0 | 1 | 4 | 2 | 1 | 8 | 20 |
| 5:15 PM | 0 | 0 | 1 | 2 | 0 | 3 | |
| 5:30 PM | 0 | 2 | 4 | 2 | 1 | 9 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 6 | 15 | 6 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Barrett Ave |
| ID: | W12 |




| | |
|---|---|
| Peak Hour: | 4:00 PM to 5:00 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Barrett Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 23 | 204 | 6 | 20 | 136 | 28 | 118 | 39 | 105 | 10 | 23 | 28 | 740 | 3013 |
| 4:15 PM | 33 | 175 | 6 | 24 | 112 | 23 | 142 | 56 | 111 | 11 | 34 | 51 | 778 | 2971 |
| 4:30 PM | 22 | 213 | 8 | 26 | 114 | 24 | 123 | 56 | 60 | 14 | 16 | 41 | 717 | 2911 |
| 4:45 PM | 21 | 228 | 6 | 31 | 127 | 31 | 127 | 54 | 79 | 12 | 24 | 38 | 778 | 2850 |
| 5:00 PM | 19 | 196 | 4 | 39 | 108 | 27 | 104 | 56 | 60 | 12 | 33 | 40 | 698 | 2801 |
| 5:15 PM | 14 | 256 | 3 | 45 | 93 | 19 | 112 | 52 | 45 | 10 | 28 | 41 | 718 | |
| 5:30 PM | 23 | 197 | 11 | 30 | 76 | 31 | 111 | 38 | 54 | 11 | 32 | 42 | 656 | |
| 5:45 PM | 20 | 221 | 7 | 41 | 113 | 30 | 95 | 48 | 65 | 17 | 39 | 33 | 729 | |
| Peak Hour | 99 | 820 | 26 | 101 | 489 | 106 | 510 | 205 | 355 | 47 | 97 | 158 | | |

## BIKES

| Interval | San Pablo Ave | | Barrett Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 8 |
| 4:15 PM | 0 | 0 | 1 | 1 | 2 | 8 |
| 4:30 PM | 1 | 1 | 1 | 0 | 3 | 8 |
| 4:45 PM | 1 | 0 | 0 | 1 | 2 | 6 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 4 |
| 5:15 PM | 0 | 0 | 1 | 1 | 2 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 2 | 2 | 2 | 2 | | |

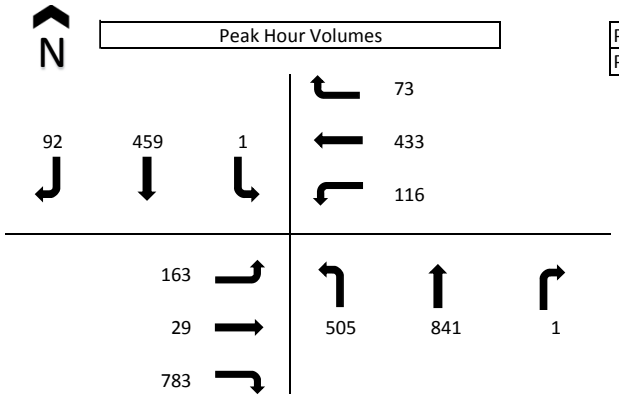
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Barrett Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 2 | 4 | 2 | 8 | 35 |
| 4:15 PM | 0 | 2 | 1 | 5 | 8 | 34 |
| 4:30 PM | 0 | 4 | 0 | 11 | 15 | 37 |
| 4:45 PM | 0 | 2 | 1 | 1 | 4 | 29 |
| 5:00 PM | 0 | 2 | 0 | 5 | 7 | 33 |
| 5:15 PM | 0 | 3 | 1 | 7 | 11 | |
| 5:30 PM | 0 | 1 | 3 | 3 | 7 | |
| 5:45 PM | 0 | 3 | 2 | 3 | 8 | |
| Peak Hour | 0 | 10 | 6 | 19 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Cutting Blvd |
| ID: | W13 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 107 | 171 | 0 | 0 | 114 | 18 | 49 | 5 | 192 | 12 | 78 | 14 | 760 | 3263 |
| 4:15 PM | 104 | 179 | 0 | 0 | 109 | 10 | 36 | 6 | 169 | 27 | 98 | 11 | 749 | 3304 |
| 4:30 PM | 132 | 194 | 0 | 0 | 134 | 30 | 52 | 5 | 220 | 19 | 77 | 9 | 872 | 3469 |
| 4:45 PM | 130 | 211 | 0 | 0 | 96 | 25 | 47 | 4 | 227 | 14 | 111 | 17 | 882 | 3466 |
| 5:00 PM | 87 | 191 | 0 | 1 | 114 | 28 | 49 | 5 | 170 | 28 | 109 | 19 | 801 | 3496 |
| 5:15 PM | 156 | 217 | 0 | 0 | 133 | 19 | 29 | 4 | 204 | 31 | 100 | 21 | 914 | |
| 5:30 PM | 128 | 219 | 0 | 0 | 97 | 19 | 49 | 10 | 201 | 32 | 98 | 16 | 869 | |
| 5:45 PM | 134 | 214 | 1 | 0 | 115 | 26 | 36 | 10 | 208 | 25 | 126 | 17 | 912 | |
| Peak Hour | 505 | 841 | 1 | 1 | 459 | 92 | 163 | 29 | 783 | 116 | 433 | 73 | | |

## BIKES

| Interval | San Pablo Ave | | Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:15 PM | 2 | 1 | 0 | 0 | 3 | 6 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 1 | 1 | 0 | 1 | 3 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

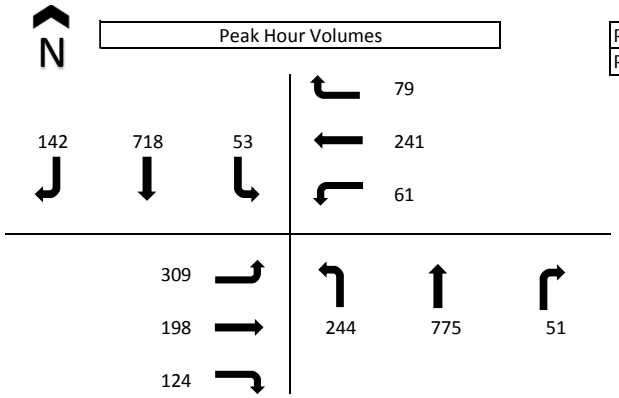
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 14 | 0 | 9 | 9 | 32 | 138 |
| 4:15 PM | 19 | 0 | 12 | 20 | 51 | 136 |
| 4:30 PM | 8 | 0 | 10 | 6 | 24 | 128 |
| 4:45 PM | 14 | 0 | 11 | 6 | 31 | 123 |
| 5:00 PM | 15 | 0 | 6 | 9 | 30 | 131 |
| 5:15 PM | 20 | 0 | 11 | 12 | 43 | |
| 5:30 PM | 6 | 0 | 7 | 6 | 19 | |
| 5:45 PM | 17 | 0 | 12 | 10 | 39 | |
| Peak Hour | 58 | 0 | 36 | 37 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Ave |
| E/W: | Central Ave |
| ID: | W14 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | San Pablo Ave | | | | | | Central Ave | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 61 | 175 | 13 | 16 | 191 | 47 | 67 | 48 | 23 | 12 | 56 | 16 | 725 | 2836 |
| 4:15 PM | 60 | 171 | 16 | 18 | 216 | 37 | 57 | 46 | 21 | 13 | 48 | 8 | 711 | 2867 |
| 4:30 PM | 59 | 178 | 12 | 20 | 153 | 32 | 71 | 31 | 29 | 13 | 59 | 11 | 668 | 2864 |
| 4:45 PM | 57 | 193 | 15 | 20 | 175 | 37 | 77 | 53 | 23 | 22 | 43 | 17 | 732 | 2953 |
| 5:00 PM | 65 | 201 | 4 | 14 | 172 | 49 | 91 | 46 | 28 | 15 | 56 | 15 | 756 | 2995 |
| 5:15 PM | 60 | 167 | 18 | 11 | 174 | 32 | 69 | 53 | 32 | 10 | 64 | 18 | 708 | |
| 5:30 PM | 60 | 199 | 18 | 11 | 178 | 30 | 71 | 45 | 41 | 22 | 55 | 27 | 757 | |
| 5:45 PM | 59 | 208 | 11 | 17 | 194 | 31 | 78 | 54 | 23 | 14 | 66 | 19 | 774 | |
| Peak Hour | 244 | 775 | 51 | 53 | 718 | 142 | 309 | 198 | 124 | 61 | 241 | 79 | | |

## BIKES

| Interval | San Pablo Ave | | Central Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 9 |
| 4:15 PM | 0 | 2 | 2 | 0 | 4 | 10 |
| 4:30 PM | 0 | 0 | 0 | 2 | 2 | 10 |
| 4:45 PM | 0 | 0 | 2 | 1 | 3 | 9 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 7 |
| 5:15 PM | 0 | 2 | 1 | 1 | 4 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 1 | 2 | 2 | 2 | | |

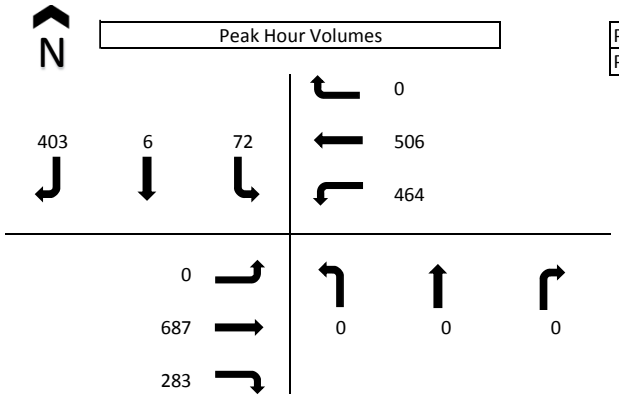
## PEDESTRIANS

| Interval | Crossing San Pablo Ave | | Crossing Central Ave | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 4 | 15 | 11 | 0 | 30 | 109 |
| 4:15 PM | 11 | 7 | 7 | 0 | 25 | 99 |
| 4:30 PM | 11 | 8 | 5 | 2 | 26 | 115 |
| 4:45 PM | 10 | 12 | 3 | 3 | 28 | 144 |
| 5:00 PM | 3 | 10 | 6 | 1 | 20 | 147 |
| 5:15 PM | 15 | 14 | 9 | 3 | 41 | |
| 5:30 PM | 17 | 19 | 10 | 9 | 55 | |
| 5:45 PM | 6 | 15 | 6 | 4 | 31 | |
| Peak Hour | 41 | 58 | 31 | 17 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/14/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | HWY 80 WB Ramps |
| E/W: | San Pablo Dam Rd |
| ID: | W15 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | HWY 80 WB Ramps | | | | | | San Pablo Dam Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 20 | 0 | 92 | 0 | 163 | 85 | 89 | 118 | 0 | 567 | 2359 |
| 4:15 PM | 0 | 0 | 0 | 14 | 0 | 90 | 0 | 181 | 91 | 111 | 118 | 0 | 605 | 2398 |
| 4:30 PM | 0 | 0 | 0 | 25 | 0 | 86 | 0 | 145 | 85 | 114 | 118 | 0 | 573 | 2381 |
| 4:45 PM | 0 | 0 | 0 | 16 | 1 | 95 | 0 | 164 | 79 | 137 | 122 | 0 | 614 | 2403 |
| 5:00 PM | 0 | 0 | 0 | 18 | 0 | 91 | 0 | 166 | 76 | 116 | 139 | 0 | 606 | 2421 |
| 5:15 PM | 0 | 0 | 0 | 20 | 2 | 100 | 0 | 166 | 62 | 116 | 122 | 0 | 588 | |
| 5:30 PM | 0 | 0 | 0 | 14 | 1 | 101 | 0 | 187 | 74 | 111 | 107 | 0 | 595 | |
| 5:45 PM | 0 | 0 | 0 | 20 | 3 | 111 | 0 | 168 | 71 | 121 | 138 | 0 | 632 | |
| Peak Hour | 0 | 0 | 0 | 72 | 6 | 403 | 0 | 687 | 283 | 464 | 506 | 0 | | |

## BIKES

| Interval | HWY 80 WB Ramps | | San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

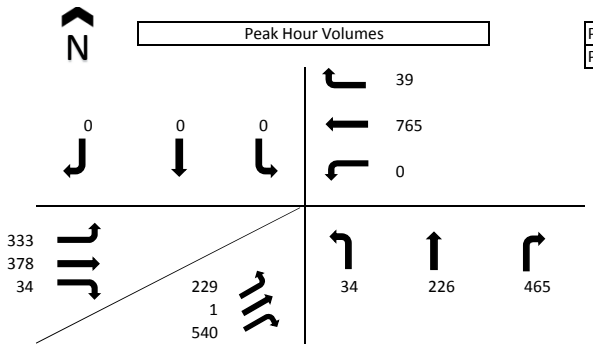
## PEDESTRIANS

| Interval | Crossing HWY 80 WB Ramps | | Crossing San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 7 |
| 4:15 PM | 1 | 0 | 0 | 0 | 1 | 7 |
| 4:30 PM | 0 | 3 | 0 | 0 | 3 | 9 |
| 4:45 PM | 0 | 2 | 0 | 1 | 3 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 3 | 0 | 0 | 3 | |
| 5:30 PM | 0 | 1 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 0 | 5 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

Firm: IDAX
Date: 4/30/2015
Count Period: PM
N/S: Amador Street
E/W: San Pablo Dam Road
ID: W16




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | Amador Street | | | | | | San Pablo Dam Road | | | | | | 80 WB Off-Ramp | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | NEL | NET | NER | Interval | Hourly |
| 4:00 PM | 1 | 40 | 82 | 0 | 0 | 0 | 87 | 63 | 8 | 0 | 206 | 5 | 58 | 0 | 122 | 672 | 2764 |
| 4:15 PM | 6 | 52 | 83 | 0 | 0 | 0 | 71 | 65 | 10 | 0 | 173 | 12 | 69 | 0 | 103 | 644 | 2889 |
| 4:30 PM | 8 | 57 | 103 | 0 | 0 | 0 | 79 | 76 | 14 | 0 | 218 | 6 | 56 | 0 | 128 | 745 | 2994 |
| 4:45 PM | 9 | 63 | 108 | 0 | 0 | 0 | 87 | 67 | 6 | 0 | 160 | 8 | 62 | 1 | 132 | 703 | 3028 |
| 5:00 PM | 4 | 62 | 108 | 0 | 0 | 0 | 81 | 94 | 9 | 0 | 232 | 15 | 57 | 1 | 134 | 797 | 3044 |
| 5:15 PM | 7 | 59 | 122 | 0 | 0 | 0 | 90 | 86 | 10 | 0 | 194 | 7 | 49 | 0 | 125 | 749 | |
| 5:30 PM | 9 | 54 | 128 | 0 | 0 | 0 | 87 | 114 | 9 | 0 | 178 | 8 | 60 | 0 | 132 | 779 | |
| 5:45 PM | 14 | 51 | 107 | 0 | 0 | 0 | 75 | 84 | 6 | 0 | 161 | 9 | 63 | 0 | 149 | 719 | |
| Peak Hour | 34 | 226 | 465 | 0 | 0 | 0 | 333 | 378 | 34 | 0 | 765 | 39 | 229 | 1 | 540 | | |

## BIKES

| Interval | Amador Street | | San Pablo Dam Road | | Crossing 80 WB Off-Ramp | Totals | |
|---|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | NEB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 4:30 PM | 0 | 0 | 0 | 1 | 0 | 1 | 8 |
| 4:45 PM | 0 | 0 | 0 | 4 | 0 | 4 | 10 |
| 5:00 PM | 2 | 0 | 0 | 0 | 0 | 2 | 6 |
| 5:15 PM | 1 | 0 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 3 | 0 | 0 | 0 | 0 | 3 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 6 | 0 | 0 | 0 | 0 | | |

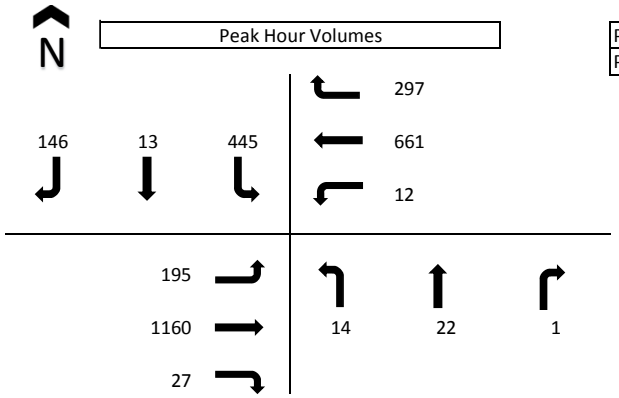
## PEDESTRIANS

| Interval Start | Crossing Amador Street | | Crossing San Pablo Dam Road | | Crossing 80 WB Off-Ramp | Totals | |
|---|---|---|---|---|---|---|---|
| | North Leg | South Leg | East Leg | West Leg | SW Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 4:15 PM | 0 | 0 | 0 | 0 | 2 | 2 | 11 |
| 4:30 PM | 0 | 2 | 0 | 0 | 3 | 5 | 11 |
| 4:45 PM | 0 | 2 | 0 | 0 | 2 | 4 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 5:15 PM | 0 | 0 | 0 | 0 | 2 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 3 | 3 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 2 | 2 | |
| Peak Hour | 0 | 0 | 0 | 0 | 7 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | El Portal Dr |
| E/W: | San Pablo Dam Rd |
| ID: | W17 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | El Portal Dr | | | | | | San Pablo Dam Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 6 | 4 | 0 | 90 | 5 | 14 | 34 | 215 | 7 | 2 | 153 | 67 | 597 | 2521 |
| 4:15 PM | 3 | 7 | 0 | 96 | 4 | 20 | 38 | 215 | 4 | 3 | 144 | 69 | 603 | 2586 |
| 4:30 PM | 3 | 2 | 4 | 104 | 1 | 16 | 24 | 223 | 3 | 0 | 192 | 92 | 664 | 2788 |
| 4:45 PM | 2 | 3 | 3 | 104 | 2 | 20 | 32 | 227 | 8 | 2 | 185 | 69 | 657 | 2902 |
| 5:00 PM | 3 | 6 | 0 | 111 | 3 | 20 | 46 | 256 | 6 | 3 | 141 | 67 | 662 | 2993 |
| 5:15 PM | 1 | 2 | 0 | 130 | 6 | 27 | 60 | 306 | 5 | 3 | 177 | 88 | 805 | |
| 5:30 PM | 5 | 11 | 0 | 112 | 3 | 45 | 44 | 308 | 6 | 4 | 170 | 70 | 778 | |
| 5:45 PM | 5 | 3 | 1 | 92 | 1 | 54 | 45 | 290 | 10 | 2 | 173 | 72 | 748 | |
| Peak Hour | 14 | 22 | 1 | 445 | 13 | 146 | 195 | 1160 | 27 | 12 | 661 | 297 | | |

## BIKES

| Interval | El Portal Dr | | San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 1 | 2 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 1 | 1 | 2 | 3 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 1 | 1 | 1 | 3 | |
| 5:45 PM | 0 | 1 | 0 | 1 | 2 | |
| Peak Hour | 0 | 2 | 1 | 2 | | |

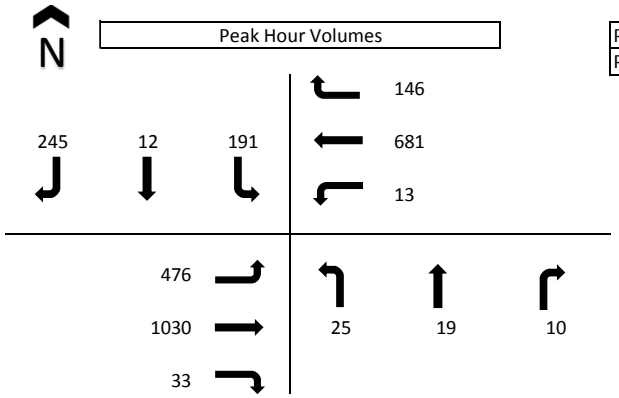
## PEDESTRIANS

| Interval | Crossing El Portal Dr | | Crossing San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 5 | 7 | 0 | 12 | 27 |
| 4:15 PM | 0 | 2 | 7 | 0 | 9 | 25 |
| 4:30 PM | 1 | 0 | 1 | 0 | 2 | 22 |
| 4:45 PM | 1 | 2 | 1 | 0 | 4 | 29 |
| 5:00 PM | 1 | 3 | 5 | 1 | 10 | 28 |
| 5:15 PM | 1 | 1 | 4 | 0 | 6 | |
| 5:30 PM | 0 | 3 | 6 | 0 | 9 | |
| 5:45 PM | 0 | 2 | 1 | 0 | 3 | |
| Peak Hour | 2 | 9 | 16 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM -6:00 PM |
| N/S: | Appian Way/La Colina Rd |
| E/W: | San Pablo Dam Rd |
| ID: | W18 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.92 |

## AUTOMOBILES

| Interval | Appian Way/La Colina Rd | | | | | | San Pablo Dam Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 6 | 7 | 1 | 42 | 7 | 62 | 81 | 222 | 9 | 2 | 154 | 30 | 623 | 2555 |
| 4:15 PM | 10 | 4 | 3 | 37 | 2 | 75 | 77 | 206 | 6 | 0 | 158 | 38 | 616 | 2578 |
| 4:30 PM | 5 | 2 | 2 | 37 | 6 | 80 | 109 | 216 | 8 | 2 | 157 | 33 | 657 | 2707 |
| 4:45 PM | 8 | 6 | 0 | 29 | 3 | 58 | 107 | 212 | 3 | 4 | 179 | 50 | 659 | 2832 |
| 5:00 PM | 5 | 2 | 0 | 52 | 3 | 68 | 109 | 221 | 9 | 1 | 143 | 33 | 646 | 2881 |
| 5:15 PM | 7 | 10 | 4 | 35 | 2 | 66 | 116 | 271 | 8 | 3 | 188 | 35 | 745 | |
| 5:30 PM | 9 | 3 | 0 | 49 | 2 | 58 | 143 | 289 | 11 | 5 | 176 | 37 | 782 | |
| 5:45 PM | 4 | 4 | 6 | 55 | 5 | 53 | 108 | 249 | 5 | 4 | 174 | 41 | 708 | |
| Peak Hour | 25 | 19 | 10 | 191 | 12 | 245 | 476 | 1030 | 33 | 13 | 681 | 146 | | |

## BIKES

| Interval | Appian Way/La Colina Rd | | San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 2 | 1 | 3 | 9 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:30 PM | 0 | 0 | 1 | 4 | 5 | 6 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

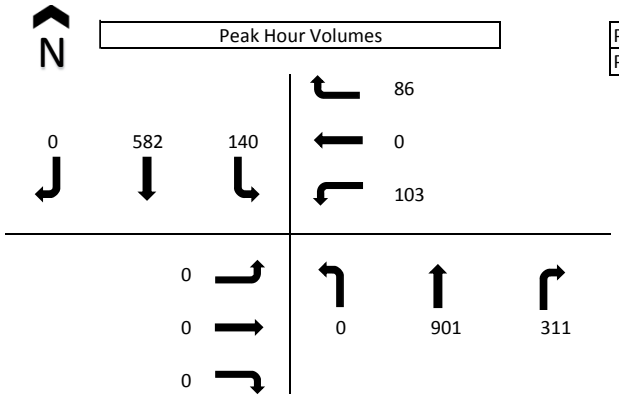
## PEDESTRIANS

| Interval | Crossing Appian Way/La Colina Rd | | Crossing San Pablo Dam Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 5 | 0 | 3 | 8 | 20 |
| 4:15 PM | 0 | 3 | 0 | 2 | 5 | 17 |
| 4:30 PM | 1 | 3 | 0 | 1 | 5 | 13 |
| 4:45 PM | 0 | 2 | 0 | 0 | 2 | 15 |
| 5:00 PM | 0 | 0 | 4 | 1 | 5 | 23 |
| 5:15 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:30 PM | 4 | 2 | 0 | 1 | 7 | |
| 5:45 PM | 0 | 6 | 4 | 0 | 10 | |
| Peak Hour | 4 | 8 | 9 | 2 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Dam Rd |
| E/W: | Castro Ranch Rd |
| ID: | W19 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | San Pablo Dam Rd | | | | | | Castro Ranch Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 140 | 46 | 31 | 115 | 0 | 0 | 0 | 0 | 23 | 0 | 19 | 374 | 1758 |
| 4:15 PM | 0 | 185 | 53 | 26 | 132 | 0 | 0 | 0 | 0 | 29 | 0 | 9 | 434 | 1881 |
| 4:30 PM | 0 | 197 | 54 | 28 | 137 | 0 | 0 | 0 | 0 | 25 | 0 | 19 | 460 | 1982 |
| 4:45 PM | 0 | 218 | 60 | 33 | 132 | 0 | 0 | 0 | 0 | 28 | 0 | 19 | 490 | 2087 |
| 5:00 PM | 0 | 200 | 73 | 27 | 150 | 0 | 0 | 0 | 0 | 26 | 0 | 21 | 497 | 2123 |
| 5:15 PM | 0 | 234 | 80 | 29 | 154 | 0 | 0 | 0 | 0 | 16 | 0 | 22 | 535 | |
| 5:30 PM | 0 | 237 | 89 | 44 | 139 | 0 | 0 | 0 | 0 | 32 | 0 | 24 | 565 | |
| 5:45 PM | 0 | 230 | 69 | 40 | 139 | 0 | 0 | 0 | 0 | 29 | 0 | 19 | 526 | |
| Peak Hour | 0 | 901 | 311 | 140 | 582 | 0 | 0 | 0 | 0 | 103 | 0 | 86 | | |

## BIKES

| Interval | San Pablo Dam Rd | | Castro Ranch Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 2 | 0 | 1 | 4 | 12 |
| 4:15 PM | 1 | 0 | 0 | 2 | 3 | 11 |
| 4:30 PM | 2 | 0 | 0 | 0 | 2 | 10 |
| 4:45 PM | 0 | 1 | 0 | 2 | 3 | 11 |
| 5:00 PM | 2 | 1 | 0 | 0 | 3 | 13 |
| 5:15 PM | 0 | 0 | 0 | 2 | 2 | |
| 5:30 PM | 3 | 0 | 0 | 0 | 3 | |
| 5:45 PM | 2 | 0 | 0 | 3 | 5 | |
| Peak Hour | 7 | 1 | 0 | 5 | | |

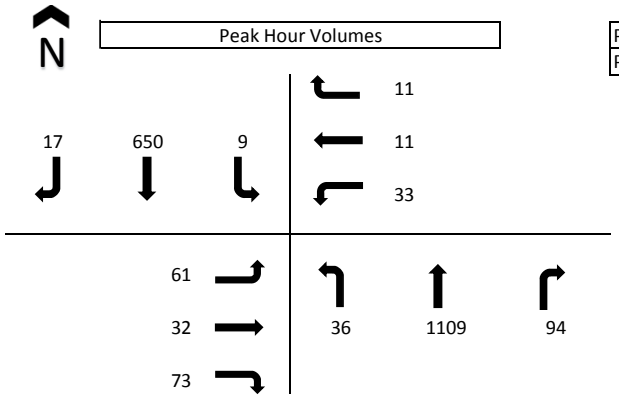
## PEDESTRIANS

| Interval | Crossing San Pablo Dam Rd | | Crossing Castro Ranch Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:00 PM | 3 | 0 | 0 | 0 | 3 | 5 |
| 5:15 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 5 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | San Pablo Dam Rd/Camino Pablo |
| E/W: | Wildcat Canyon Rd/Bear Creek Rd |
| ID: | W20 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | San Pablo Dam Rd/Camino Pablo | | | | | | Wildcat Canyon Rd/Bear Creek Rd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 12 | 198 | 24 | 0 | 105 | 3 | 8 | 6 | 4 | 7 | 3 | 3 | 373 | 1762 |
| 4:15 PM | 16 | 215 | 30 | 4 | 139 | 2 | 4 | 8 | 13 | 8 | 1 | 1 | 441 | 1894 |
| 4:30 PM | 12 | 259 | 27 | 1 | 163 | 9 | 9 | 7 | 11 | 4 | 1 | 2 | 505 | 2026 |
| 4:45 PM | 7 | 222 | 19 | 2 | 140 | 2 | 12 | 12 | 18 | 6 | 1 | 2 | 443 | 2059 |
| 5:00 PM | 6 | 276 | 28 | 1 | 154 | 2 | 7 | 8 | 12 | 4 | 4 | 3 | 505 | 2136 |
| 5:15 PM | 9 | 296 | 29 | 2 | 169 | 3 | 22 | 11 | 21 | 6 | 2 | 3 | 573 | |
| 5:30 PM | 12 | 269 | 23 | 3 | 165 | 6 | 13 | 6 | 20 | 17 | 3 | 1 | 538 | |
| 5:45 PM | 9 | 268 | 14 | 3 | 162 | 6 | 19 | 7 | 20 | 6 | 2 | 4 | 520 | |
| Peak Hour | 36 | 1109 | 94 | 9 | 650 | 17 | 61 | 32 | 73 | 33 | 11 | 11 | | |

## BIKES

| Interval | San Pablo Dam Rd/Camino Pablo | | Wildcat Canyon Rd/Bear Creek Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 1 | 0 | 0 | 2 | 3 | 22 |
| 4:15 PM | 2 | 1 | 1 | 1 | 5 | 25 |
| 4:30 PM | 3 | 4 | 1 | 0 | 8 | 27 |
| 4:45 PM | 2 | 0 | 4 | 0 | 6 | 28 |
| 5:00 PM | 0 | 3 | 1 | 2 | 6 | 29 |
| 5:15 PM | 1 | 1 | 2 | 3 | 7 | |
| 5:30 PM | 1 | 1 | 2 | 5 | 9 | |
| 5:45 PM | 2 | 4 | 1 | 0 | 7 | |
| Peak Hour | 4 | 9 | 6 | 10 | | |

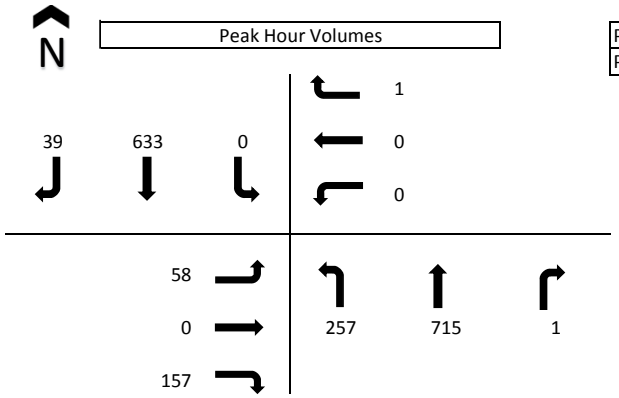
## PEDESTRIANS

| Interval | Crossing San Pablo Dam Rd/Camino Pablo | | Crossing Wildcat Canyon Rd/Bear Creek Rd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | El Portal Dr |
| E/W: | El Portal Dr/Road 20 |
| ID: | W21 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.85 |

## AUTOMOBILES

| Interval | El Portal Dr | | | | | | El Portal Dr/Road 20 | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 22 | 168 | 1 | 1 | 160 | 15 | 10 | 1 | 41 | 0 | 0 | 0 | 419 | 1634 |
| 4:15 PM | 36 | 138 | 0 | 0 | 151 | 12 | 10 | 0 | 43 | 0 | 0 | 1 | 391 | 1672 |
| 4:30 PM | 48 | 133 | 0 | 0 | 155 | 4 | 12 | 0 | 43 | 0 | 0 | 0 | 395 | 1707 |
| 4:45 PM | 51 | 151 | 2 | 0 | 151 | 17 | 12 | 0 | 44 | 0 | 0 | 1 | 429 | 1742 |
| 5:00 PM | 51 | 159 | 1 | 0 | 177 | 17 | 14 | 0 | 38 | 0 | 0 | 0 | 457 | 1861 |
| 5:15 PM | 46 | 171 | 0 | 0 | 163 | 4 | 11 | 0 | 31 | 0 | 0 | 0 | 426 | |
| 5:30 PM | 69 | 178 | 0 | 0 | 131 | 5 | 13 | 0 | 33 | 0 | 0 | 1 | 430 | |
| 5:45 PM | 91 | 207 | 0 | 0 | 162 | 13 | 20 | 0 | 55 | 0 | 0 | 0 | 548 | |
| Peak Hour | 257 | 715 | 1 | 0 | 633 | 39 | 58 | 0 | 157 | 0 | 0 | 1 | | |

## BIKES

| Interval | El Portal Dr | | El Portal Dr/Road 20 | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 8 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 9 |
| 5:00 PM | 0 | 1 | 1 | 0 | 2 | 8 |
| 5:15 PM | 3 | 1 | 1 | 0 | 5 | |
| 5:30 PM | 1 | 0 | 0 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 4 | 2 | 2 | 0 | | |

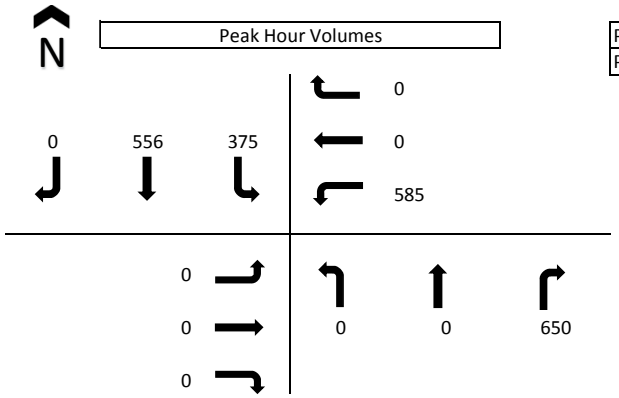
## PEDESTRIANS

| Interval | Crossing El Portal Dr | | Crossing El Portal Dr/Road 20 | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 2 | 3 | 8 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 7 |
| 4:30 PM | 0 | 2 | 0 | 0 | 2 | 10 |
| 4:45 PM | 0 | 0 | 0 | 1 | 1 | 11 |
| 5:00 PM | 0 | 1 | 0 | 1 | 2 | 11 |
| 5:15 PM | 0 | 3 | 0 | 2 | 5 | |
| 5:30 PM | 2 | 0 | 0 | 1 | 3 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 1 | |
| Peak Hour | 2 | 5 | 0 | 4 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | El Portal/ HWY 80 WB Off-Ramp |
| E/W: | El Portal |
| ID: | W22 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.88 |

## AUTOMOBILES

| Interval | El Portal/ HWY 80 WB Off-Ramp | | | | | | El Portal | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 0 | 0 | 158 | 65 | 81 | 0 | 0 | 0 | 0 | 138 | 0 | 0 | 442 | 1794 |
| 4:15 PM | 0 | 0 | 141 | 61 | 90 | 0 | 0 | 0 | 0 | 148 | 0 | 0 | 440 | 1822 |
| 4:30 PM | 0 | 0 | 158 | 57 | 98 | 0 | 0 | 0 | 0 | 124 | 0 | 0 | 437 | 1899 |
| 4:45 PM | 0 | 0 | 172 | 57 | 98 | 0 | 0 | 0 | 0 | 148 | 0 | 0 | 475 | 2028 |
| 5:00 PM | 0 | 0 | 171 | 82 | 91 | 0 | 0 | 0 | 0 | 126 | 0 | 0 | 470 | 2166 |
| 5:15 PM | 0 | 0 | 179 | 78 | 98 | 0 | 0 | 0 | 0 | 162 | 0 | 0 | 517 | |
| 5:30 PM | 0 | 0 | 143 | 107 | 178 | 0 | 0 | 0 | 0 | 138 | 0 | 0 | 566 | |
| 5:45 PM | 0 | 0 | 157 | 108 | 189 | 0 | 0 | 0 | 0 | 159 | 0 | 0 | 613 | |
| Peak Hour | 0 | 0 | 650 | 375 | 556 | 0 | 0 | 0 | 0 | 585 | 0 | 0 | | |

## BIKES

| Interval | El Portal/ HWY 80 WB Off-Ramp | | El Portal | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 1 | 0 | 0 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

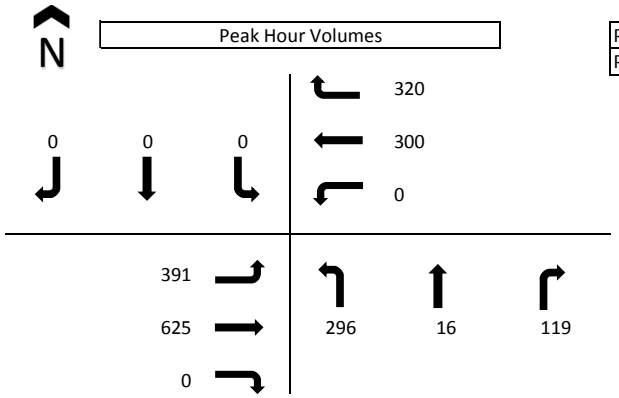
## PEDESTRIANS

| Interval | Crossing El Portal/ HWY 80 WB Off-Ramp | | Crossing El Portal | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 0 | 0 | 0 | 2 | 8 |
| 4:15 PM | 3 | 0 | 0 | 0 | 3 | 6 |
| 4:30 PM | 3 | 0 | 0 | 0 | 3 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 2 | 0 | 0 | 0 | 2 | |
| 5:30 PM | 3 | 0 | 0 | 0 | 3 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 5 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | HWY 80 EB Ramps |
| E/W: | El Portal Dr |
| ID: | W23 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.95 |

## AUTOMOBILES

| Interval | HWY 80 EB Ramps | | | | | | El Portal Dr | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 82 | 0 | 32 | 0 | 0 | 0 | 98 | 110 | 0 | 0 | 68 | 57 | 447 | 1787 |
| 4:15 PM | 68 | 0 | 34 | 0 | 0 | 0 | 91 | 114 | 0 | 0 | 68 | 65 | 440 | 1836 |
| 4:30 PM | 60 | 2 | 34 | 0 | 0 | 0 | 110 | 106 | 0 | 0 | 64 | 70 | 446 | 1939 |
| 4:45 PM | 76 | 0 | 26 | 0 | 0 | 0 | 106 | 121 | 0 | 0 | 63 | 62 | 454 | 2002 |
| 5:00 PM | 73 | 10 | 21 | 0 | 0 | 0 | 111 | 140 | 0 | 0 | 62 | 79 | 496 | 2067 |
| 5:15 PM | 75 | 3 | 40 | 0 | 0 | 0 | 89 | 163 | 0 | 0 | 83 | 90 | 543 | |
| 5:30 PM | 75 | 0 | 25 | 0 | 0 | 0 | 94 | 165 | 0 | 0 | 71 | 79 | 509 | |
| 5:45 PM | 73 | 3 | 33 | 0 | 0 | 0 | 97 | 157 | 0 | 0 | 84 | 72 | 519 | |
| Peak Hour | 296 | 16 | 119 | 0 | 0 | 0 | 391 | 625 | 0 | 0 | 300 | 320 | | |

## BIKES

| Interval | HWY 80 EB Ramps | | El Portal Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 5:00 PM | 0 | 0 | 1 | 1 | 2 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 0 | 2 | 2 | |
| Peak Hour | 0 | 0 | 2 | 3 | | |

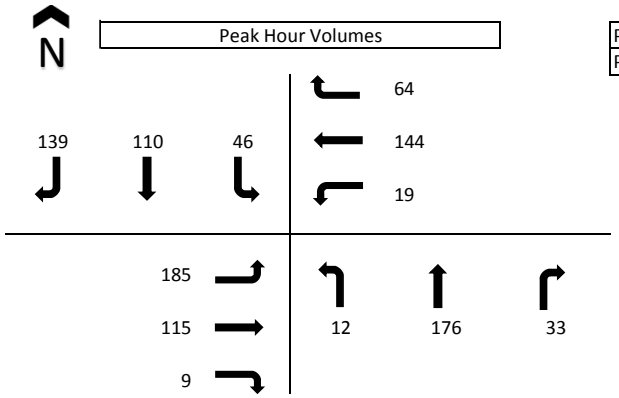
## PEDESTRIANS

| Interval | Crossing HWY 80 EB Ramps | | Crossing El Portal Dr | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 0 | 0 | 0 | 2 | 12 |
| 4:15 PM | 6 | 0 | 0 | 0 | 6 | 10 |
| 4:30 PM | 4 | 0 | 0 | 0 | 4 | 8 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 8 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 8 |
| 5:15 PM | 4 | 0 | 0 | 0 | 4 | |
| 5:30 PM | 4 | 0 | 0 | 0 | 4 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 8 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Canal Blvd |
| E/W: | W Cutting Blvd |
| ID: | W24 |




| | |
|---|---|
| Peak Hour: | 5:00 PM to 6:00 PM |
| Peak Hour Factor: | 0.89 |

## AUTOMOBILES

| Interval | Canal Blvd | | | | | | W Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 6 | 53 | 8 | 12 | 22 | 22 | 46 | 18 | 3 | 5 | 20 | 34 | 249 | 1011 |
| 4:15 PM | 7 | 38 | 7 | 6 | 28 | 35 | 45 | 36 | 1 | 5 | 46 | 20 | 274 | 1006 |
| 4:30 PM | 4 | 45 | 4 | 14 | 27 | 23 | 42 | 37 | 1 | 8 | 30 | 28 | 263 | 983 |
| 4:45 PM | 4 | 31 | 4 | 13 | 15 | 36 | 45 | 21 | 2 | 4 | 34 | 16 | 225 | 1014 |
| 5:00 PM | 1 | 40 | 6 | 7 | 31 | 28 | 55 | 26 | 1 | 6 | 25 | 18 | 244 | 1052 |
| 5:15 PM | 3 | 32 | 6 | 16 | 26 | 35 | 44 | 23 | 1 | 4 | 44 | 17 | 251 | |
| 5:30 PM | 6 | 60 | 14 | 12 | 26 | 32 | 42 | 36 | 5 | 5 | 41 | 15 | 294 | |
| 5:45 PM | 2 | 44 | 7 | 11 | 27 | 44 | 44 | 30 | 2 | 4 | 34 | 14 | 263 | |
| Peak Hour | 12 | 176 | 33 | 46 | 110 | 139 | 185 | 115 | 9 | 19 | 144 | 64 | | |

## BIKES

| Interval | Canal Blvd | | W Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 2 | 1 | 0 | 0 | 3 | 7 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:30 PM | 0 | 2 | 1 | 0 | 3 | 11 |
| 4:45 PM | 0 | 0 | 1 | 0 | 1 | 8 |
| 5:00 PM | 1 | 0 | 1 | 0 | 2 | 7 |
| 5:15 PM | 2 | 0 | 2 | 1 | 5 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 3 | 0 | 3 | 1 | | |

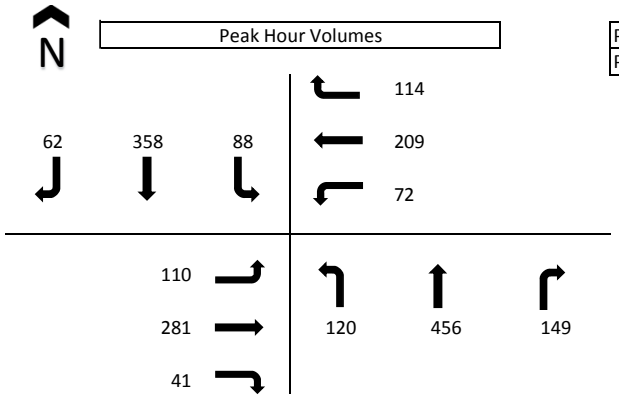
## PEDESTRIANS

| Interval | Crossing Canal Blvd | | Crossing W Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 2 | 1 | 0 | 0 | 3 | 5 |
| 4:30 PM | 0 | 1 | 0 | 0 | 1 | 2 |
| 4:45 PM | 1 | 0 | 0 | 0 | 1 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 6 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 2 | 0 | 0 | 0 | 2 | |
| 5:45 PM | 0 | 4 | 0 | 0 | 4 | |
| Peak Hour | 2 | 4 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Harbour Way S |
| E/W: | Cutting Blvd |
| ID: | W25 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.91 |

## AUTOMOBILES

| Interval | Harbour Way S | | | | | | Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 25 | 116 | 40 | 24 | 87 | 13 | 24 | 44 | 14 | 12 | 54 | 30 | 483 | 1956 |
| 4:15 PM | 23 | 89 | 30 | 24 | 72 | 11 | 40 | 53 | 11 | 24 | 65 | 33 | 475 | 2041 |
| 4:30 PM | 18 | 123 | 27 | 15 | 93 | 15 | 16 | 89 | 7 | 15 | 55 | 26 | 499 | 2060 |
| 4:45 PM | 34 | 117 | 32 | 27 | 60 | 18 | 29 | 78 | 9 | 17 | 48 | 30 | 499 | 2023 |
| 5:00 PM | 49 | 108 | 50 | 23 | 107 | 17 | 32 | 69 | 16 | 18 | 54 | 25 | 568 | 2046 |
| 5:15 PM | 19 | 108 | 40 | 23 | 98 | 12 | 33 | 45 | 9 | 22 | 52 | 33 | 494 | |
| 5:30 PM | 22 | 93 | 29 | 25 | 66 | 16 | 26 | 64 | 19 | 11 | 64 | 27 | 462 | |
| 5:45 PM | 31 | 107 | 51 | 20 | 75 | 17 | 22 | 71 | 17 | 16 | 59 | 36 | 522 | |
| Peak Hour | 120 | 456 | 149 | 88 | 358 | 62 | 110 | 281 | 41 | 72 | 209 | 114 | | |

## BIKES

| Interval | Harbour Way S | | Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:00 PM | 0 | 2 | 1 | 1 | 4 | 8 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 2 | 0 | 2 | 4 | |
| Peak Hour | 0 | 2 | 1 | 1 | | |

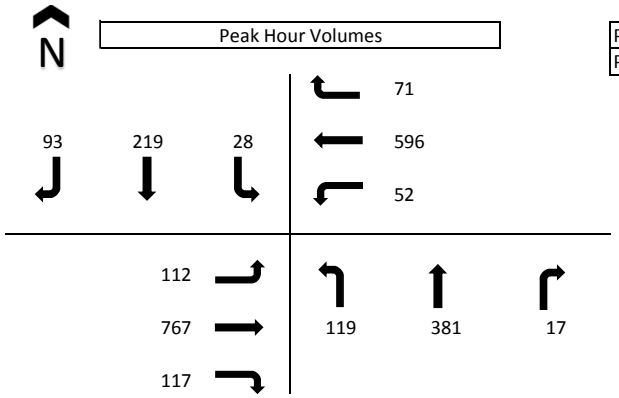
## PEDESTRIANS

| Interval | Crossing Harbour Way S | | Crossing Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 9 |
| 4:15 PM | 1 | 0 | 1 | 0 | 2 | 10 |
| 4:30 PM | 1 | 0 | 0 | 0 | 1 | 9 |
| 4:45 PM | 0 | 1 | 5 | 0 | 6 | 14 |
| 5:00 PM | 1 | 0 | 0 | 0 | 1 | 12 |
| 5:15 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:30 PM | 3 | 0 | 2 | 1 | 6 | |
| 5:45 PM | 4 | 0 | 0 | 0 | 4 | |
| Peak Hour | 2 | 1 | 6 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | IDAX |
| Date: | 4/15/2015 |
| Count Period: | 4:00 PM to 6:00 PM |
| N/S: | Carlson Blvd |
| E/W: | Cutting Blvd |
| ID: | W26 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.96 |

## AUTOMOBILES

| Interval | Carlson Blvd | | | | | | Cutting Blvd | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 37 | 79 | 2 | 8 | 51 | 25 | 23 | 186 | 32 | 5 | 131 | 21 | 600 | 2439 |
| 4:15 PM | 24 | 79 | 5 | 5 | 39 | 20 | 23 | 169 | 35 | 17 | 154 | 14 | 584 | 2512 |
| 4:30 PM | 28 | 102 | 4 | 5 | 45 | 21 | 26 | 201 | 23 | 8 | 134 | 25 | 622 | 2572 |
| 4:45 PM | 30 | 80 | 4 | 9 | 55 | 26 | 33 | 178 | 28 | 17 | 159 | 14 | 633 | 2563 |
| 5:00 PM | 30 | 90 | 8 | 4 | 70 | 17 | 23 | 202 | 33 | 15 | 165 | 16 | 673 | 2513 |
| 5:15 PM | 31 | 109 | 1 | 10 | 49 | 29 | 30 | 186 | 33 | 12 | 138 | 16 | 644 | |
| 5:30 PM | 37 | 75 | 5 | 21 | 48 | 29 | 35 | 161 | 32 | 16 | 135 | 19 | 613 | |
| 5:45 PM | 24 | 79 | 4 | 10 | 54 | 25 | 25 | 178 | 22 | 13 | 125 | 24 | 583 | |
| Peak Hour | 119 | 381 | 17 | 28 | 219 | 93 | 112 | 767 | 117 | 52 | 596 | 71 | | |

## BIKES

| Interval | Carlson Blvd | | Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:30 PM | 0 | 1 | 0 | 0 | 1 | 8 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 7 |
| 5:00 PM | 0 | 0 | 1 | 1 | 2 | 7 |
| 5:15 PM | 0 | 0 | 4 | 0 | 4 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 1 | 0 | 0 | 0 | 1 | |
| Peak Hour | 0 | 2 | 5 | 1 | | |

## PEDESTRIANS

| Interval | Crossing Carlson Blvd | | Crossing Cutting Blvd | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 2 | 3 | 0 | 0 | 5 | 19 |
| 4:15 PM | 2 | 3 | 1 | 0 | 6 | 22 |
| 4:30 PM | 2 | 2 | 0 | 0 | 4 | 22 |
| 4:45 PM | 1 | 3 | 0 | 0 | 4 | 22 |
| 5:00 PM | 4 | 4 | 0 | 0 | 8 | 34 |
| 5:15 PM | 1 | 2 | 3 | 0 | 6 | |
| 5:30 PM | 0 | 1 | 3 | 0 | 4 | |
| 5:45 PM | 7 | 5 | 4 | 0 | 16 | |
| Peak Hour | 8 | 11 | 3 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Appendix D: Synchro LOS Sheets - AM Peak Period

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 24 | 114 | 37 | 622 | 220 | 113 | 222 | 340 | 850 | 228 | 439 | 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 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 25 | 120 | 39 | 655 | 232 | 119 | 234 | 358 | 0 | 240 | 462 | 0 |
| Adj No. of Lanes | 1 | 2 | 0 | 2 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 35 | 232 | 72 | 773 | 339 | 174 | 265 | 1385 | 975 | 228 | 1311 | 0 |
| Arrive On Green | 0.02 | 0.09 | 0.09 | 0.23 | 0.29 | 0.29 | 0.15 | 0.40 | 0.00 | 0.13 | 0.37 | 0.00 |
| Sat Flow, veh/h | 1757 | 2627 | 822 | 3408 | 1150 | 590 | 1757 | 3505 | 1568 | 1757 | 3597 | 0 |
| Grp Volume(v), veh/h | 25 | 78 | 81 | 655 | 0 | 351 | 234 | 358 | 0 | 240 | 462 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1696 | 1704 | 0 | 1741 | 1757 | 1752 | 1568 | 1757 | 1752 | 0 |
| Q Serve(g_s), s | 1.4 | 4.3 | 4.5 | 18.4 | 0.0 | 17.8 | 13.0 | 6.9 | 0.0 | 13.0 | 9.5 | 0.0 |
| Cycle Q Clear(g_c), s | 1.4 | 4.3 | 4.5 | 18.4 | 0.0 | 17.8 | 13.0 | 6.9 | 0.0 | 13.0 | 9.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 0.34 | 1.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 35 | 155 | 150 | 773 | 0 | 513 | 265 | 1385 | 975 | 228 | 1311 | 0 |
| V/C Ratio(X) | 0.71 | 0.51 | 0.54 | 0.85 | 0.00 | 0.68 | 0.88 | 0.26 | 0.00 | 1.05 | 0.35 | 0.00 |
| Avail Cap(c_a), veh/h | 88 | 280 | 271 | 1227 | 0 | 818 | 281 | 1385 | 975 | 228 | 1311 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 48.7 | 43.5 | 43.6 | 37.0 | 0.0 | 31.1 | 41.6 | 20.4 | 0.0 | 43.5 | 22.6 | 0.0 |
| Incr Delay (d2), s/veh | 23.1 | 2.6 | 3.0 | 3.3 | 0.0 | 1.6 | 25.4 | 0.5 | 0.0 | 73.6 | 0.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 2.2 | 2.2 | 9.0 | 0.0 | 8.8 | 8.2 | 3.4 | 0.0 | 10.9 | 4.7 | 0.0 |
| LnGrp Delay(d),s/veh | 71.8 | 46.1 | 46.6 | 40.3 | 0.0 | 32.8 | 67.0 | 20.8 | 0.0 | 117.1 | 23.3 | 0.0 |
| LnGrp LOS | E | D | D | D | | C | E | C | | F | C | |
| Approach Vol, veh/h | | 184 | | | 1006 | | | 592 | | | 702 | |
| Approach Delay, s/veh | | 49.8 | | | 37.7 | | | 39.1 | | | 55.4 | |
| Approach LOS | | D | | | D | | | D | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 17.0 | 43.5 | 26.7 | 12.8 | 19.1 | 41.4 | 6.0 | 33.5 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 13.0 | 19.0 | 36.0 | 16.0 | 16.0 | 16.0 | 5.0 | 47.0 |
| Max Q Clear Time (g_c+I1), s | 15.0 | 8.9 | 20.4 | 6.5 | 15.0 | 11.5 | 3.4 | 19.8 |
| Green Ext Time (p_c), s | 0.0 | 3.9 | 2.3 | 2.2 | 0.1 | 2.1 | 0.0 | 3.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 43.9 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 15 | 322 | 10 | 231 | 1137 | 7 | 12 | 17 | 60 | 5 | 4 | 6 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 0.99 | | 0.99 | 0.99 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 17 | 358 | 11 | 257 | 1263 | 8 | 13 | 19 | 67 | 6 | 4 | 7 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 118 | 2417 | 75 | 441 | 2054 | 13 | 60 | 42 | 113 | 95 | 63 | 71 |
| Arrive On Green | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Sat Flow, veh/h | 90 | 3026 | 94 | 481 | 2572 | 17 | 115 | 400 | 1080 | 364 | 597 | 673 |
| Grp Volume(v), veh/h | 192 | 0 | 194 | 735 | 0 | 793 | 99 | 0 | 0 | 17 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1548 | 0 | 1662 | 1394 | 0 | 1675 | 1595 | 0 | 0 | 1633 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 2.3 | 18.8 | 0.0 | 15.4 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 2.0 | 0.0 | 2.3 | 21.0 | 0.0 | 15.4 | 5.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Prop In Lane | 0.09 | | 0.06 | 0.35 | | 0.01 | 0.13 | | 0.68 | 0.35 | | 0.41 |
| Lane Grp Cap(c), veh/h | 1283 | 0 | 1327 | 1171 | 0 | 1338 | 215 | 0 | 0 | 229 | 0 | 0 |
| V/C Ratio(X) | 0.15 | 0.00 | 0.15 | 0.63 | 0.00 | 0.59 | 0.46 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1283 | 0 | 1327 | 1171 | 0 | 1338 | 539 | 0 | 0 | 534 | 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 | 1.9 | 0.0 | 2.0 | 4.1 | 0.0 | 3.3 | 36.3 | 0.0 | 0.0 | 34.4 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 0.0 | 0.2 | 1.2 | 0.0 | 0.9 | 0.6 | 0.0 | 0.0 | 0.1 | 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 | 1.1 | 0.0 | 1.1 | 8.0 | 0.0 | 7.1 | 2.2 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 2.2 | 0.0 | 2.2 | 5.4 | 0.0 | 4.1 | 36.8 | 0.0 | 0.0 | 34.4 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | C | | |
| Approach Vol, veh/h | | 386 | | | 1528 | | | 99 | | | 17 | |
| Approach Delay, s/veh | | 2.2 | | | 4.7 | | | 36.8 | | | 34.4 | |
| Approach LOS | | A | | | A | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 72.4 | | 12.6 | | 72.4 | | 12.6 |
| Change Period (Y+Rc), s | | 4.5 | | * 3.7 | | 4.5 | | 3.7 |
| Max Green Setting (Gmax), s | | 50.5 | | * 27 | | 50.5 | | 26.3 |
| Max Q Clear Time (g_c+I1), s | | 4.3 | | 7.0 | | 23.0 | | 2.8 |
| Green Ext Time (p_c), s | | 31.7 | | 0.4 | | 21.5 | | 0.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 6.0 |
| HCM 2010 LOS | A |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 3 | 418 | 217 | 395 | 798 | 23 | 152 | 18 | 139 | 44 | 78 | 5 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 3 | 464 | 241 | 439 | 887 | 26 | 169 | 20 | 154 | 49 | 87 | 6 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 6 | 818 | 422 | 474 | 2202 | 65 | 291 | 375 | 314 | 317 | 347 | 24 |
| Arrive On Green | 0.00 | 0.37 | 0.37 | 0.27 | 0.63 | 0.63 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Sat Flow, veh/h | 1757 | 2229 | 1150 | 1757 | 3477 | 102 | 1285 | 1845 | 1545 | 1193 | 1706 | 118 |
| Grp Volume(v), veh/h | 3 | 364 | 341 | 439 | 447 | 466 | 169 | 20 | 154 | 49 | 0 | 93 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1627 | 1757 | 1752 | 1827 | 1285 | 1845 | 1545 | 1193 | 0 | 1824 |
| Q Serve(g_s), s | 0.1 | 14.1 | 14.3 | 20.7 | 10.7 | 10.7 | 10.8 | 0.7 | 7.5 | 2.9 | 0.0 | 3.6 |
| Cycle Q Clear(g_c), s | 0.1 | 14.1 | 14.3 | 20.7 | 10.7 | 10.7 | 14.4 | 0.7 | 7.5 | 3.7 | 0.0 | 3.6 |
| Prop In Lane | 1.00 | | 0.71 | 1.00 | | 0.06 | 1.00 | | 1.00 | 1.00 | | 0.06 |
| Lane Grp Cap(c), veh/h | 6 | 643 | 597 | 474 | 1110 | 1157 | 291 | 375 | 314 | 317 | 0 | 371 |
| V/C Ratio(X) | 0.53 | 0.57 | 0.57 | 0.93 | 0.40 | 0.40 | 0.58 | 0.05 | 0.49 | 0.15 | 0.00 | 0.25 |
| Avail Cap(c_a), veh/h | 277 | 643 | 597 | 525 | 1110 | 1157 | 362 | 477 | 400 | 383 | 0 | 472 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 42.3 | 21.5 | 21.6 | 30.2 | 7.7 | 7.7 | 34.5 | 27.3 | 30.0 | 28.7 | 0.0 | 28.4 |
| Incr Delay (d2), s/veh | 47.2 | 3.6 | 3.9 | 20.6 | 1.1 | 1.0 | 1.3 | 0.0 | 0.8 | 0.2 | 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 | 0.1 | 7.4 | 7.0 | 12.7 | 5.4 | 5.6 | 4.0 | 0.4 | 3.3 | 1.0 | 0.0 | 1.9 |
| LnGrp Delay(d),s/veh | 89.5 | 25.1 | 25.5 | 50.8 | 8.8 | 8.7 | 35.8 | 27.3 | 30.8 | 28.9 | 0.0 | 28.7 |
| LnGrp LOS | F | C | C | D | A | A | D | C | C | C | | C |
| Approach Vol, veh/h | | 708 | | | 1352 | | | 343 | | | 142 | |
| Approach Delay, s/veh | | 25.6 | | | 22.4 | | | 33.0 | | | 28.8 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 26.9 | 36.2 | | 21.9 | 4.3 | 58.8 | | 21.9 |
| Change Period (Y+Rc), s | 4.0 | 5.0 | | 4.6 | 4.0 | 5.0 | | 4.6 |
| Max Green Setting (Gmax), s | 25.4 | 24.0 | | 22.0 | 13.4 | 36.0 | | 22.0 |
| Max Q Clear Time (g_c+I1), s | 22.7 | 16.3 | | 16.4 | 2.1 | 12.7 | | 5.7 |
| Green Ext Time (p_c), s | 0.2 | 4.9 | | 0.8 | 0.0 | 9.8 | | 1.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 25.1 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 22 | 240 | 56 | 155 | 338 | 101 | 39 | 316 | 175 | 184 | 738 | 24 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 25 | 276 | 64 | 178 | 389 | 116 | 45 | 363 | 201 | 211 | 848 | 28 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 32 | 477 | 109 | 203 | 696 | 205 | 58 | 424 | 231 | 661 | 1905 | 63 |
| Arrive On Green | 0.02 | 0.17 | 0.17 | 0.12 | 0.26 | 0.26 | 0.03 | 0.19 | 0.19 | 0.38 | 0.55 | 0.55 |
| Sat Flow, veh/h | 1757 | 2835 | 647 | 1757 | 2663 | 784 | 1757 | 2192 | 1194 | 1757 | 3461 | 114 |
| Grp Volume(v), veh/h | 25 | 169 | 171 | 178 | 254 | 251 | 45 | 289 | 275 | 211 | 429 | 447 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1729 | 1757 | 1752 | 1696 | 1757 | 1752 | 1634 | 1757 | 1752 | 1823 |
| Q Serve(g_s), s | 1.8 | 11.5 | 11.9 | 13.0 | 16.3 | 16.7 | 3.3 | 20.7 | 21.2 | 11.1 | 19.0 | 19.0 |
| Cycle Q Clear(g_c), s | 1.8 | 11.5 | 11.9 | 13.0 | 16.3 | 16.7 | 3.3 | 20.7 | 21.2 | 11.1 | 19.0 | 19.0 |
| Prop In Lane | 1.00 | | 0.37 | 1.00 | | 0.46 | 1.00 | | 0.73 | 1.00 | | 0.06 |
| Lane Grp Cap(c), veh/h | 32 | 295 | 291 | 203 | 458 | 443 | 58 | 339 | 316 | 661 | 964 | 1003 |
| V/C Ratio(X) | 0.78 | 0.57 | 0.59 | 0.88 | 0.56 | 0.57 | 0.77 | 0.85 | 0.87 | 0.32 | 0.45 | 0.45 |
| Avail Cap(c_a), veh/h | 209 | 519 | 512 | 216 | 519 | 502 | 216 | 377 | 352 | 661 | 964 | 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 | 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 | 63.5 | 49.8 | 49.9 | 56.6 | 41.5 | 41.6 | 62.4 | 50.7 | 50.9 | 28.7 | 17.4 | 17.4 |
| Incr Delay (d2), s/veh | 32.1 | 2.5 | 2.7 | 30.0 | 1.5 | 1.6 | 19.4 | 23.0 | 26.5 | 0.3 | 1.5 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 5.8 | 5.9 | 8.0 | 8.1 | 8.0 | 1.9 | 12.2 | 11.9 | 5.4 | 9.6 | 10.0 |
| LnGrp Delay(d),s/veh | 95.6 | 52.3 | 52.6 | 86.6 | 43.0 | 43.2 | 81.7 | 73.6 | 77.3 | 29.0 | 18.9 | 18.8 |
| LnGrp LOS | F | D | D | F | D | D | F | E | E | C | B | B |
| Approach Vol, veh/h | | 365 | | | 683 | | | 609 | | | 1087 | |
| Approach Delay, s/veh | | 55.4 | | | 54.4 | | | 75.9 | | | 20.8 | |
| Approach LOS | | E | | | D | | | E | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 54.2 | 30.4 | 18.5 | 26.9 | 7.8 | 76.8 | 6.4 | 39.0 |
| Change Period (Y+Rc), s | 5.3 | * 5.3 | 3.5 | 5.0 | 3.5 | 5.3 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 29.7 | * 28 | 16.0 | 38.5 | 16.0 | 42.2 | 15.5 | 38.5 |
| Max Q Clear Time (g_c+I1), s | 13.1 | 23.2 | 15.0 | 13.9 | 5.3 | 21.0 | 3.8 | 18.7 |
| Green Ext Time (p_c), s | 6.7 | 1.9 | 0.0 | 7.8 | 0.0 | 8.6 | 0.0 | 7.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 46.0 |
| HCM 2010 LOS | D |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 382 | 63 | 7 | 34 | 68 | 39 | 0 | 339 | 9 | 94 | 770 | 496 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1900 | 1845 | 1900 | 0 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 434 | 72 | 0 | 39 | 77 | 44 | 0 | 385 | 10 | 107 | 875 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 474 | 498 | 0 | 47 | 94 | 54 | 0 | 1331 | 35 | 135 | 1747 | 781 |
| Arrive On Green | 0.27 | 0.27 | 0.00 | 0.11 | 0.11 | 0.11 | 0.00 | 0.38 | 0.38 | 0.08 | 0.50 | 0.00 |
| Sat Flow, veh/h | 1757 | 1845 | 0 | 424 | 837 | 478 | 0 | 3580 | 90 | 1757 | 3505 | 1568 |
| Grp Volume(v), veh/h | 434 | 72 | 0 | 160 | 0 | 0 | 0 | 193 | 202 | 107 | 875 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1845 | 0 | 1739 | 0 | 0 | 0 | 1752 | 1826 | 1757 | 1752 | 1568 |
| Q Serve(g_s), s | 24.0 | 3.0 | 0.0 | 9.0 | 0.0 | 0.0 | 0.0 | 7.7 | 7.7 | 6.0 | 16.7 | 0.0 |
| Cycle Q Clear(g_c), s | 24.0 | 3.0 | 0.0 | 9.0 | 0.0 | 0.0 | 0.0 | 7.7 | 7.7 | 6.0 | 16.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 0.24 | | 0.27 | 0.00 | | 0.05 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 474 | 498 | 0 | 195 | 0 | 0 | 0 | 669 | 697 | 135 | 1747 | 781 |
| V/C Ratio(X) | 0.92 | 0.14 | 0.00 | 0.82 | 0.00 | 0.00 | 0.00 | 0.29 | 0.29 | 0.79 | 0.50 | 0.00 |
| Avail Cap(c_a), veh/h | 562 | 590 | 0 | 278 | 0 | 0 | 0 | 669 | 697 | 228 | 1747 | 781 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.98 | 0.98 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 35.4 | 27.7 | 0.0 | 43.4 | 0.0 | 0.0 | 0.0 | 21.5 | 21.5 | 45.4 | 16.8 | 0.0 |
| Incr Delay (d2), s/veh | 18.0 | 0.1 | 0.0 | 12.4 | 0.0 | 0.0 | 0.0 | 1.1 | 1.0 | 10.0 | 1.0 | 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 | 13.9 | 1.5 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 3.9 | 4.1 | 3.3 | 8.3 | 0.0 |
| LnGrp Delay(d),s/veh | 53.4 | 27.9 | 0.0 | 55.8 | 0.0 | 0.0 | 0.0 | 22.6 | 22.5 | 55.4 | 17.8 | 0.0 |
| LnGrp LOS | D | C | | E | | | | C | C | E | B | |
| Approach Vol, veh/h | | 506 | | | 160 | | | 395 | | | 982 | |
| Approach Delay, s/veh | | 49.8 | | | 55.8 | | | 22.5 | | | 21.9 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 11.7 | 42.2 | | 31.0 | | 53.8 | | 15.2 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | 13.0 | 23.0 | | 32.0 | | 40.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | 8.0 | 9.7 | | 26.0 | | 18.7 | | 11.0 |
| Green Ext Time (p_c), s | 0.1 | 6.9 | | 1.0 | | 9.0 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 31.6 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 23 | 524 | 100 | 72 | 292 | 65 | 137 | 306 | 103 | 170 | 557 | 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 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 25 | 570 | 109 | 78 | 317 | 0 | 149 | 333 | 112 | 185 | 605 | 0 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 34 | 760 | 145 | 65 | 976 | 437 | 179 | 1511 | 665 | 215 | 1584 | 0 |
| Arrive On Green | 0.02 | 0.26 | 0.26 | 0.04 | 0.28 | 0.00 | 0.10 | 0.43 | 0.43 | 0.12 | 0.45 | 0.00 |
| Sat Flow, veh/h | 1757 | 2913 | 555 | 1757 | 3505 | 1568 | 1757 | 3505 | 1543 | 1757 | 3597 | 0 |
| Grp Volume(v), veh/h | 25 | 342 | 337 | 78 | 317 | 0 | 149 | 333 | 112 | 185 | 605 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1716 | 1757 | 1752 | 1568 | 1757 | 1752 | 1543 | 1757 | 1752 | 0 |
| Q Serve(g_s), s | 1.5 | 19.4 | 19.5 | 4.0 | 7.7 | 0.0 | 9.0 | 6.4 | 4.8 | 11.2 | 12.3 | 0.0 |
| Cycle Q Clear(g_c), s | 1.5 | 19.4 | 19.5 | 4.0 | 7.7 | 0.0 | 9.0 | 6.4 | 4.8 | 11.2 | 12.3 | 0.0 |
| Prop In Lane | 1.00 | | 0.32 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 34 | 457 | 448 | 65 | 976 | 437 | 179 | 1511 | 665 | 215 | 1584 | 0 |
| V/C Ratio(X) | 0.73 | 0.75 | 0.75 | 1.20 | 0.32 | 0.00 | 0.83 | 0.22 | 0.17 | 0.86 | 0.38 | 0.00 |
| Avail Cap(c_a), veh/h | 81 | 698 | 683 | 65 | 1103 | 494 | 244 | 1511 | 665 | 260 | 1584 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.83 | 0.83 | 0.00 |
| Uniform Delay (d), s/veh | 52.7 | 36.6 | 36.7 | 52.0 | 30.9 | 0.0 | 47.6 | 19.3 | 18.8 | 46.5 | 19.6 | 0.0 |
| Incr Delay (d2), s/veh | 25.2 | 2.5 | 2.6 | 174.8 | 0.2 | 0.0 | 16.1 | 0.3 | 0.5 | 18.0 | 0.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 9.7 | 9.6 | 5.1 | 3.8 | 0.0 | 5.2 | 3.2 | 2.1 | 6.5 | 6.1 | 0.0 |
| LnGrp Delay(d),s/veh | 77.8 | 39.1 | 39.3 | 226.8 | 31.1 | 0.0 | 63.7 | 19.6 | 19.4 | 64.5 | 20.2 | 0.0 |
| LnGrp LOS | E | D | D | F | C | | E | B | B | E | C | |
| Approach Vol, veh/h | | 704 | | | 395 | | | 594 | | | 790 | |
| Approach Delay, s/veh | | 40.6 | | | 69.7 | | | 30.7 | | | 30.5 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 17.2 | 50.6 | 8.0 | 32.2 | 15.0 | 52.8 | 6.1 | 34.1 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 16.0 | 29.0 | 4.0 | 43.0 | 15.0 | 30.0 | 5.0 | 34.0 |
| Max Q Clear Time (g_c+I1), s | 13.2 | 8.4 | 6.0 | 21.5 | 11.0 | 14.3 | 3.5 | 9.7 |
| Green Ext Time (p_c), s | 0.1 | 6.9 | 0.0 | 6.7 | 0.1 | 6.1 | 0.0 | 7.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 39.6 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 311 | 211 | 62 | 26 | 204 | 71 | 69 | 222 | 78 | 38 | 404 | 404 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | 0.93 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.95 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 0.99 | 1.00 | | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1665 | 1734 | 1568 | | 1834 | 1451 | 1752 | 3322 | | 1752 | 3505 | 1494 |
| Flt Permitted | 0.95 | 0.99 | 1.00 | | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1665 | 1734 | 1568 | | 1834 | 1451 | 1752 | 3322 | | 1752 | 3505 | 1494 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 349 | 237 | 70 | 29 | 229 | 80 | 78 | 249 | 88 | 43 | 454 | 454 |
| RTOR Reduction (vph) | 0 | 0 | 59 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 286 | 300 | 11 | 0 | 258 | 27 | 78 | 337 | 0 | 43 | 454 | 454 |
| Confl. Peds. (#/hr) | | | | | | 71 | | | 10 | | | 19 |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | |
| Turn Type | Split | NA | Perm | Split | NA | Perm | Prot | NA | | Prot | NA | Perm |
| Protected Phases | 1 | 1 | | 2 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 1 | | | 2 | | | | | | 4 |
| Actuated Green, G (s) | 16.0 | 16.0 | 16.0 | | 33.4 | 33.4 | 7.0 | 29.4 | | 5.2 | 27.6 | 27.6 |
| Effective Green, g (s) | 16.0 | 16.0 | 16.0 | | 33.4 | 33.4 | 7.0 | 29.4 | | 5.2 | 27.6 | 27.6 |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.16 | | 0.33 | 0.33 | 0.07 | 0.29 | | 0.05 | 0.28 | 0.28 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 266 | 277 | 250 | | 612 | 484 | 122 | 976 | | 91 | 967 | 412 |
| v/s Ratio Prot | 0.17 | c0.17 | | | c0.14 | | c0.04 | 0.10 | | 0.02 | 0.13 | |
| v/s Ratio Perm | | | 0.01 | | | 0.02 | | | | | | c0.30 |
| v/c Ratio | 1.08 | 1.08 | 0.04 | | 0.42 | 0.06 | 0.64 | 0.35 | | 0.47 | 0.47 | 1.10 |
| Uniform Delay, d1 | 42.0 | 42.0 | 35.5 | | 25.8 | 22.6 | 45.3 | 27.7 | | 46.1 | 30.1 | 36.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 0.52 | 0.21 | 0.95 | 1.03 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 76.6 | 78.0 | 0.1 | | 2.1 | 0.2 | 10.0 | 0.2 | | 3.8 | 0.4 | 74.8 |
| Delay (s) | 118.6 | 120.0 | 35.6 | | 15.5 | 5.0 | 53.0 | 28.8 | | 49.9 | 30.5 | 111.0 |
| Level of Service | F | F | D | | B | A | D | C | | D | C | F |
| Approach Delay (s) | | 110.4 | | | 13.0 | | | 33.4 | | | 69.8 | |
| Approach LOS | | F | | | B | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 66.5 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 9 | 8 | 345 | 52 | 298 | 12 | 289 | 250 | 282 | 564 | 6 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | | 0.95 | | 0.91 | 0.91 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | |
| Frpb, ped/bikes | | 0.97 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.93 | | 1.00 | 0.90 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | 0.95 | 0.99 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3159 | | 1595 | 2964 | | 1752 | 3505 | 1476 | 1752 | 3499 | |
| Flt Permitted | | 1.00 | | 0.95 | 0.99 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 3159 | | 1595 | 2964 | | 1752 | 3505 | 1476 | 1752 | 3499 | |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 1 | 10 | 9 | 371 | 56 | 320 | 13 | 311 | 269 | 303 | 606 | 6 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 249 | 0 | 0 | 0 | 180 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 12 | 0 | 260 | 238 | 0 | 13 | 311 | 89 | 303 | 612 | 0 |
| Confl. Peds. (#/hr) | | | 16 | | | 1 | | | 12 | | | 11 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | 2 | | | |
| Turn Type | Split | NA | | Split | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | 2 | | | |
| Actuated Green, G (s) | | 7.6 | | 22.2 | 22.2 | | 0.8 | 33.2 | 33.2 | 21.0 | 53.4 | |
| Effective Green, g (s) | | 7.6 | | 22.2 | 22.2 | | 0.8 | 33.2 | 33.2 | 21.0 | 53.4 | |
| Actuated g/C Ratio | | 0.08 | | 0.22 | 0.22 | | 0.01 | 0.33 | 0.33 | 0.21 | 0.53 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 240 | | 354 | 658 | | 14 | 1163 | 490 | 367 | 1868 | |
| v/s Ratio Prot | | c0.00 | | c0.16 | 0.08 | | 0.01 | 0.09 | | c0.17 | c0.17 | |
| v/s Ratio Perm | | | | | | | | | 0.06 | | | |
| v/c Ratio | | 0.05 | | 0.73 | 0.36 | | 0.93 | 0.27 | 0.18 | 0.83 | 0.33 | |
| Uniform Delay, d1 | | 42.8 | | 36.2 | 32.9 | | 49.6 | 24.5 | 23.7 | 37.8 | 13.2 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 0.85 | 0.75 | |
| Incremental Delay, d2 | | 0.1 | | 7.7 | 0.3 | | 201.0 | 0.6 | 0.8 | 13.7 | 0.5 | |
| Delay (s) | | 42.9 | | 43.9 | 33.2 | | 250.5 | 25.0 | 24.6 | 45.9 | 10.3 | |
| Level of Service | | D | | D | C | | F | C | C | D | B | |
| Approach Delay (s) | | 42.9 | | | 36.9 | | | 29.8 | | | 22.1 | |
| Approach LOS | | D | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 29.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 57.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 36 | 111 | 75 | 113 | 98 | 163 | 38 | 315 | 37 | 126 | 789 | 44 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 0.95 | | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | | 0.99 | | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.95 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flt Protected | | 0.99 | | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3272 | | 1665 | 1743 | 1523 | 1752 | 3440 | | 1752 | 3472 | |
| Flt Permitted | | 0.99 | | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 3272 | | 1665 | 1743 | 1523 | 1752 | 3440 | | 1752 | 3472 | |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 39 | 119 | 81 | 122 | 105 | 175 | 41 | 339 | 40 | 135 | 848 | 47 |
| RTOR Reduction (vph) | 0 | 71 | 0 | 0 | 0 | 153 | 0 | 8 | 0 | 0 | 3 | 0 |
| Lane Group Flow (vph) | 0 | 168 | 0 | 110 | 117 | 22 | 41 | 371 | 0 | 135 | 892 | 0 |
| Confl. Peds. (#/hr) | | | 7 | | | 1 | | | 8 | | | 2 |
| Confl. Bikes (#/hr) | | | | | | 2 | | | | | | 1 |
| Turn Type | Split | NA | | Split | NA | Perm | Prot | NA | | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | | | | |
| Actuated Green, G (s) | | 10.7 | | 12.5 | 12.5 | 12.5 | 5.2 | 47.1 | | 13.7 | 55.6 | |
| Effective Green, g (s) | | 10.7 | | 12.5 | 12.5 | 12.5 | 5.2 | 47.1 | | 13.7 | 55.6 | |
| Actuated g/C Ratio | | 0.11 | | 0.12 | 0.12 | 0.12 | 0.05 | 0.47 | | 0.14 | 0.56 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 350 | | 208 | 217 | 190 | 91 | 1620 | | 240 | 1930 | |
| v/s Ratio Prot | | c0.05 | | 0.07 | c0.07 | | 0.02 | 0.11 | | c0.08 | c0.26 | |
| v/s Ratio Perm | | | | | | 0.01 | | | | | | |
| v/c Ratio | | 0.48 | | 0.53 | 0.54 | 0.12 | 0.45 | 0.23 | | 0.56 | 0.46 | |
| Uniform Delay, d1 | | 42.0 | | 41.0 | 41.0 | 38.8 | 46.0 | 15.7 | | 40.3 | 13.3 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 1.0 | | 2.4 | 2.6 | 0.3 | 3.5 | 0.3 | | 3.0 | 0.8 | |
| Delay (s) | | 43.1 | | 43.4 | 43.6 | 39.1 | 49.5 | 16.0 | | 43.3 | 14.1 | |
| Level of Service | | D | | D | D | D | D | B | | D | B | |
| Approach Delay (s) | | 43.1 | | | 41.6 | | | 19.3 | | | 17.9 | |
| Approach LOS | | D | | | D | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.51 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 54.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | SBL | SBT | SBR | SWL2 | SWL | SWR |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 568 | 235 | 83 | 215 | 187 | 43 | 517 | 3 | 324 | 90 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | | 0.95 | 0.95 | 0.91 | 0.95 | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 0.96 | | | 1.00 | 1.00 | 0.88 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 1.00 | | | 0.99 | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 3339 | | | 3457 | 1665 | 1475 | 1490 | | 1752 | 1568 |
| Flt Permitted | 1.00 | | | 0.55 | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | 3339 | | | 1945 | 1665 | 1475 | 1490 | | 1752 | 1568 |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 604 | 250 | 88 | 229 | 199 | 46 | 550 | 3 | 345 | 96 |
| RTOR Reduction (vph) | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 811 | 0 | 0 | 317 | 179 | 314 | 302 | 0 | 348 | 96 |
| Confl. Bikes (#/hr) | | 1 | | | | | | | | |
| Turn Type | NA | | Perm | NA | Split | NA | Perm | Prot | Prot | Perm |
| Protected Phases | 4 | | | 8 | 6 | 6 | | 2 | 2 | |
| Permitted Phases | | | 8 | | | | 6 | | | 2 |
| Actuated Green, G (s) | 28.6 | | | 28.6 | 25.2 | 25.2 | 25.2 | | 22.9 | 22.9 |
| Effective Green, g (s) | 28.6 | | | 28.6 | 25.2 | 25.2 | 25.2 | | 22.9 | 22.9 |
| Actuated g/C Ratio | 0.32 | | | 0.32 | 0.28 | 0.28 | 0.28 | | 0.26 | 0.26 |
| Clearance Time (s) | 4.0 | | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 1076 | | | 627 | 473 | 419 | 423 | | 452 | 404 |
| v/s Ratio Prot | c0.24 | | | | 0.11 | c0.21 | | | c0.20 | |
| v/s Ratio Perm | | | | 0.16 | | | 0.20 | | | 0.06 |
| v/c Ratio | 0.75 | | | 1.02dl | 0.38 | 0.75 | 0.71 | | 0.77 | 0.24 |
| Uniform Delay, d1 | 26.9 | | | 24.3 | 25.5 | 28.9 | 28.5 | | 30.5 | 26.0 |
| Progression Factor | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.7 | | | 0.2 | 0.2 | 6.3 | 4.7 | | 7.0 | 0.1 |
| Delay (s) | 29.6 | | | 24.6 | 25.7 | 35.2 | 33.2 | | 37.5 | 26.1 |
| Level of Service | C | | | C | C | D | C | | D | C |
| Approach Delay (s) | 29.6 | | | 24.6 | | 32.3 | | | 35.0 | |
| Approach LOS | C | | | C | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.76 | | |
| Actuated Cycle Length (s) | 88.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 74.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

| Movement | EBL | EBT | EBR | EBR2 | NBT | NBR | NBR2 | SBL2 | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 138 | 2 | 26 | 138 | 227 | 619 | 6 | 122 | 18 | 612 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 0.95 | | | 0.91 | 0.91 | | 1.00 | | 0.95 |
| Frpb, ped/bikes | 1.00 | 0.98 | | | 0.98 | 0.94 | | 1.00 | | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Frt | 1.00 | 0.86 | | | 0.91 | 0.85 | | 1.00 | | 1.00 |
| Flt Protected | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1665 | 1481 | | | 3005 | 1345 | | 1752 | | 3500 |
| Flt Permitted | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.95 | | 0.93 |
| Satd. Flow (perm) | 1665 | 1481 | | | 3005 | 1345 | | 1752 | | 3252 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 150 | 2 | 28 | 150 | 247 | 673 | 7 | 133 | 20 | 665 |
| RTOR Reduction (vph) | 0 | 118 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 135 | 77 | 0 | 0 | 590 | 321 | 0 | 133 | 0 | 685 |
| Confl. Peds. (#/hr) | | | | 3 | | 9 | | | | |
| Confl. Bikes (#/hr) | | | | | | 4 | 4 | | | |
| Turn Type | Split | NA | | | NA | Perm | | Prot | Perm | NA |
| Protected Phases | 4 | 4 | | | 2 | | | 1 | | 6 |
| Permitted Phases | | | | | | 2 | | | 6 | |
| Actuated Green, G (s) | 15.2 | 15.2 | | | 78.4 | 78.4 | | 14.4 | | 96.8 |
| Effective Green, g (s) | 15.2 | 15.2 | | | 78.4 | 78.4 | | 14.4 | | 96.8 |
| Actuated g/C Ratio | 0.13 | 0.13 | | | 0.65 | 0.65 | | 0.12 | | 0.81 |
| Clearance Time (s) | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 210 | 187 | | | 1963 | 878 | | 210 | | 2623 |
| v/s Ratio Prot | c0.08 | 0.05 | | | 0.20 | | | c0.08 | | |
| v/s Ratio Perm | | | | | | c0.24 | | | | 0.21 |
| v/c Ratio | 0.64 | 0.41 | | | 0.30 | 0.37 | | 0.63 | | 0.26 |
| Uniform Delay, d1 | 49.8 | 48.3 | | | 9.0 | 9.5 | | 50.3 | | 2.8 |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Incremental Delay, d2 | 6.6 | 1.5 | | | 0.4 | 1.2 | | 6.1 | | 0.2 |
| Delay (s) | 56.4 | 49.8 | | | 9.4 | 10.7 | | 56.4 | | 3.1 |
| Level of Service | E | D | | | A | B | | E | | A |
| Approach Delay (s) | | 52.5 | | | 9.8 | | | | | 11.8 |
| Approach LOS | | D | | | A | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.44 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 63.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 403 | 147 | 164 | 43 | 169 | 159 | 48 | 289 | 12 | 117 | 490 | 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 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 0.97 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 438 | 160 | 178 | 47 | 184 | 173 | 52 | 314 | 13 | 127 | 533 | 85 |
| Adj No. of Lanes | 2 | 1 | 0 | 1 | 2 | 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, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 521 | 213 | 237 | 60 | 263 | 232 | 67 | 1755 | 72 | 65 | 1548 | 246 |
| Arrive On Green | 0.15 | 0.27 | 0.27 | 0.03 | 0.15 | 0.15 | 0.04 | 0.51 | 0.51 | 0.04 | 0.51 | 0.51 |
| Sat Flow, veh/h | 3408 | 793 | 882 | 1757 | 1756 | 1544 | 1757 | 3426 | 141 | 1757 | 3028 | 481 |
| Grp Volume(v), veh/h | 438 | 0 | 338 | 47 | 184 | 173 | 52 | 160 | 167 | 127 | 308 | 310 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 0 | 1674 | 1757 | 1752 | 1547 | 1757 | 1752 | 1815 | 1757 | 1752 | 1757 |
| Q Serve(g_s), s | 13.5 | 0.0 | 20.0 | 2.9 | 10.7 | 11.6 | 3.2 | 5.3 | 5.3 | 4.0 | 11.2 | 11.3 |
| Cycle Q Clear(g_c), s | 13.5 | 0.0 | 20.0 | 2.9 | 10.7 | 11.6 | 3.2 | 5.3 | 5.3 | 4.0 | 11.2 | 11.3 |
| Prop In Lane | 1.00 | | 0.53 | 1.00 | | 1.00 | 1.00 | | 0.08 | 1.00 | | 0.27 |
| Lane Grp Cap(c), veh/h | 521 | 0 | 450 | 60 | 263 | 232 | 67 | 897 | 930 | 65 | 896 | 898 |
| V/C Ratio(X) | 0.84 | 0.00 | 0.75 | 0.78 | 0.70 | 0.75 | 0.78 | 0.18 | 0.18 | 1.95 | 0.34 | 0.35 |
| Avail Cap(c_a), veh/h | 726 | 0 | 527 | 163 | 341 | 301 | 163 | 897 | 930 | 65 | 896 | 898 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.65 | 0.00 | 0.65 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 0.98 | 0.98 |
| Uniform Delay (d), s/veh | 44.5 | 0.0 | 36.2 | 51.7 | 43.6 | 43.9 | 51.5 | 14.1 | 14.2 | 52.0 | 15.7 | 15.7 |
| Incr Delay (d2), s/veh | 4.2 | 0.0 | 3.3 | 19.3 | 4.3 | 7.2 | 17.4 | 0.4 | 0.4 | 477.9 | 1.0 | 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 | 6.6 | 0.0 | 9.6 | 1.7 | 5.5 | 5.4 | 1.9 | 2.6 | 2.8 | 10.6 | 5.6 | 5.8 |
| LnGrp Delay(d),s/veh | 48.7 | 0.0 | 39.5 | 71.0 | 47.9 | 51.2 | 68.9 | 14.6 | 14.6 | 529.9 | 16.7 | 16.7 |
| LnGrp LOS | D | | D | E | D | D | E | B | B | F | B | B |
| Approach Vol, veh/h | | 776 | | | 404 | | | 379 | | | 745 | |
| Approach Delay, s/veh | | 44.7 | | | 52.0 | | | 22.0 | | | 104.2 | |
| Approach LOS | | D | | | 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 | 8.0 | 59.3 | 7.7 | 33.0 | 8.1 | 59.2 | 20.5 | 20.2 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 4.0 | 44.0 | 10.0 | 34.0 | 10.0 | 30.0 | 23.0 | 21.0 |
| Max Q Clear Time (g_c+I1), s | 6.0 | 7.3 | 4.9 | 22.0 | 5.2 | 13.3 | 15.5 | 13.6 |
| Green Ext Time (p_c), s | 0.0 | 6.8 | 0.0 | 3.5 | 0.0 | 5.4 | 1.0 | 2.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 61.5 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 180 | 21 | 787 | 93 | 227 | 44 | 291 | 357 | 1 | 0 | 532 | 99 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.97 | 0.91 | | | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | | 1.00 | 0.93 |
| Flpb, ped/bikes | 0.90 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.86 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 1.00 | 1.00 |
| Satd. Flow (prot) | 1576 | 1434 | 1490 | 1752 | 3505 | 1332 | 3400 | 5033 | | | 3505 | 1461 |
| Flt Permitted | 0.60 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 1.00 | 1.00 |
| Satd. Flow (perm) | 999 | 1434 | 1490 | 1752 | 3505 | 1332 | 3400 | 5033 | | | 3505 | 1461 |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 191 | 22 | 837 | 99 | 241 | 47 | 310 | 380 | 1 | 0 | 566 | 105 |
| RTOR Reduction (vph) | 0 | 271 | 62 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 59 |
| Lane Group Flow (vph) | 191 | 161 | 365 | 99 | 241 | 16 | 310 | 381 | 0 | 0 | 566 | 46 |
| Confl. Peds. (#/hr) | 75 | | | | | 75 | | | 20 | | | 30 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | 1 | | | 2 |
| Heavy Vehicles (%) | 3% | 100% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Prot | NA | Perm | Prot | NA | | | NA | Perm |
| Protected Phases | | 4 | 5 | 3 | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | 8 | | | | | | 6 |
| Actuated Green, G (s) | 23.9 | 23.9 | 37.2 | 6.0 | 33.9 | 33.9 | 13.3 | 58.1 | | | 40.8 | 40.8 |
| Effective Green, g (s) | 23.9 | 23.9 | 37.2 | 6.0 | 33.9 | 33.9 | 13.3 | 58.1 | | | 40.8 | 40.8 |
| Actuated g/C Ratio | 0.24 | 0.24 | 0.37 | 0.06 | 0.34 | 0.34 | 0.13 | 0.58 | | | 0.41 | 0.41 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 238 | 342 | 613 | 105 | 1188 | 451 | 452 | 2924 | | | 1430 | 596 |
| v/s Ratio Prot | | 0.11 | c0.08 | c0.06 | 0.07 | | 0.09 | 0.08 | | | c0.16 | |
| v/s Ratio Perm | c0.19 | | 0.17 | | | 0.01 | | | | | | 0.03 |
| v/c Ratio | 0.80 | 0.47 | 0.60 | 0.94 | 0.20 | 0.04 | 0.69 | 0.13 | | | 0.40 | 0.08 |
| Uniform Delay, d1 | 35.8 | 32.6 | 25.3 | 46.8 | 23.5 | 22.1 | 41.4 | 9.5 | | | 20.9 | 18.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 0.96 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 17.5 | 1.0 | 1.6 | 69.2 | 0.1 | 0.0 | 4.2 | 0.1 | | | 0.8 | 0.3 |
| Delay (s) | 53.3 | 33.7 | 26.9 | 116.1 | 23.5 | 22.1 | 47.3 | 9.2 | | | 21.7 | 18.3 |
| Level of Service | D | C | C | F | C | C | D | A | | | C | B |
| Approach Delay (s) | | 34.5 | | | 47.0 | | | 26.3 | | | 21.2 | |
| Approach LOS | | C | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 62.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 137 | 257 | 59 | 73 | 273 | 29 | 53 | 240 | 29 | 49 | 645 | 146 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.92 | | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | | 0.99 | | 1.00 | 0.98 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.99 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1498 | 1573 | 1295 | | 3066 | | 1577 | 3085 | | 1577 | 3052 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.99 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1498 | 1573 | 1295 | | 3066 | | 1577 | 3085 | | 1577 | 3052 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 143 | 268 | 61 | 76 | 284 | 30 | 55 | 250 | 30 | 51 | 672 | 152 |
| RTOR Reduction (vph) | 0 | 0 | 49 | 0 | 6 | 0 | 0 | 9 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 129 | 282 | 12 | 0 | 384 | 0 | 55 | 271 | 0 | 51 | 806 | 0 |
| Confl. Peds. (#/hr) | | | 36 | | | 44 | | | 12 | | | 7 |
| Confl. Bikes (#/hr) | | | 4 | | | 1 | | | 1 | | | 5 |
| Turn Type | Split | NA | Perm | Split | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Actuated Green, G (s) | 20.2 | 20.2 | 20.2 | | 15.4 | | 6.8 | 43.6 | | 4.8 | 41.6 | |
| Effective Green, g (s) | 20.2 | 20.2 | 20.2 | | 15.4 | | 6.8 | 43.6 | | 4.8 | 41.6 | |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.20 | | 0.15 | | 0.07 | 0.44 | | 0.05 | 0.42 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 302 | 317 | 261 | | 472 | | 107 | 1345 | | 75 | 1269 | |
| v/s Ratio Prot | 0.09 | c0.18 | | | c0.13 | | 0.03 | 0.09 | | c0.03 | c0.26 | |
| v/s Ratio Perm | | | 0.01 | | | | | | | | | |
| v/c Ratio | 0.43 | 0.89 | 0.05 | | 0.81 | | 0.51 | 0.20 | | 0.68 | 0.64 | |
| Uniform Delay, d1 | 34.8 | 38.8 | 32.1 | | 40.9 | | 45.0 | 17.4 | | 46.8 | 23.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 0.99 | 0.84 | |
| Incremental Delay, d2 | 1.0 | 24.7 | 0.1 | | 10.3 | | 4.1 | 0.3 | | 19.1 | 2.0 | |
| Delay (s) | 35.8 | 63.5 | 32.2 | | 51.2 | | 49.1 | 17.8 | | 65.5 | 21.6 | |
| Level of Service | D | E | C | | D | | D | B | | E | C | |
| Approach Delay (s) | | 51.9 | | | 51.2 | | | 22.9 | | | 24.1 | |
| Approach LOS | | D | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 35.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 69.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 446 | 261 | 684 | 679 | 0 | 0 | 0 | 0 | 99 | 56 | 331 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | |
| Lane Util. Factor | | 0.95 | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 0.98 | | 1.00 | | | | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | | | | | 1.00 | 0.87 | |
| Flt Protected | | 1.00 | 1.00 | | 0.98 | | | | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3505 | 1535 | | 3419 | | | | | 1752 | 1608 | |
| Flt Permitted | | 1.00 | 1.00 | | 0.98 | | | | | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 3505 | 1535 | | 3419 | | | | | 1752 | 1608 | |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 0 | 451 | 264 | 691 | 686 | 0 | 0 | 0 | 0 | 100 | 57 | 334 |
| RTOR Reduction (vph) | 0 | 0 | 215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 224 | 0 |
| Lane Group Flow (vph) | 0 | 451 | 49 | 0 | 1377 | 0 | 0 | 0 | 0 | 100 | 167 | 0 |
| Confl. Peds. (#/hr) | | | 6 | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | 2 | | | | | | |
| Turn Type | | NA | Perm | Split | NA | | | | | Perm | NA | |
| Protected Phases | | 2 | | 1 | 1 | | | | | | 4 | |
| Permitted Phases | | | 2 | | | | | | | 4 | | |
| Actuated Green, G (s) | | 15.5 | 15.5 | | 42.2 | | | | | 13.5 | 13.5 | |
| Effective Green, g (s) | | 15.5 | 15.5 | | 42.2 | | | | | 13.5 | 13.5 | |
| Actuated g/C Ratio | | 0.19 | 0.19 | | 0.51 | | | | | 0.16 | 0.16 | |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 652 | 285 | | 1734 | | | | | 284 | 260 | |
| v/s Ratio Prot | | c0.13 | | | c0.40 | | | | | | c0.10 | |
| v/s Ratio Perm | | | 0.03 | | | | | | | 0.06 | | |
| v/c Ratio | | 0.69 | 0.17 | | 0.79 | | | | | 0.35 | 0.64 | |
| Uniform Delay, d1 | | 31.6 | 28.5 | | 16.9 | | | | | 31.0 | 32.6 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.2 | 0.3 | | 2.6 | | | | | 0.8 | 5.4 | |
| Delay (s) | | 34.8 | 28.7 | | 19.5 | | | | | 31.7 | 38.0 | |
| Level of Service | | C | C | | B | | | | | C | D | |
| Approach Delay (s) | | 32.6 | | | 19.5 | | | 0.0 | | | 36.7 | |
| Approach LOS | | C | | | B | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 26.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 83.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 88.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBT | WBR | NBL2 | NBL | NBR | NBR2 | NWL | NWT | NWR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 243 | 163 | 144 | 1077 | 24 | 291 | 0 | 307 | 10 | 70 | 189 | 158 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 0.95 | | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | | 0.99 | | 1.00 | | 1.00 | 1.00 | 1.00 | | | 1.00 | 0.99 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | | 0.96 | | 1.00 | | 1.00 | 0.85 | 0.85 | | | 1.00 | 0.85 |
| Flt Protected | | 0.98 | | 1.00 | | 0.95 | 1.00 | 1.00 | | | 0.99 | 1.00 |
| Satd. Flow (prot) | | 3263 | | 3492 | | 1752 | 1568 | 1490 | | | 1820 | 1548 |
| Flt Permitted | | 0.98 | | 1.00 | | 0.95 | 1.00 | 1.00 | | | 0.99 | 1.00 |
| Satd. Flow (perm) | | 3263 | | 3492 | | 1752 | 1568 | 1490 | | | 1820 | 1548 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 245 | 165 | 145 | 1088 | 24 | 294 | 0 | 310 | 10 | 71 | 191 | 160 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 555 | 0 | 1111 | 0 | 294 | 161 | 137 | 0 | 0 | 262 | 160 |
| Confl. Peds. (#/hr) | | | 4 | | 2 | | | | 4 | | | |
| Confl. Bikes (#/hr) | | | 1 | | | | | | | | | 2 |
| Turn Type | Split | NA | | NA | | Prot | Prot | custom | | Split | NA | Free |
| Protected Phases | 1 | 1 | | 4 | | 2 | 2 | 2 4 | | 3 | 3 | |
| Permitted Phases | | | | | | 2 | | | | | | Free |
| Actuated Green, G (s) | | 21.0 | | 39.2 | | 23.0 | 23.0 | 62.2 | | | 20.8 | 120.0 |
| Effective Green, g (s) | | 21.0 | | 39.2 | | 23.0 | 23.0 | 62.2 | | | 20.8 | 120.0 |
| Actuated g/C Ratio | | 0.18 | | 0.33 | | 0.19 | 0.19 | 0.52 | | | 0.17 | 1.00 |
| Clearance Time (s) | | 4.0 | | 4.0 | | 4.0 | 4.0 | | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | | 3.0 | 3.0 | | | | 3.0 | |
| Lane Grp Cap (vph) | | 571 | | 1140 | | 335 | 300 | 772 | | | 315 | 1548 |
| v/s Ratio Prot | | c0.17 | | c0.32 | | c0.17 | 0.10 | 0.09 | | | c0.14 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.10 |
| v/c Ratio | | 0.97 | | 0.97 | | 0.88 | 0.54 | 0.18 | | | 0.83 | 0.10 |
| Uniform Delay, d1 | | 49.2 | | 39.9 | | 47.1 | 43.7 | 15.3 | | | 47.9 | 0.0 |
| Progression Factor | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 30.5 | | 20.5 | | 26.1 | 6.7 | 0.1 | | | 16.8 | 0.1 |
| Delay (s) | | 79.7 | | 60.4 | | 73.3 | 50.4 | 15.4 | | | 64.7 | 0.1 |
| Level of Service | | E | | E | | E | D | B | | | E | A |
| Approach Delay (s) | | 79.7 | | 60.4 | | | 52.3 | | | | 40.2 | |
| Approach LOS | | E | | E | | | D | | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 59.4 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.92 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 90.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 72 | 521 | 9 | 14 | 976 | 350 | 5 | 6 | 6 | 310 | 25 | 55 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | 0.95 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 0.96 | | | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.99 | | 0.95 | 0.97 | |
| Satd. Flow (prot) | 1752 | 3495 | | 1752 | 3329 | | | 1731 | | 1665 | 1623 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.99 | | 0.95 | 0.97 | |
| Satd. Flow (perm) | 1752 | 3495 | | 1752 | 3329 | | | 1731 | | 1665 | 1623 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 74 | 537 | 9 | 14 | 1006 | 361 | 5 | 6 | 6 | 320 | 26 | 57 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 33 | 0 | 0 | 5 | 0 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 74 | 545 | 0 | 14 | 1334 | 0 | 0 | 12 | 0 | 205 | 184 | 0 |
| Confl. Peds. (#/hr) | | | 2 | | | 6 | | | | | | |
| Confl. Bikes (#/hr) | | | | | | 3 | | | | | | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Split | NA | | Split | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 6.8 | 55.7 | | 1.6 | 50.5 | | | 17.5 | | 17.2 | 17.2 | |
| Effective Green, g (s) | 6.8 | 55.7 | | 1.6 | 50.5 | | | 17.5 | | 17.2 | 17.2 | |
| Actuated g/C Ratio | 0.06 | 0.52 | | 0.01 | 0.47 | | | 0.16 | | 0.16 | 0.16 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 110 | 1802 | | 25 | 1556 | | | 280 | | 265 | 258 | |
| v/s Ratio Prot | c0.04 | 0.16 | | 0.01 | c0.40 | | | c0.01 | | c0.12 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.30 | | 0.56 | 0.86 | | | 0.04 | | 0.77 | 0.71 | |
| Uniform Delay, d1 | 49.5 | 15.0 | | 52.9 | 25.5 | | | 38.2 | | 43.5 | 43.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | 1.19 | 1.21 | |
| Incremental Delay, d2 | 15.0 | 0.1 | | 25.6 | 4.9 | | | 0.3 | | 12.6 | 8.6 | |
| Delay (s) | 64.5 | 15.1 | | 78.5 | 30.5 | | | 38.5 | | 64.5 | 60.7 | |
| Level of Service | E | B | | E | C | | | D | | E | E | |
| Approach Delay (s) | | 21.0 | | | 30.9 | | | 38.5 | | | 62.6 | |
| Approach LOS | | C | | | C | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 33.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 108.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 69.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 146 | 694 | 10 | 11 | 1080 | 127 | 35 | 14 | 26 | 143 | 11 | 432 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 0.97 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 166 | 789 | 11 | 12 | 1227 | 135 | 40 | 16 | 30 | 162 | 12 | 135 |
| Adj No. of Lanes | 2 | 2 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 204 | 1410 | 20 | 20 | 1114 | 122 | 238 | 95 | 179 | 210 | 16 | 196 |
| Arrive On Green | 0.06 | 0.40 | 0.40 | 0.01 | 0.35 | 0.35 | 0.30 | 0.30 | 0.30 | 0.13 | 0.13 | 0.13 |
| Sat Flow, veh/h | 3408 | 3537 | 49 | 1757 | 3184 | 349 | 789 | 316 | 592 | 1641 | 122 | 1529 |
| Grp Volume(v), veh/h | 166 | 391 | 409 | 12 | 674 | 688 | 86 | 0 | 0 | 174 | 0 | 135 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1834 | 1757 | 1752 | 1781 | 1697 | 0 | 0 | 1763 | 0 | 1529 |
| Q Serve(g_s), s | 4.8 | 17.3 | 17.3 | 0.7 | 35.0 | 35.0 | 3.7 | 0.0 | 0.0 | 9.5 | 0.0 | 8.4 |
| Cycle Q Clear(g_c), s | 4.8 | 17.3 | 17.3 | 0.7 | 35.0 | 35.0 | 3.7 | 0.0 | 0.0 | 9.5 | 0.0 | 8.4 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 0.20 | 0.47 | | 0.35 | 0.93 | | 1.00 |
| Lane Grp Cap(c), veh/h | 204 | 699 | 731 | 20 | 613 | 623 | 512 | 0 | 0 | 226 | 0 | 196 |
| V/C Ratio(X) | 0.81 | 0.56 | 0.56 | 0.60 | 1.10 | 1.10 | 0.17 | 0.00 | 0.00 | 0.77 | 0.00 | 0.69 |
| Avail Cap(c_a), veh/h | 204 | 699 | 731 | 70 | 613 | 623 | 512 | 0 | 0 | 388 | 0 | 336 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.90 | 0.90 | 0.90 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.4 | 23.3 | 23.3 | 49.2 | 32.5 | 32.5 | 25.7 | 0.0 | 0.0 | 42.2 | 0.0 | 41.7 |
| Incr Delay (d2), s/veh | 19.6 | 0.9 | 0.9 | 25.8 | 66.1 | 68.1 | 0.7 | 0.0 | 0.0 | 5.5 | 0.0 | 4.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.8 | 8.5 | 8.9 | 0.5 | 28.1 | 28.9 | 1.8 | 0.0 | 0.0 | 5.0 | 0.0 | 3.8 |
| LnGrp Delay(d),s/veh | 66.1 | 24.2 | 24.1 | 75.1 | 98.6 | 100.6 | 26.4 | 0.0 | 0.0 | 47.6 | 0.0 | 45.9 |
| LnGrp LOS | E | C | C | E | F | F | C | | | D | | D |
| Approach Vol, veh/h | | 966 | | | 1374 | | | 86 | | | 309 | |
| Approach Delay, s/veh | | 31.4 | | | 99.4 | | | 26.4 | | | 46.9 | |
| Approach LOS | | C | | | F | | | C | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 34.2 | 5.1 | 43.9 | | 16.8 | 10.0 | 39.0 |
| Change Period (Y+Rc), s | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | 21.0 | 4.0 | 37.0 | | 22.0 | 6.0 | 35.0 |
| Max Q Clear Time (g_c+I1), s | | 5.7 | 2.7 | 19.3 | | 11.5 | 6.8 | 37.0 |
| Green Ext Time (p_c), s | | 0.3 | 0.0 | 13.2 | | 1.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 67.1 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 56 | 843 | 214 | 35 | 314 | 206 |
| Number | 7 | 4 | 8 | 18 | 1 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 65 | 980 | 249 | 41 | 365 | 240 |
| Adj No. of Lanes | 1 | 2 | 2 | 1 | 1 | 1 |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 84 | 1265 | 958 | 428 | 982 | 877 |
| Arrive On Green | 0.05 | 0.36 | 0.27 | 0.27 | 0.56 | 0.56 |
| Sat Flow, veh/h | 1757 | 3597 | 3597 | 1565 | 1757 | 1568 |
| Grp Volume(v), veh/h | 65 | 980 | 249 | 41 | 365 | 240 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1752 | 1565 | 1757 | 1568 |
| Q Serve(g_s), s | 3.7 | 24.8 | 5.6 | 2.0 | 11.6 | 8.0 |
| Cycle Q Clear(g_c), s | 3.7 | 24.8 | 5.6 | 2.0 | 11.6 | 8.0 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 84 | 1265 | 958 | 428 | 982 | 877 |
| V/C Ratio(X) | 0.78 | 0.77 | 0.26 | 0.10 | 0.37 | 0.27 |
| Avail Cap(c_a), veh/h | 176 | 1682 | 1192 | 532 | 982 | 877 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.1 | 28.3 | 28.4 | 27.1 | 12.3 | 11.5 |
| Incr Delay (d2), s/veh | 14.2 | 1.7 | 0.1 | 0.1 | 1.1 | 0.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 12.3 | 2.7 | 0.9 | 5.9 | 9.7 |
| LnGrp Delay(d),s/veh | 61.3 | 30.0 | 28.6 | 27.2 | 13.3 | 12.2 |
| LnGrp LOS | E | C | C | C | B | B |
| Approach Vol, veh/h | | 1045 | 290 | | 605 | |
| Approach Delay, s/veh | | 32.0 | 28.4 | | 12.9 | |
| Approach LOS | | C | C | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | | | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | | | 40.1 | | 59.9 | 8.8 | 31.3 |
| Change Period (Y+Rc), s | | | | 4.0 | | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | | | 48.0 | | 44.0 | 10.0 | 34.0 |
| Max Q Clear Time (g_c+I1), s | | | | 26.8 | | 13.6 | 5.7 | 7.6 |
| Green Ext Time (p_c), s | | | | 9.3 | | 2.0 | 0.0 | 10.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 25.5 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 2 | 19 | 70 | 16 | 2 | 13 | 203 | 185 | 5 | 1117 | 32 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | 4.0 | 6.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 0.93 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.88 | | | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.96 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1511 | | | 1773 | 1568 | 1752 | 1845 | 1568 | 1752 | 1836 | |
| Flt Permitted | | 1.00 | | | 0.96 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 1511 | | | 1773 | 1568 | 1752 | 1845 | 1568 | 1752 | 1836 | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 0 | 2 | 20 | 74 | 17 | 2 | 14 | 214 | 195 | 5 | 1176 | 34 |
| RTOR Reduction (vph) | 0 | 20 | 0 | 0 | 0 | 2 | 0 | 0 | 33 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2 | 0 | 0 | 91 | 0 | 14 | 214 | 162 | 5 | 1210 | 0 |
| Confl. Bikes (#/hr) | | | 3 | | | | | | | | | 1 |
| Turn Type | | NA | | Split | NA | Perm | Prot | NA | custom | Prot | NA | |
| Protected Phases | | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | | | 8 | | | 6 | | | |
| Actuated Green, G (s) | | 3.3 | | | 12.4 | 12.4 | 2.6 | 123.1 | 121.6 | 1.1 | 121.6 | |
| Effective Green, g (s) | | 3.3 | | | 12.4 | 12.4 | 2.6 | 123.1 | 121.6 | 1.1 | 121.6 | |
| Actuated g/C Ratio | | 0.02 | | | 0.08 | 0.08 | 0.02 | 0.78 | 0.77 | 0.01 | 0.77 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | 4.0 | 6.0 | |
| Vehicle Extension (s) | | 2.0 | | | 2.0 | 2.0 | 2.0 | 4.0 | 4.0 | 2.0 | 4.0 | |
| Lane Grp Cap (vph) | | 31 | | | 139 | 123 | 28 | 1438 | 1207 | 12 | 1413 | |
| v/s Ratio Prot | | c0.00 | | | c0.05 | | c0.01 | 0.12 | | 0.00 | c0.66 | |
| v/s Ratio Perm | | | | | | 0.00 | | | 0.10 | | | |
| v/c Ratio | | 0.08 | | | 0.65 | 0.00 | 0.50 | 0.15 | 0.13 | 0.42 | 0.86 | |
| Uniform Delay, d1 | | 75.8 | | | 70.7 | 67.0 | 77.0 | 4.3 | 4.7 | 78.1 | 12.2 | |
| Progression Factor | | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 8.2 | 0.0 | 5.0 | 0.1 | 0.1 | 8.3 | 5.5 | |
| Delay (s) | | 76.2 | | | 78.8 | 67.0 | 82.0 | 4.4 | 4.7 | 86.4 | 17.8 | |
| Level of Service | | E | | | E | E | F | A | A | F | B | |
| Approach Delay (s) | | 76.2 | | | 78.6 | | | 7.1 | | | 18.1 | |
| Approach LOS | | E | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 157.9 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 80.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 104 | 277 | 139 | 546 | 646 | 113 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1568 | 1752 | 3505 | 3505 | 1455 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1568 | 1752 | 3505 | 3505 | 1455 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 125 | 334 | 167 | 658 | 778 | 136 |
| RTOR Reduction (vph) | 0 | 292 | 0 | 0 | 0 | 53 |
| Lane Group Flow (vph) | 125 | 42 | 167 | 658 | 778 | 83 |
| Confl. Peds. (#/hr) | | | | | | 17 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Turn Type | Prot | Prot | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 5 | 2 | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | 12.5 | 12.5 | 14.8 | 79.5 | 60.7 | 60.7 |
| Effective Green, g (s) | 12.5 | 12.5 | 14.8 | 79.5 | 60.7 | 60.7 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.15 | 0.80 | 0.61 | 0.61 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 219 | 196 | 259 | 2786 | 2127 | 883 |
| v/s Ratio Prot | c0.07 | 0.03 | c0.10 | 0.19 | c0.22 | |
| v/s Ratio Perm | | | | | | 0.06 |
| v/c Ratio | 0.57 | 0.21 | 0.64 | 0.24 | 0.37 | 0.09 |
| Uniform Delay, d1 | 41.2 | 39.3 | 40.1 | 2.6 | 9.9 | 8.2 |
| Progression Factor | 0.53 | 0.69 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.7 | 0.4 | 5.4 | 0.2 | 0.5 | 0.2 |
| Delay (s) | 24.7 | 27.6 | 45.5 | 2.8 | 10.4 | 8.4 |
| Level of Service | C | C | D | A | B | A |
| Approach Delay (s) | 26.8 | | | 11.4 | 10.1 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.44 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 41.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 507 | 619 | 0 | 169 | 463 |
| Number | 7 | 4 | 8 | 18 | 1 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 0 | 1845 | 1845 | 0 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 0 | 551 | 673 | 0 | 184 | 503 |
| Adj No. of Lanes | 0 | 1 | 1 | 0 | 1 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 3 | 3 | 0 | 3 | 3 |
| Cap, veh/h | 0 | 769 | 769 | 0 | 884 | 789 |
| Arrive On Green | 0.00 | 0.42 | 0.42 | 0.00 | 0.50 | 0.50 |
| Sat Flow, veh/h | 0 | 1845 | 1845 | 0 | 1757 | 1568 |
| Grp Volume(v), veh/h | 0 | 551 | 673 | 0 | 184 | 503 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1845 | 1845 | 0 | 1757 | 1568 |
| Q Serve(g_s), s | 0.0 | 24.8 | 33.5 | 0.0 | 5.8 | 23.5 |
| Cycle Q Clear(g_c), s | 0.0 | 24.8 | 33.5 | 0.0 | 5.8 | 23.5 |
| Prop In Lane | 0.00 | | | 0.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 769 | 769 | 0 | 884 | 789 |
| V/C Ratio(X) | 0.00 | 0.72 | 0.88 | 0.00 | 0.21 | 0.64 |
| Avail Cap(c_a), veh/h | 0 | 867 | 867 | 0 | 884 | 789 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 0.60 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 24.2 | 26.8 | 0.0 | 13.8 | 18.2 |
| Incr Delay (d2), s/veh | 0.0 | 2.5 | 5.8 | 0.0 | 0.5 | 3.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 13.1 | 18.3 | 0.0 | 2.9 | 10.9 |
| LnGrp Delay(d),s/veh | 0.0 | 26.7 | 32.6 | 0.0 | 14.3 | 22.1 |
| LnGrp LOS | | C | C | | B | C |
| Approach Vol, veh/h | | 551 | 673 | | 687 | |
| Approach Delay, s/veh | | 26.7 | 32.6 | | 20.0 | |
| Approach LOS | | C | C | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | | | 45.7 | | 54.3 | | 45.7 |
| Change Period (Y+Rc), s | | | | 4.0 | | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | | | | 47.0 | | 45.0 | | 47.0 |
| Max Q Clear Time (g_c+I1), s | | | | 26.8 | | 25.5 | | 35.5 |
| Green Ext Time (p_c), s | | | | 8.6 | | 2.4 | | 6.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 26.4 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 323 | 385 | 0 | 0 | 317 | 212 | 309 | 0 | 109 | 0 | 0 | 0 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 0 | 0 | 1845 | 1845 | 1900 | 1845 | 1845 | | | |
| Adj Flow Rate, veh/h | 367 | 438 | 0 | 0 | 360 | 241 | 351 | 0 | 124 | | | |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | | | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | | | |
| Percent Heavy Veh, % | 3 | 3 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | | | |
| Cap, veh/h | 65 | 590 | 0 | 0 | 453 | 378 | 1065 | 0 | 950 | | | |
| Arrive On Green | 0.04 | 0.32 | 0.00 | 0.00 | 0.49 | 0.49 | 0.61 | 0.00 | 0.61 | | | |
| Sat Flow, veh/h | 1757 | 1845 | 0 | 0 | 1845 | 1540 | 1757 | 0 | 1568 | | | |
| Grp Volume(v), veh/h | 367 | 438 | 0 | 0 | 360 | 241 | 351 | 0 | 124 | | | |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1845 | 0 | 0 | 1845 | 1540 | 1757 | 0 | 1568 | | | |
| Q Serve(g_s), s | 4.0 | 22.9 | 0.0 | 0.0 | 17.6 | 12.5 | 10.6 | 0.0 | 3.7 | | | |
| Cycle Q Clear(g_c), s | 4.0 | 22.9 | 0.0 | 0.0 | 17.6 | 12.5 | 10.6 | 0.0 | 3.7 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 65 | 590 | 0 | 0 | 453 | 378 | 1065 | 0 | 950 | | | |
| V/C Ratio(X) | 5.64 | 0.74 | 0.00 | 0.00 | 0.79 | 0.64 | 0.33 | 0.00 | 0.13 | | | |
| Avail Cap(c_a), veh/h | 65 | 956 | 0 | 0 | 956 | 799 | 1065 | 0 | 950 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.78 | 0.78 | 0.00 | 0.00 | 0.81 | 0.81 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 52.0 | 32.8 | 0.0 | 0.0 | 25.2 | 23.9 | 10.5 | 0.0 | 9.1 | | | |
| Incr Delay (d2), s/veh | 2114.1 | 1.5 | 0.0 | 0.0 | 2.6 | 1.4 | 0.8 | 0.0 | 0.3 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 40.1 | 11.9 | 0.0 | 0.0 | 9.1 | 5.4 | 5.3 | 0.0 | 1.7 | | | |
| LnGrp Delay(d),s/veh | 2166.1 | 34.2 | 0.0 | 0.0 | 27.8 | 25.3 | 11.3 | 0.0 | 9.4 | | | |
| LnGrp LOS | F | C | | | C | C | B | | A | | | |
| Approach Vol, veh/h | | 805 | | | 601 | | | 475 | | | | |
| Approach Delay, s/veh | | 1006.2 | | | 26.8 | | | 10.8 | | | | |
| Approach LOS | | F | | | C | | | B | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 69.5 | | 38.5 | | | 8.0 | 30.5 |
| Change Period (Y+Rc), s | | 4.0 | | 4.0 | | | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | 36.0 | | 56.0 | | | 4.0 | 56.0 |
| Max Q Clear Time (g_c+I1), s | | 12.6 | | 24.9 | | | 6.0 | 19.6 |
| Green Ext Time (p_c), s | | 2.7 | | 6.8 | | | 0.0 | 6.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 441.9 |
| HCM 2010 LOS | F |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 158 | 106 | 11 | 31 | 112 | 31 | 6 | 100 | 24 | 119 | 112 | 212 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 0.99 | 1.00 |
| Satd. Flow (prot) | 1752 | 3447 | | 1751 | 3505 | 1545 | 1751 | 3404 | | 1665 | 1743 | 1547 |
| Flt Permitted | 0.67 | 1.00 | | 0.67 | 1.00 | 1.00 | 0.67 | 1.00 | | 0.67 | 0.98 | 1.00 |
| Satd. Flow (perm) | 1245 | 3447 | | 1237 | 3505 | 1545 | 1227 | 3404 | | 1168 | 1710 | 1547 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 172 | 115 | 12 | 34 | 122 | 34 | 7 | 109 | 26 | 129 | 122 | 230 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 0 | 25 | 0 | 10 | 0 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 172 | 118 | 0 | 34 | 122 | 9 | 7 | 125 | 0 | 115 | 136 | 136 |
| Confl. Peds. (#/hr) | | | 1 | 1 | | | 1 | | | | | 1 |
| Confl. Bikes (#/hr) | | | 3 | | | 3 | | | | | | 1 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |
| Actuated Green, G (s) | 15.8 | 15.8 | | 15.8 | 15.8 | 15.8 | 37.2 | 37.2 | | 36.2 | 36.2 | 36.2 |
| Effective Green, g (s) | 15.8 | 15.8 | | 15.8 | 15.8 | 15.8 | 37.2 | 37.2 | | 36.2 | 36.2 | 36.2 |
| Actuated g/C Ratio | 0.26 | 0.26 | | 0.26 | 0.26 | 0.26 | 0.61 | 0.61 | | 0.59 | 0.59 | 0.59 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Grp Cap (vph) | 322 | 892 | | 320 | 907 | 400 | 748 | 2075 | | 693 | 1014 | 918 |
| v/s Ratio Prot | | 0.03 | | | 0.03 | | | 0.04 | | | | |
| v/s Ratio Perm | c0.14 | | | 0.03 | | 0.01 | 0.01 | | | c0.10 | 0.08 | 0.09 |
| v/c Ratio | 0.53 | 0.13 | | 0.11 | 0.13 | 0.02 | 0.01 | 0.06 | | 0.17 | 0.13 | 0.15 |
| Uniform Delay, d1 | 19.4 | 17.3 | | 17.2 | 17.4 | 16.8 | 4.7 | 4.8 | | 5.6 | 5.5 | 5.5 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.2 | 0.1 | | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 | | 0.5 | 0.3 | 0.3 |
| Delay (s) | 21.6 | 17.4 | | 17.4 | 17.4 | 16.9 | 4.7 | 4.9 | | 6.1 | 5.8 | 5.9 |
| Level of Service | C | B | | B | B | B | A | A | | A | A | A |
| Approach Delay (s) | | 19.8 | | | 17.3 | | | 4.9 | | | 5.9 | |
| Approach LOS | | B | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.28 | | |
| Actuated Cycle Length (s) | 61.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 54.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 48 | 140 | 185 | 89 | 309 | 76 | 61 | 284 | 106 | 132 | 395 | 182 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1900 | 1845 | 1845 | 1900 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 51 | 147 | 195 | 94 | 325 | 80 | 64 | 299 | 112 | 139 | 416 | 192 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 0 | 2 | 1 | 0 | 2 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 65 | 1388 | 611 | 118 | 1192 | 289 | 85 | 420 | 219 | 157 | 484 | 237 |
| Arrive On Green | 0.04 | 0.40 | 0.40 | 0.07 | 0.43 | 0.43 | 0.14 | 0.14 | 0.14 | 0.25 | 0.25 | 0.25 |
| Sat Flow, veh/h | 1757 | 3505 | 1541 | 1757 | 2796 | 678 | 600 | 2967 | 1545 | 621 | 1923 | 939 |
| Grp Volume(v), veh/h | 51 | 147 | 195 | 94 | 202 | 203 | 194 | 169 | 112 | 406 | 0 | 341 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1541 | 1757 | 1752 | 1722 | 1815 | 1752 | 1545 | 1814 | 0 | 1670 |
| Q Serve(g_s), s | 3.0 | 2.8 | 9.2 | 5.5 | 7.8 | 8.1 | 10.8 | 9.6 | 7.0 | 22.6 | 0.0 | 20.2 |
| Cycle Q Clear(g_c), s | 3.0 | 2.8 | 9.2 | 5.5 | 7.8 | 8.1 | 10.8 | 9.6 | 7.0 | 22.6 | 0.0 | 20.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.39 | 0.33 | | 1.00 | 0.34 | | 0.56 |
| Lane Grp Cap(c), veh/h | 65 | 1388 | 611 | 118 | 747 | 734 | 257 | 248 | 219 | 457 | 0 | 421 |
| V/C Ratio(X) | 0.78 | 0.11 | 0.32 | 0.79 | 0.27 | 0.28 | 0.75 | 0.68 | 0.51 | 0.89 | 0.00 | 0.81 |
| Avail Cap(c_a), veh/h | 142 | 1388 | 611 | 192 | 747 | 734 | 406 | 392 | 346 | 510 | 0 | 469 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.99 | 0.99 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.1 | 20.0 | 21.9 | 48.2 | 19.5 | 19.6 | 43.3 | 42.8 | 41.7 | 37.8 | 0.0 | 36.9 |
| Incr Delay (d2), s/veh | 7.4 | 0.2 | 1.4 | 4.5 | 0.9 | 0.9 | 1.7 | 1.2 | 0.7 | 15.0 | 0.0 | 8.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.6 | 1.4 | 4.1 | 2.8 | 4.0 | 4.0 | 5.5 | 4.7 | 3.0 | 13.2 | 0.0 | 10.3 |
| LnGrp Delay(d),s/veh | 57.5 | 20.1 | 23.3 | 52.7 | 20.4 | 20.5 | 45.0 | 44.1 | 42.4 | 52.9 | 0.0 | 45.3 |
| LnGrp LOS | E | C | C | D | C | C | D | D | D | D | | D |
| Approach Vol, veh/h | | 393 | | | 499 | | | 475 | | | 747 | |
| Approach Delay, s/veh | | 26.5 | | | 26.5 | | | 44.0 | | | 49.4 | |
| Approach LOS | | C | | | C | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 10.6 | 46.1 | | 18.4 | 7.4 | 49.3 | | 29.9 |
| Change Period (Y+Rc), s | 3.5 | 4.5 | | 3.5 | 3.5 | 4.5 | | 3.5 |
| Max Green Setting (Gmax), s | 11.5 | 25.5 | | 23.5 | 8.5 | 28.5 | | 29.5 |
| Max Q Clear Time (g_c+I1), s | 7.5 | 11.2 | | 12.8 | 5.0 | 10.1 | | 24.6 |
| Green Ext Time (p_c), s | 0.0 | 4.9 | | 1.2 | 0.0 | 5.5 | | 1.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 38.6 |
| HCM 2010 LOS | D |

Notes

User approved changes to right turn type.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 43 | 543 | 168 | 7 | 662 | 91 | 122 | 195 | 6 | 99 | 334 | 88 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 45 | 566 | 175 | 7 | 690 | 95 | 127 | 203 | 6 | 103 | 348 | 92 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 395 | 2092 | 927 | 435 | 1842 | 253 | 161 | 677 | 20 | 157 | 527 | 137 |
| Arrive On Green | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.09 | 0.19 | 0.19 | 0.09 | 0.19 | 0.19 |
| Sat Flow, veh/h | 678 | 3505 | 1553 | 707 | 3086 | 424 | 1757 | 3476 | 102 | 1757 | 2741 | 714 |
| Grp Volume(v), veh/h | 45 | 566 | 175 | 7 | 392 | 393 | 127 | 102 | 107 | 103 | 221 | 219 |
| Grp Sat Flow(s),veh/h/ln | 678 | 1752 | 1553 | 707 | 1752 | 1758 | 1757 | 1752 | 1826 | 1757 | 1752 | 1703 |
| Q Serve(g_s), s | 3.9 | 8.2 | 5.4 | 0.5 | 12.2 | 12.2 | 7.4 | 5.2 | 5.3 | 6.0 | 12.2 | 12.5 |
| Cycle Q Clear(g_c), s | 16.1 | 8.2 | 5.4 | 8.7 | 12.2 | 12.2 | 7.4 | 5.2 | 5.3 | 6.0 | 12.2 | 12.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.24 | 1.00 | | 0.06 | 1.00 | | 0.42 |
| Lane Grp Cap(c), veh/h | 395 | 2092 | 927 | 435 | 1046 | 1049 | 161 | 341 | 355 | 157 | 337 | 327 |
| V/C Ratio(X) | 0.11 | 0.27 | 0.19 | 0.02 | 0.37 | 0.37 | 0.79 | 0.30 | 0.30 | 0.66 | 0.65 | 0.67 |
| Avail Cap(c_a), veh/h | 395 | 2092 | 927 | 435 | 1046 | 1049 | 326 | 609 | 635 | 276 | 559 | 543 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 |
| Uniform Delay (d), s/veh | 15.2 | 10.2 | 9.6 | 12.3 | 11.0 | 11.0 | 46.7 | 36.2 | 36.2 | 46.2 | 39.2 | 39.3 |
| Incr Delay (d2), s/veh | 0.6 | 0.3 | 0.5 | 0.1 | 1.0 | 1.0 | 8.0 | 1.7 | 1.7 | 4.4 | 7.2 | 7.9 |
| 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 | 0.8 | 4.0 | 2.4 | 0.1 | 6.2 | 6.2 | 4.0 | 2.7 | 2.8 | 3.1 | 6.6 | 6.6 |
| LnGrp Delay(d),s/veh | 15.7 | 10.5 | 10.1 | 12.3 | 12.0 | 12.0 | 54.7 | 37.9 | 37.8 | 50.6 | 46.4 | 47.3 |
| LnGrp LOS | B | B | B | B | B | B | D | D | D | D | D | D |
| Approach Vol, veh/h | | 786 | | | 792 | | | 336 | | | 543 | |
| Approach Delay, s/veh | | 10.7 | | | 12.0 | | | 44.2 | | | 47.6 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 67.2 | 13.1 | 24.7 | | 67.2 | 12.9 | 24.9 |
| Change Period (Y+Rc), s | | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Max Green Setting (Gmax), s | | 39.5 | 19.5 | 33.5 | | 39.5 | 16.5 | 36.5 |
| Max Q Clear Time (g_c+I1), s | | 18.1 | 9.4 | 14.5 | | 14.2 | 8.0 | 7.3 |
| Green Ext Time (p_c), s | | 18.0 | 0.4 | 5.6 | | 20.7 | 0.4 | 2.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 23.9 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 273 | 183 | 281 | 223 | 772 | 105 | 85 | 852 | 217 |
| Number | | | | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 0.96 | 1.00 | | 0.95 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | | | | 1900 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | | | | 290 | 195 | 299 | 237 | 821 | 112 | 90 | 906 | 0 |
| Adj No. of Lanes | | | | 0 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | | | | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | | | | 0 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | | | | 334 | 230 | 376 | 354 | 1316 | 180 | 115 | 1365 | 610 |
| Arrive On Green | | | | 0.28 | 0.28 | 0.28 | 0.14 | 0.57 | 0.57 | 0.07 | 0.39 | 0.00 |
| Sat Flow, veh/h | | | | 1185 | 815 | 1336 | 3408 | 3078 | 420 | 1757 | 3505 | 1568 |
| Grp Volume(v), veh/h | | | | 437 | 0 | 347 | 237 | 467 | 466 | 90 | 906 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1785 | 0 | 1551 | 1704 | 1752 | 1745 | 1757 | 1752 | 1568 |
| Q Serve(g_s), s | | | | 14.0 | 0.0 | 12.4 | 4.0 | 10.7 | 10.7 | 3.0 | 12.8 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 14.0 | 0.0 | 12.4 | 4.0 | 10.7 | 10.7 | 3.0 | 12.8 | 0.0 |
| Prop In Lane | | | | 0.66 | | 0.86 | 1.00 | | 0.24 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 503 | 0 | 437 | 354 | 749 | 747 | 115 | 1365 | 610 |
| V/C Ratio(X) | | | | 0.87 | 0.00 | 0.79 | 0.67 | 0.62 | 0.62 | 0.78 | 0.66 | 0.00 |
| Avail Cap(c_a), veh/h | | | | 530 | 0 | 460 | 682 | 749 | 747 | 223 | 1365 | 610 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.83 | 0.83 | 0.83 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 20.5 | 0.0 | 19.9 | 24.9 | 9.7 | 9.7 | 27.6 | 15.1 | 0.0 |
| Incr Delay (d2), s/veh | | | | 13.9 | 0.0 | 8.9 | 1.8 | 3.2 | 3.2 | 10.8 | 2.6 | 0.0 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 8.7 | 0.0 | 6.4 | 1.9 | 5.7 | 5.7 | 1.8 | 6.7 | 0.0 |
| LnGrp Delay(d),s/veh | | | | 34.4 | 0.0 | 28.9 | 26.7 | 12.9 | 12.9 | 38.4 | 17.7 | 0.0 |
| LnGrp LOS | | | | C | | C | C | B | B | D | B | |
| Approach Vol, veh/h | | | | | 784 | | | 1170 | | | 996 | |
| Approach Delay, s/veh | | | | | 31.9 | | | 15.7 | | | 19.5 | |
| Approach LOS | | | | | C | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 8.4 | 30.2 | | | 10.7 | 27.9 | | 21.4 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | | 4.5 | 4.5 | | 4.5 |
| Max Green Setting (Gmax), s | 7.6 | 21.1 | | | 12.0 | 16.7 | | 17.8 |
| Max Q Clear Time (g_c+I1), s | 5.0 | 12.7 | | | 6.0 | 14.8 | | 16.0 |
| Green Ext Time (p_c), s | 0.0 | 6.5 | | | 0.4 | 1.7 | | 0.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 21.3 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 374 | 3 | 398 | 0 | 0 | 0 | 0 | 744 | 309 | 259 | 859 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | | | | | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 0.95 | 0.91 | 0.95 | | | | | 0.91 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.98 | 0.97 | | | | | 0.99 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.91 | 0.85 | | | | | 0.96 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 0.98 | 1.00 | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1665 | 1475 | 1445 | | | | | 4788 | | 1752 | 3505 | |
| Flt Permitted | 0.95 | 0.98 | 1.00 | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1665 | 1475 | 1445 | | | | | 4788 | | 1752 | 3505 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 398 | 3 | 423 | 0 | 0 | 0 | 0 | 791 | 329 | 276 | 914 | 0 |
| RTOR Reduction (vph) | 0 | 45 | 135 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 287 | 230 | 127 | 0 | 0 | 0 | 0 | 1064 | 0 | 276 | 914 | 0 |
| Confl. Peds. (#/hr) | | | 8 | | | | | | 3 | | | |
| Turn Type | Perm | NA | Perm | | | | | NA | | Prot | NA | |
| Protected Phases | | 4 | | | | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | | | | | | | | | |
| Actuated Green, G (s) | 27.1 | 27.1 | 27.1 | | | | | 57.0 | | 22.4 | 83.9 | |
| Effective Green, g (s) | 27.1 | 27.1 | 27.1 | | | | | 57.0 | | 22.4 | 83.9 | |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.23 | | | | | 0.48 | | 0.19 | 0.70 | |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | | | | | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 376 | 333 | 326 | | | | | 2274 | | 327 | 2450 | |
| v/s Ratio Prot | | | | | | | | c0.22 | | c0.16 | 0.26 | |
| v/s Ratio Perm | c0.17 | 0.16 | 0.09 | | | | | | | | | |
| v/c Ratio | 0.76 | 0.69 | 0.39 | | | | | 0.47 | | 0.84 | 0.37 | |
| Uniform Delay, d1 | 43.4 | 42.6 | 39.4 | | | | | 21.3 | | 47.1 | 7.3 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | | | | | 1.00 | | 1.05 | 1.04 | |
| Incremental Delay, d2 | 8.9 | 6.1 | 0.8 | | | | | 0.7 | | 12.4 | 0.3 | |
| Delay (s) | 52.3 | 48.7 | 40.2 | | | | | 22.0 | | 61.7 | 7.9 | |
| Level of Service | D | D | D | | | | | C | | E | A | |
| Approach Delay (s) | | 47.3 | | | 0.0 | | | 22.0 | | | 20.4 | |
| Approach LOS | | D | | | A | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 28.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 61.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 68 | 61 | 25 | 944 | 40 | 42 | 9 | 263 | 288 | 51 | 702 | 41 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.96 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 0.96 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1845 | 1568 | 1665 | 1675 | 1548 | 1752 | 3505 | 1554 | 1752 | 3505 | 1506 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 0.96 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1845 | 1568 | 1665 | 1675 | 1548 | 1752 | 3505 | 1554 | 1752 | 3505 | 1506 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 70 | 63 | 26 | 973 | 41 | 43 | 9 | 271 | 297 | 53 | 724 | 42 |
| RTOR Reduction (vph) | 0 | 0 | 24 | 0 | 0 | 26 | 0 | 0 | 101 | 0 | 0 | 29 |
| Lane Group Flow (vph) | 70 | 63 | 2 | 506 | 508 | 17 | 9 | 271 | 196 | 53 | 724 | 13 |
| Confl. Peds. (#/hr) | | | | | | | | | 1 | | | 7 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | | | | 1 |
| Turn Type | Split | NA | Perm | Split | NA | Perm | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | 8 | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 7.1 | 7.1 | 7.1 | 33.0 | 33.0 | 33.0 | 0.7 | 22.5 | 55.5 | 3.3 | 25.1 | 25.1 |
| Effective Green, g (s) | 7.1 | 7.1 | 7.1 | 33.0 | 33.0 | 33.0 | 0.7 | 22.5 | 55.5 | 3.3 | 25.1 | 25.1 |
| Actuated g/C Ratio | 0.08 | 0.08 | 0.08 | 0.39 | 0.39 | 0.39 | 0.01 | 0.27 | 0.66 | 0.04 | 0.30 | 0.30 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 148 | 156 | 132 | 654 | 658 | 608 | 14 | 939 | 1027 | 68 | 1048 | 450 |
| v/s Ratio Prot | c0.04 | 0.03 | | c0.30 | 0.30 | | 0.01 | 0.08 | 0.08 | c0.03 | c0.21 | |
| v/s Ratio Perm | | | 0.00 | | | 0.01 | | | 0.05 | | | 0.01 |
| v/c Ratio | 0.47 | 0.40 | 0.02 | 0.77 | 0.77 | 0.03 | 0.64 | 0.29 | 0.19 | 0.78 | 0.69 | 0.03 |
| Uniform Delay, d1 | 36.6 | 36.4 | 35.2 | 22.2 | 22.2 | 15.6 | 41.5 | 24.4 | 5.5 | 39.9 | 26.0 | 20.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.4 | 1.7 | 0.1 | 5.7 | 5.6 | 0.0 | 71.2 | 0.8 | 0.1 | 41.9 | 3.7 | 0.1 |
| Delay (s) | 39.0 | 38.1 | 35.3 | 27.9 | 27.8 | 15.6 | 112.7 | 25.1 | 5.6 | 81.9 | 29.7 | 20.9 |
| Level of Service | D | D | D | C | C | B | F | C | A | F | C | C |
| Approach Delay (s) | | 38.0 | | | 27.3 | | | 16.4 | | | 32.6 | |
| Approach LOS | | D | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 27.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 83.9 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 67.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 68 | 491 | 74 | 34 | 640 | 267 | 204 | 163 | 24 | 158 | 63 | 40 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | 1752 | 3423 | | 1752 | 5036 | 1568 | 1752 | 1805 | | 1665 | 1715 | 1568 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | 1752 | 3423 | | 1752 | 5036 | 1568 | 1752 | 1805 | | 1665 | 1715 | 1568 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 73 | 528 | 80 | 37 | 688 | 287 | 219 | 175 | 26 | 170 | 68 | 43 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 194 | 0 | 7 | 0 | 0 | 0 | 37 |
| Lane Group Flow (vph) | 73 | 595 | 0 | 37 | 688 | 93 | 219 | 194 | 0 | 117 | 121 | 6 |
| Confl. Peds. (#/hr) | | | 2 | | | | | | 2 | | | |
| Confl. Bikes (#/hr) | | | 2 | | | | | | | | | |
| Turn Type | Prot | NA | | Prot | NA | Perm | Split | NA | | Split | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | | | | | | 8 | | | | | | 6 |
| Actuated Green, G (s) | 6.7 | 29.0 | | 3.9 | 26.2 | 26.2 | 18.5 | 18.5 | | 11.1 | 11.1 | 11.1 |
| Effective Green, g (s) | 6.7 | 29.0 | | 3.9 | 26.2 | 26.2 | 18.5 | 18.5 | | 11.1 | 11.1 | 11.1 |
| Actuated g/C Ratio | 0.08 | 0.36 | | 0.05 | 0.33 | 0.33 | 0.23 | 0.23 | | 0.14 | 0.14 | 0.14 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 145 | 1233 | | 84 | 1639 | 510 | 402 | 414 | | 229 | 236 | 216 |
| v/s Ratio Prot | c0.04 | c0.17 | | 0.02 | 0.14 | | c0.12 | 0.11 | | 0.07 | c0.07 | |
| v/s Ratio Perm | | | | | | 0.06 | | | | | | 0.00 |
| v/c Ratio | 0.50 | 0.48 | | 0.44 | 0.42 | 0.18 | 0.54 | 0.47 | | 0.51 | 0.51 | 0.03 |
| Uniform Delay, d1 | 35.3 | 19.9 | | 37.2 | 21.2 | 19.5 | 27.3 | 26.8 | | 32.2 | 32.2 | 30.0 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.7 | 1.4 | | 3.7 | 0.8 | 0.8 | 5.2 | 3.8 | | 1.9 | 1.9 | 0.1 |
| Delay (s) | 38.0 | 21.3 | | 40.9 | 22.0 | 20.3 | 32.5 | 30.5 | | 34.1 | 34.1 | 30.1 |
| Level of Service | D | C | | D | C | C | C | C | | C | C | C |
| Approach Delay (s) | | 23.1 | | | 22.2 | | | 31.6 | | | 33.5 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 80.5 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 53.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 39 | 9 | 32 | 70 | 25 | 164 | 52 | 680 | 65 | 87 | 388 | 50 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 41 | 10 | 34 | 74 | 27 | 174 | 55 | 723 | 69 | 93 | 413 | 53 |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 329 | 70 | 237 | 332 | 98 | 296 | 80 | 1435 | 629 | 116 | 1508 | 674 |
| Arrive On Green | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.05 | 0.41 | 0.41 | 0.07 | 0.43 | 0.43 |
| Sat Flow, veh/h | 1165 | 369 | 1254 | 935 | 517 | 1568 | 1757 | 3505 | 1535 | 1757 | 3505 | 1566 |
| Grp Volume(v), veh/h | 41 | 0 | 44 | 101 | 0 | 174 | 55 | 723 | 69 | 93 | 413 | 53 |
| Grp Sat Flow(s),veh/h/ln | 1165 | 0 | 1623 | 1451 | 0 | 1568 | 1757 | 1752 | 1535 | 1757 | 1752 | 1566 |
| Q Serve(g_s), s | 1.3 | 0.0 | 0.9 | 1.5 | 0.0 | 4.1 | 1.2 | 6.2 | 1.1 | 2.1 | 3.1 | 0.8 |
| Cycle Q Clear(g_c), s | 3.7 | 0.0 | 0.9 | 2.4 | 0.0 | 4.1 | 1.2 | 6.2 | 1.1 | 2.1 | 3.1 | 0.8 |
| Prop In Lane | 1.00 | | 0.77 | 0.73 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 329 | 0 | 307 | 429 | 0 | 296 | 80 | 1435 | 629 | 116 | 1508 | 674 |
| V/C Ratio(X) | 0.12 | 0.00 | 0.14 | 0.24 | 0.00 | 0.59 | 0.69 | 0.50 | 0.11 | 0.80 | 0.27 | 0.08 |
| Avail Cap(c_a), veh/h | 1684 | 0 | 2196 | 2115 | 0 | 2121 | 240 | 1435 | 629 | 240 | 1508 | 674 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 15.9 | 0.0 | 13.6 | 14.2 | 0.0 | 14.9 | 18.9 | 8.8 | 7.4 | 18.5 | 7.4 | 6.8 |
| Incr Delay (d2), s/veh | 0.2 | 0.0 | 0.2 | 0.3 | 0.0 | 1.8 | 9.9 | 1.3 | 0.4 | 11.8 | 0.4 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.4 | 0.0 | 0.4 | 1.0 | 0.0 | 1.9 | 0.8 | 3.2 | 0.5 | 1.4 | 1.5 | 0.4 |
| LnGrp Delay(d),s/veh | 16.0 | 0.0 | 13.8 | 14.5 | 0.0 | 16.7 | 28.8 | 10.1 | 7.7 | 30.3 | 7.9 | 7.0 |
| LnGrp LOS | B | | B | B | | B | C | B | A | C | A | A |
| Approach Vol, veh/h | | 85 | | | 275 | | | 847 | | | 559 | |
| Approach Delay, s/veh | | 14.9 | | | 15.9 | | | 11.1 | | | 11.5 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 7.2 | 21.0 | | 12.1 | 6.3 | 21.8 | | 12.1 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 |
| Max Green Setting (Gmax), s | 5.5 | 16.5 | | 54.5 | 5.5 | 16.5 | | 54.5 |
| Max Q Clear Time (g_c+I1), s | 4.1 | 8.2 | | 5.7 | 3.2 | 5.1 | | 6.1 |
| Green Ext Time (p_c), s | 0.0 | 4.8 | | 1.7 | 0.0 | 6.1 | | 1.7 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 12.2 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 340 | 18 | 113 | 30 | 46 | 15 | 199 | 557 | 19 | 12 | 378 | 247 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 362 | 19 | 120 | 32 | 49 | 16 | 212 | 593 | 20 | 13 | 402 | 263 |
| Adj No. of Lanes | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 531 | 287 | 479 | 53 | 80 | 113 | 265 | 1605 | 715 | 23 | 1123 | 501 |
| Arrive On Green | 0.16 | 0.16 | 0.16 | 0.07 | 0.07 | 0.07 | 0.15 | 0.46 | 0.46 | 0.01 | 0.32 | 0.32 |
| Sat Flow, veh/h | 3408 | 1845 | 1562 | 715 | 1094 | 1536 | 1757 | 3505 | 1561 | 1757 | 3505 | 1565 |
| Grp Volume(v), veh/h | 362 | 19 | 120 | 81 | 0 | 16 | 212 | 593 | 20 | 13 | 402 | 263 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1845 | 1562 | 1809 | 0 | 1536 | 1757 | 1752 | 1561 | 1757 | 1752 | 1565 |
| Q Serve(g_s), s | 6.0 | 0.5 | 3.5 | 2.6 | 0.0 | 0.6 | 7.0 | 6.6 | 0.4 | 0.4 | 5.3 | 8.2 |
| Cycle Q Clear(g_c), s | 6.0 | 0.5 | 3.5 | 2.6 | 0.0 | 0.6 | 7.0 | 6.6 | 0.4 | 0.4 | 5.3 | 8.2 |
| Prop In Lane | 1.00 | | 1.00 | 0.40 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 531 | 287 | 479 | 133 | 0 | 113 | 265 | 1605 | 715 | 23 | 1123 | 501 |
| V/C Ratio(X) | 0.68 | 0.07 | 0.25 | 0.61 | 0.00 | 0.14 | 0.80 | 0.37 | 0.03 | 0.57 | 0.36 | 0.52 |
| Avail Cap(c_a), veh/h | 908 | 492 | 652 | 482 | 0 | 409 | 454 | 1605 | 715 | 117 | 1123 | 501 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 23.9 | 21.6 | 15.6 | 27.0 | 0.0 | 26.0 | 24.6 | 10.6 | 8.9 | 29.5 | 15.7 | 16.7 |
| Incr Delay (d2), s/veh | 1.6 | 0.1 | 0.3 | 4.4 | 0.0 | 0.6 | 5.6 | 0.7 | 0.1 | 20.4 | 0.9 | 3.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.9 | 0.3 | 1.5 | 1.5 | 0.0 | 0.3 | 3.8 | 3.4 | 0.2 | 0.3 | 2.7 | 4.0 |
| LnGrp Delay(d),s/veh | 25.5 | 21.7 | 15.9 | 31.4 | 0.0 | 26.6 | 30.2 | 11.3 | 9.0 | 49.9 | 16.6 | 20.6 |
| LnGrp LOS | C | C | B | C | | C | C | B | A | D | B | C |
| Approach Vol, veh/h | | 501 | | | 97 | | | 825 | | | 678 | |
| Approach Delay, s/veh | | 23.1 | | | 30.6 | | | 16.1 | | | 18.7 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 5.3 | 32.0 | | 13.9 | 13.5 | 23.7 | | 8.9 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 |
| Max Green Setting (Gmax), s | 4.0 | 27.5 | | 16.0 | 15.5 | 16.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | 2.4 | 8.6 | | 8.0 | 9.0 | 10.2 | | 4.6 |
| Green Ext Time (p_c), s | 0.0 | 7.7 | | 1.2 | 0.3 | 3.5 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 19.3 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 40 | 199 | 82 | 225 | 287 | 314 | 74 | 210 | 249 | 216 | 157 | 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 | | 0.99 | 0.99 | | 0.94 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 53 | 262 | 108 | 296 | 378 | 413 | 97 | 276 | 328 | 284 | 207 | 9 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 0 |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 67 | 464 | 186 | 353 | 650 | 552 | 124 | 1396 | 620 | 624 | 879 | 38 |
| Arrive On Green | 0.04 | 0.19 | 0.19 | 0.20 | 0.35 | 0.35 | 0.07 | 0.40 | 0.40 | 0.26 | 0.26 | 0.26 |
| Sat Flow, veh/h | 1757 | 2443 | 981 | 1757 | 1845 | 1567 | 1757 | 3505 | 1557 | 1549 | 3412 | 147 |
| Grp Volume(v), veh/h | 53 | 186 | 184 | 296 | 378 | 413 | 97 | 276 | 328 | 284 | 106 | 110 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1672 | 1757 | 1845 | 1567 | 1757 | 1752 | 1557 | 774 | 1752 | 1807 |
| Q Serve(g_s), s | 1.9 | 6.2 | 6.4 | 10.4 | 10.7 | 14.8 | 3.5 | 3.3 | 10.3 | 10.7 | 3.0 | 3.1 |
| Cycle Q Clear(g_c), s | 1.9 | 6.2 | 6.4 | 10.4 | 10.7 | 14.8 | 3.5 | 3.3 | 10.3 | 10.7 | 3.0 | 3.1 |
| Prop In Lane | 1.00 | | 0.59 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.08 |
| Lane Grp Cap(c), veh/h | 67 | 333 | 317 | 353 | 650 | 552 | 124 | 1396 | 620 | 624 | 452 | 466 |
| V/C Ratio(X) | 0.79 | 0.56 | 0.58 | 0.84 | 0.58 | 0.75 | 0.79 | 0.20 | 0.53 | 0.45 | 0.23 | 0.24 |
| Avail Cap(c_a), veh/h | 151 | 438 | 418 | 563 | 879 | 746 | 151 | 1396 | 620 | 624 | 452 | 466 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.5 | 23.5 | 23.6 | 24.6 | 16.9 | 18.2 | 29.3 | 12.6 | 14.7 | 21.6 | 18.8 | 18.8 |
| Incr Delay (d2), s/veh | 18.4 | 1.5 | 1.7 | 6.3 | 0.8 | 2.8 | 19.5 | 0.3 | 3.2 | 2.4 | 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 | 1.3 | 3.1 | 3.1 | 5.6 | 5.5 | 6.7 | 2.4 | 1.6 | 5.0 | 2.5 | 1.6 | 1.7 |
| LnGrp Delay(d),s/veh | 48.9 | 25.0 | 25.3 | 30.8 | 17.7 | 21.0 | 48.8 | 12.9 | 17.9 | 24.0 | 20.0 | 20.0 |
| LnGrp LOS | D | C | C | C | B | C | D | B | B | C | B | B |
| Approach Vol, veh/h | | 423 | | | 1087 | | | 701 | | | 500 | |
| Approach Delay, s/veh | | 28.1 | | | 22.5 | | | 20.2 | | | 22.2 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 30.0 | 17.4 | 16.6 | 9.0 | 21.0 | 6.9 | 27.1 |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | | 25.5 | 20.5 | 16.0 | 5.5 | 16.0 | 5.5 | 30.5 |
| Max Q Clear Time (g_c+I1), s | | 12.3 | 12.4 | 8.4 | 5.5 | 12.7 | 3.9 | 16.8 |
| Green Ext Time (p_c), s | | 5.4 | 0.6 | 3.7 | 0.0 | 2.0 | 0.0 | 5.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 22.7 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 233 | 339 | 226 | 26 | 362 | 59 | 187 | 270 | 15 | 45 | 187 | 225 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 259 | 377 | 251 | 29 | 402 | 66 | 208 | 300 | 17 | 50 | 208 | 250 |
| Adj No. of Lanes | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 277 | 788 | 663 | 53 | 889 | 145 | 216 | 1277 | 72 | 64 | 1038 | 454 |
| Arrive On Green | 0.16 | 0.43 | 0.43 | 0.03 | 0.30 | 0.30 | 0.12 | 0.38 | 0.38 | 0.04 | 0.30 | 0.30 |
| Sat Flow, veh/h | 1757 | 1845 | 1553 | 1757 | 3010 | 490 | 1757 | 3373 | 190 | 1757 | 3505 | 1532 |
| Grp Volume(v), veh/h | 259 | 377 | 251 | 29 | 233 | 235 | 208 | 155 | 162 | 50 | 208 | 250 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1845 | 1553 | 1757 | 1752 | 1747 | 1757 | 1752 | 1810 | 1757 | 1752 | 1532 |
| Q Serve(g_s), s | 18.9 | 19.1 | 14.4 | 2.1 | 14.0 | 14.3 | 15.3 | 7.9 | 7.9 | 3.7 | 5.8 | 17.8 |
| Cycle Q Clear(g_c), s | 18.9 | 19.1 | 14.4 | 2.1 | 14.0 | 14.3 | 15.3 | 7.9 | 7.9 | 3.7 | 5.8 | 17.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.28 | 1.00 | | 0.11 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 277 | 788 | 663 | 53 | 518 | 516 | 216 | 664 | 686 | 64 | 1038 | 454 |
| V/C Ratio(X) | 0.93 | 0.48 | 0.38 | 0.55 | 0.45 | 0.46 | 0.96 | 0.23 | 0.24 | 0.78 | 0.20 | 0.55 |
| Avail Cap(c_a), veh/h | 277 | 788 | 663 | 122 | 518 | 516 | 216 | 664 | 686 | 142 | 1038 | 454 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.57 | 0.57 | 0.57 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 54.1 | 26.8 | 25.5 | 62.2 | 37.2 | 37.3 | 56.7 | 27.5 | 27.6 | 62.1 | 34.2 | 38.5 |
| Incr Delay (d2), s/veh | 25.5 | 1.2 | 0.9 | 3.3 | 2.8 | 2.9 | 50.3 | 0.8 | 0.8 | 20.9 | 0.4 | 4.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.2 | 10.0 | 6.3 | 1.1 | 7.2 | 7.3 | 10.5 | 3.9 | 4.1 | 2.2 | 2.9 | 8.1 |
| LnGrp Delay(d),s/veh | 79.6 | 28.0 | 26.4 | 65.5 | 40.0 | 40.2 | 107.0 | 28.4 | 28.4 | 83.0 | 34.7 | 43.2 |
| LnGrp LOS | E | C | C | E | D | D | F | C | C | F | C | D |
| Approach Vol, veh/h | | 887 | | | 497 | | | 525 | | | 508 | |
| Approach Delay, s/veh | | 42.6 | | | 41.6 | | | 59.5 | | | 43.6 | |
| Approach LOS | | D | | | D | | | E | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 6.9 | 60.1 | 19.0 | 44.0 | 24.0 | 43.0 | 8.3 | 54.7 |
| Change Period (Y+Rc), s | 3.0 | 4.6 | 3.0 | 5.5 | 3.5 | 4.6 | 3.5 | * 5.5 |
| Max Green Setting (Gmax), s | 9.0 | 50.4 | 16.0 | 38.5 | 20.5 | 38.4 | 10.5 | * 44 |
| Max Q Clear Time (g_c+I1), s | 4.1 | 21.1 | 17.3 | 19.8 | 20.9 | 16.3 | 5.7 | 9.9 |
| Green Ext Time (p_c), s | 0.0 | 5.5 | 0.0 | 4.3 | 0.0 | 5.2 | 0.0 | 5.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 46.3 |
| HCM 2010 LOS | D |

Notes

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

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 318 | 103 | 251 | 640 | 383 | 361 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 3.5 | 3.5 | 5.5 | 5.5 | 4.0 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3400 | 1568 | 1752 | 3505 | 3505 | 1568 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3400 | 1568 | 1752 | 3505 | 3505 | 1568 |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Adj. Flow (vph) | 361 | 117 | 285 | 727 | 435 | 410 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 361 | 117 | 285 | 727 | 435 | 410 |
| Confl. Peds. (#/hr) | | 1 | | | | |
| Turn Type | Prot | pt+ov | Prot | NA | NA | Over |
| Protected Phases | 8 | 1 7 | 1 | 6 | 2 | 8 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 46.4 | 35.2 | 25.0 | 51.4 | 22.9 | 46.4 |
| Effective Green, g (s) | 46.4 | 35.2 | 25.0 | 51.4 | 22.9 | 46.4 |
| Actuated g/C Ratio | 0.39 | 0.29 | 0.21 | 0.43 | 0.19 | 0.39 |
| Clearance Time (s) | 4.0 | | 3.5 | 5.5 | 5.5 | 4.0 |
| Vehicle Extension (s) | 2.0 | | 2.2 | 4.0 | 4.0 | 2.0 |
| Lane Grp Cap (vph) | 1309 | 458 | 363 | 1495 | 666 | 603 |
| v/s Ratio Prot | 0.11 | c0.07 | c0.16 | 0.21 | c0.12 | c0.26 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.28 | 0.26 | 0.79 | 0.49 | 0.65 | 0.68 |
| Uniform Delay, d1 | 25.5 | 32.6 | 45.2 | 25.0 | 45.1 | 30.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | 0.2 | 10.0 | 0.3 | 2.6 | 2.4 |
| Delay (s) | 25.5 | 32.8 | 55.2 | 25.3 | 47.7 | 33.3 |
| Level of Service | C | C | E | C | D | C |
| Approach Delay (s) | 27.3 | | | 33.8 | 40.7 | |
| Approach LOS | C | | | C | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 34.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 120.5 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 315 | 2 | 198 | 0 | 0 | 0 | 0 | 492 | 241 | 467 | 728 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.5 | 3.5 | | | | | | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 0.95 | 0.95 | | | | | | 0.95 | | 0.97 | 1.00 | |
| Frt | 1.00 | 0.88 | | | | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 0.99 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1665 | 1525 | | | | | | 3332 | | 3400 | 1845 | |
| Flt Permitted | 0.95 | 0.99 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1665 | 1525 | | | | | | 3332 | | 3400 | 1845 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 335 | 2 | 211 | 0 | 0 | 0 | 0 | 523 | 256 | 497 | 774 | 0 |
| RTOR Reduction (vph) | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 288 | 117 | 0 | 0 | 0 | 0 | 0 | 708 | 0 | 497 | 774 | 0 |
| Turn Type | Split | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 8 | 8 | | | | | | 6 | | 5 | 2 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.5 | 17.5 | | | | | | 22.0 | | 23.0 | 49.5 | |
| Effective Green, g (s) | 17.5 | 17.5 | | | | | | 22.0 | | 23.0 | 49.5 | |
| Actuated g/C Ratio | 0.23 | 0.23 | | | | | | 0.29 | | 0.31 | 0.66 | |
| Clearance Time (s) | 3.5 | 3.5 | | | | | | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | | | 3.0 | | 2.5 | 4.0 | |
| Lane Grp Cap (vph) | 388 | 355 | | | | | | 977 | | 1042 | 1217 | |
| v/s Ratio Prot | c0.17 | 0.08 | | | | | | c0.21 | | 0.15 | c0.42 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.74 | 0.33 | | | | | | 0.72 | | 0.48 | 0.64 | |
| Uniform Delay, d1 | 26.7 | 23.9 | | | | | | 23.8 | | 21.1 | 7.5 | |
| Progression Factor | 1.00 | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.6 | 0.2 | | | | | | 4.7 | | 0.3 | 2.5 | |
| Delay (s) | 33.2 | 24.1 | | | | | | 28.4 | | 21.4 | 10.0 | |
| Level of Service | C | C | | | | | | C | | C | B | |
| Approach Delay (s) | | 28.9 | | | 0.0 | | | 28.4 | | | 14.5 | |
| Approach LOS | | C | | | A | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 75.0 | Sum of lost time (s) | 12.5 |
| Intersection Capacity Utilization | 60.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 156 | 286 | 3 | 205 | 433 | 169 | 11 | 275 | 278 | 259 | 774 | 672 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 168 | 308 | 3 | 220 | 466 | 182 | 12 | 296 | 0 | 278 | 832 | 0 |
| Adj No. of Lanes | 2 | 2 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 234 | 586 | 6 | 234 | 804 | 360 | 311 | 1438 | 643 | 234 | 1256 | 562 |
| Arrive On Green | 0.07 | 0.16 | 0.16 | 0.13 | 0.23 | 0.23 | 0.18 | 0.41 | 0.00 | 0.13 | 0.36 | 0.00 |
| Sat Flow, veh/h | 3408 | 3556 | 35 | 1757 | 3505 | 1568 | 1757 | 3505 | 1568 | 1757 | 3505 | 1568 |
| Grp Volume(v), veh/h | 168 | 152 | 159 | 220 | 466 | 182 | 12 | 296 | 0 | 278 | 832 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1838 | 1757 | 1752 | 1568 | 1757 | 1752 | 1568 | 1757 | 1752 | 1568 |
| Q Serve(g_s), s | 5.8 | 9.5 | 9.5 | 14.9 | 14.2 | 12.1 | 0.7 | 6.5 | 0.0 | 16.0 | 24.0 | 0.0 |
| Cycle Q Clear(g_c), s | 5.8 | 9.5 | 9.5 | 14.9 | 14.2 | 12.1 | 0.7 | 6.5 | 0.0 | 16.0 | 24.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.02 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 234 | 289 | 303 | 234 | 804 | 360 | 311 | 1438 | 643 | 234 | 1256 | 562 |
| V/C Ratio(X) | 0.72 | 0.53 | 0.53 | 0.94 | 0.58 | 0.51 | 0.04 | 0.21 | 0.00 | 1.19 | 0.66 | 0.00 |
| Avail Cap(c_a), veh/h | 454 | 380 | 398 | 234 | 804 | 360 | 311 | 1438 | 643 | 234 | 1256 | 562 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.78 | 0.78 | 0.78 | 1.00 | 1.00 | 0.00 | 0.43 | 0.43 | 0.00 |
| Uniform Delay (d), s/veh | 54.8 | 45.8 | 45.8 | 51.5 | 41.1 | 40.3 | 40.9 | 22.8 | 0.0 | 52.0 | 32.4 | 0.0 |
| Incr Delay (d2), s/veh | 5.8 | 6.7 | 6.4 | 35.8 | 2.4 | 3.9 | 0.0 | 0.3 | 0.0 | 101.4 | 1.2 | 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 | 2.9 | 5.1 | 5.4 | 9.5 | 7.1 | 5.7 | 0.3 | 3.2 | 0.0 | 14.3 | 11.8 | 0.0 |
| LnGrp Delay(d),s/veh | 60.5 | 52.5 | 52.3 | 87.3 | 43.5 | 44.2 | 40.9 | 23.1 | 0.0 | 153.4 | 33.6 | 0.0 |
| LnGrp LOS | E | D | D | F | D | D | D | C | | F | C | |
| Approach Vol, veh/h | | 479 | | | 868 | | | 308 | | | 1110 | |
| Approach Delay, s/veh | | 55.2 | | | 54.7 | | | 23.8 | | | 63.6 | |
| Approach LOS | | E | | | D | | | C | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 20.0 | 25.8 | 26.2 | 48.0 | 12.2 | 33.5 | 20.0 | 54.2 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 5.0 | * 5 | 4.0 | 6.0 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 16.0 | 26.0 | 16.0 | * 43 | 16.0 | 26.0 | 16.0 | 33.0 |
| Max Q Clear Time (g_c+I1), s | 16.9 | 11.5 | 2.7 | 26.0 | 7.8 | 16.2 | 18.0 | 8.5 |
| Green Ext Time (p_c), s | 0.0 | 8.0 | 2.0 | 7.2 | 0.5 | 8.0 | 0.0 | 2.7 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 54.9 |
| HCM 2010 LOS | D |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 86 | 2 | 292 | 2 | 4 | 4 | 197 | 281 | 2 | 12 | 373 | 284 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1900 | 1845 | 1845 | 1900 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 91 | 2 | 307 | 2 | 4 | 4 | 207 | 296 | 2 | 13 | 393 | 299 |
| Adj No. of Lanes | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 335 | 7 | 304 | 61 | 121 | 121 | 342 | 1368 | 9 | 78 | 818 | 360 |
| Arrive On Green | 0.19 | 0.19 | 0.19 | 0.18 | 0.18 | 0.18 | 0.19 | 0.38 | 0.38 | 0.04 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1721 | 38 | 1566 | 341 | 682 | 682 | 1757 | 3569 | 24 | 1757 | 3505 | 1545 |
| Grp Volume(v), veh/h | 93 | 0 | 307 | 10 | 0 | 0 | 207 | 145 | 153 | 13 | 393 | 299 |
| Grp Sat Flow(s),veh/h/ln | 1759 | 0 | 1566 | 1706 | 0 | 0 | 1757 | 1752 | 1840 | 1757 | 1752 | 1545 |
| Q Serve(g_s), s | 4.0 | 0.0 | 17.5 | 0.4 | 0.0 | 0.0 | 9.7 | 5.0 | 5.0 | 0.6 | 8.7 | 16.6 |
| Cycle Q Clear(g_c), s | 4.0 | 0.0 | 17.5 | 0.4 | 0.0 | 0.0 | 9.7 | 5.0 | 5.0 | 0.6 | 8.7 | 16.6 |
| Prop In Lane | 0.98 | | 1.00 | 0.20 | | 0.40 | 1.00 | | 0.01 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 342 | 0 | 304 | 303 | 0 | 0 | 342 | 672 | 705 | 78 | 818 | 360 |
| V/C Ratio(X) | 0.27 | 0.00 | 1.01 | 0.03 | 0.00 | 0.00 | 0.61 | 0.22 | 0.22 | 0.17 | 0.48 | 0.83 |
| Avail Cap(c_a), veh/h | 342 | 0 | 304 | 303 | 0 | 0 | 342 | 672 | 705 | 78 | 818 | 360 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.8 | 0.0 | 36.3 | 30.6 | 0.0 | 0.0 | 33.1 | 18.7 | 18.7 | 41.4 | 29.8 | 32.8 |
| Incr Delay (d2), s/veh | 2.0 | 0.0 | 53.8 | 0.2 | 0.0 | 0.0 | 7.8 | 0.7 | 0.7 | 4.5 | 2.0 | 19.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 0.0 | 12.1 | 0.2 | 0.0 | 0.0 | 5.5 | 2.6 | 2.7 | 0.4 | 4.4 | 9.0 |
| LnGrp Delay(d),s/veh | 32.8 | 0.0 | 90.0 | 30.8 | 0.0 | 0.0 | 40.9 | 19.4 | 19.4 | 45.9 | 31.8 | 52.2 |
| LnGrp LOS | C | | F | C | | | D | B | B | D | C | D |
| Approach Vol, veh/h | | 400 | | | 10 | | | 505 | | | 705 | |
| Approach Delay, s/veh | | 76.7 | | | 30.8 | | | 28.2 | | | 40.7 | |
| Approach LOS | | E | | | C | | | C | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 8.5 | 39.0 | | 22.0 | 22.0 | 25.5 | | 20.5 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 |
| Max Green Setting (Gmax), s | 4.0 | 34.5 | | 17.5 | 17.5 | 21.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | 2.6 | 7.0 | | 19.5 | 11.7 | 18.6 | | 2.4 |
| Green Ext Time (p_c), s | 0.0 | 6.0 | | 0.0 | 0.3 | 1.3 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 45.6 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 7 | 2 | 10 | 740 | 41 | 39 | 20 | 514 | 139 | 281 | 697 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 3.0 | 3.0 | 4.0 | 4.0 | | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | 0.91 | 0.91 | | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | |
| Flt Protected | | 0.96 | 1.00 | 0.95 | 0.96 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1776 | 1568 | 1595 | 3183 | | 1752 | 5036 | 1568 | 1752 | 3492 | |
| Flt Permitted | | 0.96 | 1.00 | 0.95 | 0.96 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 1776 | 1568 | 1595 | 3183 | | 1752 | 5036 | 1568 | 1752 | 3492 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 7 | 2 | 10 | 771 | 43 | 41 | 21 | 535 | 145 | 293 | 726 | 16 |
| RTOR Reduction (vph) | 0 | 0 | 10 | 0 | 6 | 0 | 0 | 0 | 88 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 385 | 464 | 0 | 21 | 535 | 57 | 293 | 741 | 0 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 8 |
| Turn Type | Split | NA | Perm | Split | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | 2 | | | |
| Actuated Green, G (s) | | 2.4 | 2.4 | 27.0 | 27.0 | | 4.4 | 43.0 | 43.0 | 22.6 | 60.7 | |
| Effective Green, g (s) | | 2.4 | 2.4 | 27.0 | 27.0 | | 4.4 | 43.0 | 43.0 | 22.6 | 60.7 | |
| Actuated g/C Ratio | | 0.02 | 0.02 | 0.25 | 0.25 | | 0.04 | 0.39 | 0.39 | 0.21 | 0.55 | |
| Clearance Time (s) | | 3.0 | 3.0 | 4.0 | 4.0 | | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 2.0 | 2.0 | 3.5 | 3.5 | | 2.0 | 3.0 | 3.0 | 2.0 | 3.0 | |
| Lane Grp Cap (vph) | | 38 | 34 | 391 | 781 | | 70 | 1968 | 612 | 359 | 1926 | |
| v/s Ratio Prot | | c0.01 | | c0.24 | 0.15 | | 0.01 | c0.11 | | c0.17 | c0.21 | |
| v/s Ratio Perm | | | 0.00 | | | | | | 0.04 | | | |
| v/c Ratio | | 0.24 | 0.01 | 0.98 | 0.93dl | | 0.30 | 0.27 | 0.09 | 0.82 | 0.38 | |
| Uniform Delay, d1 | | 52.9 | 52.6 | 41.3 | 36.7 | | 51.3 | 22.8 | 21.2 | 41.7 | 14.0 | |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.39 | 1.49 | 3.37 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 1.2 | 0.0 | 41.2 | 1.3 | | 0.8 | 0.3 | 0.3 | 12.7 | 0.6 | |
| Delay (s) | | 54.1 | 52.7 | 82.5 | 38.0 | | 72.3 | 34.3 | 71.5 | 54.4 | 14.6 | |
| Level of Service | | D | D | F | D | | E | C | E | D | B | |
| Approach Delay (s) | | 53.3 | | | 58.0 | | | 43.1 | | | 25.9 | |
| Approach LOS | | D | | | E | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 41.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 15.5 |
| Intersection Capacity Utilization | 62.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 71 | 530 | 66 | 435 | 420 | 179 | 125 | 431 | 503 | 578 | 595 | 199 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 82 | 609 | 0 | 500 | 483 | 0 | 144 | 495 | 578 | 664 | 684 | 0 |
| Adj No. of Lanes | 2 | 2 | 0 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 0 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 164 | 793 | 0 | 606 | 1248 | 558 | 296 | 1069 | 1332 | 620 | 1115 | 0 |
| Arrive On Green | 0.05 | 0.23 | 0.00 | 0.18 | 0.36 | 0.00 | 0.06 | 0.10 | 0.10 | 0.06 | 0.11 | 0.00 |
| Sat Flow, veh/h | 3408 | 3597 | 0 | 3408 | 3505 | 1568 | 1757 | 3505 | 2760 | 3408 | 3597 | 0 |
| Grp Volume(v), veh/h | 82 | 609 | 0 | 500 | 483 | 0 | 144 | 495 | 578 | 664 | 684 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 0 | 1704 | 1752 | 1568 | 1757 | 1752 | 1380 | 1704 | 1752 | 0 |
| Q Serve(g_s), s | 2.6 | 17.9 | 0.0 | 15.6 | 11.3 | 0.0 | 8.8 | 14.7 | 16.6 | 20.0 | 20.5 | 0.0 |
| Cycle Q Clear(g_c), s | 2.6 | 17.9 | 0.0 | 15.6 | 11.3 | 0.0 | 8.8 | 14.7 | 16.6 | 20.0 | 20.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 164 | 793 | 0 | 606 | 1248 | 558 | 296 | 1069 | 1332 | 620 | 1115 | 0 |
| V/C Ratio(X) | 0.50 | 0.77 | 0.00 | 0.83 | 0.39 | 0.00 | 0.49 | 0.46 | 0.43 | 1.07 | 0.61 | 0.00 |
| Avail Cap(c_a), veh/h | 403 | 860 | 0 | 744 | 1248 | 558 | 296 | 1069 | 1332 | 620 | 1115 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.97 | 0.97 | 0.97 | 0.80 | 0.80 | 0.00 |
| Uniform Delay (d), s/veh | 51.1 | 39.8 | 0.0 | 43.6 | 26.5 | 0.0 | 47.3 | 41.0 | 24.6 | 51.7 | 42.8 | 0.0 |
| Incr Delay (d2), s/veh | 0.9 | 3.7 | 0.0 | 5.9 | 0.1 | 0.0 | 0.4 | 1.4 | 1.0 | 53.2 | 2.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 9.0 | 0.0 | 7.8 | 5.5 | 0.0 | 4.3 | 7.3 | 6.5 | 14.0 | 10.3 | 0.0 |
| LnGrp Delay(d),s/veh | 52.0 | 43.5 | 0.0 | 49.5 | 26.6 | 0.0 | 47.8 | 42.4 | 25.6 | 104.9 | 44.8 | 0.0 |
| LnGrp LOS | D | D | | D | C | | D | D | C | F | D | |
| Approach Vol, veh/h | | 691 | | | 983 | | | 1217 | | | 1348 | |
| Approach Delay, s/veh | | 44.5 | | | 38.2 | | | 35.0 | | | 74.4 | |
| Approach LOS | | D | | | D | | | D | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 23.0 | 36.6 | 22.5 | 27.9 | 21.6 | 38.0 | 8.3 | 42.2 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 19.0 | 26.0 | 23.0 | 26.0 | 11.0 | 34.0 | 12.0 | 37.0 |
| Max Q Clear Time (g_c+I1), s | 22.0 | 18.6 | 17.6 | 19.9 | 10.8 | 22.5 | 4.6 | 13.3 |
| Green Ext Time (p_c), s | 0.0 | 4.9 | 1.0 | 3.8 | 0.2 | 6.3 | 0.1 | 14.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 49.8 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 104 | 615 | 197 | 527 | 975 | 412 | 124 | 213 | 310 | 233 | 530 | 173 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 117 | 691 | 0 | 592 | 1096 | 0 | 139 | 239 | 0 | 262 | 596 | 0 |
| Adj No. of Lanes | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 2 | 1 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 205 | 1330 | 414 | 687 | 1422 | 636 | 232 | 1373 | 428 | 519 | 1251 | 560 |
| Arrive On Green | 0.06 | 0.26 | 0.00 | 0.20 | 0.41 | 0.00 | 0.02 | 0.09 | 0.00 | 0.15 | 0.36 | 0.00 |
| Sat Flow, veh/h | 3408 | 5036 | 1568 | 3408 | 3505 | 1568 | 3408 | 5036 | 1568 | 3408 | 3505 | 1568 |
| Grp Volume(v), veh/h | 117 | 691 | 0 | 592 | 1096 | 0 | 139 | 239 | 0 | 262 | 596 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1679 | 1568 | 1704 | 1752 | 1568 | 1704 | 1679 | 1568 | 1704 | 1752 | 1568 |
| Q Serve(g_s), s | 3.7 | 12.9 | 0.0 | 18.5 | 29.7 | 0.0 | 4.4 | 4.8 | 0.0 | 7.8 | 14.5 | 0.0 |
| Cycle Q Clear(g_c), s | 3.7 | 12.9 | 0.0 | 18.5 | 29.7 | 0.0 | 4.4 | 4.8 | 0.0 | 7.8 | 14.5 | 0.0 |
| 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 | 205 | 1330 | 414 | 687 | 1422 | 636 | 232 | 1373 | 428 | 519 | 1251 | 560 |
| V/C Ratio(X) | 0.57 | 0.52 | 0.00 | 0.86 | 0.77 | 0.00 | 0.60 | 0.17 | 0.00 | 0.50 | 0.48 | 0.00 |
| Avail Cap(c_a), veh/h | 372 | 1419 | 442 | 775 | 1422 | 636 | 403 | 1373 | 428 | 519 | 1251 | 560 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.71 | 0.71 | 0.00 | 1.00 | 1.00 | 0.00 | 0.98 | 0.98 | 0.00 | 0.83 | 0.83 | 0.00 |
| Uniform Delay (d), s/veh | 50.3 | 34.5 | 0.0 | 42.4 | 28.3 | 0.0 | 52.3 | 38.6 | 0.0 | 42.8 | 27.4 | 0.0 |
| Incr Delay (d2), s/veh | 0.7 | 0.2 | 0.0 | 8.2 | 2.7 | 0.0 | 0.9 | 0.3 | 0.0 | 0.3 | 1.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.8 | 6.0 | 0.0 | 9.5 | 14.8 | 0.0 | 2.1 | 2.3 | 0.0 | 3.7 | 7.2 | 0.0 |
| LnGrp Delay(d),s/veh | 51.0 | 34.7 | 0.0 | 50.6 | 30.9 | 0.0 | 53.2 | 38.9 | 0.0 | 43.1 | 28.5 | 0.0 |
| LnGrp LOS | D | C | | D | C | | D | D | | D | C | |
| Approach Vol, veh/h | | 808 | | | 1688 | | | 378 | | | 858 | |
| Approach Delay, s/veh | | 37.1 | | | 37.8 | | | 44.1 | | | 32.9 | |
| 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 | 25.2 | 32.1 | 10.5 | 42.3 | 9.6 | 47.6 | 19.8 | 33.0 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 24.0 | 30.0 | 12.0 | 28.0 | 11.0 | 43.0 | 11.0 | 29.0 |
| Max Q Clear Time (g_c+I1), s | 20.5 | 14.9 | 6.4 | 16.5 | 5.7 | 31.7 | 9.8 | 6.8 |
| Green Ext Time (p_c), s | 0.7 | 12.9 | 0.1 | 6.1 | 0.1 | 10.5 | 0.3 | 3.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 37.2 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 100 | 11 | 259 | 542 | 319 | 49 | 209 | 559 | 5 | 14 | 923 | 90 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | | 3.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3060 | 1660 | 1403 | 1577 | 1660 | 1411 | 3060 | 4526 | | 1577 | 3154 | 1373 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3060 | 1660 | 1403 | 1577 | 1660 | 1411 | 3060 | 4526 | | 1577 | 3154 | 1373 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 105 | 12 | 273 | 571 | 336 | 52 | 220 | 588 | 5 | 15 | 972 | 95 |
| RTOR Reduction (vph) | 0 | 0 | 75 | 0 | 0 | 33 | 0 | 1 | 0 | 0 | 0 | 69 |
| Lane Group Flow (vph) | 105 | 12 | 198 | 571 | 336 | 19 | 220 | 592 | 0 | 15 | 972 | 26 |
| Confl. Peds. (#/hr) | | | 1 | | | | | | | | | 10 |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 3 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Split | NA | pm+ov | Split | NA | Perm | Prot | NA | | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 5 | 3 | 3 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 3 | | | | | | 6 |
| Actuated Green, G (s) | 11.0 | 11.0 | 24.4 | 40.0 | 40.0 | 40.0 | 13.4 | 39.3 | | 2.7 | 28.6 | 28.6 |
| Effective Green, g (s) | 12.0 | 12.0 | 26.4 | 41.0 | 41.0 | 41.0 | 14.4 | 40.3 | | 3.7 | 29.6 | 29.6 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.24 | 0.37 | 0.37 | 0.37 | 0.13 | 0.37 | | 0.03 | 0.27 | 0.27 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | | 4.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | | 2.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 333 | 181 | 374 | 587 | 618 | 525 | 400 | 1658 | | 53 | 848 | 369 |
| v/s Ratio Prot | 0.03 | 0.01 | c0.07 | c0.36 | 0.20 | | c0.07 | 0.13 | | 0.01 | c0.31 | |
| v/s Ratio Perm | | | 0.07 | | | 0.01 | | | | | | 0.02 |
| v/c Ratio | 0.32 | 0.07 | 0.53 | 0.97 | 0.54 | 0.04 | 0.55 | 0.36 | | 0.28 | 1.15 | 0.07 |
| Uniform Delay, d1 | 45.2 | 44.0 | 36.4 | 34.0 | 27.1 | 21.9 | 44.8 | 25.4 | | 51.9 | 40.2 | 29.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 0.91 | | 1.41 | 0.87 | 2.07 |
| Incremental Delay, d2 | 0.2 | 0.1 | 0.6 | 30.0 | 0.5 | 0.0 | 0.9 | 0.6 | | 0.9 | 78.1 | 0.3 |
| Delay (s) | 45.4 | 44.0 | 37.0 | 64.0 | 27.7 | 22.0 | 44.8 | 23.7 | | 74.3 | 113.0 | 62.3 |
| Level of Service | D | D | D | E | C | C | D | C | | E | F | E |
| Approach Delay (s) | | 39.5 | | | 49.0 | | | 29.4 | | | 108.0 | |
| Approach LOS | | D | | | D | | | C | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 62.6 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.92 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 89.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 20 | 366 | 49 | 429 | 340 | 365 | 25 | 369 | 267 | 368 | 1293 | 9 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1660 | 1660 | 1710 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 |
| Adj Flow Rate, veh/h | 23 | 421 | 56 | 493 | 391 | 420 | 29 | 424 | 307 | 423 | 1486 | 10 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 2 | 1 | 3 | 1 | 2 | 3 | 1 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 43 | 525 | 69 | 302 | 1108 | 1443 | 49 | 1277 | 396 | 707 | 2182 | 668 |
| Arrive On Green | 0.03 | 0.19 | 0.19 | 0.19 | 0.35 | 0.35 | 0.01 | 0.09 | 0.09 | 0.46 | 0.96 | 0.96 |
| Sat Flow, veh/h | 1581 | 2793 | 369 | 1581 | 3154 | 2479 | 1581 | 4532 | 1404 | 3067 | 4532 | 1388 |
| Grp Volume(v), veh/h | 23 | 236 | 241 | 493 | 391 | 420 | 29 | 424 | 307 | 423 | 1486 | 10 |
| Grp Sat Flow(s),veh/h/ln | 1581 | 1577 | 1585 | 1581 | 1577 | 1240 | 1581 | 1511 | 1404 | 1534 | 1511 | 1388 |
| Q Serve(g_s), s | 1.6 | 15.8 | 16.0 | 21.0 | 10.1 | 1.0 | 2.0 | 9.6 | 14.9 | 11.3 | 3.9 | 0.0 |
| Cycle Q Clear(g_c), s | 1.6 | 15.8 | 16.0 | 21.0 | 10.1 | 1.0 | 2.0 | 9.6 | 14.9 | 11.3 | 3.9 | 0.0 |
| Prop In Lane | 1.00 | | 0.23 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 43 | 296 | 298 | 302 | 1108 | 1443 | 49 | 1277 | 396 | 707 | 2182 | 668 |
| V/C Ratio(X) | 0.53 | 0.80 | 0.81 | 1.63 | 0.35 | 0.29 | 0.60 | 0.33 | 0.78 | 0.60 | 0.68 | 0.01 |
| Avail Cap(c_a), veh/h | 201 | 373 | 375 | 302 | 1108 | 1443 | 230 | 1277 | 396 | 707 | 2182 | 668 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.97 | 0.97 | 0.88 | 0.88 | 0.88 |
| Uniform Delay (d), s/veh | 52.8 | 42.7 | 42.8 | 44.5 | 26.4 | 6.1 | 53.8 | 40.2 | 18.6 | 25.9 | 1.1 | 1.1 |
| Incr Delay (d2), s/veh | 9.7 | 9.3 | 10.0 | 299.6 | 0.2 | 0.1 | 10.9 | 0.7 | 13.4 | 1.2 | 1.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.8 | 7.6 | 7.8 | 34.3 | 4.4 | 2.3 | 1.0 | 4.1 | 7.3 | 4.8 | 1.4 | 0.0 |
| LnGrp Delay(d),s/veh | 62.5 | 52.0 | 52.8 | 344.1 | 26.6 | 6.2 | 64.6 | 40.9 | 32.1 | 27.1 | 2.7 | 1.1 |
| LnGrp LOS | E | D | D | F | C | A | E | D | C | C | A | A |
| Approach Vol, veh/h | | 500 | | | 1304 | | | 760 | | | 1919 | |
| Approach Delay, s/veh | | 52.8 | | | 140.1 | | | 38.2 | | | 8.0 | |
| Approach LOS | | D | | | F | | | D | | | A | |

| 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 | 28.3 | 34.0 | 24.0 | 23.7 | 6.4 | 56.0 | 6.0 | 41.6 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 19.0 | 30.0 | 20.0 | 25.0 | 15.0 | 34.0 | 13.0 | 32.0 |
| Max Q Clear Time (g_c+I1), s | 13.3 | 16.9 | 23.0 | 18.0 | 4.0 | 5.9 | 3.6 | 12.1 |
| Green Ext Time (p_c), s | 1.2 | 6.7 | 0.0 | 1.3 | 0.0 | 25.4 | 0.0 | 6.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 56.6 |
| HCM 2010 LOS | E |

Notes

User approved changes to right turn type.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 289 | 8 | 211 | 2 | 0 | 0 | 113 | 398 | 28 | 28 | 1491 | 180 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 3.0 | 5.0 | | 3.0 | 5.0 | 5.0 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | | 1.00 | | 1.00 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.95 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 0.95 | 1.00 | | 0.95 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1495 | 1502 | 1411 | | 1577 | | 1577 | 4488 | | 1577 | 4532 | 1340 |
| Flt Permitted | 0.76 | 0.74 | 1.00 | | 0.50 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1190 | 1158 | 1411 | | 834 | | 1577 | 4488 | | 1577 | 4532 | 1340 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 301 | 8 | 220 | 2 | 0 | 0 | 118 | 415 | 29 | 29 | 1553 | 188 |
| RTOR Reduction (vph) | 0 | 0 | 178 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 78 |
| Lane Group Flow (vph) | 154 | 155 | 42 | 0 | 2 | 0 | 118 | 439 | 0 | 29 | 1553 | 110 |
| Confl. Peds. (#/hr) | 2 | | | | | 2 | | | | | | 11 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 7 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Prot | NA | | Prot | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 21.0 | 21.0 | 21.0 | | 21.0 | | 12.6 | 68.0 | | 9.0 | 64.4 | 64.4 |
| Effective Green, g (s) | 21.0 | 21.0 | 21.0 | | 21.0 | | 12.6 | 68.0 | | 9.0 | 64.4 | 64.4 |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.19 | | 0.19 | | 0.11 | 0.62 | | 0.08 | 0.59 | 0.59 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 3.0 | 5.0 | | 3.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 2.0 | | 2.0 | 3.0 | | 2.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 227 | 221 | 269 | | 159 | | 180 | 2774 | | 129 | 2653 | 784 |
| v/s Ratio Prot | | | | | | | c0.07 | 0.10 | | 0.02 | c0.34 | |
| v/s Ratio Perm | 0.13 | c0.13 | 0.03 | | 0.00 | | | | | | | 0.08 |
| v/c Ratio | 0.68 | 0.70 | 0.16 | | 0.01 | | 0.66 | 0.16 | | 0.22 | 0.59 | 0.14 |
| Uniform Delay, d1 | 41.4 | 41.6 | 37.1 | | 36.1 | | 46.6 | 8.9 | | 47.2 | 14.4 | 10.3 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 0.74 | 0.61 | 0.38 |
| Incremental Delay, d2 | 7.8 | 9.6 | 0.3 | | 0.0 | | 6.4 | 0.1 | | 0.1 | 0.3 | 0.1 |
| Delay (s) | 49.2 | 51.2 | 37.4 | | 36.1 | | 53.0 | 9.0 | | 35.1 | 9.1 | 4.0 |
| Level of Service | D | D | D | | D | | D | A | | D | A | A |
| Approach Delay (s) | | 44.9 | | | 36.1 | | | 18.3 | | | 9.0 | |
| Approach LOS | | D | | | D | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 63.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 33 | 64 | 88 | 861 | 0 | 44 | 21 | 133 | 867 | 275 | 644 | 42 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.95 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 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 | 1845 | 1900 | 1845 | 0 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 35 | 68 | 94 | 916 | 0 | 47 | 22 | 141 | 50 | 293 | 685 | 45 |
| Adj No. of Lanes | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 181 | 351 | 485 | 0 | 0 | 0 | 40 | 476 | 213 | 325 | 991 | 65 |
| Arrive On Green | 0.61 | 0.61 | 0.61 | 0.01 | 0.00 | 0.01 | 0.02 | 0.14 | 0.13 | 0.18 | 0.30 | 0.29 |
| Sat Flow, veh/h | 294 | 572 | 791 | | 0 | | 1757 | 3505 | 1568 | 1757 | 3327 | 218 |
| Grp Volume(v), veh/h | 197 | 0 | 0 | | 0.0 | | 22 | 141 | 50 | 293 | 361 | 369 |
| Grp Sat Flow(s),veh/h/ln | 1657 | 0 | 0 | | | | 1757 | 1752 | 1568 | 1757 | 1752 | 1793 |
| Q Serve(g_s), s | 7.3 | 0.0 | 0.0 | | | | 1.7 | 5.1 | 4.0 | 22.8 | 25.5 | 25.5 |
| Cycle Q Clear(g_c), s | 7.3 | 0.0 | 0.0 | | | | 1.7 | 5.1 | 4.0 | 22.8 | 25.5 | 25.5 |
| Prop In Lane | 0.18 | | 0.48 | | | | 1.00 | | 1.00 | 1.00 | | 0.12 |
| Lane Grp Cap(c), veh/h | 1017 | 0 | 0 | | | | 40 | 476 | 213 | 325 | 522 | 534 |
| V/C Ratio(X) | 0.19 | 0.00 | 0.00 | | | | 0.56 | 0.30 | 0.23 | 0.90 | 0.69 | 0.69 |
| Avail Cap(c_a), veh/h | 1017 | 0 | 0 | | | | 113 | 476 | 213 | 326 | 522 | 534 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.61 | 0.61 | 0.61 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 11.8 | 0.0 | 0.0 | | | | 67.7 | 54.5 | 54.0 | 55.8 | 43.4 | 43.5 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | | | | 2.8 | 1.0 | 1.6 | 26.2 | 7.3 | 7.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.3 | 0.0 | 0.0 | | | | 0.9 | 2.5 | 1.8 | 13.4 | 13.4 | 13.7 |
| LnGrp Delay(d),s/veh | 11.9 | 0.0 | 0.0 | | | | 70.5 | 55.5 | 55.6 | 82.0 | 50.8 | 50.7 |
| LnGrp LOS | B | | | | | | E | E | E | F | D | D |
| Approach Vol, veh/h | | 197 | | | | | | 213 | | | 1023 | |
| Approach Delay, s/veh | | 11.9 | | | | | | 57.0 | | | 59.7 | |
| Approach LOS | | B | | | | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | 28.9 | 22.0 | | 89.1 | 6.2 | 44.7 | | |
| Change Period (Y+Rc), s | 4.0 | 5.0 | | * 4.2 | 4.0 | 5.0 | | |
| Max Green Setting (Gmax), s | 25.0 | 17.0 | | * 33 | 8.0 | 34.0 | | |
| Max Q Clear Time (g_c+I1), s | 24.8 | 7.1 | | 9.3 | 3.7 | 27.5 | | |
| Green Ext Time (p_c), s | 0.0 | 7.4 | | 0.4 | 0.0 | 5.1 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 52.7 |
| HCM 2010 LOS | D |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 22 | 582 | 175 | 546 | 341 | 829 | 41 | 72 | 287 | 519 | 904 | 108 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.93 | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1845 | 4000 | | 3579 | 3689 | 1542 | 1845 | 3689 | 1590 | 3579 | 3689 | 1618 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1845 | 3546 | | 3579 | 3689 | 1542 | 1845 | 3689 | 1590 | 3579 | 3689 | 1618 |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 23 | 619 | 186 | 581 | 363 | 882 | 44 | 77 | 305 | 552 | 962 | 115 |
| RTOR Reduction (vph) | 0 | 20 | 0 | 0 | 0 | 467 | 0 | 0 | 238 | 0 | 0 | 66 |
| Lane Group Flow (vph) | 23 | 785 | 0 | 581 | 363 | 415 | 44 | 77 | 67 | 552 | 962 | 49 |
| Confl. Peds. (#/hr) | | | 3 | | | 39 | | | 18 | | | 5 |
| Confl. Bikes (#/hr) | | | 3 | | | | | | | | | 2 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 9 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 4.4 | 33.7 | | 27.8 | 57.1 | 57.1 | 6.4 | 29.7 | 29.7 | 27.8 | 54.1 | 54.1 |
| Effective Green, g (s) | 5.4 | 35.7 | | 28.8 | 59.1 | 58.1 | 7.4 | 31.7 | 30.7 | 29.8 | 56.1 | 55.1 |
| Actuated g/C Ratio | 0.04 | 0.26 | | 0.21 | 0.42 | 0.42 | 0.05 | 0.23 | 0.22 | 0.21 | 0.40 | 0.39 |
| Clearance Time (s) | 4.0 | 5.0 | | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 6.0 | | 4.0 | 6.0 | 6.0 | 2.0 | 6.0 | 6.0 | | 6.0 | 6.0 |
| Lane Grp Cap (vph) | 71 | 1020 | | 736 | 1557 | 639 | 97 | 835 | 348 | 761 | 1478 | 636 |
| v/s Ratio Prot | 0.01 | c0.20 | | c0.16 | 0.10 | | 0.02 | 0.02 | | c0.15 | c0.26 | |
| v/s Ratio Perm | | | | | | 0.27 | | | 0.04 | | | 0.03 |
| v/c Ratio | 0.32 | 0.77 | | 0.79 | 0.23 | 0.65 | 0.45 | 0.09 | 0.19 | 0.73 | 0.65 | 0.08 |
| Uniform Delay, d1 | 65.5 | 48.3 | | 52.7 | 25.9 | 32.8 | 64.3 | 42.8 | 44.5 | 51.3 | 34.0 | 26.5 |
| Progression Factor | 0.99 | 0.76 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.72 | 0.57 | 0.44 |
| Incremental Delay, d2 | 0.3 | 1.3 | | 6.0 | 0.2 | 3.7 | 1.2 | 0.2 | 1.2 | 2.6 | 1.7 | 0.2 |
| Delay (s) | 65.2 | 38.2 | | 58.7 | 26.1 | 36.5 | 65.6 | 43.0 | 45.8 | 39.7 | 21.0 | 11.8 |
| Level of Service | E | D | | E | C | D | E | D | D | D | C | B |
| Approach Delay (s) | | 38.9 | | | 41.5 | | | 47.3 | | | 26.7 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.5 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 90.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 69 | 2 | 166 | 3 | 3 | 2 | 121 | 391 | 10 | 7 | 970 | 611 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 3.0 | 3.2 | 3.2 | 3.2 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1744 | 1845 | 1568 | 1752 | 1845 | 1542 | 1752 | 3505 | 1522 | 1752 | 3505 | 1533 |
| Flt Permitted | 0.76 | 1.00 | 1.00 | 0.76 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1388 | 1845 | 1568 | 1396 | 1845 | 1542 | 1752 | 3505 | 1522 | 1752 | 3505 | 1533 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 75 | 2 | 180 | 3 | 3 | 2 | 132 | 425 | 11 | 8 | 1054 | 664 |
| RTOR Reduction (vph) | 0 | 0 | 157 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 133 |
| Lane Group Flow (vph) | 75 | 2 | 23 | 3 | 3 | 0 | 132 | 425 | 8 | 8 | 1054 | 531 |
| Confl. Peds. (#/hr) | 4 | | | | | 4 | | | 3 | | | 1 |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 2 | | | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Actuated Green, G (s) | 13.1 | 13.1 | 13.1 | 12.9 | 12.9 | 12.9 | 15.7 | 82.7 | 82.7 | 1.2 | 68.2 | 68.2 |
| Effective Green, g (s) | 14.1 | 14.1 | 14.1 | 13.9 | 13.9 | 13.9 | 16.7 | 84.7 | 84.7 | 2.2 | 70.2 | 70.2 |
| Actuated g/C Ratio | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.15 | 0.77 | 0.77 | 0.02 | 0.64 | 0.64 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.2 | 4.2 | 4.2 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 6.0 | 2.0 | 6.0 | 6.0 |
| Lane Grp Cap (vph) | 177 | 236 | 200 | 176 | 233 | 194 | 265 | 2698 | 1171 | 35 | 2236 | 978 |
| v/s Ratio Prot | | 0.00 | | | 0.00 | | c0.08 | 0.12 | | 0.00 | 0.30 | |
| v/s Ratio Perm | c0.05 | | 0.01 | 0.00 | | 0.00 | | | 0.01 | | | c0.35 |
| v/c Ratio | 0.42 | 0.01 | 0.12 | 0.02 | 0.01 | 0.00 | 0.50 | 0.16 | 0.01 | 0.23 | 0.47 | 0.54 |
| Uniform Delay, d1 | 44.2 | 41.8 | 42.4 | 42.1 | 42.0 | 42.0 | 42.8 | 3.3 | 2.9 | 53.1 | 10.3 | 11.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.07 | 1.00 | 1.34 | 0.71 | 0.53 |
| Incremental Delay, d2 | 0.6 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.5 | 0.1 | 0.0 | 1.1 | 0.6 | 1.9 |
| Delay (s) | 44.8 | 41.9 | 42.5 | 42.1 | 42.1 | 42.0 | 45.6 | 3.6 | 2.9 | 72.0 | 7.9 | 7.7 |
| Level of Service | D | D | D | D | D | D | D | A | A | E | A | A |
| Approach Delay (s) | | 43.2 | | | 42.0 | | | 13.4 | | | 8.1 | |
| Approach LOS | | D | | | D | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 9.2 |
| Intersection Capacity Utilization | 60.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 194 | 0 | 268 | 27 | 294 | 62 | 1 | 2425 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | |
| Lane Util. Factor | | | | | 0.95 | 0.95 | 1.00 | 0.95 | | | 0.86 | |
| Frpb, ped/bikes | | | | | 1.00 | 1.00 | 1.00 | 0.99 | | | 1.00 | |
| Flpb, ped/bikes | | | | | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | |
| Frt | | | | | 0.97 | 0.85 | 1.00 | 0.97 | | | 1.00 | |
| Flt Protected | | | | | 0.96 | 1.00 | 0.95 | 1.00 | | | 1.00 | |
| Satd. Flow (prot) | | | | | 1635 | 1490 | 1752 | 3391 | | | 6346 | |
| Flt Permitted | | | | | 0.96 | 1.00 | 0.95 | 1.00 | | | 0.93 | |
| Satd. Flow (perm) | | | | | 1635 | 1490 | 1752 | 3391 | | | 5917 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 0 | 0 | 0 | 206 | 0 | 285 | 29 | 313 | 66 | 1 | 2580 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 49 | 191 | 0 | 11 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 208 | 43 | 29 | 368 | 0 | 0 | 2581 | 0 |
| Confl. Peds. (#/hr) | | | | | | | | | 7 | | | |
| Turn Type | | | | custom | NA | Perm | Prot | NA | | Perm | NA | |
| Protected Phases | | | | 2 | 2 | | 3 | 8 | | | 4 | |
| Permitted Phases | | | | 2 | | 2 | | | | 4 | | |
| Actuated Green, G (s) | | | | | 19.3 | 19.3 | 4.3 | 81.7 | | | 73.4 | |
| Effective Green, g (s) | | | | | 20.3 | 20.3 | 5.3 | 83.7 | | | 75.4 | |
| Actuated g/C Ratio | | | | | 0.18 | 0.18 | 0.05 | 0.76 | | | 0.69 | |
| Clearance Time (s) | | | | | 4.0 | 4.0 | 4.0 | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | 2.0 | 6.0 | | | 6.0 | |
| Lane Grp Cap (vph) | | | | | 301 | 274 | 84 | 2580 | | | 4055 | |
| v/s Ratio Prot | | | | | c0.13 | | c0.02 | 0.11 | | | | |
| v/s Ratio Perm | | | | | | 0.03 | | | | | c0.44 | |
| v/c Ratio | | | | | 0.69 | 0.16 | 0.35 | 0.14 | | | 0.64 | |
| Uniform Delay, d1 | | | | | 41.9 | 37.7 | 50.7 | 3.5 | | | 9.7 | |
| Progression Factor | | | | | 1.00 | 1.00 | 0.81 | 1.44 | | | 0.70 | |
| Incremental Delay, d2 | | | | | 6.7 | 0.3 | 0.9 | 0.1 | | | 0.8 | |
| Delay (s) | | | | | 48.6 | 37.9 | 41.8 | 5.2 | | | 7.5 | |
| Level of Service | | | | | D | D | D | A | | | A | |
| Approach Delay (s) | | 0.0 | | | 43.5 | | | 7.8 | | | 7.5 | |
| Approach LOS | | A | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 58.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 23 | 256 | 4 | 152 | 1492 | 55 | 21 | 27 | 23 | 20 | 48 | 48 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1900 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 25 | 275 | 4 | 163 | 1604 | 59 | 23 | 29 | 25 | 22 | 52 | 52 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 29 | 1685 | 24 | 206 | 1992 | 73 | 86 | 44 | 38 | 38 | 89 | 110 |
| Arrive On Green | 0.02 | 0.48 | 0.48 | 0.12 | 0.58 | 0.58 | 0.05 | 0.05 | 0.05 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 1757 | 3535 | 51 | 1757 | 3448 | 126 | 1757 | 909 | 783 | 540 | 1277 | 1568 |
| Grp Volume(v), veh/h | 25 | 136 | 143 | 163 | 813 | 850 | 23 | 0 | 54 | 74 | 0 | 52 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1834 | 1757 | 1752 | 1822 | 1757 | 0 | 1692 | 1818 | 0 | 1568 |
| Q Serve(g_s), s | 0.9 | 2.9 | 2.9 | 6.0 | 24.2 | 24.4 | 0.8 | 0.0 | 2.1 | 2.6 | 0.0 | 2.1 |
| Cycle Q Clear(g_c), s | 0.9 | 2.9 | 2.9 | 6.0 | 24.2 | 24.4 | 0.8 | 0.0 | 2.1 | 2.6 | 0.0 | 2.1 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 0.07 | 1.00 | | 0.46 | 0.30 | | 1.00 |
| Lane Grp Cap(c), veh/h | 29 | 835 | 874 | 206 | 1012 | 1053 | 86 | 0 | 82 | 127 | 0 | 110 |
| V/C Ratio(X) | 0.86 | 0.16 | 0.16 | 0.79 | 0.80 | 0.81 | 0.27 | 0.00 | 0.66 | 0.58 | 0.00 | 0.47 |
| Avail Cap(c_a), veh/h | 797 | 1060 | 1110 | 797 | 1060 | 1102 | 744 | 0 | 716 | 825 | 0 | 711 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 32.4 | 9.8 | 9.8 | 28.4 | 11.0 | 11.1 | 30.3 | 0.0 | 30.9 | 29.8 | 0.0 | 29.6 |
| Incr Delay (d2), s/veh | 23.1 | 0.1 | 0.1 | 2.6 | 4.7 | 4.7 | 0.6 | 0.0 | 3.3 | 4.2 | 0.0 | 3.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 1.4 | 1.5 | 3.0 | 12.8 | 13.4 | 0.4 | 0.0 | 1.0 | 1.5 | 0.0 | 1.0 |
| LnGrp Delay(d),s/veh | 55.5 | 9.9 | 9.9 | 31.0 | 15.7 | 15.7 | 30.9 | 0.0 | 34.2 | 34.0 | 0.0 | 32.8 |
| LnGrp LOS | E | A | A | C | B | B | C | | C | C | | C |
| Approach Vol, veh/h | | 304 | | | 1826 | | | 77 | | | 126 | |
| Approach Delay, s/veh | | 13.7 | | | 17.0 | | | 33.2 | | | 33.5 | |
| Approach LOS | | B | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 11.8 | 38.5 | | 7.2 | 5.1 | 45.2 | | 8.6 |
| Change Period (Y+Rc), s | 4.0 | 7.0 | | 4.0 | 4.0 | 7.0 | | 4.0 |
| Max Green Setting (Gmax), s | 30.0 | 40.0 | | 28.0 | 30.0 | 40.0 | | 30.0 |
| Max Q Clear Time (g_c+I1), s | 8.0 | 4.9 | | 4.1 | 2.9 | 26.4 | | 4.6 |
| Green Ext Time (p_c), s | 0.2 | 26.1 | | 0.2 | 0.0 | 11.8 | | 0.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 18.0 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 68 | 142 | 11 | 29 | 209 | 89 | 23 | 100 | 68 | 209 | 174 | 187 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.6 | 3.6 | | 3.2 | 3.2 | | 3.2 | 3.2 | 3.2 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.96 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1845 | 1917 | | 1845 | 1843 | | 1834 | 1815 | | 1845 | 1942 | 1605 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.58 | 1.00 | | 0.59 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1845 | 1917 | | 1845 | 1843 | | 1116 | 1815 | | 1144 | 1942 | 1605 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 76 | 160 | 12 | 33 | 235 | 100 | 26 | 112 | 76 | 235 | 196 | 210 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 13 | 0 | 0 | 19 | 0 | 0 | 0 | 136 |
| Lane Group Flow (vph) | 76 | 170 | 0 | 33 | 322 | 0 | 26 | 169 | 0 | 235 | 196 | 74 |
| Confl. Peds. (#/hr) | | | 5 | | | 1 | 7 | | | | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 1 | 1 | | 2 | 2 | | | 4 | | | 4 | |
| Permitted Phases | | | | | | | 4 | | | 4 | | 4 |
| Actuated Green, G (s) | 10.8 | 10.8 | | 18.5 | 18.5 | | 22.3 | 22.3 | | 22.3 | 22.3 | 22.3 |
| Effective Green, g (s) | 13.8 | 13.8 | | 19.5 | 19.5 | | 23.3 | 23.3 | | 23.3 | 23.3 | 23.3 |
| Actuated g/C Ratio | 0.21 | 0.21 | | 0.29 | 0.29 | | 0.35 | 0.35 | | 0.35 | 0.35 | 0.35 |
| Clearance Time (s) | 6.0 | 6.0 | | 4.6 | 4.6 | | 4.2 | 4.2 | | 4.2 | 4.2 | 4.2 |
| Vehicle Extension (s) | 1.0 | 1.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 383 | 398 | | 541 | 541 | | 391 | 636 | | 401 | 681 | 563 |
| v/s Ratio Prot | 0.04 | c0.09 | | 0.02 | c0.17 | | | 0.09 | | | 0.10 | |
| v/s Ratio Perm | | | | | | | 0.02 | | | c0.21 | | 0.05 |
| v/c Ratio | 0.20 | 0.43 | | 0.06 | 0.60 | | 0.07 | 0.27 | | 0.59 | 0.29 | 0.13 |
| Uniform Delay, d1 | 21.7 | 22.9 | | 16.9 | 20.1 | | 14.3 | 15.4 | | 17.6 | 15.6 | 14.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.1 | 0.3 | | 0.0 | 1.2 | | 0.0 | 0.1 | | 1.4 | 0.1 | 0.0 |
| Delay (s) | 21.8 | 23.1 | | 16.9 | 21.3 | | 14.3 | 15.5 | | 19.0 | 15.6 | 14.7 |
| Level of Service | C | C | | B | C | | B | B | | B | B | B |
| Approach Delay (s) | | 22.7 | | | 20.9 | | | 15.4 | | | 16.6 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 66.4 | Sum of lost time (s) | 9.8 |
| Intersection Capacity Utilization | 52.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 55 | 552 | 190 | 582 | 1682 | 80 | 237 | 212 | 175 | 79 | 562 | 57 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.91 | | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.96 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1752 | 4813 | | 3400 | 4998 | | 1595 | 3308 | 1550 | 1752 | 3452 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1752 | 4813 | | 3400 | 4998 | | 1595 | 3308 | 1550 | 1752 | 3452 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 59 | 587 | 202 | 619 | 1789 | 85 | 252 | 226 | 186 | 84 | 598 | 61 |
| RTOR Reduction (vph) | 0 | 36 | 0 | 0 | 3 | 0 | 0 | 0 | 121 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 59 | 753 | 0 | 619 | 1871 | 0 | 156 | 322 | 65 | 84 | 654 | 0 |
| Confl. Peds. (#/hr) | | | 5 | | | 2 | | | 10 | | | |
| Confl. Bikes (#/hr) | | | 4 | | | 2 | | | 1 | | | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Split | NA | pm+ov | Split | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 3 | 1 | 4 | 4 | |
| Permitted Phases | | | | | | | | | 3 | | | |
| Actuated Green, G (s) | 7.8 | 44.0 | | 30.9 | 67.1 | | 21.6 | 21.6 | 52.5 | 33.5 | 33.5 | |
| Effective Green, g (s) | 7.8 | 44.0 | | 30.9 | 67.1 | | 21.6 | 21.6 | 52.5 | 33.5 | 33.5 | |
| Actuated g/C Ratio | 0.05 | 0.29 | | 0.21 | 0.45 | | 0.14 | 0.14 | 0.35 | 0.22 | 0.22 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 2.0 | 4.0 | | 2.0 | 4.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 91 | 1411 | | 700 | 2235 | | 229 | 476 | 542 | 391 | 770 | |
| v/s Ratio Prot | 0.03 | 0.16 | | c0.18 | c0.37 | | c0.10 | 0.10 | 0.02 | 0.05 | c0.19 | |
| v/s Ratio Perm | | | | | | | | | 0.02 | | | |
| v/c Ratio | 0.65 | 0.53 | | 0.88 | 0.84 | | 0.68 | 0.68 | 0.12 | 0.21 | 0.85 | |
| Uniform Delay, d1 | 69.8 | 44.4 | | 57.8 | 36.6 | | 60.9 | 60.9 | 33.1 | 47.5 | 55.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 11.3 | 1.4 | | 12.4 | 3.9 | | 6.5 | 3.0 | 0.0 | 0.1 | 8.3 | |
| Delay (s) | 81.1 | 45.9 | | 70.3 | 40.6 | | 67.4 | 63.9 | 33.1 | 47.6 | 64.1 | |
| Level of Service | F | D | | E | D | | E | E | C | D | E | |
| Approach Delay (s) | | 48.3 | | | 47.9 | | | 56.1 | | | 62.3 | |
| Approach LOS | | D | | | D | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 51.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.84 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 86.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 65 | 310 | 174 | 57 | 1386 | 104 | 596 | 572 | 70 | 108 | 239 | 337 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 70 | 333 | 187 | 61 | 1490 | 112 | 641 | 615 | 75 | 116 | 257 | 362 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 0 | 2 | 2 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 88 | 1493 | 658 | 77 | 1472 | 650 | 659 | 1131 | 138 | 161 | 748 | 334 |
| Arrive On Green | 0.05 | 0.43 | 0.43 | 0.04 | 0.42 | 0.42 | 0.19 | 0.36 | 0.36 | 0.05 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1757 | 3505 | 1545 | 1757 | 3505 | 1547 | 3408 | 3146 | 383 | 3408 | 3505 | 1564 |
| Grp Volume(v), veh/h | 70 | 333 | 187 | 61 | 1490 | 112 | 641 | 342 | 348 | 116 | 257 | 362 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1545 | 1757 | 1752 | 1547 | 1704 | 1752 | 1776 | 1704 | 1752 | 1564 |
| Q Serve(g_s), s | 5.9 | 9.0 | 11.9 | 5.2 | 63.0 | 6.8 | 28.0 | 23.3 | 23.4 | 5.0 | 9.3 | 32.0 |
| Cycle Q Clear(g_c), s | 5.9 | 9.0 | 11.9 | 5.2 | 63.0 | 6.8 | 28.0 | 23.3 | 23.4 | 5.0 | 9.3 | 32.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.22 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 88 | 1493 | 658 | 77 | 1472 | 650 | 659 | 630 | 638 | 161 | 748 | 334 |
| V/C Ratio(X) | 0.80 | 0.22 | 0.28 | 0.79 | 1.01 | 0.17 | 0.97 | 0.54 | 0.54 | 0.72 | 0.34 | 1.09 |
| Avail Cap(c_a), veh/h | 141 | 1493 | 658 | 141 | 1472 | 650 | 659 | 630 | 638 | 364 | 748 | 334 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.77 | 0.77 | 0.77 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 70.5 | 27.3 | 28.1 | 71.0 | 43.5 | 27.2 | 60.1 | 38.2 | 38.3 | 70.5 | 50.1 | 59.0 |
| Incr Delay (d2), s/veh | 6.0 | 0.3 | 1.1 | 5.0 | 23.6 | 0.4 | 28.1 | 0.5 | 0.5 | 2.3 | 0.1 | 74.0 |
| 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 | 4.5 | 5.2 | 2.6 | 35.3 | 3.0 | 15.8 | 11.4 | 11.6 | 2.4 | 4.5 | 20.7 |
| LnGrp Delay(d),s/veh | 76.5 | 27.7 | 29.2 | 76.0 | 67.1 | 27.6 | 88.2 | 38.8 | 38.8 | 72.7 | 50.2 | 133.0 |
| LnGrp LOS | E | C | C | E | F | C | F | D | D | E | D | F |
| Approach Vol, veh/h | | 590 | | | 1663 | | | 1331 | | | 735 | |
| Approach Delay, s/veh | | 33.9 | | | 64.8 | | | 62.6 | | | 94.5 | |
| Approach LOS | | C | | | E | | | E | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 10.6 | 69.4 | 11.1 | 58.9 | 11.5 | 68.5 | 33.0 | 37.0 |
| Change Period (Y+Rc), s | 4.0 | 5.5 | 4.0 | 5.0 | 4.0 | 5.5 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 12.0 | 58.5 | 16.0 | 45.0 | 12.0 | 58.5 | 29.0 | 32.0 |
| Max Q Clear Time (g_c+I1), s | 7.2 | 13.9 | 7.0 | 25.4 | 7.9 | 65.0 | 30.0 | 34.0 |
| Green Ext Time (p_c), s | 0.0 | 32.1 | 0.1 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 65.0 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 125 | 336 | 313 | 385 | 1581 | 145 | 337 | 654 | 117 | 111 | 656 | 111 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.96 | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.90 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 129 | 346 | 323 | 397 | 1630 | 149 | 347 | 674 | 121 | 114 | 676 | 114 |
| Adj No. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 275 | 884 | 396 | 568 | 2016 | 184 | 261 | 829 | 360 | 193 | 759 | 307 |
| Arrive On Green | 0.16 | 0.26 | 0.26 | 0.32 | 0.43 | 0.43 | 0.08 | 0.24 | 0.24 | 0.06 | 0.22 | 0.22 |
| Sat Flow, veh/h | 1757 | 3357 | 1504 | 1757 | 4689 | 428 | 3408 | 3505 | 1520 | 3408 | 3505 | 1416 |
| Grp Volume(v), veh/h | 129 | 346 | 323 | 397 | 1166 | 613 | 347 | 674 | 121 | 114 | 676 | 114 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1679 | 1504 | 1757 | 1679 | 1760 | 1704 | 1752 | 1520 | 1704 | 1752 | 1416 |
| Q Serve(g_s), s | 10.0 | 12.7 | 30.2 | 29.6 | 45.5 | 45.7 | 11.5 | 27.3 | 9.9 | 4.9 | 28.1 | 10.3 |
| Cycle Q Clear(g_c), s | 10.0 | 12.7 | 30.2 | 29.6 | 45.5 | 45.7 | 11.5 | 27.3 | 9.9 | 4.9 | 28.1 | 10.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.24 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 275 | 884 | 396 | 568 | 1444 | 757 | 261 | 829 | 360 | 193 | 759 | 307 |
| V/C Ratio(X) | 0.47 | 0.39 | 0.82 | 0.70 | 0.81 | 0.81 | 1.33 | 0.81 | 0.34 | 0.59 | 0.89 | 0.37 |
| Avail Cap(c_a), veh/h | 275 | 884 | 396 | 568 | 1444 | 757 | 261 | 829 | 360 | 193 | 759 | 307 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 57.6 | 45.4 | 51.8 | 44.4 | 37.3 | 37.4 | 69.3 | 54.1 | 47.5 | 69.1 | 57.0 | 50.1 |
| Incr Delay (d2), s/veh | 5.6 | 1.3 | 16.7 | 7.0 | 5.0 | 9.1 | 171.6 | 8.5 | 2.5 | 12.6 | 14.8 | 3.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.3 | 6.1 | 14.4 | 15.4 | 22.1 | 24.0 | 11.6 | 14.2 | 4.4 | 2.6 | 15.2 | 4.3 |
| LnGrp Delay(d),s/veh | 63.2 | 46.7 | 68.6 | 51.4 | 42.3 | 46.5 | 240.8 | 62.6 | 50.0 | 81.6 | 71.8 | 53.5 |
| LnGrp LOS | E | D | E | D | D | D | F | E | D | F | E | D |
| Approach Vol, veh/h | | 798 | | | 2176 | | | 1142 | | | 904 | |
| Approach Delay, s/veh | | 58.2 | | | 45.1 | | | 115.4 | | | 70.7 | |
| Approach LOS | | E | | | D | | | F | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 13.0 | 40.0 | 53.0 | 44.0 | 16.0 | 37.0 | 28.0 | 69.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 8.5 | 35.5 | 48.5 | 39.5 | 11.5 | 32.5 | 23.5 | 64.5 |
| Max Q Clear Time (g_c+I1), s | 6.9 | 29.3 | 31.6 | 32.2 | 13.5 | 30.1 | 12.0 | 47.7 |
| Green Ext Time (p_c), s | 0.0 | 4.5 | 1.1 | 6.6 | 0.0 | 1.9 | 0.2 | 14.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 67.8 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 51 | 634 | 369 | 203 | 1651 | 71 | 679 | 368 | 89 | 135 | 612 | 246 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1942 | 1942 | 2000 | 1942 | 1942 | 2000 | 1942 | 1942 | 1942 | 1942 | 1942 | 1942 |
| Adj Flow Rate, veh/h | 53 | 654 | 0 | 209 | 1702 | 73 | 700 | 379 | 0 | 139 | 631 | 254 |
| Adj No. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 2 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 81 | 2308 | 0 | 245 | 2527 | 108 | 670 | 1033 | 488 | 177 | 755 | 545 |
| Arrive On Green | 0.04 | 0.40 | 0.00 | 0.13 | 0.49 | 0.48 | 0.19 | 0.30 | 0.00 | 0.10 | 0.20 | 0.20 |
| Sat Flow, veh/h | 1849 | 5825 | 0 | 1849 | 5209 | 223 | 3588 | 3495 | 1650 | 1849 | 3689 | 1648 |
| Grp Volume(v), veh/h | 53 | 654 | 0 | 209 | 1154 | 621 | 700 | 379 | 0 | 139 | 631 | 254 |
| Grp Sat Flow(s),veh/h/ln | 1849 | 1942 | 0 | 1849 | 1767 | 1899 | 1794 | 1748 | 1650 | 1849 | 1845 | 1648 |
| Q Serve(g_s), s | 4.2 | 11.5 | 0.0 | 16.6 | 37.5 | 37.5 | 28.0 | 12.8 | 0.0 | 11.0 | 24.6 | 18.3 |
| Cycle Q Clear(g_c), s | 4.2 | 11.5 | 0.0 | 16.6 | 37.5 | 37.5 | 28.0 | 12.8 | 0.0 | 11.0 | 24.6 | 18.3 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.12 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 81 | 2308 | 0 | 245 | 1714 | 921 | 670 | 1033 | 488 | 177 | 755 | 545 |
| V/C Ratio(X) | 0.66 | 0.28 | 0.00 | 0.85 | 0.67 | 0.67 | 1.05 | 0.37 | 0.00 | 0.79 | 0.84 | 0.47 |
| Avail Cap(c_a), veh/h | 111 | 2308 | 0 | 358 | 1714 | 921 | 670 | 1033 | 488 | 321 | 787 | 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) | 0.90 | 0.90 | 0.00 | 1.00 | 1.00 | 1.00 | 0.84 | 0.84 | 0.00 | 0.72 | 0.72 | 0.72 |
| Uniform Delay (d), s/veh | 70.6 | 30.8 | 0.0 | 63.6 | 29.5 | 29.6 | 61.0 | 41.7 | 0.0 | 66.3 | 57.2 | 39.8 |
| Incr Delay (d2), s/veh | 3.0 | 0.3 | 0.0 | 8.8 | 2.1 | 3.9 | 44.3 | 0.3 | 0.0 | 5.5 | 5.9 | 0.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.2 | 6.2 | 0.0 | 9.1 | 18.8 | 20.7 | 18.0 | 6.2 | 0.0 | 5.9 | 13.1 | 8.5 |
| LnGrp Delay(d),s/veh | 73.6 | 31.1 | 0.0 | 72.5 | 31.7 | 33.5 | 105.3 | 42.0 | 0.0 | 71.9 | 63.1 | 40.4 |
| LnGrp LOS | E | C | | E | C | C | F | D | | E | E | D |
| Approach Vol, veh/h | | 707 | | | 1984 | | | 1079 | | | 1024 | |
| Approach Delay, s/veh | | 34.3 | | | 36.5 | | | 83.1 | | | 58.7 | |
| Approach LOS | | C | | | D | | | F | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 9.6 | 75.8 | 31.0 | 33.7 | 22.9 | 62.4 | 17.3 | 47.3 |
| Change Period (Y+Rc), s | 4.0 | 5.0 | 4.0 | 5.0 | 4.0 | 5.0 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 8.0 | 67.0 | 27.0 | 30.0 | 28.0 | 47.0 | 25.0 | 32.0 |
| Max Q Clear Time (g_c+I1), s | 6.2 | 39.5 | 30.0 | 26.6 | 18.6 | 13.5 | 13.0 | 14.8 |
| Green Ext Time (p_c), s | 0.0 | 27.3 | 0.0 | 2.1 | 0.3 | 33.4 | 0.3 | 12.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 51.4 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 179 | 1489 | 320 | 433 | 1623 | 76 | 207 | 228 | 48 | 128 | 443 | 229 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.88 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1748 | 1748 | 1800 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 |
| Adj Flow Rate, veh/h | 188 | 1567 | 337 | 456 | 1708 | 0 | 218 | 240 | 51 | 135 | 466 | 0 |
| Adj No. of Lanes | 2 | 4 | 0 | 2 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 249 | 2045 | 440 | 521 | 2361 | 735 | 283 | 825 | 315 | 166 | 864 | 386 |
| Arrive On Green | 0.08 | 0.41 | 0.40 | 0.16 | 0.49 | 0.00 | 0.09 | 0.25 | 0.24 | 0.10 | 0.26 | 0.00 |
| Sat Flow, veh/h | 3229 | 4976 | 1070 | 3229 | 4771 | 1485 | 3229 | 3320 | 1303 | 1664 | 3320 | 1485 |
| Grp Volume(v), veh/h | 188 | 1420 | 484 | 456 | 1708 | 0 | 218 | 240 | 51 | 135 | 466 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1614 | 1503 | 1537 | 1614 | 1590 | 1485 | 1614 | 1660 | 1303 | 1664 | 1660 | 1485 |
| Q Serve(g_s), s | 8.6 | 40.6 | 40.8 | 20.7 | 42.3 | 0.0 | 9.9 | 8.8 | 4.6 | 11.9 | 18.1 | 0.0 |
| Cycle Q Clear(g_c), s | 8.6 | 40.6 | 40.8 | 20.7 | 42.3 | 0.0 | 9.9 | 8.8 | 4.6 | 11.9 | 18.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.70 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 249 | 1853 | 632 | 521 | 2361 | 735 | 283 | 825 | 315 | 166 | 864 | 386 |
| V/C Ratio(X) | 0.75 | 0.77 | 0.77 | 0.88 | 0.72 | 0.00 | 0.77 | 0.29 | 0.16 | 0.82 | 0.54 | 0.00 |
| Avail Cap(c_a), veh/h | 258 | 1853 | 632 | 581 | 2361 | 735 | 387 | 908 | 347 | 189 | 885 | 396 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.83 | 0.83 | 0.83 | 0.48 | 0.48 | 0.00 | 0.97 | 0.97 | 0.97 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 67.8 | 38.0 | 38.7 | 61.4 | 29.8 | 0.0 | 66.9 | 45.7 | 44.9 | 66.2 | 47.8 | 0.0 |
| Incr Delay (d2), s/veh | 9.7 | 2.6 | 7.3 | 6.3 | 0.9 | 0.0 | 3.9 | 0.1 | 0.1 | 18.7 | 0.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.2 | 17.3 | 18.6 | 9.7 | 18.7 | 0.0 | 4.6 | 4.0 | 1.7 | 6.3 | 8.3 | 0.0 |
| LnGrp Delay(d),s/veh | 77.5 | 40.6 | 45.9 | 67.7 | 30.7 | 0.0 | 70.8 | 45.7 | 45.0 | 84.9 | 48.1 | 0.0 |
| LnGrp LOS | E | D | D | E | C | | E | D | D | F | D | |
| Approach Vol, veh/h | | 2092 | | | 2164 | | | 509 | | | 601 | |
| Approach Delay, s/veh | | 45.1 | | | 38.5 | | | 56.4 | | | 56.3 | |
| Approach LOS | | D | | | D | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 27.2 | 64.6 | 16.2 | 42.0 | 14.6 | 77.2 | 17.9 | 40.3 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.0 | 4.0 | 6.0 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 26.0 | 50.0 | 17.0 | 38.0 | 11.0 | 65.0 | 16.0 | 39.0 |
| Max Q Clear Time (g_c+I1), s | 22.7 | 42.8 | 11.9 | 20.1 | 10.6 | 44.3 | 13.9 | 10.8 |
| Green Ext Time (p_c), s | 0.5 | 7.1 | 0.3 | 2.0 | 0.0 | 20.6 | 0.0 | 2.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 44.8 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 355 | 971 | 0 | 1 | 1621 | 481 | 152 | 422 | 1091 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1942 | 1942 | 0 | 2000 | 1942 | 1942 | 1942 | 1942 | 1942 | | | |
| Adj Flow Rate, veh/h | 370 | 1011 | 0 | 1 | 1689 | 0 | 158 | 440 | 0 | | | |
| Adj No. of Lanes | 2 | 2 | 0 | 0 | 3 | 1 | 1 | 2 | 1 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | | | |
| Percent Heavy Veh, % | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| Cap, veh/h | 449 | 2656 | 0 | 24 | 2883 | 938 | 272 | 542 | 243 | | | |
| Arrive On Green | 0.13 | 0.72 | 0.00 | 0.57 | 0.57 | 0.00 | 0.15 | 0.15 | 0.00 | | | |
| Sat Flow, veh/h | 3588 | 3786 | 0 | 0 | 5015 | 1650 | 1849 | 3689 | 1650 | | | |
| Grp Volume(v), veh/h | 370 | 1011 | 0 | 654 | 1036 | 0 | 158 | 440 | 0 | | | |
| Grp Sat Flow(s),veh/h/ln | 1794 | 1845 | 0 | 1941 | 1537 | 1650 | 1849 | 1845 | 1650 | | | |
| Q Serve(g_s), s | 15.1 | 15.9 | 0.0 | 0.0 | 32.4 | 0.0 | 12.0 | 17.3 | 0.0 | | | |
| Cycle Q Clear(g_c), s | 15.1 | 15.9 | 0.0 | 32.6 | 32.4 | 0.0 | 12.0 | 17.3 | 0.0 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 449 | 2656 | 0 | 1127 | 1767 | 938 | 272 | 542 | 243 | | | |
| V/C Ratio(X) | 0.82 | 0.38 | 0.00 | 0.58 | 0.59 | 0.00 | 0.58 | 0.81 | 0.00 | | | |
| Avail Cap(c_a), veh/h | 622 | 2656 | 0 | 1127 | 1767 | 938 | 441 | 881 | 394 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.59 | 0.59 | 0.00 | 0.67 | 0.67 | 0.00 | 1.00 | 1.00 | 0.00 | | | |
| Uniform Delay (d), s/veh | 64.0 | 8.1 | 0.0 | 20.5 | 20.4 | 0.0 | 59.7 | 62.0 | 0.0 | | | |
| Incr Delay (d2), s/veh | 2.7 | 0.2 | 0.0 | 1.5 | 1.0 | 0.0 | 0.7 | 1.1 | 0.0 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 7.7 | 8.1 | 0.0 | 18.2 | 13.9 | 0.0 | 6.2 | 8.9 | 0.0 | | | |
| LnGrp Delay(d),s/veh | 66.7 | 8.3 | 0.0 | 22.0 | 21.4 | 0.0 | 60.4 | 63.1 | 0.0 | | | |
| LnGrp LOS | E | A | | C | C | | E | E | | | | |
| Approach Vol, veh/h | | 1381 | | | 1690 | | | 598 | | | | |
| Approach Delay, s/veh | | 24.0 | | | 21.6 | | | 62.4 | | | | |
| Approach LOS | | C | | | C | | | E | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 111.0 | | | 21.8 | 89.2 | | 25.2 |
| Change Period (Y+Rc), s | | 5.0 | | | 4.0 | 5.0 | | 4.2 |
| Max Green Setting (Gmax), s | | 106.0 | | | 25.0 | 77.0 | | 34.8 |
| Max Q Clear Time (g_c+I1), s | | 17.9 | | | 17.1 | 34.6 | | 19.3 |
| Green Ext Time (p_c), s | | 78.9 | | | 0.7 | 40.1 | | 1.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 29.2 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 109 | 309 | 80 | 208 | 1019 | 564 | 313 | 990 | 75 | 149 | 333 | 36 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 122 | 347 | 90 | 234 | 1145 | 634 | 352 | 1112 | 0 | 167 | 374 | 40 |
| Adj No. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 1 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 140 | 1435 | 447 | 378 | 1788 | 549 | 835 | 1647 | 0 | 331 | 901 | 280 |
| Arrive On Green | 0.04 | 0.28 | 0.28 | 0.11 | 0.35 | 0.35 | 0.25 | 0.33 | 0.00 | 0.10 | 0.18 | 0.18 |
| Sat Flow, veh/h | 3408 | 5036 | 1568 | 3408 | 5036 | 1547 | 3408 | 5202 | 0 | 3408 | 5036 | 1565 |
| Grp Volume(v), veh/h | 122 | 347 | 90 | 234 | 1145 | 634 | 352 | 1112 | 0 | 167 | 374 | 40 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1679 | 1568 | 1704 | 1679 | 1547 | 1704 | 1679 | 0 | 1704 | 1679 | 1565 |
| Q Serve(g_s), s | 3.6 | 5.3 | 4.4 | 6.6 | 19.0 | 35.5 | 8.7 | 19.1 | 0.0 | 4.7 | 6.6 | 2.2 |
| Cycle Q Clear(g_c), s | 3.6 | 5.3 | 4.4 | 6.6 | 19.0 | 35.5 | 8.7 | 19.1 | 0.0 | 4.7 | 6.6 | 2.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 140 | 1435 | 447 | 378 | 1788 | 549 | 835 | 1647 | 0 | 331 | 901 | 280 |
| V/C Ratio(X) | 0.87 | 0.24 | 0.20 | 0.62 | 0.64 | 1.15 | 0.42 | 0.68 | 0.00 | 0.51 | 0.41 | 0.14 |
| Avail Cap(c_a), veh/h | 140 | 1435 | 447 | 378 | 1788 | 549 | 835 | 1647 | 0 | 331 | 901 | 280 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.7 | 27.5 | 27.1 | 42.4 | 26.9 | 32.3 | 31.8 | 29.1 | 0.0 | 42.9 | 36.4 | 34.6 |
| Incr Delay (d2), s/veh | 48.1 | 0.4 | 1.0 | 7.4 | 1.8 | 88.7 | 1.6 | 2.2 | 0.0 | 5.4 | 1.4 | 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 | 2.6 | 2.5 | 2.0 | 3.5 | 9.1 | 28.6 | 4.3 | 9.2 | 0.0 | 2.4 | 3.2 | 1.0 |
| LnGrp Delay(d),s/veh | 95.8 | 27.9 | 28.1 | 49.8 | 28.7 | 121.0 | 33.3 | 31.3 | 0.0 | 48.3 | 37.8 | 35.7 |
| LnGrp LOS | F | C | C | D | C | F | C | C | | D | D | D |
| Approach Vol, veh/h | | 559 | | | 2013 | | | 1464 | | | 581 | |
| Approach Delay, s/veh | | 42.7 | | | 60.2 | | | 31.8 | | | 40.7 | |
| Approach LOS | | D | | | E | | | 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 | 14.2 | 37.2 | 15.6 | 33.0 | 29.0 | 22.4 | 8.6 | 40.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 9.7 | 32.7 | 11.1 | 28.5 | 24.5 | 17.9 | 4.1 | 35.5 |
| Max Q Clear Time (g_c+I1), s | 6.7 | 21.1 | 8.6 | 7.3 | 10.7 | 8.6 | 5.6 | 37.5 |
| Green Ext Time (p_c), s | 0.1 | 7.5 | 0.2 | 14.2 | 1.1 | 6.3 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 46.6 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 121 | 395 | 236 | 37 | 1261 | 53 | 492 | 198 | 41 | 103 | 128 | 236 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 141 | 459 | 274 | 43 | 1466 | 62 | 572 | 230 | 48 | 120 | 149 | 274 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 0 | 1 | 1 | 1 |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 153 | 1760 | 786 | 95 | 1643 | 735 | 552 | 317 | 66 | 139 | 245 | 204 |
| Arrive On Green | 0.09 | 0.50 | 0.50 | 0.05 | 0.47 | 0.47 | 0.16 | 0.22 | 0.22 | 0.08 | 0.13 | 0.13 |
| Sat Flow, veh/h | 1757 | 3505 | 1566 | 1757 | 3505 | 1568 | 3408 | 1471 | 307 | 1757 | 1845 | 1533 |
| Grp Volume(v), veh/h | 141 | 459 | 274 | 43 | 1466 | 62 | 572 | 0 | 278 | 120 | 149 | 274 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1566 | 1757 | 1752 | 1568 | 1704 | 0 | 1777 | 1757 | 1845 | 1533 |
| Q Serve(g_s), s | 9.6 | 9.0 | 12.7 | 2.9 | 46.0 | 2.6 | 19.5 | 0.0 | 17.5 | 8.1 | 9.2 | 16.0 |
| Cycle Q Clear(g_c), s | 9.6 | 9.0 | 12.7 | 2.9 | 46.0 | 2.6 | 19.5 | 0.0 | 17.5 | 8.1 | 9.2 | 16.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.17 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 153 | 1760 | 786 | 95 | 1643 | 735 | 552 | 0 | 384 | 139 | 245 | 204 |
| V/C Ratio(X) | 0.92 | 0.26 | 0.35 | 0.45 | 0.89 | 0.08 | 1.04 | 0.00 | 0.72 | 0.87 | 0.61 | 1.35 |
| Avail Cap(c_a), veh/h | 153 | 1760 | 786 | 95 | 1643 | 735 | 552 | 0 | 384 | 139 | 245 | 204 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 54.6 | 17.2 | 18.1 | 55.3 | 29.2 | 17.7 | 50.5 | 0.0 | 43.9 | 54.9 | 49.3 | 52.2 |
| Incr Delay (d2), s/veh | 54.3 | 0.4 | 1.2 | 14.9 | 7.8 | 0.2 | 48.3 | 0.0 | 11.3 | 47.2 | 10.8 | 184.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.0 | 4.4 | 5.7 | 1.8 | 24.0 | 1.2 | 12.8 | 0.0 | 9.8 | 5.8 | 5.4 | 17.2 |
| LnGrp Delay(d),s/veh | 108.9 | 17.5 | 19.3 | 70.2 | 37.0 | 17.9 | 98.8 | 0.0 | 55.3 | 102.1 | 60.1 | 237.1 |
| LnGrp LOS | F | B | B | E | D | B | F | | E | F | E | F |
| Approach Vol, veh/h | | 874 | | | 1571 | | | 850 | | | 543 | |
| Approach Delay, s/veh | | 32.8 | | | 37.2 | | | 84.5 | | | 158.7 | |
| Approach LOS | | C | | | D | | | F | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 14.0 | 30.5 | 11.0 | 65.0 | 24.0 | 20.5 | 15.0 | 61.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 9.5 | 25.5 | 6.5 | 60.5 | 19.5 | 16.0 | 10.5 | 56.5 |
| Max Q Clear Time (g_c+I1), s | 10.1 | 19.5 | 4.9 | 14.7 | 21.5 | 18.0 | 11.6 | 48.0 |
| Green Ext Time (p_c), s | 0.0 | 1.9 | 0.0 | 26.2 | 0.0 | 0.0 | 0.0 | 7.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 63.9 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 68 | 614 | 32 | 0 | 1802 | 159 | 107 | 127 | 1 | 148 | 39 | 344 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 73 | 660 | 34 | 0 | 1938 | 171 | 115 | 137 | 1 | 159 | 42 | 370 |
| Adj No. of Lanes | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 135 | 2221 | 994 | 2 | 1926 | 861 | 70 | 290 | 2 | 130 | 356 | 303 |
| Arrive On Green | 0.04 | 0.63 | 0.63 | 0.00 | 0.55 | 0.55 | 0.04 | 0.16 | 0.16 | 0.07 | 0.19 | 0.19 |
| Sat Flow, veh/h | 3408 | 3505 | 1568 | 1757 | 3505 | 1567 | 1757 | 1829 | 13 | 1757 | 1845 | 1568 |
| Grp Volume(v), veh/h | 73 | 660 | 34 | 0 | 1938 | 171 | 115 | 0 | 138 | 159 | 42 | 370 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1568 | 1757 | 1752 | 1567 | 1757 | 0 | 1842 | 1757 | 1845 | 1568 |
| Q Serve(g_s), s | 2.1 | 8.6 | 0.8 | 0.0 | 55.5 | 5.6 | 4.0 | 0.0 | 6.9 | 7.5 | 1.9 | 19.5 |
| Cycle Q Clear(g_c), s | 2.1 | 8.6 | 0.8 | 0.0 | 55.5 | 5.6 | 4.0 | 0.0 | 6.9 | 7.5 | 1.9 | 19.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.01 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 135 | 2221 | 994 | 2 | 1926 | 861 | 70 | 0 | 292 | 130 | 356 | 303 |
| V/C Ratio(X) | 0.54 | 0.30 | 0.03 | 0.00 | 1.01 | 0.20 | 1.65 | 0.00 | 0.47 | 1.22 | 0.12 | 1.22 |
| Avail Cap(c_a), veh/h | 135 | 2221 | 994 | 70 | 1926 | 861 | 70 | 0 | 292 | 130 | 356 | 303 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.6 | 8.3 | 6.9 | 0.0 | 22.8 | 11.5 | 48.5 | 0.0 | 38.7 | 46.8 | 33.6 | 40.7 |
| Incr Delay (d2), s/veh | 14.7 | 0.3 | 0.1 | 0.0 | 22.0 | 0.5 | 348.9 | 0.0 | 5.4 | 149.2 | 0.7 | 126.0 |
| 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 | 1.3 | 4.2 | 0.4 | 0.0 | 32.4 | 2.5 | 8.7 | 0.0 | 3.9 | 9.0 | 1.0 | 19.0 |
| LnGrp Delay(d),s/veh | 62.3 | 8.7 | 7.0 | 0.0 | 44.8 | 12.0 | 397.4 | 0.0 | 44.1 | 195.9 | 34.3 | 166.7 |
| LnGrp LOS | E | A | A | | F | B | F | | D | F | C | F |
| Approach Vol, veh/h | | 767 | | | 2109 | | | 253 | | | 571 | |
| Approach Delay, s/veh | | 13.7 | | | 42.1 | | | 204.7 | | | 165.1 | |
| Approach LOS | | B | | | D | | | F | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 12.0 | 20.5 | 0.0 | 68.5 | 8.5 | 24.0 | 8.5 | 60.0 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 7.5 | 16.0 | 4.0 | 55.5 | 4.0 | 19.5 | 4.0 | 55.5 |
| Max Q Clear Time (g_c+I1), s | 9.5 | 8.9 | 0.0 | 10.6 | 6.0 | 21.5 | 4.1 | 57.5 |
| Green Ext Time (p_c), s | 0.0 | 1.4 | 0.0 | 35.4 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 66.3 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 185 | 442 | 12 | 21 | 1948 | 416 | 50 | 54 | 33 | 261 | 22 | 420 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 193 | 460 | 12 | 22 | 2029 | 433 | 52 | 56 | 34 | 272 | 23 | 0 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 187 | 2398 | 1073 | 42 | 2108 | 924 | 67 | 71 | 43 | 326 | 229 | 194 |
| Arrive On Green | 0.11 | 0.68 | 0.68 | 0.02 | 0.60 | 0.60 | 0.04 | 0.07 | 0.07 | 0.10 | 0.12 | 0.00 |
| Sat Flow, veh/h | 1757 | 3505 | 1568 | 1757 | 3505 | 1536 | 1757 | 1076 | 653 | 3408 | 1845 | 1568 |
| Grp Volume(v), veh/h | 193 | 460 | 12 | 22 | 2029 | 433 | 52 | 0 | 90 | 272 | 23 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1568 | 1757 | 1752 | 1536 | 1757 | 0 | 1729 | 1704 | 1845 | 1568 |
| Q Serve(g_s), s | 16.0 | 7.2 | 0.4 | 1.9 | 82.2 | 23.5 | 4.4 | 0.0 | 7.7 | 11.8 | 1.7 | 0.0 |
| Cycle Q Clear(g_c), s | 16.0 | 7.2 | 0.4 | 1.9 | 82.2 | 23.5 | 4.4 | 0.0 | 7.7 | 11.8 | 1.7 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.38 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 187 | 2398 | 1073 | 42 | 2108 | 924 | 67 | 0 | 114 | 326 | 229 | 194 |
| V/C Ratio(X) | 1.03 | 0.19 | 0.01 | 0.52 | 0.96 | 0.47 | 0.78 | 0.00 | 0.79 | 0.83 | 0.10 | 0.00 |
| Avail Cap(c_a), veh/h | 187 | 2398 | 1073 | 117 | 2108 | 924 | 176 | 0 | 340 | 500 | 449 | 382 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 67.0 | 8.6 | 7.5 | 72.3 | 28.3 | 16.6 | 71.5 | 0.0 | 69.0 | 66.7 | 58.3 | 0.0 |
| Incr Delay (d2), s/veh | 73.8 | 0.2 | 0.0 | 3.7 | 12.6 | 1.7 | 7.2 | 0.0 | 11.2 | 7.2 | 0.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.6 | 3.5 | 0.2 | 0.9 | 43.1 | 10.4 | 2.3 | 0.0 | 4.0 | 5.9 | 0.9 | 0.0 |
| LnGrp Delay(d),s/veh | 141.0 | 8.8 | 7.6 | 76.0 | 40.8 | 18.3 | 78.7 | 0.0 | 80.2 | 73.9 | 58.4 | 0.0 |
| LnGrp LOS | F | A | A | E | D | B | E | | F | E | E | |
| Approach Vol, veh/h | | 665 | | | 2484 | | | 142 | | | 295 | |
| Approach Delay, s/veh | | 47.1 | | | 37.2 | | | 79.7 | | | 72.7 | |
| Approach LOS | | D | | | D | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 20.0 | 96.2 | 9.7 | 24.1 | 7.6 | 108.6 | 18.4 | 15.4 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 | 6.0 | 4.0 | 5.5 |
| Max Green Setting (Gmax), s | 16.0 | 63.0 | 15.0 | 36.5 | 10.0 | 69.0 | 22.0 | 29.5 |
| Max Q Clear Time (g_c+I1), s | 18.0 | 84.2 | 6.4 | 3.7 | 3.9 | 9.2 | 13.8 | 9.7 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 53.6 | 0.6 | 0.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 43.7 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 101 | 390 | 232 | 206 | 1086 | 693 | 109 | 379 | 119 | 78 | 414 | 134 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 2.0 |
| Lane Util. Factor | 0.97 | 0.91 | | 1.00 | *0.97 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3579 | 5005 | | 1845 | 3767 | 1650 | 1845 | 3689 | 1624 | 1845 | 3689 | 1630 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3579 | 5005 | | 1845 | 3767 | 1650 | 1845 | 3689 | 1624 | 1845 | 3689 | 1630 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 102 | 394 | 234 | 208 | 1097 | 700 | 110 | 383 | 120 | 79 | 418 | 135 |
| RTOR Reduction (vph) | 0 | 56 | 0 | 0 | 0 | 347 | 0 | 0 | 91 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 102 | 572 | 0 | 208 | 1097 | 353 | 110 | 383 | 29 | 79 | 418 | 135 |
| Confl. Peds. (#/hr) | | | | | | | | | 2 | | | 1 |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Free |
| Protected Phases | 1 | 6 | | 5 13 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | 2 | | | 8 | | | Free |
| Actuated Green, G (s) | 20.0 | 29.7 | | 31.0 | 44.7 | 44.7 | 24.0 | 33.0 | 33.0 | 24.0 | 33.0 | 140.0 |
| Effective Green, g (s) | 21.0 | 32.0 | | 33.0 | 47.0 | 47.0 | 25.0 | 35.0 | 34.0 | 25.0 | 35.0 | 140.0 |
| Actuated g/C Ratio | 0.15 | 0.23 | | 0.24 | 0.34 | 0.34 | 0.18 | 0.25 | 0.24 | 0.18 | 0.25 | 1.00 |
| Clearance Time (s) | 4.0 | 5.3 | | | 5.3 | 5.3 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 6.0 | | | 6.0 | 6.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 536 | 1144 | | 434 | 1264 | 553 | 329 | 922 | 394 | 329 | 922 | 1630 |
| v/s Ratio Prot | 0.03 | c0.11 | | c0.11 | c0.29 | | c0.06 | 0.10 | | 0.04 | c0.11 | |
| v/s Ratio Perm | | | | | | 0.21 | | | 0.02 | | | 0.08 |
| v/c Ratio | 0.19 | 0.50 | | 0.48 | 0.87 | 0.64 | 0.33 | 0.42 | 0.07 | 0.24 | 0.45 | 0.08 |
| Uniform Delay, d1 | 52.1 | 47.0 | | 46.1 | 43.6 | 39.3 | 50.2 | 43.9 | 40.9 | 49.3 | 44.4 | 0.0 |
| Progression Factor | 0.62 | 0.95 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.69 | 1.00 |
| Incremental Delay, d2 | 0.8 | 1.6 | | 0.8 | 8.2 | 5.6 | 2.7 | 1.4 | 0.4 | 1.6 | 1.5 | 0.1 |
| Delay (s) | 32.8 | 46.2 | | 46.9 | 51.8 | 44.9 | 53.0 | 45.3 | 41.2 | 49.6 | 76.4 | 0.1 |
| Level of Service | C | D | | D | D | D | D | D | D | D | E | A |
| Approach Delay (s) | | 44.3 | | | 48.9 | | | 45.9 | | | 56.8 | |
| Approach LOS | | D | | | D | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 48.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 78.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 247 | 891 | 144 | 69 | 1485 | 325 | 315 | 403 | 39 | 495 | 374 | 553 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 2.0 |
| Lane Util. Factor | 0.97 | 0.91 | | 1.00 | *0.97 | 1.00 | *1.00 | *0.97 | | *1.00 | *0.98 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.99 | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | 3579 | 5500 | | 1845 | 5650 | 1627 | 1845 | 3694 | | 1845 | 3723 | 1650 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.99 | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | 3579 | 5191 | | 1845 | 5650 | 1627 | 1845 | 3694 | | 1845 | 3723 | 1650 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 255 | 919 | 148 | 71 | 1531 | 335 | 325 | 415 | 40 | 510 | 386 | 570 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 0 | 188 | 0 | 62 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 255 | 1053 | 0 | 71 | 1531 | 147 | 253 | 465 | 0 | 291 | 605 | 570 |
| Confl. Peds. (#/hr) | | | | | | 1 | | | | | | |
| Confl. Bikes (#/hr) | | | | | | 1 | | | 4 | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Split | NA | | Split | NA | Free |
| Protected Phases | 1 | 6 | | 5 | 2 | | 4 | 4 | | 3 | 3 | |
| Permitted Phases | | | | | | 2 | | | | | | Free |
| Actuated Green, G (s) | 10.0 | 61.4 | | 7.6 | 59.0 | 59.0 | 26.9 | 26.9 | | 24.8 | 24.8 | 140.0 |
| Effective Green, g (s) | 11.0 | 63.7 | | 8.6 | 61.3 | 61.3 | 28.9 | 28.9 | | 26.8 | 26.8 | 140.0 |
| Actuated g/C Ratio | 0.08 | 0.46 | | 0.06 | 0.44 | 0.44 | 0.21 | 0.21 | | 0.19 | 0.19 | 1.00 |
| Clearance Time (s) | 4.0 | 5.3 | | 4.0 | 5.3 | 5.3 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 6.0 | | 2.0 | 6.0 | 6.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 281 | 2502 | | 113 | 2473 | 712 | 380 | 762 | | 353 | 712 | 1650 |
| v/s Ratio Prot | c0.07 | 0.19 | | 0.04 | c0.27 | | c0.14 | 0.13 | | 0.16 | c0.16 | |
| v/s Ratio Perm | | | | | | 0.09 | | | | | | c0.35 |
| v/c Ratio | 0.91 | 0.42 | | 0.63 | 0.62 | 0.21 | 0.67 | 0.61 | | 0.82 | 0.85 | 0.35 |
| Uniform Delay, d1 | 64.0 | 25.7 | | 64.1 | 30.3 | 24.3 | 51.1 | 50.4 | | 54.3 | 54.7 | 0.0 |
| Progression Factor | 1.17 | 0.63 | | 1.00 | 0.91 | 2.17 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 29.0 | 0.5 | | 6.6 | 1.0 | 0.6 | 4.8 | 1.7 | | 15.0 | 9.7 | 0.6 |
| Delay (s) | 103.7 | 16.8 | | 70.7 | 28.6 | 53.3 | 55.9 | 52.1 | | 69.4 | 64.4 | 0.6 |
| Level of Service | F | B | | E | C | D | E | D | | E | E | A |
| Approach Delay (s) | | 33.5 | | | 34.4 | | | 53.3 | | | 40.6 | |
| Approach LOS | | C | | | C | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 38.5 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 76.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 105 | 1797 | 124 | 55 | 2546 | 109 | 149 | 184 | 73 | 81 | 214 | 116 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 4.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 1.00 | 0.91 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.87 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.93 | 1.00 | | 0.99 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1845 | 5180 | | 1845 | 5240 | | 1707 | 1846 | | 1831 | 1942 | 1431 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.46 | 1.00 | | 0.40 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1845 | 5180 | | 1845 | 5240 | | 831 | 1846 | | 350 | 1942 | 1431 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 113 | 1932 | 133 | 59 | 2738 | 117 | 160 | 198 | 78 | 87 | 230 | 125 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 11 | 0 | 0 | 0 | 63 |
| Lane Group Flow (vph) | 113 | 2060 | 0 | 59 | 2852 | 0 | 160 | 265 | 0 | 87 | 230 | 62 |
| Confl. Peds. (#/hr) | | | 60 | | | 36 | 97 | | 11 | 11 | | 97 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | | 4 | | | 4 | |
| Permitted Phases | | | | | | | 4 | | | 4 | | 4 |
| Actuated Green, G (s) | 12.5 | 77.3 | | 6.3 | 71.1 | | 42.4 | 42.4 | | 42.4 | 42.4 | 42.4 |
| Effective Green, g (s) | 13.5 | 79.3 | | 6.3 | 73.1 | | 44.4 | 44.4 | | 44.4 | 44.4 | 43.4 |
| Actuated g/C Ratio | 0.10 | 0.57 | | 0.04 | 0.52 | | 0.32 | 0.32 | | 0.32 | 0.32 | 0.31 |
| Clearance Time (s) | 4.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 6.0 | | 2.0 | 6.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Grp Cap (vph) | 177 | 2934 | | 83 | 2736 | | 263 | 585 | | 111 | 615 | 443 |
| v/s Ratio Prot | c0.06 | 0.40 | | 0.03 | c0.54 | | | 0.14 | | | 0.12 | |
| v/s Ratio Perm | | | | | | | 0.19 | | | c0.25 | | 0.04 |
| v/c Ratio | 0.64 | 0.70 | | 0.71 | 1.04 | | 0.61 | 0.45 | | 0.78 | 0.37 | 0.14 |
| Uniform Delay, d1 | 60.9 | 21.8 | | 66.0 | 33.5 | | 40.4 | 38.1 | | 43.4 | 37.0 | 34.8 |
| Progression Factor | 0.95 | 0.72 | | 1.31 | 0.55 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 4.3 | 1.1 | | 10.3 | 24.7 | | 4.6 | 0.8 | | 30.9 | 0.5 | 0.2 |
| Delay (s) | 62.3 | 16.9 | | 96.7 | 43.2 | | 45.0 | 38.9 | | 74.3 | 37.6 | 35.0 |
| Level of Service | E | B | | F | D | | D | D | | E | D | D |
| Approach Delay (s) | | 19.2 | | | 44.2 | | | 41.1 | | | 44.1 | |
| Approach LOS | | B | | | D | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 34.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.92 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 102.7% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 12 | 70 | 155 | 171 | 1495 | 201 | 435 | 278 | 1860 | 40 | 61 | 94 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | | 1.00 | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.93 | 1.00 | 0.97 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.84 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1660 | 1748 | 1376 | 1660 | 5500 | | 1660 | 1748 | 2614 | 1577 | 1655 | 1245 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1660 | 1748 | 1376 | 1660 | 5500 | | 1660 | 1748 | 2614 | 1577 | 1655 | 1245 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 12 | 72 | 160 | 176 | 1541 | 207 | 448 | 287 | 1918 | 41 | 63 | 97 |
| RTOR Reduction (vph) | 0 | 0 | 109 | 0 | 11 | 0 | 0 | 0 | 1000 | 0 | 0 | 78 |
| Lane Group Flow (vph) | 12 | 72 | 51 | 176 | 1737 | 0 | 448 | 287 | 918 | 37 | 67 | 19 |
| Confl. Peds. (#/hr) | | | 28 | | | 78 | | | | | | 94 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | | | | 1 |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 3 | | | 4 |
| Actuated Green, G (s) | 2.7 | 42.7 | 42.7 | 16.3 | 55.3 | | 36.0 | 36.0 | 36.0 | 26.0 | 26.0 | 26.0 |
| Effective Green, g (s) | 3.7 | 44.7 | 44.7 | 17.3 | 57.3 | | 38.0 | 38.0 | 38.0 | 28.0 | 28.0 | 28.0 |
| Actuated g/C Ratio | 0.03 | 0.32 | 0.32 | 0.12 | 0.41 | | 0.27 | 0.27 | 0.27 | 0.20 | 0.20 | 0.20 |
| Clearance Time (s) | 4.0 | 5.0 | 5.0 | 4.0 | 6.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 3.0 | 3.0 | 2.0 | 6.0 | | 4.0 | 4.0 | 4.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 43 | 558 | 439 | 205 | 2251 | | 450 | 474 | 709 | 315 | 331 | 249 |
| v/s Ratio Prot | 0.01 | 0.04 | | c0.11 | c0.32 | | 0.27 | 0.16 | | 0.02 | c0.04 | |
| v/s Ratio Perm | | | 0.04 | | | | | | c0.35 | | | 0.02 |
| v/c Ratio | 0.28 | 0.13 | 0.12 | 0.86 | 0.77 | | 1.00 | 0.61 | 1.30 | 0.12 | 0.20 | 0.08 |
| Uniform Delay, d1 | 66.8 | 33.8 | 33.7 | 60.2 | 35.7 | | 50.9 | 44.5 | 51.0 | 45.9 | 46.7 | 45.5 |
| Progression Factor | 0.68 | 1.05 | 4.32 | 1.28 | 0.40 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.3 | 0.1 | 0.1 | 21.1 | 1.9 | | 41.0 | 2.5 | 143.2 | 0.1 | 0.1 | 0.0 |
| Delay (s) | 46.9 | 35.5 | 145.6 | 97.9 | 16.0 | | 92.0 | 47.0 | 194.2 | 45.9 | 46.8 | 45.6 |
| Level of Service | D | D | F | F | B | | F | D | F | D | D | D |
| Approach Delay (s) | | 108.2 | | | 23.5 | | | 161.0 | | | 46.0 | |
| Approach LOS | | F | | | C | | | F | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 101.2 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 121.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 169 | 364 | 867 | 1038 | 0 | 0 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.2 | 3.2 | 3.0 | 5.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 0.97 | 0.95 | | |
| Frpb, ped/bikes | 1.00 | 0.99 | 1.00 | 1.00 | | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Satd. Flow (prot) | 1942 | 1627 | 3579 | 3689 | | |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Satd. Flow (perm) | 1942 | 1627 | 3579 | 3689 | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 178 | 383 | 913 | 1093 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 71 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 178 | 312 | 913 | 1093 | 0 | 0 |
| Confl. Peds. (#/hr) | | 1 | | | | |
| Confl. Bikes (#/hr) | | 2 | | | | |
| Turn Type | NA | Perm | Prot | NA | | |
| Protected Phases | 2 | | 1 | 1 2 | | |
| Permitted Phases | | 2 | | | | |
| Actuated Green, G (s) | 43.8 | 43.8 | 88.0 | 140.0 | | |
| Effective Green, g (s) | 44.8 | 44.8 | 89.0 | 134.8 | | |
| Actuated g/C Ratio | 0.32 | 0.32 | 0.64 | 0.96 | | |
| Clearance Time (s) | 4.2 | 4.2 | 4.0 | | | |
| Vehicle Extension (s) | 4.0 | 4.0 | 3.0 | | | |
| Lane Grp Cap (vph) | 621 | 520 | 2275 | 3551 | | |
| v/s Ratio Prot | 0.09 | | c0.26 | 0.30 | | |
| v/s Ratio Perm | | c0.19 | | | | |
| v/c Ratio | 0.29 | 0.60 | 0.40 | 0.31 | | |
| Uniform Delay, d1 | 35.6 | 40.1 | 12.5 | 0.1 | | |
| Progression Factor | 1.00 | 1.00 | 0.44 | 1.00 | | |
| Incremental Delay, d2 | 0.3 | 2.3 | 0.3 | 0.0 | | |
| Delay (s) | 36.0 | 42.3 | 5.9 | 0.2 | | |
| Level of Service | D | D | A | A | | |
| Approach Delay (s) | 40.3 | | | 2.8 | 0.0 | |
| Approach LOS | D | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 10.2 |
| Intersection Capacity Utilization | 51.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# Appendix D: Synchro LOS Sheets - PM Peak Period

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 36 | 404 | 86 | 346 | 52 | 39 | 103 | 532 | 1039 | 290 | 254 | 35 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 40 | 444 | 95 | 380 | 57 | 43 | 113 | 585 | 0 | 319 | 279 | 0 |
| Adj No. of Lanes | 1 | 2 | 0 | 2 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 50 | 460 | 98 | 480 | 264 | 199 | 141 | 1259 | 784 | 316 | 1609 | 0 |
| Arrive On Green | 0.03 | 0.16 | 0.16 | 0.14 | 0.27 | 0.27 | 0.08 | 0.36 | 0.00 | 0.18 | 0.46 | 0.00 |
| Sat Flow, veh/h | 1757 | 2878 | 611 | 3408 | 971 | 733 | 1757 | 3505 | 1568 | 1757 | 3597 | 0 |
| Grp Volume(v), veh/h | 40 | 269 | 270 | 380 | 0 | 100 | 113 | 585 | 0 | 319 | 279 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1737 | 1704 | 0 | 1704 | 1757 | 1752 | 1568 | 1757 | 1752 | 0 |
| Q Serve(g_s), s | 2.3 | 15.2 | 15.5 | 10.8 | 0.0 | 4.5 | 6.3 | 12.8 | 0.0 | 18.0 | 4.7 | 0.0 |
| Cycle Q Clear(g_c), s | 2.3 | 15.2 | 15.5 | 10.8 | 0.0 | 4.5 | 6.3 | 12.8 | 0.0 | 18.0 | 4.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.35 | 1.00 | | 0.43 | 1.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 50 | 280 | 278 | 480 | 0 | 464 | 141 | 1259 | 784 | 316 | 1609 | 0 |
| V/C Ratio(X) | 0.80 | 0.96 | 0.97 | 0.79 | 0.00 | 0.22 | 0.80 | 0.46 | 0.00 | 1.01 | 0.17 | 0.00 |
| Avail Cap(c_a), veh/h | 88 | 280 | 278 | 1125 | 0 | 750 | 176 | 1259 | 784 | 316 | 1609 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 48.3 | 41.7 | 41.8 | 41.5 | 0.0 | 28.1 | 45.2 | 24.6 | 0.0 | 41.0 | 15.9 | 0.0 |
| Incr Delay (d2), s/veh | 23.9 | 42.7 | 45.9 | 3.0 | 0.0 | 0.2 | 19.0 | 1.2 | 0.0 | 52.8 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.4 | 10.7 | 11.0 | 5.3 | 0.0 | 2.2 | 3.8 | 6.4 | 0.0 | 13.3 | 2.3 | 0.0 |
| LnGrp Delay(d),s/veh | 72.2 | 84.4 | 87.7 | 44.5 | 0.0 | 28.4 | 64.3 | 25.9 | 0.0 | 93.9 | 16.1 | 0.0 |
| LnGrp LOS | E | F | F | D | | C | E | C | | F | B | |
| Approach Vol, veh/h | | 579 | | | 480 | | | 698 | | | 598 | |
| Approach Delay, s/veh | | 85.1 | | | 41.2 | | | 32.1 | | | 57.6 | |
| Approach LOS | | F | | | D | | | C | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 22.0 | 39.9 | 18.1 | 20.0 | 12.0 | 49.9 | 6.9 | 31.2 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 18.0 | 17.0 | 33.0 | 16.0 | 10.0 | 25.0 | 5.0 | 44.0 |
| Max Q Clear Time (g_c+I1), s | 20.0 | 14.8 | 12.8 | 17.5 | 8.3 | 6.7 | 4.3 | 6.5 |
| Green Ext Time (p_c), s | 0.0 | 1.2 | 1.3 | 0.0 | 0.0 | 5.7 | 0.0 | 4.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 53.4 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 16 | 1305 | 23 | 93 | 444 | 6 | 19 | 16 | 251 | 13 | 6 | 7 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 0.97 | 0.99 | | 0.99 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 16 | 1345 | 24 | 96 | 458 | 6 | 20 | 16 | 259 | 13 | 6 | 7 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 54 | 2312 | 41 | 222 | 1268 | 17 | 58 | 31 | 312 | 161 | 75 | 64 |
| Arrive On Green | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| Sat Flow, veh/h | 16 | 3418 | 61 | 231 | 1875 | 26 | 55 | 137 | 1375 | 429 | 331 | 280 |
| Grp Volume(v), veh/h | 725 | 0 | 660 | 170 | 0 | 390 | 295 | 0 | 0 | 26 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1829 | 0 | 1665 | 458 | 0 | 1673 | 1566 | 0 | 0 | 1040 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 18.0 | 11.5 | 0.0 | 8.4 | 5.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 17.8 | 0.0 | 18.0 | 29.6 | 0.0 | 8.4 | 15.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| Prop In Lane | 0.02 | | 0.04 | 0.56 | | 0.02 | 0.07 | | 0.88 | 0.50 | | 0.27 |
| Lane Grp Cap(c), veh/h | 1280 | 0 | 1127 | 376 | 0 | 1132 | 401 | 0 | 0 | 300 | 0 | 0 |
| V/C Ratio(X) | 0.57 | 0.00 | 0.59 | 0.45 | 0.00 | 0.34 | 0.74 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1280 | 0 | 1127 | 376 | 0 | 1132 | 514 | 0 | 0 | 392 | 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 | 7.3 | 0.0 | 7.4 | 10.8 | 0.0 | 5.8 | 31.2 | 0.0 | 0.0 | 25.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.8 | 0.0 | 2.2 | 1.2 | 0.0 | 0.3 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.5 | 0.0 | 8.9 | 2.8 | 0.0 | 3.9 | 6.9 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 9.2 | 0.0 | 9.6 | 12.0 | 0.0 | 6.1 | 33.9 | 0.0 | 0.0 | 25.8 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | B | | A | C | | | C | | |
| Approach Vol, veh/h | | 1385 | | | 560 | | | 295 | | | 26 | |
| Approach Delay, s/veh | | 9.4 | | | 7.9 | | | 33.9 | | | 25.8 | |
| Approach LOS | | A | | | A | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 62.0 | | 23.0 | | 62.0 | | 23.0 |
| Change Period (Y+Rc), s | | 4.5 | | * 3.7 | | 4.5 | | 3.7 |
| Max Green Setting (Gmax), s | | 51.5 | | * 26 | | 51.5 | | 25.3 |
| Max Q Clear Time (g_c+I1), s | | 20.0 | | 17.2 | | 31.6 | | 3.0 |
| Green Ext Time (p_c), s | | 24.2 | | 0.9 | | 16.6 | | 1.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 12.4 |
| HCM 2010 LOS | B |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 18 | 1162 | 184 | 172 | 356 | 26 | 220 | 62 | 307 | 23 | 33 | 12 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 19 | 1210 | 192 | 179 | 371 | 27 | 229 | 65 | 320 | 24 | 34 | 12 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 30 | 1440 | 227 | 216 | 1925 | 140 | 381 | 446 | 373 | 295 | 315 | 111 |
| Arrive On Green | 0.02 | 0.48 | 0.48 | 0.12 | 0.58 | 0.58 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Sat Flow, veh/h | 1757 | 3030 | 478 | 1757 | 3313 | 240 | 1337 | 1845 | 1542 | 983 | 1302 | 460 |
| Grp Volume(v), veh/h | 19 | 697 | 705 | 179 | 195 | 203 | 229 | 65 | 320 | 24 | 0 | 46 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1756 | 1757 | 1752 | 1801 | 1337 | 1845 | 1542 | 983 | 0 | 1762 |
| Q Serve(g_s), s | 0.9 | 29.5 | 29.9 | 8.5 | 4.5 | 4.5 | 13.7 | 2.4 | 16.9 | 1.7 | 0.0 | 1.7 |
| Cycle Q Clear(g_c), s | 0.9 | 29.5 | 29.9 | 8.5 | 4.5 | 4.5 | 15.4 | 2.4 | 16.9 | 4.0 | 0.0 | 1.7 |
| Prop In Lane | 1.00 | | 0.27 | 1.00 | | 0.13 | 1.00 | | 1.00 | 1.00 | | 0.26 |
| Lane Grp Cap(c), veh/h | 30 | 833 | 834 | 216 | 1018 | 1047 | 381 | 446 | 373 | 295 | 0 | 426 |
| V/C Ratio(X) | 0.64 | 0.84 | 0.84 | 0.83 | 0.19 | 0.19 | 0.60 | 0.15 | 0.86 | 0.08 | 0.00 | 0.11 |
| Avail Cap(c_a), veh/h | 215 | 833 | 834 | 360 | 1018 | 1047 | 498 | 608 | 508 | 381 | 0 | 580 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 41.5 | 19.4 | 19.6 | 36.4 | 8.4 | 8.4 | 31.1 | 25.3 | 30.8 | 26.9 | 0.0 | 25.1 |
| Incr Delay (d2), s/veh | 15.4 | 9.8 | 10.3 | 3.1 | 0.4 | 0.4 | 1.1 | 0.1 | 9.2 | 0.1 | 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 | 0.6 | 16.4 | 16.9 | 4.3 | 2.3 | 2.4 | 5.1 | 1.2 | 8.1 | 0.5 | 0.0 | 0.9 |
| LnGrp Delay(d),s/veh | 56.9 | 29.2 | 29.8 | 39.5 | 8.8 | 8.8 | 32.2 | 25.4 | 40.0 | 27.0 | 0.0 | 25.2 |
| LnGrp LOS | E | C | C | D | A | A | C | C | D | C | | C |
| Approach Vol, veh/h | | 1421 | | | 577 | | | 614 | | | 70 | |
| Approach Delay, s/veh | | 29.9 | | | 18.3 | | | 35.5 | | | 25.8 | |
| Approach LOS | | C | | | B | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 14.4 | 45.4 | | 25.2 | 5.4 | 54.4 | | 25.2 |
| Change Period (Y+Rc), s | 4.0 | 5.0 | | 4.6 | 4.0 | 5.0 | | 4.6 |
| Max Green Setting (Gmax), s | 17.4 | 26.0 | | 28.0 | 10.4 | 33.0 | | 28.0 |
| Max Q Clear Time (g_c+I1), s | 10.5 | 31.9 | | 18.9 | 2.9 | 6.5 | | 6.0 |
| Green Ext Time (p_c), s | 0.1 | 0.0 | | 1.5 | 0.0 | 12.6 | | 2.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 28.6 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 156 | 509 | 37 | 61 | 240 | 195 | 51 | 610 | 88 | 190 | 378 | 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 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 159 | 519 | 38 | 62 | 245 | 199 | 52 | 622 | 90 | 194 | 386 | 13 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 168 | 488 | 36 | 80 | 435 | 339 | 67 | 727 | 105 | 477 | 1677 | 56 |
| Arrive On Green | 0.10 | 0.29 | 0.29 | 0.05 | 0.23 | 0.23 | 0.04 | 0.24 | 0.24 | 0.27 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1757 | 1697 | 124 | 1757 | 1869 | 1456 | 1757 | 3075 | 444 | 1757 | 3460 | 116 |
| Grp Volume(v), veh/h | 159 | 0 | 557 | 62 | 229 | 215 | 52 | 354 | 358 | 194 | 195 | 204 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 0 | 1821 | 1757 | 1752 | 1572 | 1757 | 1752 | 1766 | 1757 | 1752 | 1824 |
| Q Serve(g_s), s | 10.8 | 0.0 | 34.5 | 4.2 | 13.8 | 14.6 | 3.5 | 23.2 | 23.3 | 10.9 | 7.7 | 7.8 |
| Cycle Q Clear(g_c), s | 10.8 | 0.0 | 34.5 | 4.2 | 13.8 | 14.6 | 3.5 | 23.2 | 23.3 | 10.9 | 7.7 | 7.8 |
| Prop In Lane | 1.00 | | 0.07 | 1.00 | | 0.93 | 1.00 | | 0.25 | 1.00 | | 0.06 |
| Lane Grp Cap(c), veh/h | 168 | 0 | 523 | 80 | 408 | 366 | 67 | 414 | 418 | 477 | 849 | 884 |
| V/C Ratio(X) | 0.94 | 0.00 | 1.06 | 0.78 | 0.56 | 0.59 | 0.77 | 0.85 | 0.86 | 0.41 | 0.23 | 0.23 |
| Avail Cap(c_a), veh/h | 168 | 0 | 523 | 176 | 504 | 452 | 205 | 467 | 471 | 477 | 849 | 884 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.9 | 0.0 | 42.8 | 56.7 | 40.6 | 40.9 | 57.2 | 43.8 | 43.9 | 35.8 | 17.9 | 17.9 |
| Incr Delay (d2), s/veh | 53.1 | 0.0 | 57.5 | 14.8 | 1.7 | 2.1 | 17.1 | 19.6 | 19.8 | 0.6 | 0.6 | 0.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.7 | 0.0 | 25.7 | 2.4 | 6.9 | 6.5 | 2.0 | 13.5 | 13.6 | 5.4 | 3.9 | 4.1 |
| LnGrp Delay(d),s/veh | 107.0 | 0.0 | 100.2 | 71.5 | 42.3 | 43.0 | 74.3 | 63.4 | 63.6 | 36.4 | 18.6 | 18.5 |
| LnGrp LOS | F | | F | E | D | D | E | E | E | D | B | B |
| Approach Vol, veh/h | | 716 | | | 506 | | | 764 | | | 593 | |
| Approach Delay, s/veh | | 101.7 | | | 46.2 | | | 64.3 | | | 24.4 | |
| Approach LOS | | F | | | D | | | E | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 37.9 | 33.7 | 8.9 | 39.5 | 8.1 | 63.5 | 15.5 | 32.9 |
| Change Period (Y+Rc), s | 5.3 | * 5.3 | 3.5 | 5.0 | 3.5 | 5.3 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 23.7 | * 32 | 12.0 | 34.5 | 14.0 | 42.2 | 11.5 | 34.5 |
| Max Q Clear Time (g_c+I1), s | 12.9 | 25.3 | 6.2 | 36.5 | 5.5 | 9.8 | 12.8 | 16.6 |
| Green Ext Time (p_c), s | 2.8 | 3.1 | 0.0 | 0.0 | 0.0 | 4.2 | 0.0 | 8.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 62.0 |
| HCM 2010 LOS | E |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 657 | 62 | 28 | 39 | 62 | 69 | 1 | 951 | 20 | 35 | 516 | 286 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 0.99 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 684 | 65 | 0 | 41 | 65 | 72 | 1 | 991 | 21 | 36 | 538 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 597 | 627 | 0 | 49 | 77 | 86 | 36 | 1201 | 25 | 45 | 1455 | 651 |
| Arrive On Green | 0.34 | 0.34 | 0.00 | 0.12 | 0.12 | 0.12 | 0.35 | 0.35 | 0.35 | 0.03 | 0.42 | 0.00 |
| Sat Flow, veh/h | 1757 | 1845 | 0 | 390 | 618 | 684 | 0 | 3436 | 73 | 1757 | 3505 | 1568 |
| Grp Volume(v), veh/h | 684 | 65 | 0 | 178 | 0 | 0 | 532 | 0 | 481 | 36 | 538 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1845 | 0 | 1691 | 0 | 0 | 1844 | 0 | 1665 | 1757 | 1752 | 1568 |
| Q Serve(g_s), s | 34.0 | 2.4 | 0.0 | 10.3 | 0.0 | 0.0 | 0.0 | 0.0 | 26.4 | 2.0 | 10.6 | 0.0 |
| Cycle Q Clear(g_c), s | 34.0 | 2.4 | 0.0 | 10.3 | 0.0 | 0.0 | 26.4 | 0.0 | 26.4 | 2.0 | 10.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 0.23 | | 0.40 | 0.00 | | 0.04 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 597 | 627 | 0 | 211 | 0 | 0 | 681 | 0 | 582 | 45 | 1455 | 651 |
| V/C Ratio(X) | 1.15 | 0.10 | 0.00 | 0.84 | 0.00 | 0.00 | 0.78 | 0.00 | 0.83 | 0.80 | 0.37 | 0.00 |
| Avail Cap(c_a), veh/h | 597 | 627 | 0 | 271 | 0 | 0 | 681 | 0 | 582 | 70 | 1455 | 651 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.85 | 0.00 | 0.85 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 33.0 | 22.6 | 0.0 | 42.8 | 0.0 | 0.0 | 29.7 | 0.0 | 29.7 | 48.5 | 20.2 | 0.0 |
| Incr Delay (d2), s/veh | 83.8 | 0.1 | 0.0 | 17.0 | 0.0 | 0.0 | 7.5 | 0.0 | 10.9 | 29.0 | 0.7 | 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 | 30.3 | 1.2 | 0.0 | 5.8 | 0.0 | 0.0 | 14.9 | 0.0 | 13.9 | 1.4 | 5.2 | 0.0 |
| LnGrp Delay(d),s/veh | 116.8 | 22.6 | 0.0 | 59.8 | 0.0 | 0.0 | 37.2 | 0.0 | 40.7 | 77.4 | 20.9 | 0.0 |
| LnGrp LOS | F | C | | E | | | D | | D | E | C | |
| Approach Vol, veh/h | | 749 | | | 178 | | | 1013 | | | 574 | |
| Approach Delay, s/veh | | 108.7 | | | 59.8 | | | 38.9 | | | 24.5 | |
| Approach LOS | | F | | | E | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 6.6 | 38.9 | | 38.0 | | 45.5 | | 16.5 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | 4.0 | 30.0 | | 34.0 | | 38.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | 4.0 | 28.4 | | 36.0 | | 12.6 | | 12.3 |
| Green Ext Time (p_c), s | 0.0 | 1.3 | | 0.0 | | 12.1 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 57.9 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 13 | 425 | 130 | 70 | 267 | 148 | 181 | 833 | 89 | 137 | 400 | 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 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 14 | 452 | 138 | 74 | 284 | 0 | 193 | 886 | 95 | 146 | 426 | 0 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 22 | 612 | 185 | 65 | 905 | 405 | 222 | 1685 | 748 | 176 | 1592 | 0 |
| Arrive On Green | 0.01 | 0.23 | 0.23 | 0.04 | 0.26 | 0.00 | 0.13 | 0.48 | 0.48 | 0.10 | 0.45 | 0.00 |
| Sat Flow, veh/h | 1757 | 2616 | 790 | 1757 | 3505 | 1568 | 1757 | 3505 | 1555 | 1757 | 3597 | 0 |
| Grp Volume(v), veh/h | 14 | 301 | 289 | 74 | 284 | 0 | 193 | 886 | 95 | 146 | 426 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1654 | 1757 | 1752 | 1568 | 1757 | 1752 | 1555 | 1757 | 1752 | 0 |
| Q Serve(g_s), s | 0.9 | 17.2 | 17.5 | 4.0 | 7.1 | 0.0 | 11.6 | 19.0 | 3.6 | 8.8 | 8.2 | 0.0 |
| Cycle Q Clear(g_c), s | 0.9 | 17.2 | 17.5 | 4.0 | 7.1 | 0.0 | 11.6 | 19.0 | 3.6 | 8.8 | 8.2 | 0.0 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 22 | 410 | 387 | 65 | 905 | 405 | 222 | 1685 | 748 | 176 | 1592 | 0 |
| V/C Ratio(X) | 0.63 | 0.73 | 0.75 | 1.14 | 0.31 | 0.00 | 0.87 | 0.53 | 0.13 | 0.83 | 0.27 | 0.00 |
| Avail Cap(c_a), veh/h | 244 | 746 | 705 | 65 | 905 | 405 | 244 | 1685 | 748 | 244 | 1592 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.00 |
| Uniform Delay (d), s/veh | 53.1 | 38.3 | 38.4 | 52.0 | 32.3 | 0.0 | 46.3 | 19.5 | 15.5 | 47.7 | 18.3 | 0.0 |
| Incr Delay (d2), s/veh | 25.5 | 2.6 | 2.9 | 153.8 | 0.2 | 0.0 | 25.1 | 1.2 | 0.3 | 14.6 | 0.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 8.6 | 8.3 | 4.7 | 3.5 | 0.0 | 7.2 | 9.4 | 1.6 | 5.0 | 4.0 | 0.0 |
| LnGrp Delay(d),s/veh | 78.5 | 40.8 | 41.3 | 206.0 | 32.5 | 0.0 | 71.4 | 20.7 | 15.9 | 62.3 | 18.7 | 0.0 |
| LnGrp LOS | E | D | D | F | C | | E | C | B | E | B | |
| Approach Vol, veh/h | | 604 | | | 358 | | | 1174 | | | 572 | |
| Approach Delay, s/veh | | 41.9 | | | 68.4 | | | 28.6 | | | 29.8 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 14.8 | 55.9 | 8.0 | 29.3 | 17.7 | 53.1 | 5.4 | 31.9 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 15.0 | 27.0 | 4.0 | 46.0 | 15.0 | 27.0 | 15.0 | 27.0 |
| Max Q Clear Time (g_c+I1), s | 10.8 | 21.0 | 6.0 | 19.5 | 13.6 | 10.2 | 2.9 | 9.1 |
| Green Ext Time (p_c), s | 0.1 | 4.1 | 0.0 | 5.8 | 0.1 | 8.8 | 0.0 | 5.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 37.1 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 557 | 105 | 83 | 12 | 100 | 41 | 98 | 629 | 52 | 36 | 248 | 349 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.96 | | 1.00 | 1.00 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.95 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 0.97 | 1.00 | | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1665 | 1694 | 1510 | | 1835 | 1568 | 1752 | 3430 | | 1752 | 3505 | 1497 |
| Flt Permitted | 0.95 | 0.97 | 1.00 | | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1665 | 1694 | 1510 | | 1835 | 1568 | 1752 | 3430 | | 1752 | 3505 | 1497 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 612 | 115 | 91 | 13 | 110 | 45 | 108 | 691 | 57 | 40 | 273 | 384 |
| RTOR Reduction (vph) | 0 | 0 | 69 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 361 | 366 | 22 | 0 | 123 | 9 | 108 | 748 | 0 | 40 | 273 | 384 |
| Confl. Peds. (#/hr) | | | 15 | | | | | | 39 | | | 20 |
| Confl. Bikes (#/hr) | | | | | | | | | 4 | | | |
| Turn Type | Split | NA | Perm | Split | NA | Perm | Prot | NA | | Prot | NA | Perm |
| Protected Phases | 1 | 1 | | 2 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 1 | | | 2 | | | | | | 4 |
| Actuated Green, G (s) | 21.4 | 21.4 | 21.4 | | 18.0 | 18.0 | 6.0 | 31.0 | | 3.6 | 28.6 | 28.6 |
| Effective Green, g (s) | 21.4 | 21.4 | 21.4 | | 18.0 | 18.0 | 6.0 | 31.0 | | 3.6 | 28.6 | 28.6 |
| Actuated g/C Ratio | 0.24 | 0.24 | 0.24 | | 0.20 | 0.20 | 0.07 | 0.34 | | 0.04 | 0.32 | 0.32 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 395 | 402 | 359 | | 367 | 313 | 116 | 1181 | | 70 | 1113 | 475 |
| v/s Ratio Prot | c0.22 | 0.22 | | | c0.07 | | c0.06 | 0.22 | | 0.02 | 0.08 | |
| v/s Ratio Perm | | | 0.01 | | | 0.01 | | | | | | c0.26 |
| v/c Ratio | 0.91 | 0.91 | 0.06 | | 0.34 | 0.03 | 0.93 | 0.63 | | 0.57 | 0.25 | 0.81 |
| Uniform Delay, d1 | 33.4 | 33.4 | 26.5 | | 30.9 | 29.0 | 41.8 | 24.7 | | 42.4 | 22.7 | 28.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 25.1 | 24.3 | 0.1 | | 2.5 | 0.2 | 62.0 | 1.1 | | 10.8 | 0.1 | 9.8 |
| Delay (s) | 58.5 | 57.7 | 26.6 | | 33.3 | 29.1 | 103.8 | 25.9 | | 53.2 | 22.8 | 38.0 |
| Level of Service | E | E | C | | C | C | F | C | | D | C | D |
| Approach Delay (s) | | 54.6 | | | 32.2 | | | 35.7 | | | 32.9 | |
| Approach LOS | | D | | | C | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 57.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 2 | 22 | 6 | 341 | 80 | 143 | 53 | 810 | 314 | 385 | 417 | 17 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | | 0.95 | | 0.91 | 0.91 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | |
| Frpb, ped/bikes | | 0.98 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.97 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | | 1.00 | | 0.95 | 0.98 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3321 | | 1595 | 3084 | | 1752 | 3505 | 1514 | 1752 | 3477 | |
| Flt Permitted | | 1.00 | | 0.95 | 0.98 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 3321 | | 1595 | 3084 | | 1752 | 3505 | 1514 | 1752 | 3477 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 2 | 23 | 6 | 355 | 83 | 149 | 55 | 844 | 327 | 401 | 434 | 18 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 89 | 0 | 0 | 0 | 162 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 26 | 0 | 199 | 299 | 0 | 55 | 844 | 165 | 401 | 450 | 0 |
| Confl. Peds. (#/hr) | | | 29 | | | 1 | | | 11 | | | 22 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | 3 | | | 1 |
| Turn Type | Split | NA | | Split | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | 2 | | | |
| Actuated Green, G (s) | | 9.6 | | 18.1 | 18.1 | | 5.8 | 30.3 | 30.3 | 26.0 | 50.5 | |
| Effective Green, g (s) | | 9.6 | | 18.1 | 18.1 | | 5.8 | 30.3 | 30.3 | 26.0 | 50.5 | |
| Actuated g/C Ratio | | 0.10 | | 0.18 | 0.18 | | 0.06 | 0.30 | 0.30 | 0.26 | 0.50 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 318 | | 288 | 558 | | 101 | 1062 | 458 | 455 | 1755 | |
| v/s Ratio Prot | | c0.01 | | c0.12 | 0.10 | | 0.03 | c0.24 | | c0.23 | 0.13 | |
| v/s Ratio Perm | | | | | | | | | 0.11 | | | |
| v/c Ratio | | 0.08 | | 0.69 | 0.54 | | 0.54 | 0.79 | 0.36 | 0.88 | 0.26 | |
| Uniform Delay, d1 | | 41.2 | | 38.3 | 37.1 | | 45.8 | 32.0 | 27.3 | 35.5 | 14.1 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | 7.0 | 1.0 | | 5.9 | 6.2 | 2.2 | 17.8 | 0.4 | |
| Delay (s) | | 41.3 | | 45.3 | 38.1 | | 51.7 | 38.1 | 29.5 | 53.3 | 14.4 | |
| Level of Service | | D | | D | D | | D | D | C | D | B | |
| Approach Delay (s) | | 41.3 | | | 40.6 | | | 36.4 | | | 32.7 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 69.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 85 | 144 | 47 | 256 | 200 | 202 | 61 | 883 | 73 | 124 | 843 | 67 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 0.95 | | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flt Protected | | 0.98 | | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3347 | | 1665 | 1740 | 1505 | 1752 | 3461 | | 1752 | 3444 | |
| Flt Permitted | | 0.98 | | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 3347 | | 1665 | 1740 | 1505 | 1752 | 3461 | | 1752 | 3444 | |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 96 | 162 | 53 | 288 | 225 | 227 | 69 | 992 | 82 | 139 | 947 | 75 |
| RTOR Reduction (vph) | 0 | 17 | 0 | 0 | 0 | 186 | 0 | 6 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 0 | 294 | 0 | 251 | 262 | 41 | 69 | 1068 | 0 | 139 | 1017 | 0 |
| Confl. Peds. (#/hr) | | | 9 | | | 6 | | | | | | 21 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | 1 | | | 2 |
| Turn Type | Split | NA | | Split | NA | Perm | Prot | NA | | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | | | | |
| Actuated Green, G (s) | | 13.6 | | 18.1 | 18.1 | 18.1 | 5.2 | 42.0 | | 10.3 | 47.1 | |
| Effective Green, g (s) | | 13.6 | | 18.1 | 18.1 | 18.1 | 5.2 | 42.0 | | 10.3 | 47.1 | |
| Actuated g/C Ratio | | 0.14 | | 0.18 | 0.18 | 0.18 | 0.05 | 0.42 | | 0.10 | 0.47 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 455 | | 301 | 314 | 272 | 91 | 1453 | | 180 | 1622 | |
| v/s Ratio Prot | | c0.09 | | c0.15 | 0.15 | | 0.04 | c0.31 | | c0.08 | 0.30 | |
| v/s Ratio Perm | | | | | | 0.03 | | | | | | |
| v/c Ratio | | 0.65 | | 0.83 | 0.83 | 0.15 | 0.76 | 0.74 | | 0.77 | 0.63 | |
| Uniform Delay, d1 | | 40.9 | | 39.5 | 39.5 | 34.5 | 46.8 | 24.3 | | 43.7 | 19.9 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.1 | | 17.7 | 17.1 | 0.3 | 29.7 | 3.3 | | 18.3 | 1.8 | |
| Delay (s) | | 44.1 | | 57.2 | 56.6 | 34.7 | 76.5 | 27.7 | | 62.1 | 21.7 | |
| Level of Service | | D | | E | E | C | E | C | | E | C | |
| Approach Delay (s) | | 44.1 | | | 50.1 | | | 30.6 | | | 26.5 | |
| Approach LOS | | D | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 34.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 68.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | SBL | SBT | SBR | SWL2 | SWL | SWR |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 641 | 123 | 56 | 272 | 553 | 112 | 558 | 8 | 183 | 142 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | | 0.95 | 0.95 | 0.91 | 0.95 | | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | 0.99 | 0.99 | | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 0.98 | | | 1.00 | 1.00 | 0.94 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 1.00 | | | 0.99 | 0.95 | 0.98 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 3409 | | | 3475 | 1665 | 1541 | 1471 | | 1752 | 1547 |
| Flt Permitted | 1.00 | | | 0.64 | 0.95 | 0.98 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | 3409 | | | 2259 | 1665 | 1541 | 1471 | | 1752 | 1547 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 689 | 132 | 60 | 292 | 595 | 120 | 600 | 9 | 197 | 153 |
| RTOR Reduction (vph) | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 806 | 0 | 0 | 352 | 458 | 443 | 414 | 0 | 206 | 153 |
| Confl. Peds. (#/hr) | | 8 | | | | | 1 | | | 1 |
| Turn Type | NA | | Perm | NA | Split | NA | Perm | Prot | Prot | Perm |
| Protected Phases | 4 | | | 8 | 6 | 6 | | 2 | 2 | |
| Permitted Phases | | | 8 | | | | 6 | | | 2 |
| Actuated Green, G (s) | 25.5 | | | 25.5 | 30.5 | 30.5 | 30.5 | | 14.4 | 14.4 |
| Effective Green, g (s) | 25.5 | | | 25.5 | 30.5 | 30.5 | 30.5 | | 14.4 | 14.4 |
| Actuated g/C Ratio | 0.31 | | | 0.31 | 0.37 | 0.37 | 0.37 | | 0.17 | 0.17 |
| Clearance Time (s) | 4.0 | | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 2.0 | | | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 1054 | | | 699 | 616 | 570 | 544 | | 306 | 270 |
| v/s Ratio Prot | c0.24 | | | | 0.28 | c0.29 | | | c0.12 | |
| v/s Ratio Perm | | | | 0.16 | | | 0.28 | | | 0.10 |
| v/c Ratio | 0.76 | | | 0.50 | 0.74 | 0.78 | 0.76 | | 0.67 | 0.57 |
| Uniform Delay, d1 | 25.7 | | | 23.3 | 22.6 | 22.9 | 22.8 | | 31.8 | 31.1 |
| Progression Factor | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.0 | | | 0.2 | 4.2 | 6.0 | 5.6 | | 4.5 | 1.6 |
| Delay (s) | 28.8 | | | 23.5 | 26.8 | 29.0 | 28.4 | | 36.3 | 32.8 |
| Level of Service | C | | | C | C | C | C | | D | C |
| Approach Delay (s) | 28.8 | | | 23.5 | | 28.0 | | | 34.8 | |
| Approach LOS | C | | | C | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 28.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 82.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 78.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | EBR2 | NBT | NBR | NBR2 | SBL2 | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 298 | 65 | 42 | 109 | 657 | 877 | 15 | 72 | 24 | 624 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 0.95 | | | 0.91 | 0.91 | | 1.00 | | 0.95 |
| Frpb, ped/bikes | 1.00 | 0.99 | | | 0.99 | 0.95 | | 1.00 | | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Frt | 1.00 | 0.91 | | | 0.94 | 0.85 | | 1.00 | | 1.00 |
| Flt Protected | 0.95 | 0.99 | | | 1.00 | 1.00 | | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1665 | 1560 | | | 3131 | 1360 | | 1752 | | 3498 |
| Flt Permitted | 0.95 | 0.99 | | | 1.00 | 1.00 | | 0.95 | | 0.87 |
| Satd. Flow (perm) | 1665 | 1560 | | | 3131 | 1360 | | 1752 | | 3035 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 324 | 71 | 46 | 118 | 714 | 953 | 16 | 78 | 26 | 678 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 288 | 245 | 0 | 0 | 1162 | 503 | 0 | 78 | 0 | 704 |
| Confl. Peds. (#/hr) | | | 1 | | | 6 | | | | |
| Confl. Bikes (#/hr) | | | | | | 4 | 4 | | | |
| Turn Type | Split | NA | | | NA | Perm | | Prot | Perm | NA |
| Protected Phases | 4 | 4 | | | 2 | | | 1 | | 6 |
| Permitted Phases | | | | | | 2 | | | 6 | |
| Actuated Green, G (s) | 26.6 | 26.6 | | | 72.0 | 72.0 | | 9.4 | | 85.4 |
| Effective Green, g (s) | 26.6 | 26.6 | | | 72.0 | 72.0 | | 9.4 | | 85.4 |
| Actuated g/C Ratio | 0.22 | 0.22 | | | 0.60 | 0.60 | | 0.08 | | 0.71 |
| Clearance Time (s) | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 369 | 345 | | | 1878 | 816 | | 137 | | 2159 |
| v/s Ratio Prot | c0.17 | 0.16 | | | c0.37 | | | c0.04 | | |
| v/s Ratio Perm | | | | | | 0.37 | | | | 0.23 |
| v/c Ratio | 0.78 | 0.71 | | | 0.62 | 0.62 | | 0.57 | | 0.33 |
| Uniform Delay, d1 | 44.0 | 43.1 | | | 15.3 | 15.2 | | 53.3 | | 6.5 |
| Progression Factor | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | | 1.00 |
| Incremental Delay, d2 | 10.2 | 6.8 | | | 1.5 | 3.5 | | 5.3 | | 0.4 |
| Delay (s) | 54.2 | 49.9 | | | 16.8 | 18.7 | | 58.7 | | 6.9 |
| Level of Service | D | D | | | B | B | | E | | A |
| Approach Delay (s) | | 52.1 | | | 17.4 | | | | | 12.1 |
| Approach LOS | | D | | | B | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 80.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 510 | 205 | 355 | 47 | 97 | 158 | 99 | 820 | 26 | 101 | 489 | 106 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.99 | 1.00 | | 0.97 | 1.00 | | 0.97 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 526 | 211 | 366 | 48 | 100 | 163 | 102 | 845 | 27 | 104 | 504 | 109 |
| Adj No. of Lanes | 2 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 611 | 194 | 336 | 61 | 315 | 278 | 127 | 1579 | 50 | 65 | 1201 | 258 |
| Arrive On Green | 0.18 | 0.32 | 0.32 | 0.03 | 0.18 | 0.18 | 0.07 | 0.46 | 0.46 | 0.04 | 0.42 | 0.42 |
| Sat Flow, veh/h | 3408 | 597 | 1036 | 1757 | 1752 | 1545 | 1757 | 3463 | 111 | 1757 | 2855 | 614 |
| Grp Volume(v), veh/h | 526 | 0 | 577 | 48 | 100 | 163 | 102 | 428 | 444 | 104 | 308 | 305 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 0 | 1634 | 1757 | 1752 | 1545 | 1757 | 1752 | 1821 | 1757 | 1752 | 1717 |
| Q Serve(g_s), s | 16.2 | 0.0 | 35.0 | 2.9 | 5.4 | 10.4 | 6.2 | 19.0 | 19.0 | 4.0 | 13.4 | 13.5 |
| Cycle Q Clear(g_c), s | 16.2 | 0.0 | 35.0 | 2.9 | 5.4 | 10.4 | 6.2 | 19.0 | 19.0 | 4.0 | 13.4 | 13.5 |
| Prop In Lane | 1.00 | | 0.63 | 1.00 | | 1.00 | 1.00 | | 0.06 | 1.00 | | 0.36 |
| Lane Grp Cap(c), veh/h | 611 | 0 | 529 | 61 | 315 | 278 | 127 | 799 | 830 | 65 | 737 | 722 |
| V/C Ratio(X) | 0.86 | 0.00 | 1.09 | 0.78 | 0.32 | 0.59 | 0.80 | 0.54 | 0.54 | 1.60 | 0.42 | 0.42 |
| Avail Cap(c_a), veh/h | 789 | 0 | 529 | 98 | 315 | 278 | 163 | 799 | 830 | 65 | 737 | 722 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.58 | 0.00 | 0.58 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 |
| Uniform Delay (d), s/veh | 43.0 | 0.0 | 36.5 | 51.7 | 38.5 | 40.6 | 49.3 | 21.1 | 21.1 | 52.0 | 22.0 | 22.1 |
| Incr Delay (d2), s/veh | 4.7 | 0.0 | 57.2 | 19.2 | 0.6 | 3.2 | 19.5 | 2.6 | 2.5 | 327.3 | 1.7 | 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 | 8.0 | 0.0 | 24.2 | 1.8 | 2.6 | 4.7 | 3.7 | 9.7 | 10.1 | 7.8 | 6.8 | 6.7 |
| LnGrp Delay(d),s/veh | 47.7 | 0.0 | 93.7 | 70.9 | 39.1 | 43.8 | 68.8 | 23.7 | 23.6 | 379.3 | 23.7 | 23.8 |
| LnGrp LOS | D | | F | E | D | D | E | C | C | F | C | C |
| Approach Vol, veh/h | | 1103 | | | 311 | | | 974 | | | 717 | |
| Approach Delay, s/veh | | 71.8 | | | 46.5 | | | 28.4 | | | 75.3 | |
| Approach LOS | | E | | | D | | | C | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 8.0 | 53.2 | 7.8 | 39.0 | 11.8 | 49.4 | 23.4 | 23.4 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 4.0 | 47.0 | 6.0 | 35.0 | 10.0 | 33.0 | 25.0 | 16.0 |
| Max Q Clear Time (g_c+I1), s | 6.0 | 21.0 | 4.9 | 37.0 | 8.2 | 15.5 | 18.2 | 12.4 |
| Green Ext Time (p_c), s | 0.0 | 11.1 | 0.0 | 0.0 | 0.0 | 9.1 | 1.2 | 1.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 56.4 |
| HCM 2010 LOS | E |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 163 | 29 | 783 | 116 | 433 | 73 | 505 | 841 | 1 | 1 | 459 | 92 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 0.97 | 0.91 | | | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 | 1.00 | | | 1.00 | 0.92 |
| Flpb, ped/bikes | 0.94 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | 1.00 | 0.86 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 1.00 | 1.00 |
| Satd. Flow (prot) | 1651 | 1414 | 1490 | 1752 | 3505 | 1382 | 3400 | 5034 | | | 3504 | 1442 |
| Flt Permitted | 0.49 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 |
| Satd. Flow (perm) | 854 | 1414 | 1490 | 1752 | 3505 | 1382 | 3400 | 5034 | | | 3344 | 1442 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 170 | 30 | 816 | 121 | 451 | 76 | 526 | 876 | 1 | 1 | 478 | 96 |
| RTOR Reduction (vph) | 0 | 294 | 30 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 63 |
| Lane Group Flow (vph) | 170 | 128 | 394 | 121 | 451 | 37 | 526 | 877 | 0 | 0 | 479 | 33 |
| Confl. Peds. (#/hr) | 58 | | | | | 58 | | | 36 | | | 37 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 100% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Prot | NA | Perm | Prot | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | 5 | 3 | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | 8 | | | | 6 | | 6 |
| Actuated Green, G (s) | 25.1 | 25.1 | 45.5 | 4.0 | 33.1 | 33.1 | 20.4 | 58.9 | | | 34.5 | 34.5 |
| Effective Green, g (s) | 25.1 | 25.1 | 45.5 | 4.0 | 33.1 | 33.1 | 20.4 | 58.9 | | | 34.5 | 34.5 |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.46 | 0.04 | 0.33 | 0.33 | 0.20 | 0.59 | | | 0.34 | 0.34 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 214 | 354 | 737 | 70 | 1160 | 457 | 693 | 2965 | | | 1153 | 497 |
| v/s Ratio Prot | | 0.09 | 0.11 | c0.07 | 0.13 | | c0.15 | 0.17 | | | | |
| v/s Ratio Perm | c0.20 | | 0.16 | | | 0.03 | | | | | c0.14 | 0.02 |
| v/c Ratio | 0.79 | 0.36 | 0.53 | 1.73 | 0.39 | 0.08 | 0.76 | 0.30 | | | 0.42 | 0.07 |
| Uniform Delay, d1 | 35.0 | 30.9 | 19.6 | 48.0 | 25.7 | 23.0 | 37.5 | 10.2 | | | 25.0 | 22.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.15 | 1.09 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | 18.1 | 0.6 | 0.7 | 380.4 | 0.2 | 0.1 | 4.0 | 0.2 | | | 1.1 | 0.3 |
| Delay (s) | 53.1 | 31.5 | 20.4 | 428.4 | 25.9 | 23.1 | 47.2 | 11.4 | | | 26.1 | 22.2 |
| Level of Service | D | C | C | F | C | C | D | B | | | C | C |
| Approach Delay (s) | | 30.5 | | | 100.7 | | | 24.8 | | | 25.5 | |
| Approach LOS | | C | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 67.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 309 | 198 | 124 | 61 | 241 | 79 | 244 | 775 | 51 | 53 | 718 | 142 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.88 | | 0.98 | | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | | 0.97 | | 1.00 | 0.99 | | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 0.99 | 1.00 | | 0.99 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1498 | 1559 | 1241 | | 2976 | | 1577 | 3102 | | 1577 | 3054 | |
| Flt Permitted | 0.95 | 0.99 | 1.00 | | 0.99 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1498 | 1559 | 1241 | | 2976 | | 1577 | 3102 | | 1577 | 3054 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 319 | 204 | 128 | 63 | 248 | 81 | 252 | 799 | 53 | 55 | 740 | 146 |
| RTOR Reduction (vph) | 0 | 0 | 101 | 0 | 24 | 0 | 0 | 5 | 0 | 0 | 16 | 0 |
| Lane Group Flow (vph) | 255 | 268 | 27 | 0 | 368 | 0 | 252 | 847 | 0 | 55 | 870 | 0 |
| Confl. Peds. (#/hr) | | | 58 | | | 41 | | | 31 | | | 17 |
| Confl. Bikes (#/hr) | | | 2 | | | 2 | | | 1 | | | 2 |
| Turn Type | Split | NA | Perm | Split | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | | | | |
| Actuated Green, G (s) | 21.4 | 21.4 | 21.4 | | 15.3 | | 17.8 | 42.2 | | 5.1 | 29.5 | |
| Effective Green, g (s) | 21.4 | 21.4 | 21.4 | | 15.3 | | 17.8 | 42.2 | | 5.1 | 29.5 | |
| Actuated g/C Ratio | 0.21 | 0.21 | 0.21 | | 0.15 | | 0.18 | 0.42 | | 0.05 | 0.29 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 320 | 333 | 265 | | 455 | | 280 | 1309 | | 80 | 900 | |
| v/s Ratio Prot | 0.17 | c0.17 | | | c0.12 | | c0.16 | 0.27 | | 0.03 | c0.28 | |
| v/s Ratio Perm | | | 0.02 | | | | | | | | | |
| v/c Ratio | 0.80 | 0.80 | 0.10 | | 0.81 | | 0.90 | 0.65 | | 0.69 | 0.97 | |
| Uniform Delay, d1 | 37.2 | 37.3 | 31.6 | | 40.9 | | 40.2 | 23.0 | | 46.7 | 34.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 0.98 | 0.96 | |
| Incremental Delay, d2 | 12.9 | 13.2 | 0.2 | | 10.2 | | 29.4 | 2.5 | | 17.8 | 19.8 | |
| Delay (s) | 50.1 | 50.5 | 31.8 | | 51.2 | | 69.6 | 25.5 | | 63.5 | 53.2 | |
| Level of Service | D | D | C | | D | | E | C | | E | D | |
| Approach Delay (s) | | 46.7 | | | 51.2 | | | 35.5 | | | 53.8 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 45.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.88 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 84.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 687 | 283 | 464 | 506 | 0 | 0 | 0 | 0 | 72 | 6 | 403 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | |
| Lane Util. Factor | | 0.95 | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 0.98 | | 1.00 | | | | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | | | | | 1.00 | 0.85 | |
| Flt Protected | | 1.00 | 1.00 | | 0.98 | | | | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3505 | 1543 | | 3421 | | | | | 1752 | 1572 | |
| Flt Permitted | | 1.00 | 1.00 | | 0.60 | | | | | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 3505 | 1543 | | 2106 | | | | | 1752 | 1572 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 0 | 716 | 295 | 483 | 527 | 0 | 0 | 0 | 0 | 75 | 6 | 420 |
| RTOR Reduction (vph) | 0 | 0 | 177 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 | 0 |
| Lane Group Flow (vph) | 0 | 716 | 118 | 0 | 1010 | 0 | 0 | 0 | 0 | 75 | 310 | 0 |
| Confl. Peds. (#/hr) | | | 5 | 5 | | | | | | | | |
| Turn Type | | NA | Perm | Perm | NA | | | | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | | | | 6 | |
| Permitted Phases | | | 4 | 8 | | | | | | 6 | | |
| Actuated Green, G (s) | | 16.0 | 16.0 | | 16.0 | | | | | 16.0 | 16.0 | |
| Effective Green, g (s) | | 16.0 | 16.0 | | 16.0 | | | | | 16.0 | 16.0 | |
| Actuated g/C Ratio | | 0.40 | 0.40 | | 0.40 | | | | | 0.40 | 0.40 | |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1402 | 617 | | 842 | | | | | 700 | 628 | |
| v/s Ratio Prot | | 0.20 | | | | | | | | | c0.20 | |
| v/s Ratio Perm | | | 0.08 | | c0.48 | | | | | 0.04 | | |
| v/c Ratio | | 0.51 | 0.19 | | 2.03dl | | | | | 0.11 | 0.49 | |
| Uniform Delay, d1 | | 9.0 | 7.8 | | 12.0 | | | | | 7.5 | 9.0 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.3 | 0.2 | | 101.2 | | | | | 0.3 | 2.8 | |
| Delay (s) | | 9.4 | 7.9 | | 113.2 | | | | | 7.8 | 11.7 | |
| Level of Service | | A | A | | F | | | | | A | B | |
| Approach Delay (s) | | 9.0 | | | 113.2 | | | 0.0 | | | 11.1 | |
| Approach LOS | | A | | | F | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 51.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 40.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 81.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBT | WBR | NBL2 | NBL | NBR | NBR2 | NWL | NWT | NWR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 333 | 378 | 34 | 765 | 39 | 229 | 1 | 533 | 7 | 34 | 226 | 465 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 0.95 | | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 |
| Frpb, ped/bikes | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | | 1.00 | 0.99 |
| Flpb, ped/bikes | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Frt | | 0.99 | | 0.99 | | 1.00 | 0.85 | 0.85 | | | 1.00 | 0.85 |
| Flt Protected | | 0.98 | | 1.00 | | 0.95 | 1.00 | 1.00 | | | 0.99 | 1.00 |
| Satd. Flow (prot) | | 3405 | | 3479 | | 1752 | 1569 | 1490 | | | 1833 | 1547 |
| Flt Permitted | | 0.98 | | 1.00 | | 0.95 | 1.00 | 1.00 | | | 0.99 | 1.00 |
| Satd. Flow (perm) | | 3405 | | 3479 | | 1752 | 1569 | 1490 | | | 1833 | 1547 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 351 | 398 | 36 | 805 | 41 | 241 | 1 | 561 | 7 | 36 | 238 | 489 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 785 | 0 | 844 | 0 | 241 | 287 | 264 | 0 | 0 | 274 | 489 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 6 |
| Turn Type | Split | NA | | NA | | Prot | Prot | custom | | Split | NA | Free |
| Protected Phases | 1 | 1 | | 4 | | 2 | 2 | 2 4 | | 3 | 3 | |
| Permitted Phases | | | | | | 2 | | | | | | Free |
| Actuated Green, G (s) | | 38.0 | | 43.5 | | 34.1 | 34.1 | 77.6 | | | 26.4 | 158.0 |
| Effective Green, g (s) | | 38.0 | | 43.5 | | 34.1 | 34.1 | 77.6 | | | 26.4 | 158.0 |
| Actuated g/C Ratio | | 0.24 | | 0.28 | | 0.22 | 0.22 | 0.49 | | | 0.17 | 1.00 |
| Clearance Time (s) | | 4.0 | | 4.0 | | 4.0 | 4.0 | | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | | 3.0 | 3.0 | | | | 3.0 | |
| Lane Grp Cap (vph) | | 818 | | 957 | | 378 | 338 | 731 | | | 306 | 1547 |
| v/s Ratio Prot | | c0.23 | | c0.24 | | 0.14 | c0.18 | 0.18 | | | c0.15 | |
| v/s Ratio Perm | | | | | | | | | | | | 0.32 |
| v/c Ratio | | 0.96 | | 0.88 | | 0.64 | 0.85 | 0.36 | | | 0.90 | 0.32 |
| Uniform Delay, d1 | | 59.2 | | 54.8 | | 56.3 | 59.5 | 24.9 | | | 64.4 | 0.0 |
| Progression Factor | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 21.9 | | 9.6 | | 8.0 | 22.5 | 0.3 | | | 26.5 | 0.5 |
| Delay (s) | | 81.1 | | 64.4 | | 64.3 | 82.0 | 25.2 | | | 91.0 | 0.5 |
| Level of Service | | F | | E | | E | F | C | | | F | A |
| Approach Delay (s) | | 81.1 | | 64.4 | | | 57.0 | | | | 33.0 | |
| Approach LOS | | F | | E | | | E | | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 59.1 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.90 | | |
| Actuated Cycle Length (s) | 158.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 83.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 195 | 1160 | 27 | 12 | 661 | 297 | 14 | 22 | 1 | 445 | 13 | 146 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | 0.95 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | | 1.00 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 0.95 | | | 1.00 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.98 | | 0.95 | 0.98 | |
| Satd. Flow (prot) | 1752 | 3489 | | 1752 | 3314 | | | 1803 | | 1665 | 1572 | |
| Flt Permitted | 0.19 | 1.00 | | 0.11 | 1.00 | | | 0.98 | | 0.95 | 0.98 | |
| Satd. Flow (perm) | 348 | 3489 | | 212 | 3314 | | | 1803 | | 1665 | 1572 | |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 210 | 1247 | 29 | 13 | 711 | 319 | 15 | 24 | 1 | 478 | 14 | 157 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 51 | 0 | 0 | 1 | 0 | 0 | 36 | 0 |
| Lane Group Flow (vph) | 210 | 1275 | 0 | 13 | 979 | 0 | 0 | 39 | 0 | 335 | 278 | 0 |
| Confl. Peds. (#/hr) | 2 | | 9 | 9 | | 2 | | | 16 | | | 1 |
| Confl. Bikes (#/hr) | | | 1 | | | 2 | | | | | | 2 |
| Turn Type | Perm | NA | | Perm | NA | | Split | NA | | Split | NA | |
| Protected Phases | | 4 | | | 8 | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Actuated Green, G (s) | 52.0 | 52.0 | | 52.0 | 52.0 | | | 17.0 | | 19.0 | 19.0 | |
| Effective Green, g (s) | 52.0 | 52.0 | | 52.0 | 52.0 | | | 17.0 | | 19.0 | 19.0 | |
| Actuated g/C Ratio | 0.52 | 0.52 | | 0.52 | 0.52 | | | 0.17 | | 0.19 | 0.19 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 180 | 1814 | | 110 | 1723 | | | 306 | | 316 | 298 | |
| v/s Ratio Prot | | 0.37 | | | 0.30 | | | c0.02 | | c0.20 | 0.18 | |
| v/s Ratio Perm | c0.60 | | | 0.06 | | | | | | | | |
| v/c Ratio | 1.17 | 0.70 | | 0.12 | 0.57 | | | 0.13 | | 1.06 | 0.93 | |
| Uniform Delay, d1 | 24.0 | 18.2 | | 12.3 | 16.3 | | | 35.2 | | 40.5 | 39.9 | |
| Progression Factor | 1.00 | 1.00 | | 0.73 | 1.11 | | | 1.00 | | 0.96 | 0.95 | |
| Incremental Delay, d2 | 119.1 | 1.3 | | 0.3 | 0.3 | | | 0.9 | | 63.4 | 31.3 | |
| Delay (s) | 143.1 | 19.4 | | 9.4 | 18.4 | | | 36.1 | | 102.1 | 69.3 | |
| Level of Service | F | B | | A | B | | | D | | F | E | |
| Approach Delay (s) | | 36.9 | | | 18.3 | | | 36.1 | | | 86.2 | |
| Approach LOS | | D | | | B | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.94 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 72.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 476 | 1030 | 33 | 13 | 681 | 146 | 25 | 19 | 10 | 191 | 12 | 245 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1900 | 1845 | 1900 | 1900 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 517 | 1120 | 36 | 14 | 740 | 159 | 27 | 21 | 11 | 208 | 13 | 266 |
| Adj No. of Lanes | 2 | 2 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 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, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 583 | 1636 | 53 | 23 | 900 | 193 | 155 | 120 | 63 | 265 | 17 | 247 |
| Arrive On Green | 0.17 | 0.47 | 0.47 | 0.01 | 0.31 | 0.31 | 0.19 | 0.19 | 0.19 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h | 3408 | 3463 | 111 | 1757 | 2863 | 615 | 796 | 619 | 324 | 1658 | 104 | 1545 |
| Grp Volume(v), veh/h | 517 | 567 | 589 | 14 | 453 | 446 | 59 | 0 | 0 | 221 | 0 | 266 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1821 | 1757 | 1752 | 1725 | 1739 | 0 | 0 | 1762 | 0 | 1545 |
| Q Serve(g_s), s | 14.8 | 25.2 | 25.2 | 0.8 | 23.9 | 23.9 | 2.8 | 0.0 | 0.0 | 12.0 | 0.0 | 16.0 |
| Cycle Q Clear(g_c), s | 14.8 | 25.2 | 25.2 | 0.8 | 23.9 | 23.9 | 2.8 | 0.0 | 0.0 | 12.0 | 0.0 | 16.0 |
| Prop In Lane | 1.00 | | 0.06 | 1.00 | | 0.36 | 0.46 | | 0.19 | 0.94 | | 1.00 |
| Lane Grp Cap(c), veh/h | 583 | 828 | 861 | 23 | 551 | 542 | 338 | 0 | 0 | 282 | 0 | 247 |
| V/C Ratio(X) | 0.89 | 0.68 | 0.68 | 0.62 | 0.82 | 0.82 | 0.17 | 0.00 | 0.00 | 0.78 | 0.00 | 1.08 |
| Avail Cap(c_a), veh/h | 613 | 828 | 861 | 70 | 578 | 569 | 338 | 0 | 0 | 282 | 0 | 247 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.54 | 0.54 | 0.54 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 40.5 | 20.6 | 20.6 | 49.1 | 31.7 | 31.7 | 33.6 | 0.0 | 0.0 | 40.3 | 0.0 | 42.0 |
| Incr Delay (d2), s/veh | 8.4 | 1.3 | 1.2 | 24.4 | 9.0 | 9.1 | 1.1 | 0.0 | 0.0 | 13.5 | 0.0 | 79.0 |
| 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 | 7.6 | 12.4 | 12.9 | 0.5 | 12.9 | 12.8 | 1.5 | 0.0 | 0.0 | 6.9 | 0.0 | 12.2 |
| LnGrp Delay(d),s/veh | 48.9 | 21.8 | 21.8 | 73.5 | 40.7 | 40.8 | 34.7 | 0.0 | 0.0 | 53.8 | 0.0 | 121.0 |
| LnGrp LOS | D | C | C | E | D | D | C | | | D | | F |
| Approach Vol, veh/h | | 1673 | | | 913 | | | 59 | | | 487 | |
| Approach Delay, s/veh | | 30.2 | | | 41.2 | | | 34.7 | | | 90.5 | |
| Approach LOS | | C | | | D | | | C | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 23.5 | 5.3 | 51.3 | | 20.0 | 21.1 | 35.4 |
| Change Period (Y+Rc), s | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | 17.0 | 4.0 | 47.0 | | 16.0 | 18.0 | 33.0 |
| Max Q Clear Time (g_c+I1), s | | 4.8 | 2.8 | 27.2 | | 18.0 | 16.8 | 25.9 |
| Green Ext Time (p_c), s | | 0.2 | 0.0 | 13.6 | | 0.0 | 0.3 | 5.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 42.9 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 140 | 582 | 901 | 311 | 103 | 86 |
| Number | 7 | 4 | 8 | 18 | 1 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.97 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 149 | 619 | 959 | 331 | 110 | 91 |
| Adj No. of Lanes | 1 | 2 | 2 | 1 | 1 | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 183 | 1791 | 1285 | 559 | 719 | 641 |
| Arrive On Green | 0.10 | 0.51 | 0.37 | 0.37 | 0.41 | 0.41 |
| Sat Flow, veh/h | 1757 | 3597 | 3597 | 1526 | 1757 | 1568 |
| Grp Volume(v), veh/h | 149 | 619 | 959 | 331 | 110 | 91 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1752 | 1526 | 1757 | 1568 |
| Q Serve(g_s), s | 8.3 | 10.5 | 23.9 | 17.5 | 3.9 | 3.6 |
| Cycle Q Clear(g_c), s | 8.3 | 10.5 | 23.9 | 17.5 | 3.9 | 3.6 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 183 | 1791 | 1285 | 559 | 719 | 641 |
| V/C Ratio(X) | 0.81 | 0.35 | 0.75 | 0.59 | 0.15 | 0.14 |
| Avail Cap(c_a), veh/h | 404 | 2418 | 1472 | 641 | 719 | 641 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.8 | 14.5 | 27.6 | 25.6 | 18.6 | 18.5 |
| Incr Delay (d2), s/veh | 8.4 | 0.1 | 1.8 | 1.1 | 0.5 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.4 | 5.1 | 11.8 | 7.5 | 2.0 | 4.1 |
| LnGrp Delay(d),s/veh | 52.2 | 14.6 | 29.4 | 26.7 | 19.1 | 19.0 |
| LnGrp LOS | D | B | C | C | B | B |
| Approach Vol, veh/h | | 768 | 1290 | | 201 | |
| Approach Delay, s/veh | | 21.9 | 28.7 | | 19.0 | |
| Approach LOS | | C | C | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | | | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | | | 55.1 | | 44.9 | 14.4 | 40.7 |
| Change Period (Y+Rc), s | | | | 4.0 | | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | | | 69.0 | | 23.0 | 23.0 | 42.0 |
| Max Q Clear Time (g_c+I1), s | | | | 12.5 | | 5.9 | 10.3 | 25.9 |
| Green Ext Time (p_c), s | | | | 20.8 | | 0.5 | 0.3 | 10.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 25.6 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 61 | 32 | 73 | 33 | 11 | 11 | 36 | 1109 | 94 | 9 | 650 | 17 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | 4.0 | 6.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 0.98 | | | 1.00 | 0.90 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.94 | | | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | |
| Flt Protected | | 0.98 | | | 0.96 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1676 | | | 1778 | 1411 | 1752 | 1845 | 1533 | 1752 | 1837 | |
| Flt Permitted | | 0.98 | | | 0.96 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 1676 | | | 1778 | 1411 | 1752 | 1845 | 1533 | 1752 | 1837 | |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 66 | 34 | 78 | 35 | 12 | 12 | 39 | 1192 | 101 | 10 | 699 | 18 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 0 | 11 | 0 | 0 | 12 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 167 | 0 | 0 | 47 | 1 | 39 | 1192 | 89 | 10 | 717 | 0 |
| Confl. Bikes (#/hr) | | | 6 | | | 10 | | | 4 | | | 9 |
| Turn Type | Split | NA | | Split | NA | Perm | Prot | NA | custom | Prot | NA | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | 8 | | | 6 | | | |
| Actuated Green, G (s) | | 21.7 | | | 7.9 | 7.9 | 7.2 | 121.2 | 116.5 | 2.5 | 116.5 | |
| Effective Green, g (s) | | 21.7 | | | 7.9 | 7.9 | 7.2 | 121.2 | 116.5 | 2.5 | 116.5 | |
| Actuated g/C Ratio | | 0.13 | | | 0.05 | 0.05 | 0.04 | 0.71 | 0.68 | 0.01 | 0.68 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | 4.0 | 6.0 | |
| Vehicle Extension (s) | | 2.0 | | | 2.0 | 2.0 | 2.0 | 4.0 | 4.0 | 2.0 | 4.0 | |
| Lane Grp Cap (vph) | | 212 | | | 81 | 65 | 73 | 1305 | 1042 | 25 | 1249 | |
| v/s Ratio Prot | | c0.10 | | | c0.03 | | c0.02 | c0.65 | | 0.01 | 0.39 | |
| v/s Ratio Perm | | | | | | 0.00 | | | 0.06 | | | |
| v/c Ratio | | 0.79 | | | 0.58 | 0.01 | 0.53 | 0.91 | 0.09 | 0.40 | 0.57 | |
| Uniform Delay, d1 | | 72.5 | | | 80.1 | 78.0 | 80.4 | 20.7 | 9.3 | 83.7 | 14.4 | |
| Progression Factor | | 1.00 | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 16.0 | | | 6.6 | 0.0 | 3.7 | 10.1 | 0.0 | 3.8 | 0.8 | |
| Delay (s) | | 88.6 | | | 86.7 | 78.0 | 84.1 | 30.8 | 9.4 | 87.4 | 15.1 | |
| Level of Service | | F | | | F | E | F | C | A | F | B | |
| Approach Delay (s) | | 88.6 | | | 84.9 | | | 30.7 | | | 16.1 | |
| Approach LOS | | F | | | F | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 32.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.88 | | |
| Actuated Cycle Length (s) | 171.3 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 82.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 58 | 157 | 257 | 715 | 633 | 39 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1568 | 1752 | 3505 | 3505 | 1515 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1568 | 1752 | 3505 | 3505 | 1515 |
| Peak-hour factor, PHF | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Adj. Flow (vph) | 68 | 185 | 302 | 841 | 745 | 46 |
| RTOR Reduction (vph) | 0 | 167 | 0 | 0 | 0 | 20 |
| Lane Group Flow (vph) | 68 | 18 | 302 | 841 | 745 | 26 |
| Confl. Peds. (#/hr) | 2 | | | | | 4 |
| Confl. Bikes (#/hr) | | 2 | | | | 2 |
| Turn Type | Prot | Prot | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 5 | 2 | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | 9.9 | 9.9 | 22.6 | 82.1 | 55.5 | 55.5 |
| Effective Green, g (s) | 9.9 | 9.9 | 22.6 | 82.1 | 55.5 | 55.5 |
| Actuated g/C Ratio | 0.10 | 0.10 | 0.23 | 0.82 | 0.56 | 0.56 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 173 | 155 | 395 | 2877 | 1945 | 840 |
| v/s Ratio Prot | c0.04 | 0.01 | c0.17 | 0.24 | c0.21 | |
| v/s Ratio Perm | | | | | | 0.02 |
| v/c Ratio | 0.39 | 0.12 | 0.76 | 0.29 | 0.38 | 0.03 |
| Uniform Delay, d1 | 42.2 | 41.1 | 36.2 | 2.1 | 12.6 | 10.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.5 | 0.3 | 8.5 | 0.3 | 0.6 | 0.1 |
| Delay (s) | 43.7 | 41.4 | 44.8 | 2.4 | 13.1 | 10.1 |
| Level of Service | D | D | D | A | B | B |
| Approach Delay (s) | 42.0 | | | 13.6 | 13.0 | |
| Approach LOS | D | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 45.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 650 | 585 | 0 | 375 | 556 |
| Number | 7 | 4 | 8 | 18 | 1 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 0 | 1845 | 1845 | 0 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 0 | 739 | 665 | 0 | 426 | 632 |
| Adj No. of Lanes | 0 | 1 | 1 | 0 | 1 | 1 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | 0 | 3 | 3 | 0 | 3 | 3 |
| Cap, veh/h | 0 | 820 | 820 | 0 | 836 | 746 |
| Arrive On Green | 0.00 | 0.44 | 0.89 | 0.00 | 0.48 | 0.48 |
| Sat Flow, veh/h | 0 | 1845 | 1845 | 0 | 1757 | 1568 |
| Grp Volume(v), veh/h | 0 | 739 | 665 | 0 | 426 | 632 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1845 | 1845 | 0 | 1757 | 1568 |
| Q Serve(g_s), s | 0.0 | 37.1 | 14.4 | 0.0 | 16.8 | 35.4 |
| Cycle Q Clear(g_c), s | 0.0 | 37.1 | 14.4 | 0.0 | 16.8 | 35.4 |
| Prop In Lane | 0.00 | | | 0.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 820 | 820 | 0 | 836 | 746 |
| V/C Ratio(X) | 0.00 | 0.90 | 0.81 | 0.00 | 0.51 | 0.85 |
| Avail Cap(c_a), veh/h | 0 | 867 | 867 | 0 | 836 | 746 |
| HCM Platoon Ratio | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 0.50 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 25.8 | 3.9 | 0.0 | 18.1 | 23.0 |
| Incr Delay (d2), s/veh | 0.0 | 12.1 | 2.9 | 0.0 | 2.2 | 11.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 21.7 | 6.9 | 0.0 | 8.6 | 17.7 |
| LnGrp Delay(d),s/veh | 0.0 | 37.9 | 6.8 | 0.0 | 20.4 | 34.5 |
| LnGrp LOS | | D | A | | C | C |
| Approach Vol, veh/h | | 739 | 665 | | 1058 | |
| Approach Delay, s/veh | | 37.9 | 6.8 | | 28.8 | |
| Approach LOS | | D | A | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | | | 48.4 | | 51.6 | | 48.4 |
| Change Period (Y+Rc), s | | | | 4.0 | | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | | | | 47.0 | | 45.0 | | 47.0 |
| Max Q Clear Time (g_c+I1), s | | | | 39.1 | | 37.4 | | 16.4 |
| Green Ext Time (p_c), s | | | | 5.3 | | 2.6 | | 12.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 25.6 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 391 | 625 | 0 | 0 | 300 | 320 | 296 | 16 | 119 | 0 | 0 | 0 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 1.00 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 0 | 0 | 1845 | 1845 | 1900 | 1845 | 1845 | | | |
| Adj Flow Rate, veh/h | 412 | 658 | 0 | 0 | 316 | 337 | 312 | 17 | 125 | | | |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | | | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Percent Heavy Veh, % | 3 | 3 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | | | |
| Cap, veh/h | 441 | 868 | 0 | 0 | 332 | 274 | 750 | 41 | 704 | | | |
| Arrive On Green | 0.50 | 0.94 | 0.00 | 0.00 | 0.06 | 0.06 | 0.45 | 0.45 | 0.45 | | | |
| Sat Flow, veh/h | 1757 | 1845 | 0 | 0 | 1845 | 1523 | 1670 | 91 | 1568 | | | |
| Grp Volume(v), veh/h | 412 | 658 | 0 | 0 | 316 | 337 | 329 | 0 | 125 | | | |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1845 | 0 | 0 | 1845 | 1523 | 1761 | 0 | 1568 | | | |
| Q Serve(g_s), s | 22.0 | 7.3 | 0.0 | 0.0 | 17.1 | 18.0 | 12.7 | 0.0 | 4.8 | | | |
| Cycle Q Clear(g_c), s | 22.0 | 7.3 | 0.0 | 0.0 | 17.1 | 18.0 | 12.7 | 0.0 | 4.8 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.95 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 441 | 868 | 0 | 0 | 332 | 274 | 791 | 0 | 704 | | | |
| V/C Ratio(X) | 0.94 | 0.76 | 0.00 | 0.00 | 0.95 | 1.23 | 0.42 | 0.00 | 0.18 | | | |
| Avail Cap(c_a), veh/h | 632 | 1070 | 0 | 0 | 332 | 274 | 791 | 0 | 704 | | | |
| HCM Platoon Ratio | 2.00 | 2.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.56 | 0.56 | 0.00 | 0.00 | 0.10 | 0.10 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 24.2 | 1.8 | 0.0 | 0.0 | 46.6 | 47.0 | 18.7 | 0.0 | 16.5 | | | |
| Incr Delay (d2), s/veh | 10.9 | 1.4 | 0.0 | 0.0 | 7.4 | 106.6 | 1.6 | 0.0 | 0.6 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 11.9 | 2.9 | 0.0 | 0.0 | 9.4 | 15.7 | 6.5 | 0.0 | 2.2 | | | |
| LnGrp Delay(d),s/veh | 35.1 | 3.2 | 0.0 | 0.0 | 54.0 | 153.7 | 20.3 | 0.0 | 17.0 | | | |
| LnGrp LOS | D | A | | | D | F | C | | B | | | |
| Approach Vol, veh/h | | 1070 | | | 653 | | | 454 | | | | |
| Approach Delay, s/veh | | 15.5 | | | 105.5 | | | 19.4 | | | | |
| Approach LOS | | B | | | F | | | B | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 48.9 | | 51.1 | | | 29.1 | 22.0 |
| Change Period (Y+Rc), s | | 4.0 | | 4.0 | | | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | 34.0 | | 58.0 | | | 36.0 | 18.0 |
| Max Q Clear Time (g_c+I1), s | | 14.7 | | 9.3 | | | 24.0 | 20.0 |
| Green Ext Time (p_c), s | | 2.4 | | 10.3 | | | 1.1 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 43.3 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 185 | 115 | 9 | 19 | 144 | 64 | 12 | 176 | 33 | 46 | 110 | 139 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1750 | 3460 | | 1746 | 3505 | 1546 | 1752 | 3415 | | 1665 | 1749 | 1568 |
| Flt Permitted | 0.65 | 1.00 | | 0.66 | 1.00 | 1.00 | 0.67 | 1.00 | | 0.61 | 0.99 | 1.00 |
| Satd. Flow (perm) | 1197 | 3460 | | 1220 | 3505 | 1546 | 1236 | 3415 | | 1061 | 1737 | 1568 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Adj. Flow (vph) | 208 | 129 | 10 | 21 | 162 | 72 | 13 | 198 | 37 | 52 | 124 | 156 |
| RTOR Reduction (vph) | 0 | 7 | 0 | 0 | 0 | 51 | 0 | 15 | 0 | 0 | 0 | 68 |
| Lane Group Flow (vph) | 208 | 132 | 0 | 21 | 162 | 21 | 13 | 220 | 0 | 47 | 129 | 88 |
| Confl. Peds. (#/hr) | 2 | | 4 | 4 | | 2 | | | | | | |
| Confl. Bikes (#/hr) | | | 3 | | | 1 | | | 3 | | | |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | | 6 | | 6 |
| Actuated Green, G (s) | 17.4 | 17.4 | | 17.4 | 17.4 | 17.4 | 35.6 | 35.6 | | 34.6 | 34.6 | 34.6 |
| Effective Green, g (s) | 17.4 | 17.4 | | 17.4 | 17.4 | 17.4 | 35.6 | 35.6 | | 34.6 | 34.6 | 34.6 |
| Actuated g/C Ratio | 0.29 | 0.29 | | 0.29 | 0.29 | 0.29 | 0.58 | 0.58 | | 0.57 | 0.57 | 0.57 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 3.5 | 3.5 | | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Grp Cap (vph) | 341 | 986 | | 348 | 999 | 440 | 721 | 1993 | | 601 | 985 | 889 |
| v/s Ratio Prot | | 0.04 | | | 0.05 | | | 0.06 | | | | |
| v/s Ratio Perm | c0.17 | | | 0.02 | | 0.01 | 0.01 | | | 0.04 | c0.07 | 0.06 |
| v/c Ratio | 0.61 | 0.13 | | 0.06 | 0.16 | 0.05 | 0.02 | 0.11 | | 0.08 | 0.13 | 0.10 |
| Uniform Delay, d1 | 18.9 | 16.2 | | 15.9 | 16.3 | 15.8 | 5.3 | 5.7 | | 6.0 | 6.2 | 6.1 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.6 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | | 0.3 | 0.3 | 0.2 |
| Delay (s) | 22.4 | 16.3 | | 16.0 | 16.4 | 15.9 | 5.4 | 5.8 | | 6.2 | 6.4 | 6.3 |
| Level of Service | C | B | | B | B | B | A | A | | A | A | A |
| Approach Delay (s) | | 20.0 | | | 16.2 | | | 5.7 | | | 6.3 | |
| Approach LOS | | B | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.29 | | |
| Actuated Cycle Length (s) | 61.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 44.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 110 | 281 | 41 | 72 | 209 | 114 | 120 | 456 | 149 | 88 | 358 | 62 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1900 | 1845 | 1845 | 1900 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 121 | 309 | 45 | 79 | 230 | 125 | 132 | 501 | 164 | 97 | 393 | 68 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 0 | 2 | 1 | 0 | 2 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 147 | 1127 | 497 | 101 | 654 | 341 | 147 | 591 | 322 | 165 | 698 | 126 |
| Arrive On Green | 0.08 | 0.32 | 0.32 | 0.06 | 0.30 | 0.30 | 0.21 | 0.21 | 0.21 | 0.28 | 0.28 | 0.28 |
| Sat Flow, veh/h | 1757 | 3505 | 1545 | 1757 | 2215 | 1157 | 710 | 2852 | 1554 | 595 | 2519 | 455 |
| Grp Volume(v), veh/h | 121 | 309 | 45 | 79 | 180 | 175 | 337 | 296 | 164 | 296 | 0 | 262 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1545 | 1757 | 1752 | 1620 | 1809 | 1752 | 1554 | 1815 | 0 | 1753 |
| Q Serve(g_s), s | 7.5 | 7.2 | 2.2 | 4.9 | 8.9 | 9.4 | 19.9 | 17.8 | 10.3 | 15.5 | 0.0 | 14.0 |
| Cycle Q Clear(g_c), s | 7.5 | 7.2 | 2.2 | 4.9 | 8.9 | 9.4 | 19.9 | 17.8 | 10.3 | 15.5 | 0.0 | 14.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.71 | 0.39 | | 1.00 | 0.33 | | 0.26 |
| Lane Grp Cap(c), veh/h | 147 | 1127 | 497 | 101 | 517 | 478 | 375 | 363 | 322 | 503 | 0 | 486 |
| V/C Ratio(X) | 0.82 | 0.27 | 0.09 | 0.78 | 0.35 | 0.37 | 0.90 | 0.82 | 0.51 | 0.59 | 0.00 | 0.54 |
| Avail Cap(c_a), veh/h | 168 | 1127 | 497 | 279 | 517 | 478 | 403 | 390 | 346 | 503 | 0 | 486 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 49.6 | 27.8 | 26.1 | 51.2 | 30.5 | 30.6 | 42.5 | 41.6 | 38.6 | 34.3 | 0.0 | 33.8 |
| Incr Delay (d2), s/veh | 21.4 | 0.6 | 0.4 | 4.9 | 1.8 | 2.2 | 20.3 | 10.8 | 0.5 | 5.0 | 0.0 | 4.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.5 | 3.6 | 1.0 | 2.5 | 4.6 | 4.5 | 12.0 | 9.7 | 4.5 | 8.4 | 0.0 | 7.3 |
| LnGrp Delay(d),s/veh | 71.0 | 28.4 | 26.4 | 56.1 | 32.3 | 32.8 | 62.7 | 52.4 | 39.1 | 39.3 | 0.0 | 38.0 |
| LnGrp LOS | E | C | C | E | C | C | E | D | D | D | | D |
| Approach Vol, veh/h | | 475 | | | 434 | | | 797 | | | 558 | |
| Approach Delay, s/veh | | 39.0 | | | 36.8 | | | 54.0 | | | 38.7 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 9.8 | 39.9 | | 26.3 | 12.7 | 37.0 | | 34.0 |
| Change Period (Y+Rc), s | 3.5 | 4.5 | | 3.5 | 3.5 | 4.5 | | 3.5 |
| Max Green Setting (Gmax), s | 17.5 | 22.5 | | 24.5 | 10.5 | 29.5 | | 30.5 |
| Max Q Clear Time (g_c+I1), s | 6.9 | 9.2 | | 21.9 | 9.5 | 11.4 | | 17.5 |
| Green Ext Time (p_c), s | 0.1 | 4.8 | | 0.9 | 0.0 | 5.7 | | 1.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 43.8 |
| HCM 2010 LOS | D |

Notes

User approved changes to right turn type.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 112 | 767 | 117 | 52 | 596 | 71 | 119 | 381 | 17 | 28 | 219 | 93 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 117 | 799 | 122 | 54 | 621 | 74 | 124 | 397 | 18 | 29 | 228 | 97 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 483 | 2284 | 1003 | 394 | 2052 | 244 | 154 | 635 | 29 | 86 | 355 | 146 |
| Arrive On Green | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.09 | 0.19 | 0.19 | 0.05 | 0.15 | 0.15 |
| Sat Flow, veh/h | 738 | 3505 | 1539 | 598 | 3149 | 375 | 1757 | 3415 | 154 | 1757 | 2409 | 989 |
| Grp Volume(v), veh/h | 117 | 799 | 122 | 54 | 345 | 350 | 124 | 203 | 212 | 29 | 164 | 161 |
| Grp Sat Flow(s),veh/h/ln | 738 | 1752 | 1539 | 598 | 1752 | 1771 | 1757 | 1752 | 1817 | 1757 | 1752 | 1645 |
| Q Serve(g_s), s | 9.0 | 11.3 | 3.3 | 4.9 | 9.4 | 9.4 | 7.6 | 11.7 | 11.8 | 1.8 | 9.7 | 10.2 |
| Cycle Q Clear(g_c), s | 18.4 | 11.3 | 3.3 | 16.2 | 9.4 | 9.4 | 7.6 | 11.7 | 11.8 | 1.8 | 9.7 | 10.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.21 | 1.00 | | 0.09 | 1.00 | | 0.60 |
| Lane Grp Cap(c), veh/h | 483 | 2284 | 1003 | 394 | 1142 | 1154 | 154 | 326 | 338 | 86 | 258 | 242 |
| V/C Ratio(X) | 0.24 | 0.35 | 0.12 | 0.14 | 0.30 | 0.30 | 0.81 | 0.62 | 0.63 | 0.34 | 0.63 | 0.67 |
| Avail Cap(c_a), veh/h | 483 | 2284 | 1003 | 394 | 1142 | 1154 | 279 | 581 | 603 | 184 | 486 | 456 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 0.97 | 0.97 | 0.97 | 0.95 | 0.95 | 0.95 |
| Uniform Delay (d), s/veh | 12.3 | 8.6 | 7.2 | 12.3 | 8.3 | 8.3 | 49.3 | 41.2 | 41.3 | 50.6 | 44.1 | 44.3 |
| Incr Delay (d2), s/veh | 1.2 | 0.4 | 0.2 | 0.7 | 0.7 | 0.7 | 9.3 | 6.7 | 6.6 | 2.2 | 8.6 | 10.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.0 | 5.6 | 1.5 | 0.9 | 4.7 | 4.8 | 4.1 | 6.3 | 6.6 | 0.9 | 5.3 | 5.4 |
| LnGrp Delay(d),s/veh | 13.5 | 9.1 | 7.5 | 13.0 | 9.0 | 9.0 | 58.6 | 48.0 | 47.8 | 52.8 | 52.7 | 54.7 |
| LnGrp LOS | B | A | A | B | A | A | E | D | D | D | D | D |
| Approach Vol, veh/h | | 1038 | | | 749 | | | 539 | | | 354 | |
| Approach Delay, s/veh | | 9.4 | | | 9.3 | | | 50.4 | | | 53.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 76.2 | 13.1 | 20.7 | | 76.2 | 8.9 | 25.0 |
| Change Period (Y+Rc), s | | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Max Green Setting (Gmax), s | | 49.5 | 17.5 | 30.5 | | 49.5 | 11.5 | 36.5 |
| Max Q Clear Time (g_c+I1), s | | 20.4 | 9.6 | 12.2 | | 18.2 | 3.8 | 13.8 |
| Green Ext Time (p_c), s | | 25.2 | 0.2 | 4.0 | | 26.9 | 0.2 | 5.7 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 23.4 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 127 | 209 | 258 | 313 | 894 | 121 | 100 | 644 | 305 |
| Number | | | | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 0.98 | 0.99 | | 0.96 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | | | | 1900 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | | | | 134 | 220 | 272 | 329 | 941 | 127 | 105 | 678 | 0 |
| Adj No. of Lanes | | | | 0 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | | | | 0 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | | | | 271 | 445 | 593 | 705 | 1204 | 162 | 239 | 1368 | 612 |
| Arrive On Green | | | | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.00 |
| Sat Flow, veh/h | | | | 694 | 1141 | 1519 | 1449 | 3085 | 416 | 520 | 3505 | 1568 |
| Grp Volume(v), veh/h | | | | 350 | 0 | 276 | 329 | 534 | 534 | 105 | 678 | 0 |
| Grp Sat Flow(s),veh/h/ln | | | | 1810 | 0 | 1543 | 724 | 1752 | 1749 | 520 | 1752 | 1568 |
| Q Serve(g_s), s | | | | 6.0 | 0.0 | 5.5 | 9.1 | 11.0 | 11.0 | 5.0 | 6.0 | 0.0 |
| Cycle Q Clear(g_c), s | | | | 6.0 | 0.0 | 5.5 | 15.1 | 11.0 | 11.0 | 16.0 | 6.0 | 0.0 |
| Prop In Lane | | | | 0.38 | | 0.98 | 1.00 | | 0.24 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 706 | 0 | 602 | 705 | 684 | 683 | 239 | 1368 | 612 |
| V/C Ratio(X) | | | | 0.49 | 0.00 | 0.46 | 0.47 | 0.78 | 0.78 | 0.44 | 0.50 | 0.00 |
| Avail Cap(c_a), veh/h | | | | 706 | 0 | 602 | 705 | 684 | 683 | 239 | 1368 | 612 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | | | 9.4 | 0.0 | 9.3 | 15.2 | 11.0 | 11.0 | 19.0 | 9.5 | 0.0 |
| Incr Delay (d2), s/veh | | | | 2.5 | 0.0 | 2.5 | 2.2 | 8.6 | 8.7 | 5.8 | 1.3 | 0.0 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 3.4 | 0.0 | 2.7 | 2.0 | 6.8 | 6.8 | 1.5 | 3.1 | 0.0 |
| LnGrp Delay(d),s/veh | | | | 11.9 | 0.0 | 11.8 | 17.4 | 19.6 | 19.6 | 24.7 | 10.7 | 0.0 |
| LnGrp LOS | | | | B | | B | B | B | B | C | B | |
| Approach Vol, veh/h | | | | | 626 | | | 1397 | | | 783 | |
| Approach Delay, s/veh | | | | | 11.9 | | | 19.1 | | | 12.6 | |
| Approach LOS | | | | | B | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 20.5 | | | | 20.5 | | 20.5 |
| Change Period (Y+Rc), s | | 4.5 | | | | 4.5 | | 4.5 |
| Max Green Setting (Gmax), s | | 16.0 | | | | 16.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | | 17.1 | | | | 18.0 | | 8.0 |
| Green Ext Time (p_c), s | | 0.0 | | | | 0.0 | | 2.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 15.7 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 551 | 21 | 687 | 0 | 0 | 0 | 0 | 800 | 106 | 132 | 663 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | | | | | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 0.95 | 0.91 | 0.95 | | | | | 0.91 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 0.99 | 0.99 | | | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.90 | 0.85 | | | | | 0.98 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 0.99 | 1.00 | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1665 | 1476 | 1471 | | | | | 4940 | | 1752 | 3505 | |
| Flt Permitted | 0.95 | 0.99 | 1.00 | | | | | 1.00 | | 0.27 | 1.00 | |
| Satd. Flow (perm) | 1665 | 1476 | 1471 | | | | | 4940 | | 503 | 3505 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 562 | 21 | 701 | 0 | 0 | 0 | 0 | 816 | 108 | 135 | 677 | 0 |
| RTOR Reduction (vph) | 0 | 62 | 62 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 444 | 364 | 352 | 0 | 0 | 0 | 0 | 883 | 0 | 135 | 677 | 0 |
| Confl. Peds. (#/hr) | | | 1 | 1 | | | 10 | | | | | 10 |
| Confl. Bikes (#/hr) | | | | | | | | | 2 | | | 3 |
| Turn Type | Perm | NA | Perm | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | | | | | | | 6 | | |
| Actuated Green, G (s) | 16.0 | 16.0 | 16.0 | | | | | 16.0 | | 16.0 | 16.0 | |
| Effective Green, g (s) | 16.0 | 16.0 | 16.0 | | | | | 16.0 | | 16.0 | 16.0 | |
| Actuated g/C Ratio | 0.39 | 0.39 | 0.39 | | | | | 0.39 | | 0.39 | 0.39 | |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | | | | | 4.5 | | 4.5 | 4.5 | |
| Lane Grp Cap (vph) | 649 | 576 | 574 | | | | | 1927 | | 196 | 1367 | |
| v/s Ratio Prot | | | | | | | | 0.18 | | | 0.19 | |
| v/s Ratio Perm | c0.27 | 0.25 | 0.24 | | | | | | | c0.27 | | |
| v/c Ratio | 0.68 | 0.63 | 0.61 | | | | | 0.46 | | 0.69 | 0.50 | |
| Uniform Delay, d1 | 10.4 | 10.1 | 10.0 | | | | | 9.3 | | 10.4 | 9.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | | | | | 1.00 | | 1.85 | 1.91 | |
| Incremental Delay, d2 | 5.8 | 5.2 | 4.8 | | | | | 0.8 | | 16.1 | 1.1 | |
| Delay (s) | 16.2 | 15.3 | 14.8 | | | | | 10.1 | | 35.4 | 19.2 | |
| Level of Service | B | B | B | | | | | B | | D | B | |
| Approach Delay (s) | | 15.5 | | | 0.0 | | | 10.1 | | | 21.9 | |
| Approach LOS | | B | | | A | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 41.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 59.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 68 | 44 | 3 | 311 | 96 | 45 | 40 | 549 | 828 | 80 | 230 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1845 | 1568 | 1665 | 1707 | 1538 | 1752 | 3505 | 1543 | 1752 | 3505 | 1524 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1845 | 1568 | 1665 | 1707 | 1538 | 1752 | 3505 | 1543 | 1752 | 3505 | 1524 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 73 | 47 | 3 | 334 | 103 | 48 | 43 | 590 | 890 | 86 | 247 | 65 |
| RTOR Reduction (vph) | 0 | 0 | 3 | 0 | 0 | 35 | 0 | 0 | 212 | 0 | 0 | 37 |
| Lane Group Flow (vph) | 73 | 47 | 0 | 217 | 220 | 13 | 43 | 590 | 678 | 86 | 247 | 28 |
| Confl. Peds. (#/hr) | 4 | | | | | 4 | | | 3 | | | 3 |
| Confl. Bikes (#/hr) | | | | | | 1 | | | | | | |
| Turn Type | Split | NA | Perm | Split | NA | Perm | Prot | NA | pm+ov | Prot | NA | Perm |
| Protected Phases | 4 | 4 | | 8 | 8 | | 5 | 2 | 8 | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 7.5 | 7.5 | 7.5 | 24.6 | 24.6 | 24.6 | 3.1 | 33.4 | 58.0 | 7.3 | 37.6 | 37.6 |
| Effective Green, g (s) | 7.5 | 7.5 | 7.5 | 24.6 | 24.6 | 24.6 | 3.1 | 33.4 | 58.0 | 7.3 | 37.6 | 37.6 |
| Actuated g/C Ratio | 0.08 | 0.08 | 0.08 | 0.28 | 0.28 | 0.28 | 0.03 | 0.38 | 0.65 | 0.08 | 0.42 | 0.42 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 147 | 155 | 132 | 461 | 472 | 426 | 61 | 1318 | 1007 | 144 | 1484 | 645 |
| v/s Ratio Prot | c0.04 | 0.03 | | 0.13 | 0.13 | | 0.02 | 0.17 | c0.19 | c0.05 | 0.07 | |
| v/s Ratio Perm | | | 0.00 | | | 0.01 | | | 0.25 | | | 0.02 |
| v/c Ratio | 0.50 | 0.30 | 0.00 | 0.47 | 0.47 | 0.03 | 0.70 | 0.45 | 0.67 | 0.60 | 0.17 | 0.04 |
| Uniform Delay, d1 | 38.8 | 38.2 | 37.2 | 26.7 | 26.6 | 23.4 | 42.4 | 20.8 | 9.5 | 39.3 | 15.9 | 15.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.6 | 1.1 | 0.0 | 0.8 | 0.7 | 0.0 | 30.9 | 1.1 | 1.8 | 6.5 | 0.2 | 0.1 |
| Delay (s) | 41.5 | 39.3 | 37.2 | 27.4 | 27.4 | 23.4 | 73.3 | 21.9 | 11.3 | 45.8 | 16.1 | 15.2 |
| Level of Service | D | D | D | C | C | C | E | C | B | D | B | B |
| Approach Delay (s) | | 40.5 | | | 27.0 | | | 17.2 | | | 22.4 | |
| Approach LOS | | D | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 88.8 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 69.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 69 | 750 | 156 | 23 | 418 | 73 | 135 | 91 | 31 | 412 | 205 | 22 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (prot) | 1752 | 3401 | | 1752 | 5036 | 1568 | 1752 | 1765 | | 1665 | 1723 | 1568 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 0.98 | 1.00 |
| Satd. Flow (perm) | 1752 | 3401 | | 1752 | 5036 | 1568 | 1752 | 1765 | | 1665 | 1723 | 1568 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 74 | 806 | 168 | 25 | 449 | 78 | 145 | 98 | 33 | 443 | 220 | 24 |
| RTOR Reduction (vph) | 0 | 21 | 0 | 0 | 0 | 54 | 0 | 15 | 0 | 0 | 0 | 19 |
| Lane Group Flow (vph) | 74 | 953 | 0 | 25 | 449 | 24 | 145 | 116 | 0 | 328 | 335 | 5 |
| Confl. Peds. (#/hr) | | | | | | | | | 5 | | | |
| Confl. Bikes (#/hr) | | | 3 | | | | | | 2 | | | |
| Turn Type | Prot | NA | | Prot | NA | Perm | Split | NA | | Split | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | | | | | | 8 | | | | | | 6 |
| Actuated Green, G (s) | 6.8 | 29.4 | | 1.6 | 24.2 | 24.2 | 16.0 | 16.0 | | 17.0 | 17.0 | 17.0 |
| Effective Green, g (s) | 6.8 | 29.4 | | 1.6 | 24.2 | 24.2 | 16.0 | 16.0 | | 17.0 | 17.0 | 17.0 |
| Actuated g/C Ratio | 0.08 | 0.37 | | 0.02 | 0.30 | 0.30 | 0.20 | 0.20 | | 0.21 | 0.21 | 0.21 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 148 | 1249 | | 35 | 1523 | 474 | 350 | 353 | | 353 | 366 | 333 |
| v/s Ratio Prot | c0.04 | c0.28 | | 0.01 | 0.09 | | c0.08 | 0.07 | | c0.20 | 0.19 | |
| v/s Ratio Perm | | | | | | 0.02 | | | | | | 0.00 |
| v/c Ratio | 0.50 | 0.76 | | 0.71 | 0.29 | 0.05 | 0.41 | 0.33 | | 0.93 | 0.92 | 0.02 |
| Uniform Delay, d1 | 35.0 | 22.2 | | 39.0 | 21.4 | 19.8 | 27.9 | 27.4 | | 30.9 | 30.8 | 24.9 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.6 | 4.5 | | 51.0 | 0.5 | 0.2 | 3.6 | 2.5 | | 30.0 | 26.7 | 0.0 |
| Delay (s) | 37.6 | 26.7 | | 90.0 | 21.9 | 20.0 | 31.5 | 29.9 | | 60.9 | 57.5 | 24.9 |
| Level of Service | D | C | | F | C | B | C | C | | E | E | C |
| Approach Delay (s) | | 27.5 | | | 24.7 | | | 30.7 | | | 58.0 | |
| Approach LOS | | C | | | C | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 35.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 80.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 72.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 61 | 39 | 75 | 58 | 33 | 93 | 52 | 393 | 68 | 170 | 782 | 111 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 66 | 42 | 81 | 62 | 35 | 100 | 56 | 423 | 73 | 183 | 841 | 119 |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 346 | 129 | 250 | 291 | 135 | 363 | 80 | 1386 | 620 | 163 | 1553 | 678 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.05 | 0.40 | 0.40 | 0.09 | 0.44 | 0.44 |
| Sat Flow, veh/h | 1235 | 557 | 1075 | 660 | 580 | 1564 | 1757 | 3505 | 1568 | 1757 | 3505 | 1531 |
| Grp Volume(v), veh/h | 66 | 0 | 123 | 97 | 0 | 100 | 56 | 423 | 73 | 183 | 841 | 119 |
| Grp Sat Flow(s),veh/h/ln | 1235 | 0 | 1633 | 1240 | 0 | 1564 | 1757 | 1752 | 1568 | 1757 | 1752 | 1531 |
| Q Serve(g_s), s | 2.1 | 0.0 | 2.7 | 1.1 | 0.0 | 2.3 | 1.4 | 3.6 | 1.3 | 4.0 | 7.6 | 2.0 |
| Cycle Q Clear(g_c), s | 5.9 | 0.0 | 2.7 | 3.7 | 0.0 | 2.3 | 1.4 | 3.6 | 1.3 | 4.0 | 7.6 | 2.0 |
| Prop In Lane | 1.00 | | 0.66 | 0.64 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 346 | 0 | 379 | 425 | 0 | 363 | 80 | 1386 | 620 | 163 | 1553 | 678 |
| V/C Ratio(X) | 0.19 | 0.00 | 0.32 | 0.23 | 0.00 | 0.28 | 0.70 | 0.31 | 0.12 | 1.12 | 0.54 | 0.18 |
| Avail Cap(c_a), veh/h | 1697 | 0 | 2165 | 1971 | 0 | 2074 | 163 | 1386 | 620 | 163 | 1553 | 678 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 16.6 | 0.0 | 13.7 | 13.9 | 0.0 | 13.5 | 20.2 | 8.9 | 8.2 | 19.5 | 8.8 | 7.2 |
| Incr Delay (d2), s/veh | 0.3 | 0.0 | 0.5 | 0.3 | 0.0 | 0.4 | 10.7 | 0.6 | 0.4 | 106.0 | 1.4 | 0.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.7 | 0.0 | 1.2 | 1.0 | 0.0 | 1.0 | 0.9 | 1.8 | 0.6 | 6.7 | 3.9 | 0.9 |
| LnGrp Delay(d),s/veh | 16.9 | 0.0 | 14.2 | 14.2 | 0.0 | 13.9 | 30.9 | 9.5 | 8.6 | 125.5 | 10.1 | 7.8 |
| LnGrp LOS | B | | B | B | | B | C | A | A | F | B | A |
| Approach Vol, veh/h | | 189 | | | 197 | | | 552 | | | 1143 | |
| Approach Delay, s/veh | | 15.1 | | | 14.1 | | | 11.6 | | | 28.4 | |
| Approach LOS | | B | | | B | | | B | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 8.0 | 21.0 | | 14.0 | 6.0 | 23.0 | | 14.0 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | 4.0 | 17.0 | | 57.0 | 4.0 | 17.0 | | 57.0 |
| Max Q Clear Time (g_c+I1), s | 6.0 | 5.6 | | 7.9 | 3.4 | 9.6 | | 5.7 |
| Green Ext Time (p_c), s | 0.0 | 6.8 | | 2.0 | 0.0 | 4.9 | | 2.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 21.3 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 281 | 37 | 126 | 18 | 16 | 10 | 195 | 387 | 11 | 26 | 732 | 312 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 302 | 40 | 135 | 19 | 17 | 11 | 210 | 416 | 12 | 28 | 787 | 335 |
| Adj No. of Lanes | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 481 | 260 | 217 | 42 | 37 | 67 | 179 | 1816 | 813 | 44 | 1547 | 679 |
| Arrive On Green | 0.14 | 0.14 | 0.14 | 0.04 | 0.04 | 0.04 | 0.10 | 0.52 | 0.52 | 0.02 | 0.44 | 0.44 |
| Sat Flow, veh/h | 3408 | 1845 | 1538 | 949 | 849 | 1517 | 1757 | 3505 | 1568 | 1757 | 3505 | 1539 |
| Grp Volume(v), veh/h | 302 | 40 | 135 | 36 | 0 | 11 | 210 | 416 | 12 | 28 | 787 | 335 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1845 | 1538 | 1797 | 0 | 1517 | 1757 | 1752 | 1568 | 1757 | 1752 | 1539 |
| Q Serve(g_s), s | 4.9 | 1.1 | 4.9 | 1.2 | 0.0 | 0.4 | 6.0 | 3.8 | 0.2 | 0.9 | 9.5 | 9.2 |
| Cycle Q Clear(g_c), s | 4.9 | 1.1 | 4.9 | 1.2 | 0.0 | 0.4 | 6.0 | 3.8 | 0.2 | 0.9 | 9.5 | 9.2 |
| Prop In Lane | 1.00 | | 1.00 | 0.53 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 481 | 260 | 217 | 79 | 0 | 67 | 179 | 1816 | 813 | 44 | 1547 | 679 |
| V/C Ratio(X) | 0.63 | 0.15 | 0.62 | 0.45 | 0.00 | 0.16 | 1.17 | 0.23 | 0.01 | 0.64 | 0.51 | 0.49 |
| Avail Cap(c_a), veh/h | 926 | 501 | 418 | 488 | 0 | 412 | 179 | 1816 | 813 | 358 | 1547 | 679 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 23.8 | 22.2 | 23.8 | 27.5 | 0.0 | 27.1 | 26.5 | 7.8 | 6.9 | 28.5 | 11.9 | 11.7 |
| Incr Delay (d2), s/veh | 1.4 | 0.3 | 2.9 | 4.0 | 0.0 | 1.1 | 121.7 | 0.3 | 0.0 | 14.4 | 1.2 | 2.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.4 | 0.6 | 2.2 | 0.7 | 0.0 | 0.2 | 8.9 | 1.9 | 0.1 | 0.6 | 4.8 | 4.3 |
| LnGrp Delay(d),s/veh | 25.2 | 22.5 | 26.7 | 31.5 | 0.0 | 28.2 | 148.2 | 8.0 | 6.9 | 42.9 | 13.1 | 14.3 |
| LnGrp LOS | C | C | C | C | | C | F | A | A | D | B | B |
| Approach Vol, veh/h | | 477 | | | 47 | | | 638 | | | 1150 | |
| Approach Delay, s/veh | | 25.4 | | | 30.7 | | | 54.2 | | | 14.1 | |
| Approach LOS | | C | | | C | | | D | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 5.5 | 34.5 | | 12.3 | 10.0 | 30.0 | | 6.6 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | 12.0 | 20.0 | | 16.0 | 6.0 | 26.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | 2.9 | 5.8 | | 6.9 | 8.0 | 11.5 | | 3.2 |
| Green Ext Time (p_c), s | 0.0 | 8.0 | | 1.3 | 0.0 | 8.2 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 27.8 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 49 | 218 | 120 | 158 | 259 | 219 | 128 | 193 | 231 | 291 | 327 | 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 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 52 | 229 | 126 | 166 | 273 | 231 | 135 | 203 | 243 | 306 | 344 | 19 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 65 | 355 | 188 | 207 | 445 | 373 | 171 | 1987 | 887 | 939 | 1410 | 78 |
| Arrive On Green | 0.04 | 0.16 | 0.16 | 0.12 | 0.24 | 0.24 | 0.10 | 0.57 | 0.57 | 0.42 | 0.42 | 0.42 |
| Sat Flow, veh/h | 1757 | 2211 | 1171 | 1757 | 1845 | 1546 | 1757 | 3505 | 1565 | 1803 | 3376 | 186 |
| Grp Volume(v), veh/h | 52 | 180 | 175 | 166 | 273 | 231 | 135 | 203 | 243 | 306 | 178 | 185 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1630 | 1757 | 1845 | 1546 | 1757 | 1752 | 1565 | 901 | 1752 | 1810 |
| Q Serve(g_s), s | 2.3 | 7.4 | 7.9 | 7.1 | 10.2 | 10.3 | 5.8 | 2.1 | 6.2 | 9.2 | 5.1 | 5.1 |
| Cycle Q Clear(g_c), s | 2.3 | 7.4 | 7.9 | 7.1 | 10.2 | 10.3 | 5.8 | 2.1 | 6.2 | 9.2 | 5.1 | 5.1 |
| Prop In Lane | 1.00 | | 0.72 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.10 |
| Lane Grp Cap(c), veh/h | 65 | 281 | 262 | 207 | 445 | 373 | 171 | 1987 | 887 | 939 | 732 | 756 |
| V/C Ratio(X) | 0.79 | 0.64 | 0.67 | 0.80 | 0.61 | 0.62 | 0.79 | 0.10 | 0.27 | 0.33 | 0.24 | 0.24 |
| Avail Cap(c_a), veh/h | 136 | 361 | 336 | 407 | 665 | 558 | 339 | 1987 | 887 | 939 | 732 | 756 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 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 | 37.1 | 30.5 | 30.6 | 33.3 | 26.2 | 26.3 | 34.2 | 7.7 | 8.6 | 15.8 | 14.6 | 14.7 |
| Incr Delay (d2), s/veh | 19.0 | 2.4 | 3.4 | 7.0 | 1.4 | 1.7 | 7.8 | 0.1 | 0.8 | 0.9 | 0.8 | 0.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.4 | 3.8 | 3.8 | 3.9 | 5.3 | 4.6 | 3.2 | 1.0 | 2.8 | 2.4 | 2.6 | 2.7 |
| LnGrp Delay(d),s/veh | 56.1 | 32.9 | 34.1 | 40.4 | 27.6 | 27.9 | 42.0 | 7.8 | 9.4 | 16.8 | 15.4 | 15.4 |
| LnGrp LOS | E | C | C | D | C | C | D | A | A | B | B | B |
| Approach Vol, veh/h | | 407 | | | 670 | | | 581 | | | 669 | |
| Approach Delay, s/veh | | 36.3 | | | 30.9 | | | 16.4 | | | 16.0 | |
| Approach LOS | | D | | | C | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 48.0 | 13.2 | 16.5 | 11.6 | 36.4 | 6.9 | 22.7 |
| Change Period (Y+Rc), s | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | | 44.0 | 18.0 | 16.0 | 15.0 | 25.0 | 6.0 | 28.0 |
| Max Q Clear Time (g_c+I1), s | | 8.2 | 9.1 | 9.9 | 7.8 | 11.2 | 4.3 | 12.3 |
| Green Ext Time (p_c), s | | 7.5 | 0.3 | 2.5 | 0.2 | 5.4 | 0.0 | 4.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 24.0 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 222 | 482 | 201 | 29 | 327 | 56 | 279 | 277 | 16 | 69 | 231 | 146 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 231 | 502 | 209 | 30 | 341 | 58 | 291 | 289 | 17 | 72 | 241 | 152 |
| Adj No. of Lanes | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 155 | 803 | 672 | 38 | 1091 | 183 | 223 | 2028 | 119 | 91 | 1836 | 810 |
| Arrive On Green | 0.09 | 0.44 | 0.44 | 0.02 | 0.36 | 0.36 | 0.13 | 0.60 | 0.60 | 0.05 | 0.52 | 0.52 |
| Sat Flow, veh/h | 1757 | 1845 | 1543 | 1757 | 2992 | 503 | 1757 | 3364 | 197 | 1757 | 3505 | 1546 |
| Grp Volume(v), veh/h | 231 | 502 | 209 | 30 | 198 | 201 | 291 | 150 | 156 | 72 | 241 | 152 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1845 | 1543 | 1757 | 1752 | 1743 | 1757 | 1752 | 1809 | 1757 | 1752 | 1546 |
| Q Serve(g_s), s | 11.5 | 27.4 | 11.5 | 2.2 | 10.5 | 10.8 | 16.5 | 4.8 | 4.9 | 5.3 | 4.6 | 6.8 |
| Cycle Q Clear(g_c), s | 11.5 | 27.4 | 11.5 | 2.2 | 10.5 | 10.8 | 16.5 | 4.8 | 4.9 | 5.3 | 4.6 | 6.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.29 | 1.00 | | 0.11 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 155 | 803 | 672 | 38 | 639 | 635 | 223 | 1056 | 1090 | 91 | 1836 | 810 |
| V/C Ratio(X) | 1.49 | 0.63 | 0.31 | 0.79 | 0.31 | 0.32 | 1.31 | 0.14 | 0.14 | 0.79 | 0.13 | 0.19 |
| Avail Cap(c_a), veh/h | 155 | 803 | 672 | 270 | 639 | 635 | 223 | 1056 | 1090 | 122 | 1836 | 810 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.59 | 0.59 | 0.59 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 59.2 | 28.5 | 24.0 | 63.3 | 29.6 | 29.7 | 56.8 | 11.2 | 11.2 | 60.9 | 15.8 | 16.3 |
| Incr Delay (d2), s/veh | 238.1 | 2.2 | 0.7 | 29.5 | 1.3 | 1.3 | 165.9 | 0.3 | 0.3 | 15.9 | 0.1 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.8 | 14.4 | 5.0 | 1.4 | 5.3 | 5.4 | 18.3 | 2.4 | 2.5 | 3.0 | 2.2 | 3.0 |
| LnGrp Delay(d),s/veh | 297.3 | 30.7 | 24.7 | 92.8 | 30.8 | 31.0 | 222.6 | 11.5 | 11.5 | 76.9 | 16.0 | 16.9 |
| LnGrp LOS | F | C | C | F | C | C | F | B | B | E | B | B |
| Approach Vol, veh/h | | 942 | | | 429 | | | 597 | | | 465 | |
| Approach Delay, s/veh | | 94.7 | | | 35.2 | | | 114.4 | | | 25.7 | |
| Approach LOS | | F | | | D | | | F | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 9.7 | 83.9 | 5.8 | 62.1 | 20.0 | 73.6 | 15.0 | 52.9 |
| Change Period (Y+Rc), s | 3.0 | 4.6 | 3.0 | 5.5 | 3.5 | 4.6 | 3.5 | * 5.5 |
| Max Green Setting (Gmax), s | 9.0 | 46.4 | 20.0 | 38.5 | 16.5 | 38.4 | 11.5 | * 47 |
| Max Q Clear Time (g_c+I1), s | 7.3 | 6.9 | 4.2 | 29.4 | 18.5 | 8.8 | 13.5 | 12.8 |
| Green Ext Time (p_c), s | 0.0 | 3.4 | 0.0 | 4.5 | 0.0 | 3.3 | 0.0 | 8.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 75.9 |
| HCM 2010 LOS | E |

**Notes**

User approved pedestrian interval to be less than phase max green.

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

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 422 | 214 | 121 | 494 | 717 | 268 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 3.5 | 3.5 | 5.5 | 5.5 | 4.0 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3400 | 1568 | 1752 | 3505 | 3505 | 1568 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3400 | 1568 | 1752 | 3505 | 3505 | 1568 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 435 | 221 | 125 | 509 | 739 | 276 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 435 | 221 | 125 | 509 | 739 | 276 |
| Confl. Bikes (#/hr) | | 1 | | | | 1 |
| Turn Type | Prot | pt+ov | Prot | NA | NA | Over |
| Protected Phases | 8 | 1 7 | 1 | 6 | 2 | 8 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 24.0 | 26.4 | 13.2 | 51.2 | 34.5 | 24.0 |
| Effective Green, g (s) | 24.0 | 26.4 | 13.2 | 51.2 | 34.5 | 24.0 |
| Actuated g/C Ratio | 0.24 | 0.26 | 0.13 | 0.51 | 0.34 | 0.24 |
| Clearance Time (s) | 4.0 | | 3.5 | 5.5 | 5.5 | 4.0 |
| Vehicle Extension (s) | 2.0 | | 2.2 | 4.0 | 4.0 | 2.0 |
| Lane Grp Cap (vph) | 808 | 410 | 229 | 1778 | 1198 | 372 |
| v/s Ratio Prot | 0.13 | c0.14 | c0.07 | 0.15 | c0.21 | c0.18 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.54 | 0.54 | 0.55 | 0.29 | 0.62 | 0.74 |
| Uniform Delay, d1 | 33.6 | 32.0 | 41.0 | 14.3 | 27.7 | 35.6 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.3 | 0.8 | 1.7 | 0.1 | 1.1 | 6.8 |
| Delay (s) | 34.0 | 32.9 | 42.7 | 14.4 | 28.8 | 42.4 |
| Level of Service | C | C | D | B | C | D |
| Approach Delay (s) | 33.6 | | | 20.0 | 32.5 | |
| Approach LOS | C | | | C | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 29.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 100.9 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 49.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 148 | 1 | 196 | 0 | 0 | 0 | 0 | 511 | 196 | 602 | 700 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.5 | 3.5 | | | | | | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 0.95 | 0.95 | | | | | | 0.95 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 0.98 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.86 | | | | | | 0.96 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1665 | 1471 | | | | | | 3348 | | 3400 | 1845 | |
| Flt Permitted | 0.95 | 1.00 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1665 | 1471 | | | | | | 3348 | | 3400 | 1845 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 153 | 1 | 202 | 0 | 0 | 0 | 0 | 527 | 202 | 621 | 722 | 0 |
| RTOR Reduction (vph) | 0 | 173 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 138 | 45 | 0 | 0 | 0 | 0 | 0 | 685 | 0 | 621 | 722 | 0 |
| Confl. Peds. (#/hr) | | | 1 | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 3 |
| Turn Type | Split | NA | | | | | | NA | | Prot | NA | |
| Protected Phases | 8 | 8 | | | | | | 6 | | 5 | 2 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 10.7 | 10.7 | | | | | | 31.8 | | 20.0 | 56.3 | |
| Effective Green, g (s) | 10.7 | 10.7 | | | | | | 31.8 | | 20.0 | 56.3 | |
| Actuated g/C Ratio | 0.14 | 0.14 | | | | | | 0.42 | | 0.27 | 0.75 | |
| Clearance Time (s) | 3.5 | 3.5 | | | | | | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | | | 3.0 | | 2.5 | 4.0 | |
| Lane Grp Cap (vph) | 237 | 209 | | | | | | 1419 | | 906 | 1384 | |
| v/s Ratio Prot | c0.08 | 0.03 | | | | | | 0.20 | | c0.18 | c0.39 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.58 | 0.21 | | | | | | 0.48 | | 0.69 | 0.52 | |
| Uniform Delay, d1 | 30.1 | 28.4 | | | | | | 15.6 | | 24.7 | 3.8 | |
| Progression Factor | 1.00 | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.3 | 0.2 | | | | | | 1.2 | | 2.0 | 1.4 | |
| Delay (s) | 32.4 | 28.6 | | | | | | 16.8 | | 26.7 | 5.2 | |
| Level of Service | C | C | | | | | | B | | C | A | |
| Approach Delay (s) | | 30.1 | | | 0.0 | | | 16.8 | | | 15.1 | |
| Approach LOS | | C | | | A | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 75.0 | Sum of lost time (s) | 12.5 |
| Intersection Capacity Utilization | 58.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 670 | 462 | 20 | 137 | 256 | 297 | 10 | 641 | 215 | 308 | 527 | 242 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 705 | 486 | 21 | 144 | 269 | 45 | 11 | 675 | 0 | 324 | 555 | 0 |
| Adj No. of Lanes | 2 | 2 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 744 | 1153 | 50 | 172 | 701 | 314 | 353 | 726 | 325 | 351 | 693 | 310 |
| Arrive On Green | 0.22 | 0.34 | 0.34 | 0.10 | 0.20 | 0.20 | 0.20 | 0.21 | 0.00 | 0.20 | 0.20 | 0.00 |
| Sat Flow, veh/h | 3408 | 3421 | 148 | 1757 | 3505 | 1568 | 1757 | 3505 | 1568 | 1757 | 3505 | 1568 |
| Grp Volume(v), veh/h | 705 | 249 | 258 | 144 | 269 | 45 | 11 | 675 | 0 | 324 | 555 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1816 | 1757 | 1752 | 1568 | 1757 | 1752 | 1568 | 1757 | 1752 | 1568 |
| Q Serve(g_s), s | 24.5 | 13.1 | 13.2 | 9.7 | 8.0 | 1.8 | 0.6 | 22.7 | 0.0 | 21.7 | 18.1 | 0.0 |
| Cycle Q Clear(g_c), s | 24.5 | 13.1 | 13.2 | 9.7 | 8.0 | 1.8 | 0.6 | 22.7 | 0.0 | 21.7 | 18.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.08 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 744 | 591 | 612 | 172 | 701 | 314 | 353 | 726 | 325 | 351 | 693 | 310 |
| V/C Ratio(X) | 0.95 | 0.42 | 0.42 | 0.84 | 0.38 | 0.14 | 0.03 | 0.93 | 0.00 | 0.92 | 0.80 | 0.00 |
| Avail Cap(c_a), veh/h | 744 | 591 | 612 | 249 | 701 | 314 | 353 | 730 | 327 | 381 | 1139 | 510 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.09 | 0.09 | 0.09 | 1.00 | 1.00 | 0.00 | 0.84 | 0.84 | 0.00 |
| Uniform Delay (d), s/veh | 46.2 | 30.7 | 30.7 | 53.2 | 41.6 | 16.5 | 38.6 | 46.7 | 0.0 | 47.1 | 45.9 | 0.0 |
| Incr Delay (d2), s/veh | 21.2 | 2.2 | 2.1 | 1.6 | 0.1 | 0.1 | 0.0 | 18.4 | 0.0 | 23.6 | 1.8 | 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 | 13.7 | 6.7 | 7.0 | 4.8 | 3.9 | 0.8 | 0.3 | 12.8 | 0.0 | 12.8 | 9.0 | 0.0 |
| LnGrp Delay(d),s/veh | 67.5 | 32.9 | 32.9 | 54.8 | 41.7 | 16.6 | 38.6 | 65.1 | 0.0 | 70.7 | 47.7 | 0.0 |
| LnGrp LOS | E | C | C | D | D | B | D | E | | E | D | |
| Approach Vol, veh/h | | 1212 | | | 458 | | | 686 | | | 879 | |
| Approach Delay, s/veh | | 53.0 | | | 43.4 | | | 64.7 | | | 56.2 | |
| Approach LOS | | D | | | D | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 15.7 | 46.5 | 29.1 | 28.7 | 32.2 | 30.0 | 28.0 | 29.8 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 5.0 | * 5 | 6.0 | * 6 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 17.0 | 33.0 | 12.0 | * 39 | 26.0 | * 24 | 26.0 | 25.0 |
| Max Q Clear Time (g_c+I1), s | 11.7 | 15.2 | 2.6 | 20.1 | 26.5 | 10.0 | 23.7 | 24.7 |
| Green Ext Time (p_c), s | 0.2 | 5.7 | 3.2 | 3.6 | 0.0 | 1.5 | 0.2 | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 55.0 |
| HCM 2010 LOS | D |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 188 | 8 | 497 | 11 | 7 | 15 | 250 | 570 | 1 | 18 | 487 | 342 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 0.97 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1900 | 1845 | 1845 | 1900 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 198 | 8 | 74 | 12 | 7 | 16 | 263 | 600 | 1 | 19 | 513 | 65 |
| Adj No. of Lanes | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 1 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 310 | 13 | 285 | 102 | 59 | 136 | 381 | 1360 | 2 | 105 | 779 | 343 |
| Arrive On Green | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.22 | 0.38 | 0.38 | 0.12 | 0.44 | 0.44 |
| Sat Flow, veh/h | 1692 | 68 | 1553 | 573 | 334 | 764 | 1757 | 3590 | 6 | 1757 | 3505 | 1542 |
| Grp Volume(v), veh/h | 206 | 0 | 74 | 35 | 0 | 0 | 263 | 293 | 308 | 19 | 513 | 65 |
| Grp Sat Flow(s),veh/h/ln | 1760 | 0 | 1553 | 1672 | 0 | 0 | 1757 | 1752 | 1843 | 1757 | 1752 | 1542 |
| Q Serve(g_s), s | 9.7 | 0.0 | 3.7 | 1.6 | 0.0 | 0.0 | 12.4 | 11.2 | 11.2 | 0.9 | 10.3 | 2.3 |
| Cycle Q Clear(g_c), s | 9.7 | 0.0 | 3.7 | 1.6 | 0.0 | 0.0 | 12.4 | 11.2 | 11.2 | 0.9 | 10.3 | 2.3 |
| Prop In Lane | 0.96 | | 1.00 | 0.34 | | 0.46 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 323 | 0 | 285 | 297 | 0 | 0 | 381 | 664 | 698 | 105 | 779 | 343 |
| V/C Ratio(X) | 0.64 | 0.00 | 0.26 | 0.12 | 0.00 | 0.00 | 0.69 | 0.44 | 0.44 | 0.18 | 0.66 | 0.19 |
| Avail Cap(c_a), veh/h | 323 | 0 | 285 | 297 | 0 | 0 | 381 | 664 | 698 | 105 | 779 | 343 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 34.0 | 0.0 | 31.5 | 31.1 | 0.0 | 0.0 | 32.5 | 20.8 | 20.8 | 37.6 | 22.3 | 20.1 |
| Incr Delay (d2), s/veh | 9.3 | 0.0 | 2.2 | 0.8 | 0.0 | 0.0 | 9.9 | 2.1 | 2.0 | 3.7 | 4.3 | 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 | 5.6 | 0.0 | 1.7 | 0.8 | 0.0 | 0.0 | 7.0 | 5.8 | 6.0 | 0.5 | 5.3 | 1.1 |
| LnGrp Delay(d),s/veh | 43.3 | 0.0 | 33.7 | 31.9 | 0.0 | 0.0 | 42.3 | 23.0 | 22.9 | 41.3 | 26.7 | 21.3 |
| LnGrp LOS | D | | C | C | | | D | C | C | D | C | C |
| Approach Vol, veh/h | | 280 | | | 35 | | | 864 | | | 597 | |
| Approach Delay, s/veh | | 40.8 | | | 31.9 | | | 28.8 | | | 26.5 | |
| Approach LOS | | D | | | C | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 9.9 | 38.6 | | 21.0 | 24.0 | 24.5 | | 20.5 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 |
| Max Green Setting (Gmax), s | 5.4 | 34.1 | | 16.5 | 19.5 | 20.0 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | 2.9 | 13.2 | | 11.7 | 14.4 | 12.3 | | 3.6 |
| Green Ext Time (p_c), s | 0.0 | 7.7 | | 0.6 | 0.4 | 4.2 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 30.0 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 106 | 39 | 111 | 582 | 69 | 112 | 180 | 816 | 371 | 309 | 762 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 3.0 | 3.0 | 4.0 | 4.0 | | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | 0.91 | 0.91 | | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | |
| Flt Protected | | 0.96 | 1.00 | 0.95 | 0.97 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1780 | 1568 | 1595 | 3141 | | 1752 | 5036 | 1532 | 1752 | 3489 | |
| Flt Permitted | | 0.96 | 1.00 | 0.95 | 0.97 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | | 1780 | 1568 | 1595 | 3141 | | 1752 | 5036 | 1532 | 1752 | 3489 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 110 | 41 | 116 | 606 | 72 | 117 | 188 | 850 | 386 | 322 | 794 | 22 |
| RTOR Reduction (vph) | 0 | 0 | 103 | 0 | 23 | 0 | 0 | 0 | 250 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 151 | 13 | 303 | 469 | 0 | 188 | 850 | 136 | 322 | 815 | 0 |
| Confl. Peds. (#/hr) | | | | | | | | | | | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | 3 | | | 8 |
| Turn Type | Split | NA | Perm | Split | NA | | Prot | NA | Perm | Prot | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | | | | 2 | | | |
| Actuated Green, G (s) | | 13.5 | 13.5 | 25.3 | 25.3 | | 31.0 | 42.2 | 42.2 | 24.0 | 34.7 | |
| Effective Green, g (s) | | 13.5 | 13.5 | 25.3 | 25.3 | | 31.0 | 42.2 | 42.2 | 24.0 | 34.7 | |
| Actuated g/C Ratio | | 0.11 | 0.11 | 0.21 | 0.21 | | 0.26 | 0.35 | 0.35 | 0.20 | 0.29 | |
| Clearance Time (s) | | 3.0 | 3.0 | 4.0 | 4.0 | | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 2.0 | 2.0 | 3.5 | 3.5 | | 2.0 | 3.0 | 3.0 | 2.0 | 3.0 | |
| Lane Grp Cap (vph) | | 200 | 176 | 336 | 662 | | 452 | 1770 | 538 | 350 | 1008 | |
| v/s Ratio Prot | | c0.08 | | c0.19 | 0.15 | | 0.11 | c0.17 | | c0.18 | c0.23 | |
| v/s Ratio Perm | | | 0.01 | | | | | | 0.09 | | | |
| v/c Ratio | | 0.76 | 0.07 | 0.90 | 0.71 | | 0.42 | 0.48 | 0.25 | 0.92 | 0.81 | |
| Uniform Delay, d1 | | 51.6 | 47.7 | 46.1 | 43.9 | | 37.0 | 30.3 | 27.7 | 47.1 | 39.6 | |
| Progression Factor | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.32 | 1.38 | 6.01 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 13.4 | 0.1 | 26.5 | 3.6 | | 0.2 | 0.6 | 0.8 | 28.3 | 7.0 | |
| Delay (s) | | 65.0 | 47.7 | 72.6 | 47.5 | | 48.9 | 42.5 | 167.0 | 75.4 | 46.5 | |
| Level of Service | | E | D | E | D | | D | D | F | E | D | |
| Approach Delay (s) | | 57.5 | | | 57.1 | | | 77.1 | | | 54.7 | |
| Approach LOS | | E | | | E | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 64.2 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 15.5 |
| Intersection Capacity Utilization | 70.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 81 | 564 | 84 | 410 | 461 | 606 | 178 | 641 | 595 | 786 | 613 | 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 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 84 | 588 | 0 | 427 | 480 | 0 | 185 | 668 | 620 | 819 | 639 | 0 |
| Adj No. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 162 | 736 | 329 | 530 | 1115 | 499 | 229 | 1085 | 729 | 767 | 1417 | 634 |
| Arrive On Green | 0.05 | 0.21 | 0.00 | 0.16 | 0.32 | 0.00 | 0.04 | 0.10 | 0.10 | 0.38 | 0.68 | 0.00 |
| Sat Flow, veh/h | 3408 | 3505 | 1568 | 3408 | 3505 | 1568 | 1757 | 3505 | 1568 | 3408 | 3505 | 1568 |
| Grp Volume(v), veh/h | 84 | 588 | 0 | 427 | 480 | 0 | 185 | 668 | 620 | 819 | 639 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1568 | 1704 | 1752 | 1568 | 1757 | 1752 | 1568 | 1704 | 1752 | 1568 |
| Q Serve(g_s), s | 2.9 | 19.1 | 0.0 | 14.5 | 13.0 | 0.0 | 12.5 | 21.9 | 37.1 | 27.0 | 10.2 | 0.0 |
| Cycle Q Clear(g_c), s | 2.9 | 19.1 | 0.0 | 14.5 | 13.0 | 0.0 | 12.5 | 21.9 | 37.1 | 27.0 | 10.2 | 0.0 |
| 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 | 162 | 736 | 329 | 530 | 1115 | 499 | 229 | 1085 | 729 | 767 | 1417 | 634 |
| V/C Ratio(X) | 0.52 | 0.80 | 0.00 | 0.81 | 0.43 | 0.00 | 0.81 | 0.62 | 0.85 | 1.07 | 0.45 | 0.00 |
| Avail Cap(c_a), veh/h | 483 | 789 | 353 | 767 | 1115 | 499 | 278 | 1085 | 729 | 767 | 1417 | 634 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.83 | 0.83 | 0.83 | 0.51 | 0.51 | 0.00 |
| Uniform Delay (d), s/veh | 55.8 | 45.0 | 0.0 | 48.9 | 32.3 | 0.0 | 55.9 | 47.0 | 35.5 | 37.5 | 13.3 | 0.0 |
| Incr Delay (d2), s/veh | 1.0 | 5.3 | 0.0 | 3.5 | 0.2 | 0.0 | 9.5 | 2.2 | 10.1 | 43.8 | 0.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.4 | 9.8 | 0.0 | 7.1 | 6.3 | 0.0 | 6.7 | 11.0 | 18.5 | 17.3 | 5.0 | 0.0 |
| LnGrp Delay(d),s/veh | 56.8 | 50.3 | 0.0 | 52.4 | 32.5 | 0.0 | 65.5 | 49.2 | 45.6 | 81.2 | 13.8 | 0.0 |
| LnGrp LOS | E | D | | D | C | | E | D | D | F | B | |
| Approach Vol, veh/h | | 672 | | | 907 | | | 1473 | | | 1458 | |
| Approach Delay, s/veh | | 51.1 | | | 41.9 | | | 49.8 | | | 51.7 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 30.0 | 40.1 | 21.7 | 28.2 | 18.6 | 51.5 | 8.7 | 41.2 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 26.0 | 26.0 | 26.0 | 26.0 | 18.0 | 34.0 | 16.0 | 36.0 |
| Max Q Clear Time (g_c+I1), s | 29.0 | 39.1 | 16.5 | 21.1 | 14.5 | 12.2 | 4.9 | 15.0 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 1.2 | 2.9 | 0.1 | 18.4 | 0.1 | 12.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 49.0 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 181 | 740 | 171 | 343 | 507 | 323 | 179 | 559 | 577 | 459 | 443 | 132 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 199 | 813 | 0 | 377 | 557 | 0 | 197 | 614 | 0 | 504 | 487 | 0 |
| Adj No. of Lanes | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 2 | 1 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 288 | 1291 | 402 | 468 | 1083 | 485 | 675 | 1662 | 518 | 601 | 1081 | 483 |
| Arrive On Green | 0.03 | 0.08 | 0.00 | 0.14 | 0.31 | 0.00 | 0.07 | 0.11 | 0.00 | 0.06 | 0.10 | 0.00 |
| Sat Flow, veh/h | 3408 | 5036 | 1568 | 3408 | 3505 | 1568 | 3408 | 5036 | 1568 | 3408 | 3505 | 1568 |
| Grp Volume(v), veh/h | 199 | 813 | 0 | 377 | 557 | 0 | 197 | 614 | 0 | 504 | 487 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1679 | 1568 | 1704 | 1752 | 1568 | 1704 | 1679 | 1568 | 1704 | 1752 | 1568 |
| Q Serve(g_s), s | 6.9 | 18.7 | 0.0 | 12.9 | 15.7 | 0.0 | 6.6 | 13.6 | 0.0 | 17.6 | 15.7 | 0.0 |
| Cycle Q Clear(g_c), s | 6.9 | 18.7 | 0.0 | 12.9 | 15.7 | 0.0 | 6.6 | 13.6 | 0.0 | 17.6 | 15.7 | 0.0 |
| 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 | 288 | 1291 | 402 | 468 | 1083 | 485 | 675 | 1662 | 518 | 601 | 1081 | 483 |
| V/C Ratio(X) | 0.69 | 0.63 | 0.00 | 0.81 | 0.51 | 0.00 | 0.29 | 0.37 | 0.00 | 0.84 | 0.45 | 0.00 |
| Avail Cap(c_a), veh/h | 426 | 1343 | 418 | 625 | 1139 | 510 | 675 | 1662 | 518 | 682 | 1081 | 483 |
| HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I) | 0.60 | 0.60 | 0.00 | 1.00 | 1.00 | 0.00 | 0.93 | 0.93 | 0.00 | 0.89 | 0.89 | 0.00 |
| Uniform Delay (d), s/veh | 56.8 | 49.4 | 0.0 | 50.2 | 34.1 | 0.0 | 48.1 | 41.9 | 0.0 | 54.8 | 44.3 | 0.0 |
| Incr Delay (d2), s/veh | 0.7 | 0.5 | 0.0 | 4.1 | 0.4 | 0.0 | 0.1 | 0.6 | 0.0 | 6.7 | 1.2 | 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 | 8.8 | 0.0 | 6.3 | 7.6 | 0.0 | 3.1 | 6.4 | 0.0 | 8.9 | 7.8 | 0.0 |
| LnGrp Delay(d),s/veh | 57.4 | 50.0 | 0.0 | 54.3 | 34.4 | 0.0 | 48.1 | 42.5 | 0.0 | 61.5 | 45.5 | 0.0 |
| LnGrp LOS | E | D | | D | C | | D | D | | E | D | |
| Approach Vol, veh/h | | 1012 | | | 934 | | | 811 | | | 991 | |
| Approach Delay, s/veh | | 51.4 | | | 42.5 | | | 43.8 | | | 53.6 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 19.5 | 33.8 | 26.8 | 40.0 | 13.2 | 40.1 | 24.1 | 42.6 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 21.0 | 31.0 | 16.0 | 36.0 | 14.0 | 38.0 | 23.0 | 29.0 |
| Max Q Clear Time (g_c+I1), s | 14.9 | 20.7 | 8.6 | 17.7 | 8.9 | 17.7 | 19.6 | 15.6 |
| Green Ext Time (p_c), s | 0.6 | 8.8 | 4.3 | 6.3 | 0.2 | 16.1 | 0.6 | 6.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 48.1 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 168 | 24 | 279 | 150 | 298 | 210 | 263 | 1054 | 24 | 55 | 882 | 155 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | | 3.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3060 | 1660 | 1394 | 1577 | 1660 | 1384 | 3060 | 4510 | | 1577 | 3154 | 1370 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3060 | 1660 | 1394 | 1577 | 1660 | 1384 | 3060 | 4510 | | 1577 | 3154 | 1370 |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 171 | 24 | 285 | 153 | 304 | 214 | 268 | 1076 | 24 | 56 | 900 | 158 |
| RTOR Reduction (vph) | 0 | 0 | 169 | 0 | 0 | 167 | 0 | 2 | 0 | 0 | 0 | 90 |
| Lane Group Flow (vph) | 171 | 24 | 116 | 153 | 304 | 47 | 268 | 1098 | 0 | 56 | 900 | 68 |
| Confl. Peds. (#/hr) | | | 8 | | | 3 | | | 25 | | | 11 |
| Confl. Bikes (#/hr) | | | 2 | | | 3 | | | 7 | | | 3 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Split | NA | pm+ov | Split | NA | Perm | Prot | NA | | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 5 | 3 | 3 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 3 | | | | | | 6 |
| Actuated Green, G (s) | 13.2 | 13.2 | 26.9 | 25.1 | 25.1 | 25.1 | 13.7 | 52.7 | | 12.0 | 51.0 | 51.0 |
| Effective Green, g (s) | 14.2 | 14.2 | 28.9 | 26.1 | 26.1 | 26.1 | 14.7 | 53.7 | | 13.0 | 52.0 | 52.0 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.24 | 0.22 | 0.22 | 0.22 | 0.12 | 0.45 | | 0.11 | 0.43 | 0.43 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | | 4.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | | 2.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 362 | 196 | 335 | 342 | 361 | 301 | 374 | 2018 | | 170 | 1366 | 593 |
| v/s Ratio Prot | c0.06 | 0.01 | 0.04 | 0.10 | c0.18 | | c0.09 | 0.24 | | 0.04 | c0.29 | |
| v/s Ratio Perm | | | 0.04 | | | 0.03 | | | | | | 0.05 |
| v/c Ratio | 0.47 | 0.12 | 0.35 | 0.45 | 0.84 | 0.15 | 0.72 | 0.54 | | 0.33 | 0.66 | 0.12 |
| Uniform Delay, d1 | 49.4 | 47.3 | 37.7 | 40.7 | 45.0 | 38.0 | 50.6 | 24.2 | | 49.5 | 27.0 | 20.3 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.22 | 0.99 | | 0.58 | 0.42 | 0.12 |
| Incremental Delay, d2 | 0.4 | 0.1 | 0.2 | 0.3 | 15.5 | 0.1 | 5.2 | 1.0 | | 0.4 | 2.2 | 0.4 |
| Delay (s) | 49.8 | 47.4 | 37.9 | 41.0 | 60.5 | 38.1 | 66.8 | 24.9 | | 29.3 | 13.5 | 2.8 |
| Level of Service | D | D | D | D | E | D | E | C | | C | B | A |
| Approach Delay (s) | | 42.6 | | | 48.9 | | | 33.1 | | | 12.8 | |
| Approach LOS | | D | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 72.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 27 | 309 | 27 | 179 | 187 | 520 | 92 | 744 | 330 | 682 | 696 | 37 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1660 | 1660 | 1710 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 | 1660 |
| Adj Flow Rate, veh/h | 28 | 322 | 28 | 186 | 195 | 542 | 96 | 775 | 344 | 710 | 725 | 39 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 2 | 1 | 3 | 1 | 2 | 3 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 46 | 494 | 43 | 222 | 883 | 1655 | 130 | 869 | 263 | 1199 | 2305 | 706 |
| Arrive On Green | 0.03 | 0.17 | 0.17 | 0.14 | 0.28 | 0.28 | 0.08 | 0.19 | 0.19 | 0.13 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1581 | 2933 | 253 | 1581 | 3154 | 2445 | 1581 | 4532 | 1374 | 3067 | 4532 | 1388 |
| Grp Volume(v), veh/h | 28 | 172 | 178 | 186 | 195 | 542 | 96 | 775 | 344 | 710 | 725 | 39 |
| Grp Sat Flow(s),veh/h/ln | 1581 | 1577 | 1610 | 1581 | 1577 | 1223 | 1581 | 1511 | 1374 | 1534 | 1511 | 1388 |
| Q Serve(g_s), s | 2.1 | 12.2 | 12.4 | 13.8 | 5.7 | 1.6 | 7.1 | 20.0 | 16.6 | 26.2 | 16.9 | 2.8 |
| Cycle Q Clear(g_c), s | 2.1 | 12.2 | 12.4 | 13.8 | 5.7 | 1.6 | 7.1 | 20.0 | 16.6 | 26.2 | 16.9 | 2.8 |
| Prop In Lane | 1.00 | | 0.16 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 46 | 266 | 271 | 222 | 883 | 1655 | 130 | 869 | 263 | 1199 | 2305 | 706 |
| V/C Ratio(X) | 0.61 | 0.65 | 0.66 | 0.84 | 0.22 | 0.33 | 0.74 | 0.89 | 1.31 | 0.59 | 0.31 | 0.06 |
| Avail Cap(c_a), veh/h | 158 | 368 | 376 | 250 | 920 | 1684 | 224 | 869 | 263 | 1199 | 2305 | 706 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.90 | 0.90 | 0.90 |
| Uniform Delay (d), s/veh | 57.6 | 46.6 | 46.6 | 50.2 | 33.2 | 3.5 | 53.8 | 47.3 | 25.4 | 43.2 | 31.5 | 25.7 |
| Incr Delay (d2), s/veh | 12.2 | 2.6 | 2.7 | 19.6 | 0.1 | 0.1 | 7.6 | 13.0 | 161.9 | 0.7 | 0.3 | 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 | 1.1 | 5.5 | 5.7 | 7.2 | 2.5 | 2.4 | 3.4 | 9.4 | 18.1 | 11.3 | 7.1 | 1.1 |
| LnGrp Delay(d),s/veh | 69.8 | 49.2 | 49.3 | 69.9 | 33.3 | 3.6 | 61.4 | 60.3 | 187.3 | 43.9 | 31.9 | 25.8 |
| LnGrp LOS | E | D | D | E | C | A | E | E | F | D | C | C |
| Approach Vol, veh/h | | 378 | | | 923 | | | 1215 | | | 1474 | |
| Approach Delay, s/veh | | 50.8 | | | 23.2 | | | 96.3 | | | 37.5 | |
| Approach LOS | | D | | | C | | | F | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 50.9 | 26.0 | 19.9 | 23.2 | 12.9 | 64.0 | 6.5 | 36.6 |
| Change Period (Y+Rc), s | 5.0 | * 5 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Max Green Setting (Gmax), s | 37.0 | * 21 | 18.0 | 27.0 | 16.0 | 42.0 | 11.0 | 34.0 |
| Max Q Clear Time (g_c+I1), s | 28.2 | 22.0 | 15.8 | 14.4 | 9.1 | 18.9 | 4.1 | 7.7 |
| Green Ext Time (p_c), s | 3.8 | 0.0 | 0.1 | 4.4 | 0.1 | 15.7 | 0.0 | 5.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 53.4 |
| HCM 2010 LOS | D |

Notes

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

User approved changes to right turn type.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 183 | 1 | 169 | 15 | 5 | 47 | 198 | 890 | 0 | 7 | 700 | 135 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 3.0 | 5.0 | | 3.0 | 5.0 | 5.0 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | | 1.00 | | 1.00 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.95 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | | 0.91 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 0.95 | 1.00 | | 0.99 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1495 | 1500 | 1411 | | 1471 | | 1577 | 4532 | | 1577 | 4532 | 1345 |
| Flt Permitted | 0.70 | 0.68 | 1.00 | | 0.93 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1105 | 1064 | 1411 | | 1383 | | 1577 | 4532 | | 1577 | 4532 | 1345 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 185 | 1 | 171 | 15 | 5 | 47 | 200 | 899 | 0 | 7 | 707 | 136 |
| RTOR Reduction (vph) | 0 | 0 | 147 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 57 |
| Lane Group Flow (vph) | 92 | 94 | 24 | 0 | 27 | 0 | 200 | 899 | 0 | 7 | 707 | 79 |
| Confl. Peds. (#/hr) | 2 | | | | | 2 | | | | | | 10 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 6 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Prot | NA | | Prot | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 15.5 | 15.5 | 15.5 | | 15.5 | | 18.2 | 79.5 | | 3.0 | 64.3 | 64.3 |
| Effective Green, g (s) | 15.5 | 15.5 | 15.5 | | 15.5 | | 18.2 | 79.5 | | 3.0 | 64.3 | 64.3 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | | 0.14 | | 0.17 | 0.72 | | 0.03 | 0.58 | 0.58 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | | 4.0 | | 3.0 | 5.0 | | 3.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 2.0 | | 2.0 | 3.0 | | 2.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 155 | 149 | 198 | | 194 | | 260 | 3275 | | 43 | 2649 | 786 |
| v/s Ratio Prot | | | | | | | c0.13 | c0.20 | | 0.00 | c0.16 | |
| v/s Ratio Perm | 0.08 | c0.09 | 0.02 | | 0.02 | | | | | | | 0.06 |
| v/c Ratio | 0.59 | 0.63 | 0.12 | | 0.14 | | 0.77 | 0.27 | | 0.16 | 0.27 | 0.10 |
| Uniform Delay, d1 | 44.3 | 44.6 | 41.3 | | 41.4 | | 43.9 | 5.3 | | 52.3 | 11.2 | 10.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.0 | 8.4 | 0.3 | | 0.1 | | 11.6 | 0.2 | | 0.7 | 0.2 | 0.3 |
| Delay (s) | 50.3 | 53.0 | 41.6 | | 41.5 | | 55.5 | 5.5 | | 52.9 | 11.5 | 10.3 |
| Level of Service | D | D | D | | D | | E | A | | D | B | B |
| Approach Delay (s) | | 46.8 | | | 41.5 | | | 14.6 | | | 11.7 | |
| Approach LOS | | D | | | D | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 54.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 37 | 32 | 47 | 886 | 0 | 240 | 81 | 576 | 836 | 212 | 325 | 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 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.96 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 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 | 1845 | 1900 | 1845 | 0 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 |
| Adj Flow Rate, veh/h | 39 | 34 | 49 | 933 | 0 | 253 | 85 | 606 | 0 | 223 | 342 | 65 |
| Adj No. of Lanes | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 318 | 277 | 399 | 0 | 0 | 0 | 118 | 701 | 314 | 257 | 817 | 153 |
| Arrive On Green | 0.59 | 0.59 | 0.59 | 0.01 | 0.00 | 0.01 | 0.07 | 0.20 | 0.00 | 0.15 | 0.28 | 0.27 |
| Sat Flow, veh/h | 541 | 471 | 679 | | 0 | | 1757 | 3505 | 1568 | 1757 | 2924 | 548 |
| Grp Volume(v), veh/h | 122 | 0 | 0 | | 0.0 | | 85 | 606 | 0 | 223 | 203 | 204 |
| Grp Sat Flow(s),veh/h/ln | 1692 | 0 | 0 | | | | 1757 | 1752 | 1568 | 1757 | 1752 | 1719 |
| Q Serve(g_s), s | 4.5 | 0.0 | 0.0 | | | | 6.6 | 23.4 | 0.0 | 17.4 | 13.2 | 13.6 |
| Cycle Q Clear(g_c), s | 4.5 | 0.0 | 0.0 | | | | 6.6 | 23.4 | 0.0 | 17.4 | 13.2 | 13.6 |
| Prop In Lane | 0.32 | | 0.40 | | | | 1.00 | | 1.00 | 1.00 | | 0.32 |
| Lane Grp Cap(c), veh/h | 994 | 0 | 0 | | | | 118 | 701 | 314 | 257 | 490 | 480 |
| V/C Ratio(X) | 0.12 | 0.00 | 0.00 | | | | 0.72 | 0.86 | 0.00 | 0.87 | 0.41 | 0.42 |
| Avail Cap(c_a), veh/h | 994 | 0 | 0 | | | | 213 | 701 | 314 | 289 | 490 | 480 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 0.00 | | | | 0.40 | 0.40 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.8 | 0.0 | 0.0 | | | | 64.0 | 54.2 | 0.0 | 58.4 | 41.1 | 41.4 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | | | | 1.2 | 5.9 | 0.0 | 19.9 | 2.6 | 2.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 0.0 | 0.0 | | | | 3.3 | 11.9 | 0.0 | 9.8 | 6.7 | 6.8 |
| LnGrp Delay(d),s/veh | 12.8 | 0.0 | 0.0 | | | | 65.3 | 60.1 | 0.0 | 78.3 | 43.7 | 44.1 |
| LnGrp LOS | B | | | | | | E | E | | E | D | D |
| Approach Vol, veh/h | | 122 | | | | | | 691 | | | 630 | |
| Approach Delay, s/veh | | 12.8 | | | | | | 60.7 | | | 56.1 | |
| Approach LOS | | B | | | | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | 23.5 | 31.0 | | 85.5 | 12.4 | 42.1 | | |
| Change Period (Y+Rc), s | 4.0 | 5.0 | | * 4.2 | 4.0 | 5.0 | | |
| Max Green Setting (Gmax), s | 22.0 | 26.0 | | * 33 | 16.0 | 32.0 | | |
| Max Q Clear Time (g_c+I1), s | 19.4 | 25.4 | | 6.5 | 8.6 | 15.6 | | |
| Green Ext Time (p_c), s | 0.1 | 0.5 | | 0.3 | 0.1 | 12.2 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 54.6 |
| HCM 2010 LOS | D |

Notes

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 73 | 539 | 86 | 398 | 353 | 905 | 183 | 473 | 453 | 699 | 326 | 216 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 4.0 | 5.0 | | 3.0 | 5.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 5.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 0.97 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.93 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1845 | 3602 | | 3579 | 3689 | 1540 | 1845 | 3689 | 1606 | 3579 | 3689 | 1607 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1845 | 3602 | | 3579 | 3689 | 1540 | 1845 | 3689 | 1606 | 3579 | 3689 | 1607 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 75 | 556 | 89 | 410 | 364 | 933 | 189 | 488 | 467 | 721 | 336 | 223 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 0 | 373 | 0 | 0 | 224 | 0 | 0 | 129 |
| Lane Group Flow (vph) | 75 | 636 | 0 | 410 | 364 | 560 | 189 | 488 | 243 | 721 | 336 | 94 |
| Confl. Peds. (#/hr) | | | 7 | | | 40 | | | 11 | | | 10 |
| Confl. Bikes (#/hr) | | | 1 | | | | | | | | | 1 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 9 | 6 | |
| Permitted Phases | | | | | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 10.1 | 33.4 | | 21.7 | 45.0 | 45.0 | 19.3 | 33.9 | 33.9 | 29.0 | 48.6 | 48.6 |
| Effective Green, g (s) | 10.1 | 33.4 | | 22.7 | 45.0 | 46.0 | 19.3 | 35.9 | 34.9 | 31.0 | 50.6 | 48.6 |
| Actuated g/C Ratio | 0.07 | 0.24 | | 0.16 | 0.32 | 0.33 | 0.14 | 0.26 | 0.25 | 0.22 | 0.36 | 0.35 |
| Clearance Time (s) | 4.0 | 5.0 | | 4.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 6.0 | | 4.0 | 6.0 | 6.0 | 3.0 | 6.0 | 6.0 | | 6.0 | 6.0 |
| Lane Grp Cap (vph) | 133 | 859 | | 580 | 1185 | 506 | 254 | 945 | 400 | 792 | 1333 | 557 |
| v/s Ratio Prot | 0.04 | 0.18 | | c0.11 | 0.10 | | c0.10 | 0.13 | | c0.20 | 0.09 | |
| v/s Ratio Perm | | | | | | c0.36 | | | c0.15 | | | 0.06 |
| v/c Ratio | 0.56 | 0.74 | | 0.71 | 0.31 | 1.11 | 0.74 | 0.52 | 0.61 | 0.91 | 0.25 | 0.17 |
| Uniform Delay, d1 | 62.8 | 49.3 | | 55.5 | 35.8 | 47.0 | 58.0 | 44.6 | 46.5 | 53.1 | 31.4 | 31.7 |
| Progression Factor | 1.19 | 1.05 | | 0.80 | 0.71 | 1.59 | 1.00 | 1.00 | 1.00 | 1.05 | 0.96 | 1.75 |
| Incremental Delay, d2 | 1.0 | 1.5 | | 3.8 | 0.4 | 70.4 | 11.2 | 2.0 | 6.7 | 12.3 | 0.4 | 0.5 |
| Delay (s) | 75.6 | 53.4 | | 48.2 | 25.9 | 145.1 | 69.2 | 46.6 | 53.2 | 68.4 | 30.4 | 56.1 |
| Level of Service | E | D | | D | C | F | E | D | D | E | C | E |
| Approach Delay (s) | | 55.7 | | | 96.4 | | | 53.0 | | | 56.3 | |
| Approach LOS | | E | | | F | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 69.5 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.90 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 95.5% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 103 | 16 | 90 | 13 | 12 | 26 | 224 | 946 | 23 | 29 | 378 | 225 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1749 | 1845 | 1546 | 1749 | 1845 | 1546 | 1752 | 3505 | 1527 | 1752 | 3505 | 1530 |
| Flt Permitted | 0.75 | 1.00 | 1.00 | 0.75 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1379 | 1845 | 1546 | 1374 | 1845 | 1546 | 1752 | 3505 | 1527 | 1752 | 3505 | 1530 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 108 | 17 | 95 | 14 | 13 | 27 | 236 | 996 | 24 | 31 | 398 | 237 |
| RTOR Reduction (vph) | 0 | 0 | 81 | 0 | 0 | 23 | 0 | 0 | 7 | 0 | 0 | 112 |
| Lane Group Flow (vph) | 108 | 17 | 14 | 14 | 13 | 4 | 236 | 996 | 17 | 31 | 398 | 125 |
| Confl. Peds. (#/hr) | 2 | | 2 | 2 | | 2 | | | 2 | | | 2 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 2 | | | 6 | | 3 11 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Actuated Green, G (s) | 15.3 | 15.3 | 15.3 | 15.3 | 15.3 | 15.3 | 20.7 | 75.2 | 75.2 | 4.5 | 55.0 | 55.0 |
| Effective Green, g (s) | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 | 22.7 | 77.2 | 77.2 | 5.5 | 57.0 | 57.0 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.21 | 0.71 | 0.71 | 0.05 | 0.53 | 0.53 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 6.0 | 6.0 | 2.0 | 6.0 | 6.0 |
| Lane Grp Cap (vph) | 208 | 278 | 233 | 207 | 278 | 233 | 368 | 2505 | 1091 | 89 | 1849 | 807 |
| v/s Ratio Prot | | 0.01 | | | 0.01 | | c0.13 | c0.28 | | 0.02 | 0.11 | |
| v/s Ratio Perm | c0.08 | | 0.01 | 0.01 | | 0.00 | | | 0.01 | | | 0.08 |
| v/c Ratio | 0.52 | 0.06 | 0.06 | 0.07 | 0.05 | 0.02 | 0.64 | 0.40 | 0.02 | 0.35 | 0.22 | 0.15 |
| Uniform Delay, d1 | 42.2 | 39.3 | 39.3 | 39.3 | 39.2 | 39.0 | 38.9 | 6.1 | 4.4 | 49.5 | 13.6 | 13.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.20 | 0.89 | 0.55 | 0.82 | 0.95 | 3.07 |
| Incremental Delay, d2 | 0.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 2.7 | 0.4 | 0.0 | 0.8 | 0.3 | 0.4 |
| Delay (s) | 43.2 | 39.3 | 39.3 | 39.4 | 39.2 | 39.0 | 49.5 | 5.9 | 2.5 | 41.5 | 13.2 | 40.6 |
| Level of Service | D | D | D | D | D | D | D | A | A | D | B | D |
| Approach Delay (s) | | 41.2 | | | 39.2 | | | 14.0 | | | 24.3 | |
| Approach LOS | | D | | | D | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 20.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 108.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 56.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 51 | 0 | 280 | 42 | 945 | 237 | 0 | 1294 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | |
| Lane Util. Factor | | | | | 0.95 | 0.95 | 1.00 | 0.95 | | | 0.86 | |
| Frpb, ped/bikes | | | | | 1.00 | 1.00 | 1.00 | 0.99 | | | 1.00 | |
| Flpb, ped/bikes | | | | | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | |
| Frt | | | | | 0.90 | 0.85 | 1.00 | 0.97 | | | 1.00 | |
| Flt Protected | | | | | 0.99 | 1.00 | 0.95 | 1.00 | | | 1.00 | |
| Satd. Flow (prot) | | | | | 1546 | 1490 | 1752 | 3381 | | | 6346 | |
| Flt Permitted | | | | | 0.99 | 1.00 | 0.95 | 1.00 | | | 1.00 | |
| Satd. Flow (perm) | | | | | 1546 | 1490 | 1752 | 3381 | | | 6346 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 0 | 0 | 0 | 54 | 0 | 298 | 45 | 1005 | 252 | 0 | 1377 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 91 | 91 | 0 | 9 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 88 | 82 | 45 | 1248 | 0 | 0 | 1377 | 0 |
| Confl. Peds. (#/hr) | | | | | | | | | 3 | | | |
| Turn Type | | | | custom | NA | Perm | Prot | NA | | | NA | |
| Protected Phases | | | | 2 | 2 | | 3 | 8 | | | 4 | |
| Permitted Phases | | | | 2 | | 2 | | | | | | |
| Actuated Green, G (s) | | | | | 14.0 | 14.0 | 6.4 | 85.0 | | | 74.6 | |
| Effective Green, g (s) | | | | | 15.0 | 15.0 | 7.4 | 87.0 | | | 76.6 | |
| Actuated g/C Ratio | | | | | 0.14 | 0.14 | 0.07 | 0.81 | | | 0.71 | |
| Clearance Time (s) | | | | | 4.0 | 4.0 | 4.0 | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | 2.0 | 6.0 | | | 6.0 | |
| Lane Grp Cap (vph) | | | | | 214 | 206 | 120 | 2723 | | | 4500 | |
| v/s Ratio Prot | | | | | c0.06 | | 0.03 | c0.37 | | | 0.22 | |
| v/s Ratio Perm | | | | | | 0.05 | | | | | | |
| v/c Ratio | | | | | 0.41 | 0.40 | 0.38 | 0.46 | | | 0.31 | |
| Uniform Delay, d1 | | | | | 42.5 | 42.4 | 48.1 | 3.2 | | | 5.8 | |
| Progression Factor | | | | | 1.00 | 1.00 | 0.87 | 1.61 | | | 0.83 | |
| Incremental Delay, d2 | | | | | 1.3 | 1.3 | 0.7 | 0.5 | | | 0.2 | |
| Delay (s) | | | | | 43.7 | 43.6 | 42.5 | 5.7 | | | 5.0 | |
| Level of Service | | | | | D | D | D | A | | | A | |
| Approach Delay (s) | | 0.0 | | | 43.7 | | | 7.0 | | | 5.0 | |
| Approach LOS | | A | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 108.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 52.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 79 | 1244 | 6 | 37 | 423 | 27 | 18 | 48 | 17 | 54 | 41 | 26 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1900 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 84 | 1323 | 6 | 39 | 450 | 29 | 19 | 51 | 18 | 57 | 44 | 28 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 109 | 1927 | 9 | 47 | 1681 | 108 | 102 | 75 | 26 | 86 | 67 | 133 |
| Arrive On Green | 0.06 | 0.54 | 0.54 | 0.03 | 0.50 | 0.50 | 0.06 | 0.06 | 0.06 | 0.09 | 0.09 | 0.09 |
| Sat Flow, veh/h | 1757 | 3578 | 16 | 1757 | 3339 | 215 | 1757 | 1297 | 458 | 1012 | 782 | 1568 |
| Grp Volume(v), veh/h | 84 | 648 | 681 | 39 | 235 | 244 | 19 | 0 | 69 | 101 | 0 | 28 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1842 | 1757 | 1752 | 1801 | 1757 | 0 | 1755 | 1794 | 0 | 1568 |
| Q Serve(g_s), s | 3.1 | 17.6 | 17.6 | 1.4 | 5.0 | 5.1 | 0.7 | 0.0 | 2.5 | 3.6 | 0.0 | 1.1 |
| Cycle Q Clear(g_c), s | 3.1 | 17.6 | 17.6 | 1.4 | 5.0 | 5.1 | 0.7 | 0.0 | 2.5 | 3.6 | 0.0 | 1.1 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.12 | 1.00 | | 0.26 | 0.56 | | 1.00 |
| Lane Grp Cap(c), veh/h | 109 | 944 | 992 | 47 | 882 | 907 | 102 | 0 | 102 | 153 | 0 | 133 |
| V/C Ratio(X) | 0.77 | 0.69 | 0.69 | 0.82 | 0.27 | 0.27 | 0.19 | 0.00 | 0.68 | 0.66 | 0.00 | 0.21 |
| Avail Cap(c_a), veh/h | 809 | 1076 | 1131 | 809 | 1076 | 1106 | 755 | 0 | 754 | 826 | 0 | 722 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.1 | 11.0 | 11.0 | 31.5 | 9.3 | 9.3 | 29.2 | 0.0 | 30.1 | 28.9 | 0.0 | 27.8 |
| Incr Delay (d2), s/veh | 4.3 | 1.9 | 1.8 | 12.2 | 0.2 | 0.2 | 0.3 | 0.0 | 3.0 | 4.8 | 0.0 | 0.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.6 | 8.9 | 9.4 | 0.9 | 2.5 | 2.6 | 0.3 | 0.0 | 1.3 | 2.0 | 0.0 | 0.5 |
| LnGrp Delay(d),s/veh | 34.4 | 12.9 | 12.8 | 43.8 | 9.5 | 9.5 | 29.6 | 0.0 | 33.1 | 33.7 | 0.0 | 28.5 |
| LnGrp LOS | C | B | B | D | A | A | C | | C | C | | C |
| Approach Vol, veh/h | | 1413 | | | 518 | | | 88 | | | 129 | |
| Approach Delay, s/veh | | 14.1 | | | 12.1 | | | 32.3 | | | 32.6 | |
| Approach LOS | | B | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 5.8 | 42.1 | | 7.8 | 8.0 | 39.8 | | 9.5 |
| Change Period (Y+Rc), s | 4.0 | 7.0 | | 4.0 | 4.0 | 7.0 | | 4.0 |
| Max Green Setting (Gmax), s | 30.0 | 40.0 | | 28.0 | 30.0 | 40.0 | | 30.0 |
| Max Q Clear Time (g_c+I1), s | 3.4 | 19.6 | | 4.5 | 5.1 | 7.1 | | 5.6 |
| Green Ext Time (p_c), s | 0.0 | 15.4 | | 0.2 | 0.1 | 22.1 | | 0.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 15.5 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 295 | 364 | 42 | 56 | 202 | 189 | 23 | 80 | 49 | 99 | 80 | 138 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.6 | 3.6 | | 3.2 | 3.2 | | 3.2 | 3.2 | 3.2 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.93 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1845 | 1905 | | 1845 | 1781 | | 1834 | 1822 | | 1842 | 1942 | 1603 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.70 | 1.00 | | 0.57 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1845 | 1905 | | 1845 | 1781 | | 1345 | 1822 | | 1099 | 1942 | 1603 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 324 | 400 | 46 | 62 | 222 | 208 | 25 | 88 | 54 | 109 | 88 | 152 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 27 | 0 | 0 | 22 | 0 | 0 | 0 | 123 |
| Lane Group Flow (vph) | 324 | 443 | 0 | 62 | 403 | 0 | 25 | 120 | 0 | 109 | 88 | 29 |
| Confl. Peds. (#/hr) | | | 10 | | | 1 | 5 | | 2 | 2 | | 5 |
| Confl. Bikes (#/hr) | | | 1 | | | 1 | | | | | | 1 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 1 | 1 | | 2 | 2 | | | 4 | | | 4 | |
| Permitted Phases | | | | | | | 4 | | | 4 | | 4 |
| Actuated Green, G (s) | 25.6 | 25.6 | | 24.2 | 24.2 | | 14.0 | 14.0 | | 14.0 | 14.0 | 14.0 |
| Effective Green, g (s) | 28.6 | 28.6 | | 25.2 | 25.2 | | 15.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Actuated g/C Ratio | 0.36 | 0.36 | | 0.32 | 0.32 | | 0.19 | 0.19 | | 0.19 | 0.19 | 0.19 |
| Clearance Time (s) | 6.0 | 6.0 | | 4.6 | 4.6 | | 4.2 | 4.2 | | 4.2 | 4.2 | 4.2 |
| Vehicle Extension (s) | 1.0 | 1.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 671 | 693 | | 591 | 571 | | 256 | 347 | | 209 | 370 | 305 |
| v/s Ratio Prot | 0.18 | c0.23 | | 0.03 | c0.23 | | | 0.07 | | | 0.05 | |
| v/s Ratio Perm | | | | | | | 0.02 | | | c0.10 | | 0.02 |
| v/c Ratio | 0.48 | 0.64 | | 0.10 | 0.71 | | 0.10 | 0.35 | | 0.52 | 0.24 | 0.10 |
| Uniform Delay, d1 | 19.3 | 20.7 | | 18.8 | 23.4 | | 26.2 | 27.6 | | 28.6 | 27.0 | 26.2 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.2 | 1.4 | | 0.0 | 3.2 | | 0.1 | 0.2 | | 1.1 | 0.1 | 0.0 |
| Delay (s) | 19.5 | 22.2 | | 18.8 | 26.7 | | 26.3 | 27.8 | | 29.7 | 27.1 | 26.3 |
| Level of Service | B | C | | B | C | | C | C | | C | C | C |
| Approach Delay (s) | | 21.0 | | | 25.7 | | | 27.5 | | | 27.5 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 78.6 | Sum of lost time (s) | 9.8 |
| Intersection Capacity Utilization | 63.4% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 112 | 1386 | 190 | 321 | 702 | 82 | 286 | 480 | 508 | 147 | 248 | 57 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.91 | | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1752 | 4928 | | 3400 | 4947 | | 1595 | 3345 | 1538 | 1752 | 3397 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1752 | 4928 | | 3400 | 4947 | | 1595 | 3345 | 1538 | 1752 | 3397 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 115 | 1429 | 196 | 331 | 724 | 85 | 295 | 495 | 524 | 152 | 256 | 59 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 8 | 0 | 0 | 0 | 173 | 0 | 16 | 0 |
| Lane Group Flow (vph) | 115 | 1615 | 0 | 331 | 801 | 0 | 257 | 533 | 351 | 152 | 299 | 0 |
| Confl. Peds. (#/hr) | | | 7 | | | 3 | | | 13 | | | 1 |
| Confl. Bikes (#/hr) | | | 8 | | | 1 | | | 1 | | | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Split | NA | pm+ov | Split | NA | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 3 | 1 | 4 | 4 | |
| Permitted Phases | | | | | | | | | 3 | | | |
| Actuated Green, G (s) | 13.5 | 55.0 | | 18.3 | 59.8 | | 28.0 | 28.0 | 46.3 | 18.7 | 18.7 | |
| Effective Green, g (s) | 13.5 | 55.0 | | 18.3 | 59.8 | | 28.0 | 28.0 | 46.3 | 18.7 | 18.7 | |
| Actuated g/C Ratio | 0.10 | 0.39 | | 0.13 | 0.43 | | 0.20 | 0.20 | 0.33 | 0.13 | 0.13 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 2.0 | 4.0 | | 2.0 | 4.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lane Grp Cap (vph) | 168 | 1936 | | 444 | 2113 | | 319 | 669 | 508 | 234 | 453 | |
| v/s Ratio Prot | 0.07 | c0.33 | | c0.10 | c0.16 | | c0.16 | 0.16 | 0.09 | 0.09 | c0.09 | |
| v/s Ratio Perm | | | | | | | | | 0.14 | | | |
| v/c Ratio | 0.68 | 0.83 | | 0.75 | 0.38 | | 0.81 | 0.80 | 0.69 | 0.65 | 0.66 | |
| Uniform Delay, d1 | 61.2 | 38.4 | | 58.6 | 27.4 | | 53.4 | 53.3 | 40.6 | 57.5 | 57.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 8.8 | 4.4 | | 5.9 | 0.5 | | 13.0 | 6.1 | 3.3 | 4.6 | 2.6 | |
| Delay (s) | 70.0 | 42.8 | | 64.5 | 27.9 | | 66.4 | 59.4 | 43.9 | 62.1 | 60.3 | |
| Level of Service | E | D | | E | C | | E | E | D | E | E | |
| Approach Delay (s) | | 44.6 | | | 38.5 | | | 54.6 | | | 60.9 | |
| Approach LOS | | D | | | D | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 47.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 140.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 85.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 204 | 1220 | 485 | 83 | 493 | 139 | 230 | 297 | 124 | 254 | 489 | 129 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 7 | 4 | 14 | 3 | 8 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 208 | 1245 | 495 | 85 | 503 | 142 | 235 | 303 | 127 | 259 | 499 | 132 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 0 | 2 | 2 | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 176 | 1915 | 842 | 106 | 1776 | 795 | 283 | 414 | 169 | 306 | 624 | 273 |
| Arrive On Green | 0.10 | 0.55 | 0.55 | 0.06 | 0.51 | 0.51 | 0.08 | 0.17 | 0.17 | 0.09 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1757 | 3505 | 1542 | 1757 | 3505 | 1568 | 3408 | 2415 | 988 | 3408 | 3505 | 1534 |
| Grp Volume(v), veh/h | 208 | 1245 | 495 | 85 | 503 | 142 | 235 | 218 | 212 | 259 | 499 | 132 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1542 | 1757 | 1752 | 1568 | 1704 | 1752 | 1651 | 1704 | 1752 | 1534 |
| Q Serve(g_s), s | 14.0 | 35.0 | 30.0 | 6.7 | 11.6 | 6.9 | 9.5 | 16.5 | 17.1 | 10.5 | 19.1 | 10.8 |
| Cycle Q Clear(g_c), s | 14.0 | 35.0 | 30.0 | 6.7 | 11.6 | 6.9 | 9.5 | 16.5 | 17.1 | 10.5 | 19.1 | 10.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.60 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 176 | 1915 | 842 | 106 | 1776 | 795 | 283 | 300 | 283 | 306 | 624 | 273 |
| V/C Ratio(X) | 1.18 | 0.65 | 0.59 | 0.80 | 0.28 | 0.18 | 0.83 | 0.73 | 0.75 | 0.85 | 0.80 | 0.48 |
| Avail Cap(c_a), veh/h | 176 | 1915 | 842 | 427 | 1776 | 795 | 341 | 426 | 401 | 341 | 851 | 373 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 63.0 | 22.3 | 21.2 | 64.9 | 19.9 | 18.7 | 63.2 | 54.9 | 55.2 | 62.8 | 55.1 | 51.7 |
| Incr Delay (d2), s/veh | 126.1 | 1.7 | 3.0 | 5.0 | 0.1 | 0.1 | 11.6 | 1.6 | 2.5 | 14.9 | 2.7 | 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 | 12.9 | 17.4 | 13.4 | 3.4 | 5.6 | 3.0 | 4.9 | 8.1 | 8.0 | 5.6 | 9.5 | 4.6 |
| LnGrp Delay(d),s/veh | 189.1 | 24.1 | 24.2 | 69.9 | 20.0 | 18.9 | 74.8 | 56.5 | 57.7 | 77.7 | 57.8 | 52.2 |
| LnGrp LOS | F | C | C | E | C | B | E | E | E | E | E | D |
| Approach Vol, veh/h | | 1948 | | | 730 | | | 665 | | | 890 | |
| Approach Delay, s/veh | | 41.7 | | | 25.6 | | | 63.3 | | | 62.8 | |
| Approach LOS | | D | | | C | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 12.5 | 82.0 | 16.6 | 29.0 | 18.0 | 76.4 | 15.6 | 29.9 |
| Change Period (Y+Rc), s | 4.0 | 5.5 | 4.0 | 5.0 | 4.0 | 5.5 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 34.0 | 39.5 | 14.0 | 34.0 | 14.0 | 59.5 | 14.0 | 34.0 |
| Max Q Clear Time (g_c+I1), s | 8.7 | 37.0 | 12.5 | 19.1 | 16.0 | 13.6 | 11.5 | 21.1 |
| Green Ext Time (p_c), s | 0.1 | 2.4 | 0.1 | 3.2 | 0.0 | 24.0 | 0.1 | 3.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 46.8 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 226 | 1356 | 228 | 185 | 551 | 166 | 280 | 562 | 328 | 277 | 548 | 70 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 0.98 | 1.00 | | 0.96 | 1.00 | | 0.95 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1900 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 238 | 1427 | 240 | 195 | 580 | 175 | 295 | 592 | 345 | 292 | 577 | 74 |
| Adj No. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 399 | 1859 | 312 | 193 | 1202 | 354 | 339 | 876 | 376 | 307 | 844 | 359 |
| Arrive On Green | 0.45 | 0.86 | 0.86 | 0.22 | 0.63 | 0.63 | 0.10 | 0.25 | 0.25 | 0.09 | 0.24 | 0.24 |
| Sat Flow, veh/h | 1757 | 4323 | 726 | 1757 | 3845 | 1131 | 3408 | 3505 | 1506 | 3408 | 3505 | 1493 |
| Grp Volume(v), veh/h | 238 | 1108 | 559 | 195 | 505 | 250 | 295 | 592 | 345 | 292 | 577 | 74 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1679 | 1692 | 1757 | 1679 | 1618 | 1704 | 1752 | 1506 | 1704 | 1752 | 1493 |
| Q Serve(g_s), s | 15.2 | 20.4 | 20.5 | 16.5 | 12.1 | 12.6 | 12.8 | 22.9 | 33.4 | 12.8 | 22.4 | 5.9 |
| Cycle Q Clear(g_c), s | 15.2 | 20.4 | 20.5 | 16.5 | 12.1 | 12.6 | 12.8 | 22.9 | 33.4 | 12.8 | 22.4 | 5.9 |
| Prop In Lane | 1.00 | | 0.43 | 1.00 | | 0.70 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 399 | 1444 | 727 | 193 | 1050 | 506 | 339 | 876 | 376 | 307 | 844 | 359 |
| V/C Ratio(X) | 0.60 | 0.77 | 0.77 | 1.01 | 0.48 | 0.49 | 0.87 | 0.68 | 0.92 | 0.95 | 0.68 | 0.21 |
| Avail Cap(c_a), veh/h | 399 | 1444 | 727 | 193 | 1050 | 506 | 339 | 876 | 376 | 307 | 844 | 359 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 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 | 35.7 | 7.4 | 7.4 | 58.5 | 21.6 | 21.7 | 66.6 | 50.8 | 54.7 | 67.9 | 51.8 | 45.5 |
| Incr Delay (d2), s/veh | 6.4 | 4.0 | 7.7 | 67.1 | 1.6 | 3.4 | 25.1 | 4.2 | 29.4 | 40.5 | 4.5 | 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 | 8.0 | 9.4 | 10.6 | 11.5 | 5.7 | 6.0 | 7.2 | 11.6 | 17.0 | 7.8 | 11.4 | 2.6 |
| LnGrp Delay(d),s/veh | 42.2 | 11.4 | 15.1 | 125.6 | 23.2 | 25.1 | 91.7 | 54.9 | 84.1 | 108.4 | 56.2 | 46.8 |
| LnGrp LOS | D | B | B | F | C | C | F | D | F | F | E | D |
| Approach Vol, veh/h | | 1905 | | | 950 | | | 1232 | | | 943 | |
| Approach Delay, s/veh | | 16.3 | | | 44.7 | | | 71.9 | | | 71.7 | |
| Approach LOS | | B | | | D | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 18.0 | 42.0 | 21.0 | 69.0 | 19.4 | 40.6 | 38.6 | 51.4 |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Max Green Setting (Gmax), s | 13.5 | 37.5 | 16.5 | 64.5 | 14.9 | 36.1 | 34.1 | 46.9 |
| Max Q Clear Time (g_c+I1), s | 14.8 | 35.4 | 18.5 | 22.5 | 14.8 | 24.4 | 17.2 | 14.6 |
| Green Ext Time (p_c), s | 0.0 | 1.6 | 0.0 | 27.8 | 0.0 | 7.1 | 0.6 | 23.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 45.7 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 205 | 1541 | 246 | 94 | 793 | 87 | 543 | 441 | 135 | 195 | 422 | 140 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.97 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1942 | 1942 | 2000 | 1942 | 1942 | 2000 | 1942 | 1942 | 1942 | 1942 | 1942 | 1942 |
| Adj Flow Rate, veh/h | 209 | 1572 | 0 | 96 | 809 | 89 | 554 | 450 | 0 | 199 | 431 | 143 |
| Adj No. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 2 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 246 | 2196 | 0 | 131 | 1708 | 187 | 637 | 876 | 414 | 239 | 746 | 430 |
| Arrive On Green | 0.13 | 0.41 | 0.00 | 0.07 | 0.35 | 0.35 | 0.18 | 0.25 | 0.00 | 0.13 | 0.20 | 0.19 |
| Sat Flow, veh/h | 1849 | 5476 | 0 | 1849 | 4851 | 531 | 3588 | 3495 | 1650 | 1849 | 3689 | 1608 |
| Grp Volume(v), veh/h | 209 | 1572 | 0 | 96 | 588 | 310 | 554 | 450 | 0 | 199 | 431 | 143 |
| Grp Sat Flow(s),veh/h/ln | 1849 | 1767 | 0 | 1849 | 1767 | 1848 | 1794 | 1748 | 1650 | 1849 | 1845 | 1608 |
| Q Serve(g_s), s | 15.5 | 34.6 | 0.0 | 7.1 | 18.1 | 18.3 | 21.0 | 15.5 | 0.0 | 14.7 | 14.8 | 10.0 |
| Cycle Q Clear(g_c), s | 15.5 | 34.6 | 0.0 | 7.1 | 18.1 | 18.3 | 21.0 | 15.5 | 0.0 | 14.7 | 14.8 | 10.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.29 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 246 | 2196 | 0 | 131 | 1245 | 651 | 637 | 876 | 414 | 239 | 746 | 430 |
| V/C Ratio(X) | 0.85 | 0.72 | 0.00 | 0.73 | 0.47 | 0.48 | 0.87 | 0.51 | 0.00 | 0.83 | 0.58 | 0.33 |
| Avail Cap(c_a), veh/h | 291 | 2196 | 0 | 145 | 1245 | 651 | 692 | 876 | 414 | 317 | 843 | 473 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.65 | 0.65 | 0.00 | 1.00 | 1.00 | 1.00 | 0.83 | 0.83 | 0.00 | 0.95 | 0.95 | 0.95 |
| Uniform Delay (d), s/veh | 59.3 | 34.1 | 0.0 | 63.7 | 35.2 | 35.4 | 56.0 | 45.1 | 0.0 | 59.5 | 50.5 | 41.4 |
| Incr Delay (d2), s/veh | 11.2 | 1.3 | 0.0 | 12.8 | 1.0 | 2.0 | 9.3 | 0.6 | 0.0 | 12.8 | 1.0 | 0.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.7 | 17.2 | 0.0 | 4.1 | 9.0 | 9.7 | 11.3 | 7.6 | 0.0 | 8.4 | 7.6 | 4.5 |
| LnGrp Delay(d),s/veh | 70.6 | 35.5 | 0.0 | 76.5 | 36.3 | 37.4 | 65.3 | 45.7 | 0.0 | 72.3 | 51.5 | 42.0 |
| LnGrp LOS | E | D | | E | D | D | E | D | | E | D | D |
| Approach Vol, veh/h | | 1781 | | | 994 | | | 1004 | | | 773 | |
| Approach Delay, s/veh | | 39.6 | | | 40.5 | | | 56.5 | | | 55.1 | |
| Approach LOS | | D | | | D | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 21.6 | 52.3 | 27.9 | 31.3 | 12.9 | 61.0 | 21.1 | 38.1 |
| Change Period (Y+Rc), s | 4.0 | 5.0 | 4.0 | 5.0 | 4.0 | 5.0 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 21.0 | 45.0 | 26.0 | 30.0 | 10.0 | 56.0 | 23.0 | 33.0 |
| Max Q Clear Time (g_c+I1), s | 17.5 | 20.3 | 23.0 | 16.8 | 9.1 | 36.6 | 16.7 | 17.5 |
| Green Ext Time (p_c), s | 0.2 | 24.6 | 0.8 | 8.9 | 0.0 | 19.4 | 0.4 | 10.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 46.2 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 100 | 1510 | 199 | 148 | 1430 | 103 | 259 | 437 | 177 | 127 | 218 | 483 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1748 | 1748 | 1800 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748 |
| Adj Flow Rate, veh/h | 105 | 1589 | 209 | 156 | 1505 | 108 | 273 | 460 | 186 | 134 | 229 | 0 |
| Adj No. of Lanes | 2 | 4 | 0 | 2 | 3 | 1 | 2 | 2 | 1 | 1 | 2 | 1 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 170 | 2012 | 265 | 219 | 1845 | 575 | 345 | 588 | 252 | 168 | 568 | 254 |
| Arrive On Green | 0.11 | 0.74 | 0.71 | 0.14 | 0.77 | 0.77 | 0.11 | 0.18 | 0.17 | 0.10 | 0.17 | 0.00 |
| Sat Flow, veh/h | 3229 | 5418 | 712 | 3229 | 4771 | 1485 | 3229 | 3320 | 1485 | 1664 | 3320 | 1485 |
| Grp Volume(v), veh/h | 105 | 1322 | 476 | 156 | 1505 | 108 | 273 | 460 | 186 | 134 | 229 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1614 | 1503 | 1622 | 1614 | 1590 | 1485 | 1614 | 1660 | 1485 | 1664 | 1660 | 1485 |
| Q Serve(g_s), s | 4.4 | 25.5 | 26.2 | 6.5 | 27.1 | 2.7 | 11.5 | 18.5 | 16.6 | 11.0 | 8.6 | 0.0 |
| Cycle Q Clear(g_c), s | 4.4 | 25.5 | 26.2 | 6.5 | 27.1 | 2.7 | 11.5 | 18.5 | 16.6 | 11.0 | 8.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.44 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 170 | 1675 | 602 | 219 | 1845 | 575 | 345 | 588 | 252 | 168 | 568 | 254 |
| V/C Ratio(X) | 0.62 | 0.79 | 0.79 | 0.71 | 0.82 | 0.19 | 0.79 | 0.78 | 0.74 | 0.80 | 0.40 | 0.00 |
| Avail Cap(c_a), veh/h | 254 | 1675 | 602 | 254 | 1845 | 575 | 484 | 901 | 393 | 321 | 1044 | 467 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.93 | 0.93 | 0.93 | 0.73 | 0.73 | 0.73 | 0.71 | 0.71 | 0.71 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 61.3 | 14.6 | 15.4 | 59.2 | 12.8 | 10.0 | 61.0 | 55.0 | 55.1 | 61.5 | 51.6 | 0.0 |
| Incr Delay (d2), s/veh | 3.4 | 3.6 | 9.5 | 4.2 | 3.0 | 0.5 | 2.7 | 0.8 | 1.1 | 3.2 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.0 | 10.8 | 12.8 | 3.0 | 11.9 | 1.2 | 5.3 | 8.6 | 6.9 | 5.2 | 4.0 | 0.0 |
| LnGrp Delay(d),s/veh | 64.7 | 18.2 | 24.9 | 63.4 | 15.8 | 10.6 | 63.7 | 55.8 | 56.3 | 64.8 | 51.8 | 0.0 |
| LnGrp LOS | E | B | C | E | B | B | E | E | E | E | D | |
| Approach Vol, veh/h | | 1903 | | | 1769 | | | 919 | | | 363 | |
| Approach Delay, s/veh | | 22.5 | | | 19.7 | | | 58.2 | | | 56.6 | |
| Approach LOS | | C | | | B | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 12.5 | 55.0 | 18.0 | 27.0 | 10.4 | 57.2 | 17.1 | 27.8 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.0 | 4.0 | 6.0 | 4.0 | 5.0 |
| Max Green Setting (Gmax), s | 10.0 | 49.0 | 20.0 | 42.0 | 10.0 | 49.0 | 26.0 | 36.0 |
| Max Q Clear Time (g_c+I1), s | 8.5 | 28.2 | 13.5 | 10.6 | 6.4 | 29.1 | 13.0 | 20.5 |
| Green Ext Time (p_c), s | 0.1 | 20.6 | 0.4 | 2.5 | 0.1 | 19.7 | 0.2 | 2.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 30.6 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 462 | 1117 | 0 | 0 | 1620 | 569 | 113 | 248 | 662 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1942 | 1942 | 0 | 0 | 1942 | 1942 | 1942 | 1942 | 1942 | | | |
| Adj Flow Rate, veh/h | 467 | 1128 | 0 | 0 | 1636 | 0 | 114 | 251 | 0 | | | |
| Adj No. of Lanes | 2 | 2 | 0 | 0 | 3 | 1 | 1 | 2 | 1 | | | |
| Peak Hour Factor | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | | | |
| Percent Heavy Veh, % | 3 | 3 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | | | |
| Cap, veh/h | 542 | 3180 | 0 | 0 | 3493 | 1126 | 174 | 346 | 155 | | | |
| Arrive On Green | 0.15 | 0.86 | 0.00 | 0.00 | 1.00 | 0.00 | 0.09 | 0.09 | 0.00 | | | |
| Sat Flow, veh/h | 3588 | 3786 | 0 | 0 | 5320 | 1650 | 1849 | 3689 | 1650 | | | |
| Grp Volume(v), veh/h | 467 | 1128 | 0 | 0 | 1636 | 0 | 114 | 251 | 0 | | | |
| Grp Sat Flow(s),veh/h/ln | 1794 | 1845 | 0 | 0 | 1689 | 1650 | 1849 | 1845 | 1650 | | | |
| Q Serve(g_s), s | 17.8 | 8.5 | 0.0 | 0.0 | 0.0 | 0.0 | 8.3 | 9.3 | 0.0 | | | |
| Cycle Q Clear(g_c), s | 17.8 | 8.5 | 0.0 | 0.0 | 0.0 | 0.0 | 8.3 | 9.3 | 0.0 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 542 | 3180 | 0 | 0 | 3493 | 1126 | 174 | 346 | 155 | | | |
| V/C Ratio(X) | 0.86 | 0.35 | 0.00 | 0.00 | 0.47 | 0.00 | 0.66 | 0.72 | 0.00 | | | |
| Avail Cap(c_a), veh/h | 589 | 3180 | 0 | 0 | 3493 | 1126 | 473 | 943 | 422 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.48 | 0.48 | 0.00 | 0.00 | 0.73 | 0.00 | 1.00 | 1.00 | 0.00 | | | |
| Uniform Delay (d), s/veh | 58.0 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 61.2 | 61.7 | 0.0 | | | |
| Incr Delay (d2), s/veh | 5.6 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 1.6 | 1.1 | 0.0 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 9.2 | 4.3 | 0.0 | 0.0 | 0.1 | 0.0 | 4.4 | 4.8 | 0.0 | | | |
| LnGrp Delay(d),s/veh | 63.6 | 2.1 | 0.0 | 0.0 | 0.3 | 0.0 | 62.8 | 62.8 | 0.0 | | | |
| LnGrp LOS | E | A | | | A | | E | E | | | | |
| Approach Vol, veh/h | | 1595 | | | 1636 | | | 365 | | | | |
| Approach Delay, s/veh | | 20.1 | | | 0.3 | | | 62.8 | | | | |
| Approach LOS | | C | | | A | | | E | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 123.7 | | | 24.2 | 99.5 | | 16.3 |
| Change Period (Y+Rc), s | | 5.0 | | | 4.0 | 5.0 | | 4.2 |
| Max Green Setting (Gmax), s | | 96.0 | | | 22.0 | 70.0 | | 34.8 |
| Max Q Clear Time (g_c+I1), s | | 10.5 | | | 19.8 | 2.0 | | 11.3 |
| Green Ext Time (p_c), s | | 78.1 | | | 0.4 | 63.2 | | 0.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 15.4 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 175 | 1125 | 393 | 164 | 315 | 165 | 186 | 404 | 110 | 471 | 833 | 65 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 179 | 1148 | 401 | 167 | 321 | 168 | 190 | 412 | 0 | 481 | 850 | 66 |
| Adj No. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 409 | 2203 | 676 | 270 | 1998 | 621 | 525 | 1070 | 0 | 412 | 902 | 274 |
| Arrive On Green | 0.24 | 0.88 | 0.88 | 0.08 | 0.40 | 0.40 | 0.15 | 0.21 | 0.00 | 0.12 | 0.18 | 0.18 |
| Sat Flow, veh/h | 3408 | 5036 | 1545 | 3408 | 5036 | 1564 | 3408 | 5202 | 0 | 3408 | 5036 | 1529 |
| Grp Volume(v), veh/h | 179 | 1148 | 401 | 167 | 321 | 168 | 190 | 412 | 0 | 481 | 850 | 66 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1679 | 1545 | 1704 | 1679 | 1564 | 1704 | 1679 | 0 | 1704 | 1679 | 1529 |
| Q Serve(g_s), s | 5.4 | 6.3 | 8.1 | 5.7 | 4.9 | 8.7 | 6.0 | 8.4 | 0.0 | 14.5 | 20.0 | 4.4 |
| Cycle Q Clear(g_c), s | 5.4 | 6.3 | 8.1 | 5.7 | 4.9 | 8.7 | 6.0 | 8.4 | 0.0 | 14.5 | 20.0 | 4.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 409 | 2203 | 676 | 270 | 1998 | 621 | 525 | 1070 | 0 | 412 | 902 | 274 |
| V/C Ratio(X) | 0.44 | 0.52 | 0.59 | 0.62 | 0.16 | 0.27 | 0.36 | 0.38 | 0.00 | 1.17 | 0.94 | 0.24 |
| Avail Cap(c_a), veh/h | 409 | 2203 | 676 | 270 | 1998 | 621 | 525 | 1070 | 0 | 412 | 902 | 274 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 42.2 | 4.6 | 4.7 | 53.5 | 23.3 | 24.5 | 45.5 | 40.5 | 0.0 | 52.8 | 48.6 | 42.2 |
| Incr Delay (d2), s/veh | 3.4 | 0.9 | 3.8 | 10.2 | 0.2 | 1.1 | 1.9 | 1.0 | 0.0 | 98.8 | 18.8 | 2.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.7 | 2.7 | 3.9 | 3.1 | 2.3 | 3.9 | 3.0 | 4.0 | 0.0 | 12.5 | 10.9 | 2.0 |
| LnGrp Delay(d),s/veh | 45.5 | 5.5 | 8.5 | 63.7 | 23.5 | 25.5 | 47.4 | 41.6 | 0.0 | 151.6 | 67.5 | 44.3 |
| LnGrp LOS | D | A | A | E | C | C | D | D | | F | E | D |
| Approach Vol, veh/h | | 1728 | | | 656 | | | 602 | | | 1397 | |
| Approach Delay, s/veh | | 10.3 | | | 34.3 | | | 43.4 | | | 95.3 | |
| Approach LOS | | B | | | C | | | D | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 19.0 | 30.0 | 14.0 | 57.0 | 23.0 | 26.0 | 18.9 | 52.1 |
| 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 | 14.5 | 25.5 | 9.5 | 52.5 | 18.5 | 21.5 | 14.4 | 47.6 |
| Max Q Clear Time (g_c+I1), s | 16.5 | 10.4 | 7.7 | 10.1 | 8.0 | 22.0 | 7.4 | 10.7 |
| Green Ext Time (p_c), s | 0.0 | 7.8 | 0.1 | 19.3 | 0.4 | 0.0 | 0.3 | 18.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 45.6 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 142 | 1802 | 454 | 41 | 553 | 23 | 177 | 127 | 31 | 27 | 148 | 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 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 145 | 1839 | 463 | 42 | 564 | 23 | 181 | 130 | 32 | 28 | 151 | 85 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 0 | 1 | 1 | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 265 | 2118 | 947 | 59 | 1706 | 746 | 241 | 233 | 57 | 86 | 261 | 217 |
| Arrive On Green | 0.15 | 0.60 | 0.60 | 0.03 | 0.49 | 0.49 | 0.07 | 0.16 | 0.16 | 0.05 | 0.14 | 0.14 |
| Sat Flow, veh/h | 1757 | 3505 | 1568 | 1757 | 3505 | 1534 | 3408 | 1424 | 351 | 1757 | 1845 | 1534 |
| Grp Volume(v), veh/h | 145 | 1839 | 463 | 42 | 564 | 23 | 181 | 0 | 162 | 28 | 151 | 85 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1568 | 1757 | 1752 | 1534 | 1704 | 0 | 1775 | 1757 | 1845 | 1534 |
| Q Serve(g_s), s | 9.2 | 52.4 | 19.9 | 2.8 | 11.8 | 0.9 | 6.3 | 0.0 | 10.1 | 1.8 | 9.2 | 6.0 |
| Cycle Q Clear(g_c), s | 9.2 | 52.4 | 19.9 | 2.8 | 11.8 | 0.9 | 6.3 | 0.0 | 10.1 | 1.8 | 9.2 | 6.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.20 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 265 | 2118 | 947 | 59 | 1706 | 746 | 241 | 0 | 290 | 86 | 261 | 217 |
| V/C Ratio(X) | 0.55 | 0.87 | 0.49 | 0.72 | 0.33 | 0.03 | 0.75 | 0.00 | 0.56 | 0.32 | 0.58 | 0.39 |
| Avail Cap(c_a), veh/h | 265 | 2118 | 947 | 59 | 1706 | 746 | 241 | 0 | 290 | 86 | 261 | 217 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.2 | 19.8 | 13.3 | 57.4 | 18.8 | 16.1 | 54.7 | 0.0 | 46.2 | 55.1 | 48.1 | 46.8 |
| Incr Delay (d2), s/veh | 7.9 | 5.2 | 1.8 | 54.6 | 0.5 | 0.1 | 19.1 | 0.0 | 7.6 | 9.7 | 9.0 | 5.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.0 | 26.5 | 9.0 | 2.3 | 5.8 | 0.4 | 3.6 | 0.0 | 5.6 | 1.1 | 5.4 | 2.9 |
| LnGrp Delay(d),s/veh | 55.1 | 24.9 | 15.1 | 112.0 | 19.4 | 16.1 | 73.8 | 0.0 | 53.8 | 64.8 | 57.1 | 52.0 |
| LnGrp LOS | E | C | B | F | B | B | E | | D | E | E | D |
| Approach Vol, veh/h | | 2447 | | | 629 | | | 343 | | | 264 | |
| Approach Delay, s/veh | | 24.9 | | | 25.4 | | | 64.4 | | | 56.3 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 10.4 | 24.1 | 8.5 | 77.0 | 13.0 | 21.5 | 22.6 | 62.9 |
| 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 | 5.9 | 19.6 | 4.0 | 72.5 | 8.5 | 17.0 | 18.1 | 58.4 |
| Max Q Clear Time (g_c+I1), s | 3.8 | 12.1 | 4.8 | 54.4 | 8.3 | 11.2 | 11.2 | 13.8 |
| Green Ext Time (p_c), s | 0.0 | 1.2 | 0.0 | 16.1 | 0.0 | 1.0 | 0.2 | 34.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 30.9 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 239 | 2220 | 70 | 8 | 728 | 82 | 14 | 6 | 4 | 106 | 18 | 128 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 246 | 2289 | 72 | 8 | 751 | 85 | 14 | 6 | 4 | 109 | 19 | 132 |
| Adj No. of Lanes | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 588 | 2176 | 973 | 59 | 1688 | 745 | 70 | 143 | 95 | 101 | 287 | 244 |
| Arrive On Green | 0.17 | 0.62 | 0.62 | 0.04 | 0.64 | 0.64 | 0.04 | 0.14 | 0.14 | 0.06 | 0.16 | 0.16 |
| Sat Flow, veh/h | 3408 | 3505 | 1568 | 1757 | 3505 | 1547 | 1757 | 1034 | 689 | 1757 | 1845 | 1568 |
| Grp Volume(v), veh/h | 246 | 2289 | 72 | 8 | 751 | 85 | 14 | 0 | 10 | 109 | 19 | 132 |
| Grp Sat Flow(s),veh/h/ln | 1704 | 1752 | 1568 | 1757 | 1752 | 1547 | 1757 | 0 | 1723 | 1757 | 1845 | 1568 |
| Q Serve(g_s), s | 7.7 | 74.5 | 2.2 | 0.5 | 12.9 | 2.6 | 0.9 | 0.0 | 0.6 | 6.9 | 1.1 | 9.3 |
| Cycle Q Clear(g_c), s | 7.7 | 74.5 | 2.2 | 0.5 | 12.9 | 2.6 | 0.9 | 0.0 | 0.6 | 6.9 | 1.1 | 9.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.40 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 588 | 2176 | 973 | 59 | 1688 | 745 | 70 | 0 | 238 | 101 | 287 | 244 |
| V/C Ratio(X) | 0.42 | 1.05 | 0.07 | 0.14 | 0.44 | 0.11 | 0.20 | 0.00 | 0.04 | 1.08 | 0.07 | 0.54 |
| Avail Cap(c_a), veh/h | 588 | 2176 | 973 | 59 | 1688 | 745 | 70 | 0 | 238 | 101 | 287 | 244 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 44.3 | 22.8 | 9.0 | 55.7 | 13.5 | 11.6 | 55.7 | 0.0 | 44.8 | 56.5 | 43.2 | 46.7 |
| Incr Delay (d2), s/veh | 2.2 | 34.7 | 0.1 | 4.8 | 0.9 | 0.3 | 6.3 | 0.0 | 0.3 | 112.5 | 0.4 | 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 | 0.2 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.8 | 46.1 | 1.0 | 0.3 | 6.3 | 1.1 | 0.6 | 0.0 | 0.3 | 6.5 | 0.6 | 4.6 |
| LnGrp Delay(d),s/veh | 46.5 | 57.4 | 9.2 | 60.5 | 14.4 | 11.9 | 62.0 | 0.0 | 45.1 | 169.2 | 43.6 | 55.0 |
| LnGrp LOS | D | F | A | E | B | B | E | | D | F | D | E |
| Approach Vol, veh/h | | 2607 | | | 844 | | | 24 | | | 260 | |
| Approach Delay, s/veh | | 55.1 | | | 14.5 | | | 55.0 | | | 102.0 | |
| Approach LOS | | E | | | B | | | D | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 11.4 | 21.1 | 8.5 | 79.0 | 9.3 | 23.2 | 25.2 | 62.3 |
| 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 | 6.9 | 16.6 | 4.0 | 74.5 | 4.8 | 18.7 | 20.7 | 57.8 |
| Max Q Clear Time (g_c+I1), s | 8.9 | 2.6 | 2.5 | 76.5 | 2.9 | 11.3 | 9.7 | 14.9 |
| Green Ext Time (p_c), s | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.3 | 0.6 | 38.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 49.2 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 243 | 2038 | 25 | 15 | 631 | 307 | 20 | 40 | 43 | 658 | 51 | 38 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 261 | 2191 | 27 | 16 | 678 | 330 | 22 | 43 | 46 | 708 | 55 | 0 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 187 | 1937 | 856 | 34 | 1632 | 730 | 42 | 53 | 56 | 796 | 505 | 429 |
| Arrive On Green | 0.11 | 0.55 | 0.55 | 0.02 | 0.47 | 0.47 | 0.02 | 0.06 | 0.06 | 0.23 | 0.27 | 0.00 |
| Sat Flow, veh/h | 1757 | 3505 | 1549 | 1757 | 3505 | 1568 | 1757 | 817 | 874 | 3408 | 1845 | 1568 |
| Grp Volume(v), veh/h | 261 | 2191 | 27 | 16 | 678 | 330 | 22 | 0 | 89 | 708 | 55 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1549 | 1757 | 1752 | 1568 | 1757 | 0 | 1690 | 1704 | 1845 | 1568 |
| Q Serve(g_s), s | 16.0 | 82.9 | 1.2 | 1.4 | 19.2 | 21.4 | 1.9 | 0.0 | 7.8 | 30.1 | 3.3 | 0.0 |
| Cycle Q Clear(g_c), s | 16.0 | 82.9 | 1.2 | 1.4 | 19.2 | 21.4 | 1.9 | 0.0 | 7.8 | 30.1 | 3.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.52 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 187 | 1937 | 856 | 34 | 1632 | 730 | 42 | 0 | 109 | 796 | 505 | 429 |
| V/C Ratio(X) | 1.39 | 1.13 | 0.03 | 0.47 | 0.42 | 0.45 | 0.52 | 0.00 | 0.82 | 0.89 | 0.11 | 0.00 |
| Avail Cap(c_a), veh/h | 187 | 1937 | 856 | 117 | 1632 | 730 | 117 | 0 | 130 | 1613 | 892 | 758 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 67.0 | 33.5 | 15.3 | 72.8 | 26.6 | 27.1 | 72.3 | 0.0 | 69.3 | 55.6 | 40.8 | 0.0 |
| Incr Delay (d2), s/veh | 206.0 | 66.1 | 0.1 | 3.6 | 0.8 | 2.0 | 3.7 | 0.0 | 28.2 | 3.7 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 18.5 | 57.6 | 0.5 | 0.7 | 9.5 | 9.7 | 0.9 | 0.0 | 4.5 | 14.6 | 1.7 | 0.0 |
| LnGrp Delay(d),s/veh | 273.0 | 99.6 | 15.3 | 76.4 | 27.3 | 29.1 | 76.0 | 0.0 | 97.5 | 59.3 | 40.8 | 0.0 |
| LnGrp LOS | F | F | B | E | C | C | E | | F | E | D | |
| Approach Vol, veh/h | | 2479 | | | 1024 | | | 111 | | | 763 | |
| Approach Delay, s/veh | | 116.9 | | | 28.7 | | | 93.3 | | | 58.0 | |
| Approach LOS | | F | | | C | | | F | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 20.0 | 75.8 | 7.6 | 46.6 | 6.9 | 88.9 | 39.0 | 15.1 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 | 6.0 | 4.0 | 5.5 |
| Max Green Setting (Gmax), s | 16.0 | 32.0 | 10.0 | 72.5 | 10.0 | 38.0 | 71.0 | 11.5 |
| Max Q Clear Time (g_c+I1), s | 18.0 | 23.4 | 3.9 | 5.3 | 3.4 | 84.9 | 32.1 | 9.8 |
| Green Ext Time (p_c), s | 0.0 | 8.5 | 0.0 | 0.8 | 0.0 | 0.0 | 2.9 | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 85.4 |
| HCM 2010 LOS | F |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 202 | 1852 | 349 | 130 | 540 | 75 | 99 | 269 | 134 | 302 | 398 | 173 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 2.0 |
| Lane Util. Factor | 0.97 | 0.91 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | *0.85 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.99 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3579 | 5900 | | 1845 | 3689 | 1650 | 1845 | 3689 | 1623 | 1845 | 3301 | 1628 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3579 | 5160 | | 1845 | 3689 | 1650 | 1845 | 3689 | 1623 | 1845 | 3301 | 1628 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 208 | 1909 | 360 | 134 | 557 | 77 | 102 | 277 | 138 | 311 | 410 | 178 |
| RTOR Reduction (vph) | 0 | 16 | 0 | 0 | 0 | 40 | 0 | 0 | 121 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 208 | 2253 | 0 | 134 | 557 | 37 | 102 | 277 | 17 | 311 | 410 | 178 |
| Confl. Peds. (#/hr) | | | 3 | | | | | | 3 | | | 5 |
| Confl. Bikes (#/hr) | | | 1 | | | | | | | | | 1 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Free |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 15 | 4 | |
| Permitted Phases | | | | | | 2 | | | 8 | | | Free |
| Actuated Green, G (s) | 14.0 | 71.2 | | 12.6 | 69.8 | 69.8 | 12.7 | 17.5 | 17.5 | 26.4 | 35.2 | 150.0 |
| Effective Green, g (s) | 15.0 | 73.5 | | 13.6 | 72.1 | 72.1 | 13.7 | 19.5 | 18.5 | 28.4 | 37.2 | 150.0 |
| Actuated g/C Ratio | 0.10 | 0.49 | | 0.09 | 0.48 | 0.48 | 0.09 | 0.13 | 0.12 | 0.19 | 0.25 | 1.00 |
| Clearance Time (s) | 4.0 | 5.3 | | 4.0 | 5.3 | 5.3 | 4.0 | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 6.0 | | 3.0 | 6.0 | 6.0 | 2.0 | 2.0 | 2.0 | | 2.0 | |
| Lane Grp Cap (vph) | 357 | 2891 | | 167 | 1773 | 793 | 168 | 479 | 200 | 349 | 818 | 1628 |
| v/s Ratio Prot | 0.06 | c0.38 | | c0.07 | 0.15 | | 0.06 | c0.08 | | c0.17 | 0.12 | |
| v/s Ratio Perm | | | | | | 0.02 | | | 0.01 | | | c0.11 |
| v/c Ratio | 0.58 | 0.78 | | 0.80 | 0.31 | 0.05 | 0.61 | 0.58 | 0.09 | 0.89 | 0.50 | 0.11 |
| Uniform Delay, d1 | 64.5 | 31.6 | | 66.9 | 23.8 | 20.7 | 65.6 | 61.4 | 58.3 | 59.3 | 48.4 | 0.0 |
| Progression Factor | 1.23 | 0.62 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.97 | 1.00 |
| Incremental Delay, d2 | 1.9 | 1.7 | | 23.5 | 0.5 | 0.1 | 4.2 | 1.1 | 0.1 | 22.3 | 0.2 | 0.1 |
| Delay (s) | 81.5 | 21.3 | | 90.4 | 24.3 | 20.8 | 69.8 | 62.4 | 58.3 | 80.9 | 47.4 | 0.1 |
| Level of Service | F | C | | F | C | C | E | E | E | F | D | A |
| Approach Delay (s) | | 26.3 | | | 35.5 | | | 62.8 | | | 49.6 | |
| Approach LOS | | C | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.77 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 86.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 411 | 1578 | 155 | 31 | 1201 | 534 | 246 | 264 | 50 | 292 | 391 | 410 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 2.0 |
| Lane Util. Factor | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 | 0.91 | 0.91 | | 0.91 | 0.91 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.99 | | 0.95 | 0.99 | 1.00 |
| Satd. Flow (prot) | 3579 | 5800 | | 1845 | 5100 | 1626 | 1679 | 3435 | | 1679 | 3493 | 1650 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.99 | | 0.95 | 0.99 | 1.00 |
| Satd. Flow (perm) | 3579 | 5230 | | 1845 | 5301 | 1626 | 1679 | 3435 | | 1679 | 3493 | 1650 |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 424 | 1627 | 160 | 32 | 1238 | 551 | 254 | 272 | 52 | 301 | 403 | 423 |
| RTOR Reduction (vph) | 0 | 66 | 0 | 0 | 0 | 220 | 0 | 8 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 424 | 1721 | 0 | 32 | 1238 | 331 | 190 | 380 | 0 | 229 | 475 | 423 |
| Confl. Peds. (#/hr) | | | | | | 1 | | | | | | |
| Confl. Bikes (#/hr) | | | | | | 2 | | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Turn Type | Prot | NA | | Prot | NA | Perm | Split | NA | | Split | NA | Free |
| Protected Phases | 1 | 6 | | 5 | 2 | | 4 | 4 | | 3 | 3 | |
| Permitted Phases | | | | | | 2 | | | | | | Free |
| Actuated Green, G (s) | 23.0 | 82.1 | | 5.0 | 64.1 | 64.1 | 24.6 | 24.6 | | 19.0 | 19.0 | 150.0 |
| Effective Green, g (s) | 24.0 | 84.4 | | 6.0 | 66.4 | 66.4 | 26.6 | 26.6 | | 21.0 | 21.0 | 150.0 |
| Actuated g/C Ratio | 0.16 | 0.56 | | 0.04 | 0.44 | 0.44 | 0.18 | 0.18 | | 0.14 | 0.14 | 1.00 |
| Clearance Time (s) | 4.0 | 5.3 | | 4.0 | 5.3 | 5.3 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 6.0 | | 2.0 | 6.0 | 6.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 572 | 3263 | | 73 | 2257 | 719 | 297 | 609 | | 235 | 489 | 1650 |
| v/s Ratio Prot | c0.12 | 0.30 | | 0.02 | c0.24 | | c0.11 | 0.11 | | c0.14 | 0.14 | |
| v/s Ratio Perm | | | | | | 0.20 | | | | | | 0.26 |
| v/c Ratio | 0.74 | 0.53 | | 0.44 | 0.55 | 0.46 | 0.64 | 0.62 | | 0.97 | 0.97 | 0.26 |
| Uniform Delay, d1 | 60.0 | 20.4 | | 70.4 | 30.8 | 29.3 | 57.3 | 57.1 | | 64.2 | 64.2 | 0.0 |
| Progression Factor | 0.93 | 1.56 | | 1.09 | 0.96 | 0.92 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.9 | 0.3 | | 0.1 | 0.1 | 0.2 | 5.0 | 2.3 | | 51.3 | 33.3 | 0.4 |
| Delay (s) | 58.6 | 32.1 | | 77.0 | 29.5 | 27.1 | 62.3 | 59.3 | | 115.5 | 97.5 | 0.4 |
| Level of Service | E | C | | E | C | C | E | E | | F | F | A |
| Approach Delay (s) | | 37.2 | | | 29.6 | | | 60.3 | | | 64.7 | |
| Approach LOS | | D | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 42.5 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 71.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 66 | 2871 | 172 | 131 | 2241 | 55 | 173 | 206 | 39 | 56 | 53 | 32 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | | 4.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.91 | | 1.00 | 0.91 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frpb, ped/bikes | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 0.97 |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1845 | 5227 | | 1845 | 5278 | | 1822 | 1891 | | 1841 | 1942 | 1609 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.70 | 1.00 | | 0.26 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1845 | 5227 | | 1845 | 5278 | | 1347 | 1891 | | 498 | 1942 | 1609 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 67 | 2900 | 174 | 132 | 2264 | 56 | 175 | 208 | 39 | 57 | 54 | 32 |
| RTOR Reduction (vph) | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 26 |
| Lane Group Flow (vph) | 67 | 3070 | 0 | 132 | 2318 | 0 | 175 | 242 | 0 | 57 | 54 | 6 |
| Confl. Peds. (#/hr) | | | 23 | | | 3 | 10 | | 3 | 3 | | 10 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | | 4 | | | 4 | |
| Permitted Phases | | | | | | | 4 | | | 4 | | 4 |
| Actuated Green, G (s) | 8.0 | 96.1 | | 13.5 | 101.6 | | 26.4 | 26.4 | | 26.4 | 26.4 | 26.4 |
| Effective Green, g (s) | 9.0 | 98.1 | | 13.5 | 103.6 | | 28.4 | 28.4 | | 28.4 | 28.4 | 27.4 |
| Actuated g/C Ratio | 0.06 | 0.65 | | 0.09 | 0.69 | | 0.19 | 0.19 | | 0.19 | 0.19 | 0.18 |
| Clearance Time (s) | 4.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 6.0 | | 2.0 | 6.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Grp Cap (vph) | 110 | 3418 | | 166 | 3645 | | 255 | 358 | | 94 | 367 | 293 |
| v/s Ratio Prot | 0.04 | c0.59 | | c0.07 | 0.44 | | | 0.13 | | | 0.03 | |
| v/s Ratio Perm | | | | | | | c0.13 | | | 0.11 | | 0.00 |
| v/c Ratio | 0.61 | 0.90 | | 0.80 | 0.64 | | 0.69 | 0.68 | | 0.61 | 0.15 | 0.02 |
| Uniform Delay, d1 | 68.8 | 21.8 | | 66.9 | 12.8 | | 56.6 | 56.5 | | 55.7 | 50.7 | 50.3 |
| Progression Factor | 0.92 | 0.75 | | 1.26 | 0.26 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 4.1 | 2.8 | | 19.2 | 0.8 | | 8.1 | 5.4 | | 12.1 | 0.3 | 0.0 |
| Delay (s) | 67.1 | 19.2 | | 103.8 | 4.1 | | 64.7 | 62.0 | | 67.8 | 51.0 | 50.3 |
| Level of Service | E | B | | F | A | | E | E | | E | D | D |
| Approach Delay (s) | | 20.2 | | | 9.4 | | | 63.1 | | | 57.5 | |
| Approach LOS | | C | | | A | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 96.0% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 13 | 67 | 68 | 72 | 2029 | 208 | 259 | 119 | 1248 | 56 | 36 | 327 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | | 1.00 | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.94 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 |
| Satd. Flow (prot) | 1660 | 1748 | 1389 | 1660 | 4653 | | 1660 | 1748 | 2557 | 1577 | 1641 | 1462 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.99 | 1.00 |
| Satd. Flow (perm) | 1660 | 1748 | 1389 | 1660 | 4653 | | 1660 | 1748 | 2557 | 1577 | 1641 | 1462 |
| Peak-hour factor, PHF | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Adj. Flow (vph) | 13 | 68 | 69 | 73 | 2049 | 210 | 262 | 120 | 1261 | 57 | 36 | 330 |
| RTOR Reduction (vph) | 0 | 0 | 56 | 0 | 85 | 0 | 0 | 0 | 563 | 0 | 0 | 119 |
| Lane Group Flow (vph) | 13 | 68 | 13 | 73 | 2174 | 0 | 262 | 120 | 698 | 46 | 47 | 211 |
| Confl. Peds. (#/hr) | | | 22 | | | 32 | | | 57 | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 3 |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | custom | Split | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | 3 | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 5 | | | 4 |
| Actuated Green, G (s) | 2.8 | 26.4 | 26.4 | 41.4 | 64.0 | | 37.6 | 37.6 | 79.0 | 25.6 | 25.6 | 25.6 |
| Effective Green, g (s) | 3.8 | 28.4 | 28.4 | 42.4 | 66.0 | | 39.6 | 39.6 | 83.0 | 27.6 | 27.6 | 27.6 |
| Actuated g/C Ratio | 0.03 | 0.19 | 0.19 | 0.28 | 0.44 | | 0.26 | 0.26 | 0.55 | 0.18 | 0.18 | 0.18 |
| Clearance Time (s) | 4.0 | 5.0 | 5.0 | 4.0 | 6.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 2.0 | 3.0 | 3.0 | 2.0 | 6.0 | | 4.0 | 4.0 | 4.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 42 | 330 | 262 | 469 | 2047 | | 438 | 461 | 1414 | 290 | 301 | 269 |
| v/s Ratio Prot | 0.01 | 0.04 | | 0.04 | c0.47 | | c0.16 | 0.07 | c0.13 | 0.03 | 0.03 | |
| v/s Ratio Perm | | | 0.01 | | | | | | 0.14 | | | c0.14 |
| v/c Ratio | 0.31 | 0.21 | 0.05 | 0.16 | 1.06 | | 0.60 | 0.26 | 0.49 | 0.16 | 0.16 | 0.78 |
| Uniform Delay, d1 | 71.8 | 51.3 | 49.8 | 40.4 | 42.0 | | 48.2 | 43.6 | 20.6 | 51.4 | 51.4 | 58.4 |
| Progression Factor | 0.97 | 1.36 | 3.93 | 0.65 | 0.68 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.5 | 0.3 | 0.1 | 0.0 | 36.8 | | 5.9 | 1.4 | 0.1 | 0.1 | 0.1 | 12.9 |
| Delay (s) | 71.4 | 69.9 | 195.4 | 26.1 | 65.3 | | 54.2 | 45.0 | 20.7 | 51.5 | 51.5 | 71.2 |
| Level of Service | E | E | F | C | E | | D | D | C | D | D | E |
| Approach Delay (s) | | 127.8 | | | 64.1 | | | 27.8 | | | 66.9 | |
| Approach LOS | | F | | | E | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 53.3 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.87 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 93.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 114 | 171 | 1260 | 1305 | 0 | 0 |
| Ideal Flow (vphpl) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Total Lost time (s) | 3.2 | 3.2 | 3.0 | 5.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 0.97 | 0.95 | | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Satd. Flow (prot) | 1942 | 1650 | 3579 | 3689 | | |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Satd. Flow (perm) | 1942 | 1650 | 3579 | 3689 | | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 118 | 176 | 1299 | 1345 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 66 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 118 | 110 | 1299 | 1345 | 0 | 0 |
| Turn Type | NA | Perm | Prot | NA | | |
| Protected Phases | 2 | | 1 | 1 2 | | |
| Permitted Phases | | 2 | | | | |
| Actuated Green, G (s) | 16.1 | 16.1 | 50.7 | 75.0 | | |
| Effective Green, g (s) | 17.1 | 17.1 | 51.7 | 69.8 | | |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.69 | 0.93 | | |
| Clearance Time (s) | 4.2 | 4.2 | 4.0 | | | |
| Vehicle Extension (s) | 4.0 | 4.0 | 3.0 | | | |
| Lane Grp Cap (vph) | 442 | 376 | 2467 | 3433 | | |
| v/s Ratio Prot | 0.06 | | c0.36 | c0.36 | | |
| v/s Ratio Perm | | 0.07 | | | | |
| v/c Ratio | 0.27 | 0.29 | 0.53 | 0.39 | | |
| Uniform Delay, d1 | 23.8 | 23.9 | 5.7 | 0.3 | | |
| Progression Factor | 1.00 | 1.00 | 1.70 | 1.00 | | |
| Incremental Delay, d2 | 0.4 | 0.6 | 0.2 | 0.0 | | |
| Delay (s) | 24.2 | 24.5 | 9.9 | 0.3 | | |
| Level of Service | C | C | A | A | | |
| Approach Delay (s) | 24.4 | | | 5.0 | 0.0 | |
| Approach LOS | C | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 7.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 75.0 | Sum of lost time (s) | 10.2 |
| Intersection Capacity Utilization | 50.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# Appendix E

# Freeway Segment LOS Analysis Supplementary Information

## Appendix E: Freeway Segment LOS Analysis Supplementary Information

Tables E1 and E2 provide the LOS results for each freeway CMP segment, along with detailed comparisons to the 2013 results from the previous monitoring report as well as to the 2013 INRIX results from the validation task.

*Table E1: 2015 CMP Freeway Segments Draft LOS Results – AM Peak*

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F80-1** | I-80 | Carquinez Bridge to Cummings Skyway | EB | 1.01 | 69.8 | A | 63.6 | A | 63.3 | A | 2016 | -6.5 | - | -0.3 | - |
| **F80-1** | I-80 | Carquinez Bridge to Cummings Skyway | WB | 1.05 | 65.7 | A | 65.5 | A | 64.4 | A | 2214 | -1.3 | - | -1.1 | - |
| **F80-2** | I-80 | Cummings Skyway to State Route 4 | EB | 2.70 | 57.2 | B | 64.8 | A | 65.4 | A | 2250 | 8.2 | B to A | 0.6 | |
| **F80-2** | I-80 | Cummings Skyway to State Route 4 | WB | 2.71 | 62.1 | A | 62.2 | A | 61.4 | A | 2259 | -0.7 | - | -0.8 | - |
| **F80-3** | I-80 | State Route 4 to San Pablo Dam Road | EB | 5.70 | 66.4 | A | 63.4 | A | 63.6 | A | 2196 | -2.8 | - | 0.2 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F80-3** | I-80 | State Route 4 to San Pablo Dam Road | WB | 5.71 | 42.9 | E | 27.2 | F | 24.8 | F | 1431 | -18.1 | E to F | -2.4 | - |
| **F80-4** | I-80 | San Pablo Dam Road to Cutting Blvd. | EB | 2.29 | 63.7 | A | 61.9 | A | 62.6 | A | 2255 | -1.1 | - | 0.7 | - |
| **F80-4** | I-80 | San Pablo Dam Road to Cutting Blvd. | WB | 2.27 | 35.4 | E | 29 | F | 25.8 | F | 2084 | -9.6 | E to F | -3.2 | - |
| **F80-5** | I-80 | Cutting Blvd. to Alameda County | EB | 2.05 | 69.9 | A | 63.2 | A | 63.7 | A | 2315 | -6.2 | - | 0.5 | - |
| **F80-5** | I-80 | Cutting Blvd. to Alameda County | WB | 2.07 | 22.2 | F | 18.8 | F | 18.6 | F | 2015 | -3.6 | - | -0.2 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ID | Route | Limits | Dir. | Length (miles) | Average Speed (mph) | LOS | Average Speed (mph) | LOS | Space Mean Speed (mph) | LOS | Sample Size | Delta Speed | Delta LOS | Delta Speed | Delta LOS |
| **F680-1** | I-680 | Benicia Bridge to State Route 4 | NB | 4.02 | 51.6 | D | 64.2 | A | 60.7 | A | 984 | 9.1 | D to A | -3.5 | - |
| **F680-1** | I-680 | Benicia Bridge to State Route 4 | SB | 3.99 | 57.25 | B | 63 | A | 53.9 | D | 2026 | -3.35 | B to D | -9.1 | A to D |
| **F680-2** | I-680 | State Route 4 to State Route 242 | NB | 2.81 | 39.6 | E | 66.8 | A | 65.9 | A | 2259 | 26.3 | E to A | -0.9 | - |
| **F680-2** | I-680 | State Route 4 to State Route 242 | SB | 3.01 | 44.4 | E | 41.9 | E | 44.1 | E | 2079 | -0.3 | - | 2.2 | - |
| **F680-3** | I-680 | State Route 242 to El Cerro Blvd. | NB | 10.51 | 62.8 | A | 60.3 | A | 59.1 | B | 1602 | -3.7 | A to B | -1.2 | A to B |
| **F680-3** | I-680 | State Route 242 to El Cerro Blvd. | SB | 10.33 | 44.6 | E | 24.3 | F | 27 | F | 1125 | -17.6 | E to F | 2.7 | - |
| **F680-4** | I-680 | El Cerro Blvd. to Bollinger | NB | 5.28 | 50.5 | D | 44.2 | E | 48.3 | D | 1785 | -2.2 | - | 4.1 | E to D |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| | | Canyon Road | | | | | | | | | | | | | |
| **F680-4** | I-680 | El Cerro Blvd. to Bollinger Canyon Road | SB | 5.27 | 57 | B | 59.7 | B | 66 | A | 2133 | 9 | B to A | 6.3 | B to A |
| **F680-5** | I-680 | Bollinger Canyon Rd. to Alameda County Line | NB | 2.88 | 63.1 | A | 58.3 | B | 56.7 | C | 2076 | -6.4 | A to C | -1.6 | B to C |
| **F680-5** | I-680 | Bollinger Canyon Rd. to Alameda County Line | SB | 2.88 | 61.2 | A | 66.8 | A | 66.8 | A | 2313 | 5.6 | - | 0 | - |
| **F580-1** | I-580 | Richmond Bridge to Alameda County Line | EB | 7.67 | 57.4 | B | 44.6 | E | 41.5 | E | 1982 | -15.9 | B to E | -3.1 | - |
| **F580-1** | I-580 | Richmond Bridge to | WB | 7.68 | 62 | A | 44.1 | E | 31.1 | E | 1954 | -30.9 | A to E | -13 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| | | Alameda County Line | | | | | | | | | | | | | |
| **F4-1** | SR-4 | I-80 to Cummings Skyway | EB | 4.72 | 62.25 | A | 60.1 | A | 57.2 | B | 894 | -5.05 | A to B | -2.9 | A to B |
| **F4-1** | SR-4 | I-80 to Cummings Skyway | WB | 4.64 | 58.9 | B | 62.8 | A | 61.6 | A | 2252 | 2.7 | B to A | -1.2 | - |
| **F4-2** | SR-4 | Cummings Skyway to I-680 | EB | 7.62 | 59.2 | B | 62.2 | A | 61.7 | A | 2121 | 2.5 | B to A | -0.5 | - |
| **F4-2** | SR-4 | Cummings Skyway to I-680 | WB | 7.61 | 63.8 | A | 64.5 | A | 63.8 | A | 2173 | 0 | - | -0.7 | - |
| **F4-3** | SR-4 | I-680 to State Route 242 | EB | 1.99 | 55.2 | C | 62.4 | A | 60.7 | A | 1964 | 5.5 | C to A | -1.7 | - |
| **F4-3** | SR-4 | I-680 to State Route 242 | WB | 2.03 | 50.1 | D | 43.7 | E | 40.4 | E | 2081 | -9.7 | D to E | -3.3 | - |
| **F4-4** | SR-4 | State Route 242 to Bailey Road | EB | 5.46 | 64.6 | A | 66.1 | A | 65.1 | A | 1718 | 0.5 | - | -1 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F4-4** | SR-4 | State Route 242 to Bailey Road | WB | 5.45 | 45.1 | E | 32.2 | E | 27.4 | F | 1729 | -17.7 | E to F | -4.8 | E to F |
| **F4-5** | SR-4 | Bailey Road to Loveridge Road | EB | 4.17 | 64.5 | A | 64.5 | A | 66.5 | A | 1901 | 2 | - | 2 | - |
| **F4-5** | SR-4 | Bailey Road to Loveridge Road | WB | 4.16 | 63 | A | 42.1 | E | 21.4 | F | 1734 | -41.6 | A to F | -20.7 | E to F |
| **F4-6**[1] | SR-4 | Loveridge Road to State Route 160 | EB | 6.97 | 55.2 | C | 61.6 | A | 60.7 | A | 2170 | 5.5 | C to A | -0.9 | - |
| **F4-6**[1] | SR-4 | Loveridge Road to State Route 160 | WB | 6.86 | 29.4 | F | 15.3 | F | 29.5 | F | 2167 | 0.1 | - | 14.2 | - |

[1] 95% TMC coverage used for analysis

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F4-7** | SR-4 | State Route 160 to Sand Creek Road | EB | 4.18 | New Segment | | | | 57.9 | B | 2167 | - | | | |
| **F4-7** | SR-4 | State Route 160 to Sand Creek Road | WB | 4.05 | New Segment | | | | 51.2 | D | 2167 | - | | | |
| **F24-1** | SR-24 | Alameda County Line to Camino Pablo | EB | 2.38 | 70.1 | A | 57 | B | 61.3 | A | 1686 | -8.8 | - | 4.3 | B to A |
| **F24-1** | SR-24 | Alameda County Line to Camino Pablo | WB | 2.35 | 29.1 | F | 36.8 | E | 36.7 | E | 1880 | 7.6 | F to E | -0.1 | - |
| **F24-2** | SR-24 | Camino Pablo to Oak Hill Road | EB | 3.95 | 67.4 | A | 67.1 | A | 66.8 | A | 2190 | -0.6 | - | -0.3 | - |
| **F24-2** | SR-24 | Camino Pablo to Oak Hill Road | WB | 3.95 | 43.8 | E | 41.2 | E | 39 | E | 2076 | -4.8 | - | -2.2 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | AM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F24-3** | SR-24 | Oak Hill Road to I-680 | EB | 2.20 | 67.9 | A | 68.5 | A | 66.6 | A | 2208 | -1.3 | - | -1.9 | - |
| **F24-3** | SR-24 | Oak Hill Road to I-680 | WB | 2.32 | 40.6 | E | 33.2 | E | 29.5 | F | 2139 | -11.1 | E to F | -3.7 | E to F |
| **F160-1** | SR-160 | SR-4 to County Line | EB | 2.79 | New Segment | | | | 52.3 | D | 1219 | - | | | |
| **F160-1** | SR-160 | SR-4 to County Line | WB | 2.51 | New Segment | | | | 54.5 | C | 1458 | - | | | |
| **F242-1** | SR-242 | I-680 to State Route 4 | NB | 3.07 | 50.3 | D | 67.1 | A | 63.9 | A | 1989 | 13.6 | D to A | -3.2 | - |
| **F242-1** | SR-242 | I-680 to State Route 4 | SB | 3.07 | 48.5 | D | 26 | F | 28.4 | F | 2190 | -20.1 | D to F | 2.4 | - |

*Table E2: 2015 CMP Freeway Segments Draft LOS Results – PM Peak*

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F80-1** | I-80 | Carquinez Bridge to Cummings Skyway | EB | 1.01 | 65.8 | A | 63.4 | A | 61.6 | A | 2248 | -4.2 | - | -1.8 | - |
| **F80-1** | I-80 | Carquinez Bridge to Cummings Skyway | WB | 1.05 | 66 | A | 60.7 | A | 65 | A | 2272 | -1 | - | 4.3 | - |
| **F80-2** | I-80 | Cummings Skyway to State Route 4 | EB | 2.70 | 56.5 | C | 66.7 | A | 66.7 | A | 2120 | 10.2 | C to A | 0 | - |
| **F80-2** | I-80 | Cummings Skyway to State Route 4 | WB | 2.71 | 66.2 | A | 65.5 | A | 67.5 | A | 2298 | 1.3 | - | 2 | - |
| **F80-3** | I-80 | State Route 4 to San Pablo Dam Road | EB | 5.70 | 36 | E | 31.3 | E | 28 | F | 1619 | -8 | E to F | -3.3 | E to F |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F80-3** | I-80 | State Route 4 to San Pablo Dam Road | WB | 5.71 | 62 | A | 63.3 | A | 63 | A | 2215 | 1 | - | -0.3 | - |
| **F80-4** | I-80 | San Pablo Dam Road to Cutting Blvd. | EB | 2.29 | 28.7 | F | 26.1 | F | 25 | F | 1978 | -3.7 | - | -1.1 | - |
| **F80-4** | I-80 | San Pablo Dam Road to Cutting Blvd. | WB | 2.27 | 62.8 | A | 62.8 | A | 49.9 | D | 2336 | -12.9 | A to D | -12.9 | A to D |
| **F80-5** | I-80 | Cutting Blvd. to Alameda County | EB | 2.05 | 35.4 | E | 22.5 | F | 23 | F | 1917 | -12.4 | E to F | 0.5 | - |
| **F80-5** | I-80 | Cutting Blvd. to Alameda County | WB | 2.07 | 61.3 | A | 64.8 | A | 64.7 | A | 2118 | 3.4 | - | -0.1 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ID | Route | Limits | Dir. | Length (miles) | Average Speed (mph) | LOS | Average Speed (mph) | LOS | Space Mean Speed (mph) | LOS | Sample Size | Delta Speed | Delta LOS | Delta Speed | Delta LOS |
| **F680-1** | I-680 | Benicia Bridge to State Route 4 | NB | 4.02 | 56.1 | C | 65.1 | A | 58.4 | B | 2002 | 2.3 | C to B | -6.7 | A to B |
| **F680-1** | I-680 | Benicia Bridge to State Route 4 | SB | 3.99 | 65 | A | 66.5 | A | 66.3 | A | 1918 | 1.3 | - | -0.2 | - |
| **F680-2** | I-680 | State Route 4 to State Route 242 | NB | 2.81 | 33.8 | E | 64.3 | A | 59.2 | B | 2158 | 25.4 | E to B | -5.1 | A to B |
| **F680-2** | I-680 | State Route 4 to State Route 242 | SB | 3.01 | 61.6 | A | 66.1 | A | 65.7 | A | 2091 | 4.1 | - | -0.4 | - |
| **F680-3** | I-680 | State Route 242 to El Cerro Blvd. | NB | 10.51 | 40.9 | E | 31.9 | E | 26 | F | 838 | -14.9 | E to F | -5.9 | E to F |
| **F680-3** | I-680 | State Route 242 to El Cerro Blvd. | SB | 10.33 | 54.1 | C | 45 | E | 52.2 | D | 1855 | -1.9 | C to D | 7.2 | E to D |
| **F680-4** | I-680 | El Cerro Blvd. to | NB | 5.28 | 37.2 | E | 28.3 | F | 29.3 | F | 1799 | -7.9 | E to F | 1 | - |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| | | Bollinger Canyon Road | | | | | | | | | | | | | |
| **F680-4** | I-680 | El Cerro Blvd. to Bollinger Canyon Road | SB | 5.27 | 61.4 | A | 59.9 | B | 60.5 | A | 2275 | -0.9 | - | 0.6 | B to A |
| **F680-5** | I-680 | Bollinger Canyon Rd. to Alameda County Line | NB | 2.88 | 59.7 | B | 49.2 | D | 66.8 | A | 2035 | 7.1 | B to A | 17.6 | D to A |
| **F680-5** | I-680 | Bollinger Canyon Rd. to Alameda County Line | SB | 2.88 | 54.8 | C | 59.6 | B | 56.9 | C | 2335 | 2.1 | - | -2.7 | B to C |
| **F580-1** | I-580 | Richmond Bridge to Alameda County Line | EB | 7.67 | 61.4 | A | 61.2 | A | 58.7 | B | 2035 | -2.7 | A to B | -2.5 | A to B |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F580-1** | I-580 | Richmond Bridge to Alameda County Line | WB | 7.68 | 64.1 | A | 62.5 | A | 62.2 | A | 1897 | -1.9 | - | -0.3 | - |
| **F4-1** | SR-4 | I-80 to Cummings Skyway | EB | 4.72 | 62.3 | A | 62.2 | A | 59.5 | B | 1708 | -2.8 | A to B | -2.7 | A to B |
| **F4-1** | SR-4 | I-80 to Cummings Skyway | WB | 4.64 | 56.8 | C | 62.5 | A | 61.8 | A | 2052 | 5 | C to A | -0.7 | - |
| **F4-2** | SR-4 | Cummings Skyway to I-680 | EB | 7.62 | 59.5 | B | 51.2 | D | 36.9 | E | 1910 | -22.6 | B to E | -14.3 | D to E |
| **F4-2** | SR-4 | Cummings Skyway to I-680 | WB | 7.61 | 64.5 | A | 64.7 | A | 63.3 | A | 2020 | -1.2 | - | -1.4 | - |
| **F4-3** | SR-4 | I-680 to State Route 242 | EB | 1.99 | 24 | F | 25.2 | F | 16.3 | F | 1976 | -7.7 | - | -8.9 | - |
| **F4-3** | SR-4 | I-680 to State Route 242 | WB | 2.03 | 65.2 | A | 63.2 | A | 55.3 | C | 2088 | -9.9 | A to C | -7.9 | A to C |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F4-4** | SR-4 | State Route 242 to Bailey Road | EB | 5.46 | 43.4 | E | 42.2 | E | 40.9 | E | 1795 | -2.5 | - | -1.3 | - |
| **F4-4** | SR-4 | State Route 242 to Bailey Road | WB | 5.45 | 68.6 | A | 67.3 | A | 65.2 | A | 1797 | -3.4 | - | -2.1 | - |
| **F4-5** | SR-4 | Bailey Road to Loveridge Road | EB | 4.17 | 30 | E | 16.8 | F | 56.6 | C | 2075 | 26.6 | E to C | 39.8 | F to C |
| **F4-5** | SR-4 | Bailey Road to Loveridge Road | WB | 4.16 | 66 | A | 66.2 | A | 66.8 | A | 1531 | 0.8 | - | 0.6 | - |
| **F4-6**[2] | SR-4 | Loveridge Road to State Route 160 | EB | 6.97 | 46.1 | D | 32.7 | E | 22.7 | F | 2216 | -23.4 | D to F | -10 | E to F |
| **F4-6**[1] | SR-4 | Loveridge Road to | WB | 6.86 | 57.1 | B | 61.9 | A | 63.1 | A | 2217 | 6 | B to A | 1.2 | - |

[2] 95% TMC coverage used for analysis

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| | | State Route 160 | | | | | | | | | | | | | |
| **F4-7** | SR-4 | State Route 160 to Sand Creek Road | EB | 4.18 | New Segment | | | | 56.9 | C | 2217 | - | | | |
| **F4-7** | SR-4 | State Route 160 to Sand Creek Road | WB | 4.05 | New Segment | | | | 58.9 | B | 2217 | - | | | |
| **F24-1** | SR-24 | Alameda County Line to Camino Pablo | EB | 2.38 | 44.2 | E | 42.1 | E | 30.2 | E | 2217 | -14 | - | -11.9 | - |
| **F24-1** | SR-24 | Alameda County Line to Camino Pablo | WB | 2.35 | 36.5 | E | 22.5 | F | 61.4 | A | 2217 | 24.9 | E to A | 38.9 | F to A |
| **F24-2** | SR-24 | Camino Pablo to Oak Hill Road | EB | 3.95 | 45.5 | E | 39.6 | E | 28.8 | F | 2217 | -16.7 | E to F | -10.8 | E to F |

| Segment Information | | | | | 2013 CMP Report Data | | 2013 CMP Validation Data | | PM Peak 2015 CMP Monitoring Results | | | Comparison with 2013 Report | | Comparison with 2013 Validation Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ID** | **Route** | **Limits** | **Dir.** | **Length (miles)** | **Average Speed (mph)** | **LOS** | **Average Speed (mph)** | **LOS** | **Space Mean Speed (mph)** | **LOS** | **Sample Size** | **Delta Speed** | **Delta LOS** | **Delta Speed** | **Delta LOS** |
| **F24-2** | SR-24 | Camino Pablo to Oak Hill Road | WB | 3.95 | 50.2 | D | 65.9 | A | 66.8 | A | 2217 | 16.6 | D to A | 0.9 | - |
| **F24-3** | SR-24 | Oak Hill Road to I-680 | EB | 2.20 | 45.5 | E | 42.8 | E | 29.4 | F | 2217 | -16.1 | E to F | -13.4 | E to F |
| **F24-3** | SR-24 | Oak Hill Road to I-680 | WB | 2.32 | 68.4 | A | 65.7 | A | 64.9 | A | 2217 | -3.5 | - | -0.8 | - |
| **F160-1** | SR-160 | SR-4 to County Line | EB | 2.79 | New Segment | | | | 52.3 | D | 2217 | - | | | |
| **F160-1** | SR-160 | SR-4 to County Line | WB | 2.51 | New Segment | | | | 60.2 | A | 2217 | - | | | |
| **F242-1** | SR-242 | I-680 to State Route 4 | NB | 3.07 | 53.2 | D | 62.4 | A | 44.8 | E | 2217 | -8.4 | D to E | -17.6 | A to E |
| **F242-1** | SR-242 | I-680 to State Route 4 | SB | 3.07 | 49.1 | D | 67.4 | A | 65.5 | A | 2217 | 16.4 | D to A | -1.9 | - |

# Appendix F

# Summary of Signal Timing Updates

## Appendix F: Summary of Signal Timing Updates

Table F1 provides a list of intersections for which signal timings were updated in Synchro as a part of the 2015 LOS monitoring. These updates were made based on the most current timing plans provided by member agencies.

*Table F1: List of intersections with updated signal timings in Synchro*

| ID | Facility | Cross Street | Jurisdiction |
|---|---|---|---|
| W2 | San Pablo Avenue | Pinole Valley Road | Pinole |
| W3 | San Pablo Avenue | Appian Way | Pinole |
| W4 | San Pablo Avenue | Hilltop Drive | Richmond |
| W20 | San Pablo Dam Road | Bear Creek Road | Orinda, County |
| W24 | Cutting Boulevard | Canal Boulevard | Richmond |
| W25 | Cutting Boulevard | Harbour Way | Richmond |
| W26 | Cutting Boulevard | Carlson Boulevard | Richmond |
| E8 | Brentwood Boulevard | Balfour Road | Brentwood |
| E9 | Brentwood Boulevard/State Route 4 | Byron Highway | County |
| C2 | Alhambra Avenue/Pleasant Hill Rd | Taylor Boulevard | Pleasant Hill |
| C4 | Contra Costa Boulevard | Southbound Ramps to I–680 | Pleasant Hill |
| C7 | Contra Costa Boulevard | Gregory Lane/Southbound I–680 Ramp | Pleasant Hill |
| C9 | Contra Costa Boulevard | Boyd Road/Southbound I–680 Ramp | Pleasant Hill |
| C10 | North Main Street | Sunnyvale Avenue/Southbound I–680 Ramps | Walnut Creek |
| C11 | North Main Street | Geary Road | Walnut Creek |
| C14 | Taylor Avenue | Withers Avenue | Lafayette, County |
| C15 | Geary Road | Pleasant Hill Road | Walnut Creek |
| C16 | Treat Boulevard | Clayton Road | Concord |
| C17 | Treat Boulevard | Cowell Road | Concord |
| C25 | Ygnacio Valley Road | Cowell Road | Concord |

# Appendix G

# Recount Supplementary Information

## Appendix G: Recount Supplementary Information

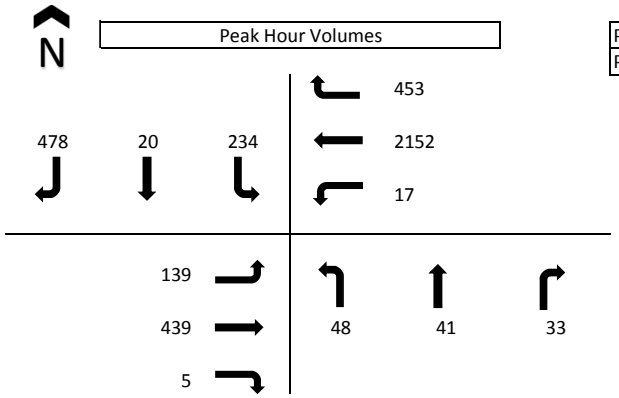
This Appendix provides the following information for the two recounts at Ygnacio Valley Road at Cowell Road:

- Data Collection Count Sheets that contain peak period auto, pedestrian and bicycle counts
- Synchro LOS Analysis worksheets

# Appendix G: Count Sheets

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY AUGUST 26, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | COWELL ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C25 |




| | |
|---|---|
| Peak Hour: | 7:00 AM to 8:00 AM |
| Peak Hour Factor: | 0.94 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 8 | 10 | 2 | 26 | 4 | 76 | 26 | 100 | 1 | 2 | 571 | 96 | 922 | 4059 |
| 7:15 AM | 14 | 14 | 3 | 55 | 7 | 160 | 28 | 94 | 2 | 2 | 591 | 104 | 1074 | 4045 |
| 7:30 AM | 21 | 13 | 23 | 72 | 7 | 145 | 31 | 113 | 0 | 3 | 516 | 129 | 1073 | 3735 |
| 7:45 AM | 5 | 4 | 5 | 81 | 2 | 97 | 54 | 132 | 2 | 10 | 474 | 124 | 990 | 3473 |
| 8:00 AM | 7 | 13 | 2 | 70 | 3 | 49 | 55 | 107 | 5 | 8 | 444 | 145 | 908 | 3173 |
| 8:15 AM | 6 | 9 | 2 | 62 | 3 | 52 | 25 | 83 | 2 | 7 | 385 | 128 | 764 | |
| 8:30 AM | 17 | 10 | 1 | 53 | 3 | 46 | 33 | 98 | 1 | 0 | 414 | 135 | 811 | |
| 8:45 AM | 7 | 4 | 0 | 61 | 1 | 26 | 14 | 89 | 1 | 2 | 364 | 121 | 690 | |
| Peak Hour | 48 | 41 | 33 | 234 | 20 | 478 | 139 | 439 | 5 | 17 | 2152 | 453 | | |

## BIKES

| Interval | COWELL ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 7:15 AM | 0 | 1 | 0 | 0 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

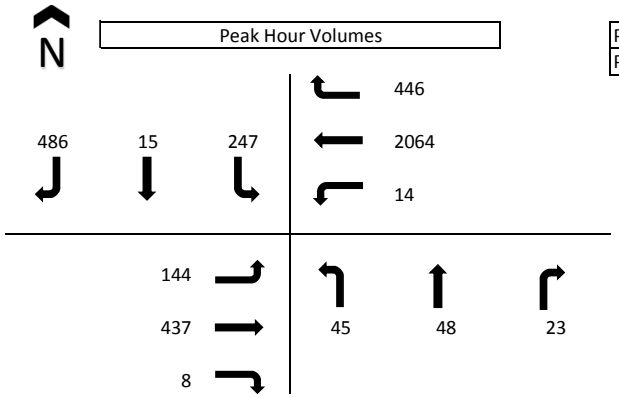
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:15 AM | 0 | 1 | 0 | 1 | 2 | |
| 8:30 AM | 0 | 0 | 0 | 2 | 2 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY SEPTEMBER 1, 2015 |
| Count Period: | 7:00 AM TO 9:00 AM |
| N/S: | COWELL ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C25 |




| | |
|---|---|
| Peak Hour: | 7:00 AM to 8:00 AM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 7:00 AM | 8 | 12 | 2 | 30 | 3 | 84 | 26 | 87 | 2 | 3 | 568 | 99 | 924 | 3977 |
| 7:15 AM | 20 | 12 | 6 | 52 | 0 | 179 | 20 | 114 | 1 | 2 | 526 | 94 | 1026 | 3943 |
| 7:30 AM | 13 | 6 | 3 | 78 | 7 | 140 | 29 | 109 | 2 | 2 | 507 | 120 | 1016 | 3850 |
| 7:45 AM | 4 | 18 | 12 | 87 | 5 | 83 | 69 | 127 | 3 | 7 | 463 | 133 | 1011 | 3752 |
| 8:00 AM | 9 | 9 | 2 | 64 | 8 | 69 | 48 | 97 | 7 | 4 | 447 | 126 | 890 | 3407 |
| 8:15 AM | 2 | 5 | 2 | 55 | 7 | 49 | 24 | 115 | 7 | 4 | 500 | 163 | 933 | |
| 8:30 AM | 10 | 6 | 3 | 37 | 3 | 46 | 12 | 99 | 4 | 0 | 533 | 165 | 918 | |
| 8:45 AM | 7 | 12 | 1 | 40 | 2 | 45 | 13 | 90 | 0 | 4 | 319 | 133 | 666 | |
| Peak Hour | 45 | 48 | 23 | 247 | 15 | 486 | 144 | 437 | 8 | 14 | 2064 | 446 | | |

## BIKES

| Interval | COWELL ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 7:00 AM | 0 | 1 | 0 | 1 | 2 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 1 | 1 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 1 | | |

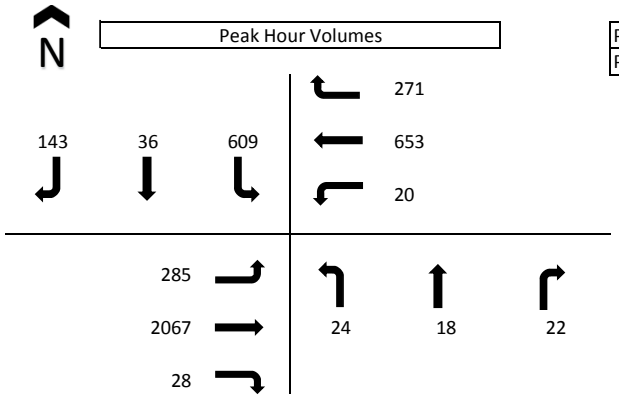
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 0 | 0 | 0 | 1 | 1 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 1 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 1 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | WEDNESDAY AUGUST 26, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | COWELL ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C25 |




| | |
|---|---|
| Peak Hour: | 4:15 PM to 5:15 PM |
| Peak Hour Factor: | 0.93 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 3 | 2 | 4 | 154 | 10 | 35 | 72 | 475 | 7 | 2 | 129 | 70 | 963 | 4133 |
| 4:15 PM | 5 | 9 | 2 | 138 | 10 | 34 | 81 | 503 | 9 | 5 | 178 | 66 | 1040 | 4176 |
| 4:30 PM | 7 | 6 | 3 | 148 | 6 | 39 | 76 | 523 | 2 | 3 | 143 | 55 | 1011 | 4113 |
| 4:45 PM | 7 | 3 | 13 | 152 | 4 | 40 | 76 | 556 | 8 | 5 | 181 | 74 | 1119 | 4049 |
| 5:00 PM | 5 | 0 | 4 | 171 | 16 | 30 | 52 | 485 | 9 | 7 | 151 | 76 | 1006 | 3887 |
| 5:15 PM | 1 | 5 | 3 | 189 | 6 | 36 | 52 | 427 | 7 | 3 | 185 | 63 | 977 | |
| 5:30 PM | 1 | 7 | 7 | 195 | 12 | 40 | 53 | 403 | 7 | 9 | 148 | 65 | 947 | |
| 5:45 PM | 2 | 11 | 7 | 176 | 9 | 44 | 48 | 422 | 5 | 3 | 149 | 81 | 957 | |
| Peak Hour | 24 | 18 | 22 | 609 | 36 | 143 | 285 | 2067 | 28 | 20 | 653 | 271 | | |

## BIKES

| Interval | COWELL ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 1 | 0 | 1 | 5 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 5 |
| 4:30 PM | 0 | 0 | 1 | 0 | 1 | 4 |
| 4:45 PM | 0 | 0 | 2 | 0 | 2 | 4 |
| 5:00 PM | 0 | 0 | 1 | 0 | 1 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 1 | 0 | 1 | |
| 5:45 PM | 0 | 0 | 1 | 0 | 1 | |
| Peak Hour | 0 | 1 | 4 | 0 | | |

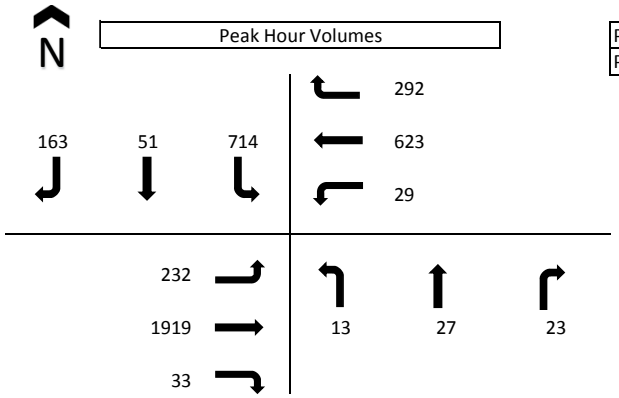
## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 1 | 1 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 1 | 1 | |
| Peak Hour | 0 | 0 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Intersection Turning Movement Summary

| | |
|---|---|
| Firm: | WILTEC |
| Date: | TUESDAY SEPTEMBER 1, 2015 |
| Count Period: | 4:00 PM TO 6:00 PM |
| N/S: | COWELL ROAD |
| E/W: | YGNACIO VALLEY ROAD |
| ID: | C25 |




| | |
|---|---|
| Peak Hour: | 4:30 PM to 5:30 PM |
| Peak Hour Factor: | 0.97 |

## AUTOMOBILES

| Interval | COWELL ROAD | | | | | | YGNACIO VALLEY ROAD | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | Interval | Hourly |
| 4:00 PM | 5 | 6 | 0 | 140 | 8 | 41 | 57 | 519 | 6 | 3 | 149 | 57 | 991 | 4024 |
| 4:15 PM | 5 | 3 | 3 | 141 | 4 | 36 | 73 | 480 | 8 | 3 | 159 | 68 | 983 | 4043 |
| 4:30 PM | 3 | 7 | 2 | 146 | 14 | 37 | 66 | 489 | 5 | 5 | 192 | 53 | 1019 | 4119 |
| 4:45 PM | 7 | 6 | 7 | 170 | 9 | 42 | 73 | 479 | 10 | 4 | 146 | 78 | 1031 | 4064 |
| 5:00 PM | 1 | 6 | 6 | 204 | 14 | 33 | 51 | 462 | 10 | 5 | 134 | 84 | 1010 | 4072 |
| 5:15 PM | 2 | 8 | 8 | 194 | 14 | 51 | 42 | 489 | 8 | 15 | 151 | 77 | 1059 | |
| 5:30 PM | 6 | 4 | 8 | 202 | 11 | 25 | 64 | 425 | 4 | 6 | 121 | 88 | 964 | |
| 5:45 PM | 1 | 7 | 8 | 199 | 14 | 38 | 57 | 473 | 13 | 3 | 150 | 76 | 1039 | |
| Peak Hour | 13 | 27 | 23 | 714 | 51 | 163 | 232 | 1919 | 33 | 29 | 623 | 292 | | |

## BIKES

| Interval | COWELL ROAD | | YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | NB | SB | EB | WB | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 1 | 1 | 3 |
| 4:45 PM | 0 | 1 | 1 | 0 | 2 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 2 | 0 | 2 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 1 | 1 | | |

## PEDESTRIANS

| Interval | Crossing COWELL ROAD | | Crossing YGNACIO VALLEY ROAD | | Totals | |
|---|---|---|---|---|---|---|
| Start | North Leg | South Leg | East Leg | West Leg | Interval | Hourly |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 1 | 0 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 1 | 0 | 0 | | |

Note: Peak Hour for all modes refers to peak hour of automobile traffic.

# Appendix G: Synchro LOS Sheets

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 139 | 439 | 5 | 17 | 2152 | 453 | 48 | 41 | 33 | 234 | 20 | 478 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 148 | 467 | 5 | 18 | 2289 | 482 | 51 | 44 | 35 | 249 | 21 | 0 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 169 | 2456 | 1099 | 37 | 2192 | 960 | 65 | 57 | 45 | 303 | 205 | 174 |
| Arrive On Green | 0.10 | 0.70 | 0.70 | 0.02 | 0.63 | 0.63 | 0.04 | 0.06 | 0.06 | 0.09 | 0.11 | 0.00 |
| Sat Flow, veh/h | 1757 | 3505 | 1568 | 1757 | 3505 | 1536 | 1757 | 953 | 758 | 3408 | 1845 | 1568 |
| Grp Volume(v), veh/h | 148 | 467 | 5 | 18 | 2289 | 482 | 51 | 0 | 79 | 249 | 21 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1568 | 1757 | 1752 | 1536 | 1757 | 0 | 1711 | 1704 | 1845 | 1568 |
| Q Serve(g_s), s | 12.5 | 6.9 | 0.1 | 1.5 | 93.8 | 25.7 | 4.3 | 0.0 | 6.8 | 10.8 | 1.5 | 0.0 |
| Cycle Q Clear(g_c), s | 12.5 | 6.9 | 0.1 | 1.5 | 93.8 | 25.7 | 4.3 | 0.0 | 6.8 | 10.8 | 1.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.44 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 169 | 2456 | 1099 | 37 | 2192 | 960 | 65 | 0 | 102 | 303 | 205 | 174 |
| V/C Ratio(X) | 0.87 | 0.19 | 0.00 | 0.49 | 1.04 | 0.50 | 0.78 | 0.00 | 0.78 | 0.82 | 0.10 | 0.00 |
| Avail Cap(c_a), veh/h | 187 | 2456 | 1099 | 117 | 2192 | 960 | 176 | 0 | 336 | 500 | 449 | 382 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 66.9 | 7.8 | 6.7 | 72.6 | 28.1 | 15.3 | 71.6 | 0.0 | 69.6 | 67.2 | 60.0 | 0.0 |
| Incr Delay (d2), s/veh | 29.6 | 0.2 | 0.0 | 3.6 | 32.0 | 1.9 | 7.3 | 0.0 | 12.0 | 5.5 | 0.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.4 | 3.4 | 0.1 | 0.8 | 54.8 | 11.4 | 2.2 | 0.0 | 3.6 | 5.3 | 0.8 | 0.0 |
| LnGrp Delay(d),s/veh | 96.5 | 7.9 | 6.7 | 76.2 | 60.1 | 17.2 | 78.9 | 0.0 | 81.6 | 72.7 | 60.0 | 0.0 |
| LnGrp LOS | F | A | A | E | F | B | E | | F | E | E | |
| Approach Vol, veh/h | | 620 | | | 2789 | | | 130 | | | 270 | |
| Approach Delay, s/veh | | 29.0 | | | 52.8 | | | 80.5 | | | 71.7 | |
| Approach LOS | | C | | | D | | | F | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 18.5 | 99.8 | 9.6 | 22.2 | 7.2 | 111.1 | 17.3 | 14.4 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 | 6.0 | 4.0 | 5.5 |
| Max Green Setting (Gmax), s | 16.0 | 63.0 | 15.0 | 36.5 | 10.0 | 69.0 | 22.0 | 29.5 |
| Max Q Clear Time (g_c+I1), s | 14.5 | 95.8 | 6.3 | 3.5 | 3.5 | 8.9 | 12.8 | 8.8 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 56.7 | 0.6 | 0.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 51.2 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 144 | 437 | 8 | 14 | 2064 | 446 | 45 | 48 | 23 | 247 | 15 | 486 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 148 | 451 | 8 | 14 | 2128 | 460 | 46 | 49 | 24 | 255 | 15 | 0 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 169 | 2479 | 1109 | 31 | 2203 | 965 | 60 | 64 | 31 | 309 | 205 | 174 |
| Arrive On Green | 0.10 | 0.71 | 0.71 | 0.02 | 0.63 | 0.63 | 0.03 | 0.05 | 0.05 | 0.09 | 0.11 | 0.00 |
| Sat Flow, veh/h | 1757 | 3505 | 1568 | 1757 | 3505 | 1536 | 1757 | 1170 | 573 | 3408 | 1845 | 1568 |
| Grp Volume(v), veh/h | 148 | 451 | 8 | 14 | 2128 | 460 | 46 | 0 | 73 | 255 | 15 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1568 | 1757 | 1752 | 1536 | 1757 | 0 | 1744 | 1704 | 1845 | 1568 |
| Q Serve(g_s), s | 12.5 | 6.5 | 0.2 | 1.2 | 86.1 | 23.8 | 3.9 | 0.0 | 6.2 | 11.0 | 1.1 | 0.0 |
| Cycle Q Clear(g_c), s | 12.5 | 6.5 | 0.2 | 1.2 | 86.1 | 23.8 | 3.9 | 0.0 | 6.2 | 11.0 | 1.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.33 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 169 | 2479 | 1109 | 31 | 2203 | 965 | 60 | 0 | 95 | 309 | 205 | 174 |
| V/C Ratio(X) | 0.87 | 0.18 | 0.01 | 0.45 | 0.97 | 0.48 | 0.77 | 0.00 | 0.77 | 0.83 | 0.07 | 0.00 |
| Avail Cap(c_a), veh/h | 187 | 2479 | 1109 | 117 | 2203 | 965 | 176 | 0 | 343 | 500 | 449 | 382 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 66.9 | 7.4 | 6.5 | 73.0 | 26.3 | 14.8 | 71.9 | 0.0 | 70.0 | 67.0 | 59.8 | 0.0 |
| Incr Delay (d2), s/veh | 29.6 | 0.2 | 0.0 | 3.8 | 12.7 | 1.7 | 7.4 | 0.0 | 12.3 | 5.9 | 0.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.4 | 3.2 | 0.1 | 0.6 | 45.3 | 10.5 | 2.0 | 0.0 | 3.3 | 5.5 | 0.6 | 0.0 |
| LnGrp Delay(d),s/veh | 96.5 | 7.5 | 6.5 | 76.7 | 39.0 | 16.5 | 79.3 | 0.0 | 82.3 | 73.0 | 59.8 | 0.0 |
| LnGrp LOS | F | A | A | E | D | B | E | | F | E | E | |
| Approach Vol, veh/h | | 607 | | | 2602 | | | 119 | | | 270 | |
| Approach Delay, s/veh | | 29.2 | | | 35.2 | | | 81.2 | | | 72.2 | |
| Approach LOS | | C | | | D | | | F | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 18.5 | 100.3 | 9.1 | 22.1 | 6.7 | 112.1 | 17.6 | 13.6 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 | 6.0 | 4.0 | 5.5 |
| Max Green Setting (Gmax), s | 16.0 | 63.0 | 15.0 | 36.5 | 10.0 | 69.0 | 22.0 | 29.5 |
| Max Q Clear Time (g_c+I1), s | 14.5 | 88.1 | 5.9 | 3.1 | 3.2 | 8.5 | 13.0 | 8.2 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 55.4 | 0.6 | 0.4 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 38.5 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 285 | 2067 | 28 | 20 | 653 | 271 | 24 | 18 | 22 | 609 | 36 | 143 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 306 | 2223 | 30 | 22 | 702 | 291 | 26 | 19 | 24 | 655 | 39 | 0 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 187 | 2049 | 904 | 42 | 1759 | 787 | 46 | 33 | 42 | 740 | 434 | 369 |
| Arrive On Green | 0.11 | 0.58 | 0.58 | 0.02 | 0.50 | 0.50 | 0.03 | 0.04 | 0.04 | 0.22 | 0.24 | 0.00 |
| Sat Flow, veh/h | 1757 | 3505 | 1547 | 1757 | 3505 | 1568 | 1757 | 742 | 937 | 3408 | 1845 | 1568 |
| Grp Volume(v), veh/h | 306 | 2223 | 30 | 22 | 702 | 291 | 26 | 0 | 43 | 655 | 39 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1547 | 1757 | 1752 | 1568 | 1757 | 0 | 1679 | 1704 | 1845 | 1568 |
| Q Serve(g_s), s | 16.0 | 87.7 | 1.2 | 1.9 | 18.7 | 17.0 | 2.2 | 0.0 | 3.8 | 27.9 | 2.5 | 0.0 |
| Cycle Q Clear(g_c), s | 16.0 | 87.7 | 1.2 | 1.9 | 18.7 | 17.0 | 2.2 | 0.0 | 3.8 | 27.9 | 2.5 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.56 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 187 | 2049 | 904 | 42 | 1759 | 787 | 46 | 0 | 75 | 740 | 434 | 369 |
| V/C Ratio(X) | 1.63 | 1.09 | 0.03 | 0.52 | 0.40 | 0.37 | 0.56 | 0.00 | 0.58 | 0.89 | 0.09 | 0.00 |
| Avail Cap(c_a), veh/h | 187 | 2049 | 904 | 117 | 1759 | 787 | 117 | 0 | 129 | 1613 | 892 | 758 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 67.0 | 31.2 | 13.2 | 72.3 | 23.3 | 22.9 | 72.2 | 0.0 | 70.3 | 56.9 | 44.8 | 0.0 |
| Incr Delay (d2), s/veh | 307.7 | 47.4 | 0.1 | 3.7 | 0.7 | 1.3 | 3.9 | 0.0 | 6.8 | 3.8 | 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 | 23.8 | 55.6 | 0.5 | 0.9 | 9.2 | 7.6 | 1.1 | 0.0 | 1.9 | 13.6 | 1.3 | 0.0 |
| LnGrp Delay(d),s/veh | 374.7 | 78.5 | 13.3 | 76.0 | 23.9 | 24.2 | 76.0 | 0.0 | 77.1 | 60.7 | 44.9 | 0.0 |
| LnGrp LOS | F | F | B | E | C | C | E | | E | E | D | |
| Approach Vol, veh/h | | 2559 | | | 1015 | | | 69 | | | 694 | |
| Approach Delay, s/veh | | 113.2 | | | 25.1 | | | 76.7 | | | 59.8 | |
| Approach LOS | | F | | | C | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 20.0 | 81.3 | 8.0 | 40.8 | 7.6 | 93.7 | 36.6 | 12.2 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 | 6.0 | 4.0 | 5.5 |
| Max Green Setting (Gmax), s | 16.0 | 32.0 | 10.0 | 72.5 | 10.0 | 38.0 | 71.0 | 11.5 |
| Max Q Clear Time (g_c+I1), s | 18.0 | 20.7 | 4.2 | 4.5 | 3.9 | 89.7 | 29.9 | 5.8 |
| Green Ext Time (p_c), s | 0.0 | 11.1 | 0.0 | 0.4 | 0.0 | 0.0 | 2.6 | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 83.5 |
| HCM 2010 LOS | F |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 232 | 1919 | 33 | 29 | 623 | 292 | 13 | 27 | 23 | 714 | 51 | 163 |
| Number | 1 | 6 | 16 | 5 | 2 | 12 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1845 | 1900 | 1845 | 1845 | 1845 |
| Adj Flow Rate, veh/h | 239 | 1978 | 34 | 30 | 642 | 301 | 13 | 28 | 24 | 736 | 53 | 0 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cap, veh/h | 187 | 1935 | 855 | 50 | 1661 | 728 | 29 | 43 | 37 | 825 | 503 | 427 |
| Arrive On Green | 0.11 | 0.55 | 0.55 | 0.03 | 0.47 | 0.47 | 0.02 | 0.05 | 0.05 | 0.24 | 0.27 | 0.00 |
| Sat Flow, veh/h | 1757 | 3505 | 1548 | 1757 | 3505 | 1535 | 1757 | 918 | 787 | 3408 | 1845 | 1568 |
| Grp Volume(v), veh/h | 239 | 1978 | 34 | 30 | 642 | 301 | 13 | 0 | 52 | 736 | 53 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1757 | 1752 | 1548 | 1757 | 1752 | 1535 | 1757 | 0 | 1706 | 1704 | 1845 | 1568 |
| Q Serve(g_s), s | 16.0 | 82.8 | 1.5 | 2.5 | 17.7 | 19.2 | 1.1 | 0.0 | 4.5 | 31.3 | 3.2 | 0.0 |
| Cycle Q Clear(g_c), s | 16.0 | 82.8 | 1.5 | 2.5 | 17.7 | 19.2 | 1.1 | 0.0 | 4.5 | 31.3 | 3.2 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.46 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 187 | 1935 | 855 | 50 | 1661 | 728 | 29 | 0 | 81 | 825 | 503 | 427 |
| V/C Ratio(X) | 1.28 | 1.02 | 0.04 | 0.60 | 0.39 | 0.41 | 0.44 | 0.00 | 0.65 | 0.89 | 0.11 | 0.00 |
| Avail Cap(c_a), veh/h | 187 | 1935 | 855 | 117 | 1661 | 728 | 117 | 0 | 131 | 1613 | 892 | 758 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 67.0 | 33.6 | 15.4 | 72.0 | 25.4 | 25.8 | 73.1 | 0.0 | 70.2 | 54.9 | 40.9 | 0.0 |
| Incr Delay (d2), s/veh | 158.7 | 26.3 | 0.1 | 4.2 | 0.7 | 1.7 | 3.8 | 0.0 | 8.4 | 3.6 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 16.0 | 46.8 | 0.7 | 1.3 | 8.7 | 8.5 | 0.6 | 0.0 | 2.3 | 15.1 | 1.7 | 0.0 |
| LnGrp Delay(d),s/veh | 225.7 | 59.8 | 15.5 | 76.2 | 26.1 | 27.5 | 76.9 | 0.0 | 78.6 | 58.6 | 40.9 | 0.0 |
| LnGrp LOS | F | F | B | E | C | C | E | | E | E | D | |
| Approach Vol, veh/h | | 2251 | | | 973 | | | 65 | | | 789 | |
| Approach Delay, s/veh | | 76.8 | | | 28.1 | | | 78.2 | | | 57.4 | |
| Approach LOS | | E | | | C | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 20.0 | 77.1 | 6.5 | 46.4 | 8.3 | 88.8 | 40.3 | 12.6 |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 | 6.0 | 4.0 | 5.5 |
| Max Green Setting (Gmax), s | 16.0 | 32.0 | 10.0 | 72.5 | 10.0 | 38.0 | 71.0 | 11.5 |
| Max Q Clear Time (g_c+I1), s | 18.0 | 21.2 | 3.1 | 5.2 | 4.5 | 84.8 | 33.3 | 6.5 |
| Green Ext Time (p_c), s | 0.0 | 10.5 | 0.0 | 0.5 | 0.0 | 0.0 | 3.0 | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 61.4 |
| HCM 2010 LOS | E |